CITY OF DULUTH, GEORGIA
COMPREHENSIVE PLAN – COMMUNITY AGENDA

November 2008




CITY OF DULUTH COMMUNITY AGENDA
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1.0 INTRODUCTION

1.1 Location and Context

In the 1970s, the City of Duluth was a peaceful, rural community located beyond the reaches of metropolitan Atlanta's explosive growth. The past three decades, however, have brought enormous changes to Duluth and areas that surround it. Duluth is no longer a peaceful country town and has instead become a major portion of the sprawling urban and suburban landscape of the Atlanta metropolitan region.

It is very unlikely that the founders of Duluth could have envisioned the changes that the City has experienced. Large tracts of farmland have been transformed into quiet subdivisions and bustling commercial centers. Poultry farms have been replaced by apartment complexes and light industrial parks. Duluth is now a City with a distinctive and charming character.

Duluth's small town character, combined with its proximity to Atlanta and all the amenities of the City have made Duluth a magnet for residential growth. The quality of the Gwinnett County School System, the growth of the Gwinnett Place Mall area (located east of the city), the aesthetic and recreational appeal of the Chattahoochee River (which forms the city's western boundary), availability of county water and sewer service, and the convenient interstate and highway access have all been cited as factors contributing to the city's population growth. The broader influences of growth in metropolitan Atlanta and Gwinnett County in particular will undoubtedly influence land use character and composition in the City of Duluth (Comprehensive Plan, Land Use Element, 1995).

1.2 Overview of Planning Documents

Duluth's comprehensive plan, prior to this Community Agenda, was prepared and adopted in 1994. A major amendment affecting primarily the land use element was adopted in 2004. Other updates were completed to the previously adopted plan, such as revision of the future land use map and updates of the short-term work program. However, Duluth's comprehensive plan was long overdue for a wholesale update by 2007. By that time, a new set of standards at the state level were adopted (effective May 1, 2005) which changed the dynamics, structures and contents of local comprehensive plans in Georgia.

The first phase of the comprehensive planning process consisted of preparation of three reports: (1) a "Community Assessment Report," (2) a "Technical Appendix to the Community Assessment Report, and (3) A Community Participation Program. This document is the "Community Agenda," which was prepared following review of the Community Assessment and Community Participation Program.

1.3 Purposes and Uses of the Comprehensive Plan

The Community Agenda is first, a physical plan intended to guide the physical development and redevelopment of the City by describing how, why, when, and where to build, rebuild, or preserve aspects of the community. Second, the Community Agenda covers a long-range planning horizon of 20 years (i.e., to the year 2027). Third, the Community Agenda is "comprehensive" in the sense that it covers the entire City limits, plus it encompasses all the functions that make a community work and considers the interrelatedness of functions. The

Community Agenda is based on the foundation that if the City knows where it wants to go, it possesses better prospects of getting there.

The Community Agenda is intended to serve numerous purposes. It provides a primary basis for evaluating all future development proposals, whether they are requests for rezoning, applications for special use permit or subdivision plat approval, and others. The Community Agenda is also intended to provide guidance for operating and capital improvement budgets. Business persons, investors, real estate brokers, and developers can learn from the plan what the future vision of the community is, as well as the overall direction and intensity of new growth and redevelopment. Market analysts and researchers can draw on the wealth of data provided in the Community Assessment and Community Agenda for their own specific needs. A separate market analysis was also conducted as a part of the comprehensive planning effort and is available for public review. Other local governments, regional entities, and state agencies also look at the contents of the Community Agenda as the best available statement of municipal policy and intent.

The ultimate clients, however, for the Community Agenda are the Mayor and City Council of Duluth and the Duluth Planning Commission. By adopting the Community Agenda, the Mayor and City Council make an extremely important expression of their consent and support for the vision and the objectives, goals, policies, and strategies contained in the Community Agenda.

1.4 How this Community Agenda is Organized

This Community Agenda articulates "issues and opportunities" in Chapter 2; these were developed through a combination of citizen participation, steering committee oversight, and input from the city's planning consultant. Chapter 3 sets framework for the comprehensive plan by providing a citywide vision statement and articulating character areas.

The next several chapters, from Chapter 4 (Environment) through 12 (Intergovernmental Coordination) focus on individual substantive areas. It is the intent of these chapters to describe how issues and opportunities (enumerated in Chapter 2) will be addressed, or if they cannot be implemented, the challenges and obstacles. Each of these chapters provides additional substantive information. Chapter 14 provides a lengthy list of additional implementation techniques that Duluth can consider during the short-term and 20-year planning horizon. Some of these implementation techniques may be specifically mentioned in the city's policies (Chapter 15) and short-term work program (Chapter 16), but many of them are not. It was suggested that including these additional implementation techniques would make the Duluth Community Agenda a more useful document over time, after adoption.

Policies are consolidated in Chapter 15 of this Community Agenda. Some readers might prefer to see policies under each of the substantive chapters of this document, for purposes of internal consistency and ease of reading when one considers a particular topic (e.g., historic preservation). However, the city's planning consultant suggested that the planning staff, which will cite this document frequently in its deliberation, would be better served by the consolidation of policy statements in one, easily referenced chapter of the plan.

Chapter 16 provides the city's short-term work program. This document covers five years and articulates all of the short-term actions, programs, and regulations that are needed to implement the Duluth Community Agenda. Chapter 17 provides a glossary of planning terms for the uninitiated reader. Chapter 18 provides references, including a number of publications that discuss best practices. These citations provide sources of more detail if needed.

1.5 Amendment and Update of the Plan

As an adopted expression of the City's policy, the Community Agenda must be maintained in a manner that it still reflects the desires of the current Mayor and City Council. Developers, the general public, and other agencies have a right to rely on the adopted Comprehensive Plan as an expression of current policy. In cases where it is determined that a particular policy, goal, program, or statement is no longer a valid expression of the City's policy, then the plan needs to be amended. Otherwise, the validity of the plan is weakened, and those that have relied on the Community Agenda when it is not a reflection of current policy have then been, in effect, misled. Local governments are required to update the Comprehensive Plan every five years, and at that time, they are encouraged to provide major rewrites of the Comprehensive Plan. Regardless, the Comprehensive Plan must be comprehensively revised every 10 years. Amendments may be considered by the Planning Commission and Mayor and City Council whenever the City finds it necessary to do so. When there is a significant change in policy by the Mayor and City Council, for instance a decision to drop a major capital improvement project that is described in the adopted plan, the plan should be amended.

2.0 ISSUES AND OPPORTUNITIES

The identification of issues and opportunities for the Duluth Community Agenda followed a multi-faceted process. First, the county's planning consultants with city staff assistance developed an initial short-list of issues and opportunities. Secondly, the city's planning consultant developed a list of probable issues and opportunities. The city consultant's list was vetted with the Planning Commission which served as the steering committee for developing the community agenda. The city's planning intern during summer 2007 interviewed stakeholders, who suggested issues and opportunities.

Prior to a visioning workshop, the city's planning consultant also developed a questionnaire on community visioning, character areas, and issues and opportunities which helped the community gauge the importance of various issues. During a visioning workshop in August 2007, attended by approximately 65 persons, issues and opportunities already identified were discussed, and others were suggested. Finally, during the early stages of preparing this community agenda, additional issues and opportunities were identified and some others were refined and made more specific.

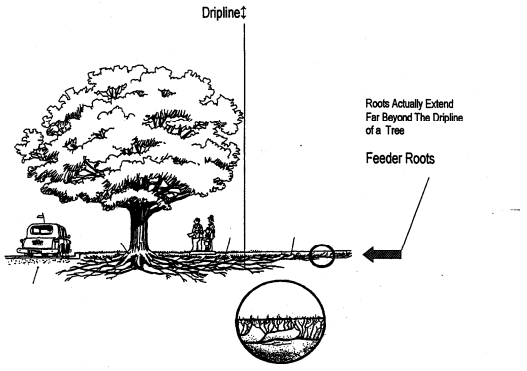
This section of the Community Agenda provides a synthesis of the issues and opportunities.

2.1 The Natural Environment

Capitalizing on the Chattahoochee River

Respondents to the visioning questionnaire in August 2007 almost unanimously support greater utilization of the Chattahoochee River as a recreational resource, (Q-18), and more than three-quarters of respondents agreed even if they have to pay for them through taxes or fees. Duluth's residents want to make the river more a part of Duluth. The Chattahoochee must be maintained as a jewel of the city and made easily accessible. A greenway along the river is desirable.

Protection of Trees and Canopy



A majority of visioning questionnaire respondents (August 2007) felt existing tree protection measures were inadequate (Q-14), and more than two-thirds indicated support for additional measures to protect tree canopy (Q-15).

2.2 Historic Resources

Possible Extension of CORE Preservation District

Stakeholders suggested that the plan should consider opportunities for geographically expanding the city's historic preservation program. Extension of preservation activities across the railroad to parts of Buford Highway (north) may be appropriate (right).

Strickland House Protection/Purchase as a Historic Building

One stakeholder suggested acquiring the Strickland House and preserving it as a historic building. It is also suggested that it might serve as a railroad museum or the home of the current history museum.

2.3 Population and Housing

Setting an Overall Target Population for the City

The comprehensive plan is an opportunity to articulate what total population size the community desires to be. The survey results from the visioning questionnaire (August 2007) indicate that modest population growth is desired, as opposed to rapid or slow growth. The plan can establish what the desired population level should be and then offer policies and programs that reinforce that desire.

Planning for an Aging Society

In just 25 years, almost one of every five persons (19.6 percent of the total population) in the United States will be retirement age (65 years or older). In 2030, the United States will have a projected 363,584,000 persons, of which almost 87,000,000 will be 65 years and older. In Georgia, there will be 1.9 million persons of retirement age in 2030, a million more than there were in 2005 (856,108).[1] How Duluth anticipates the changes to the age composition of the population, and puts programs in place to deal with those outcomes, are important issues and opportunities to be addressed in the comprehensive plan.

Conversion of Apartment Complexes into Condominiums

A small group during the breakout session of the visioning workshop in August 2007 suggested that converting existing apartment complexes to condominiums was one way to promote greater home ownership in Duluth and thereby help stabilize and transform older multi-family housing complexes in the "urban communities" character area.

[1] Weitz, Jerry. 2005. "Planning For Senior-Friendly Communities." Georgia Municipal Association Website.

Housing Unit Overcrowding and Resulting Concerns

There is concern in the community, expressed by one or more stakeholders, that some housing units in the city are occupied by more than one family, and that significant overcrowding of housing units is evident. Issues arising with overcrowding include public health concerns and impacts on neighborhoods, among others.

Hill Street Area Community Development

The "Hill Street" Community has long been a focus of targeted community development efforts in Duluth. This area will be addressed as part of the character area planning process and other appropriate components of the comprehensive plan.

Role of Mixed-Income Housing and Appropriate Locations

Mixed income housing, or the deliberate inclusion of housing affordable to different ranges of household incomes, is both an opportunity and an issue. It is an opportunity to meet the housing objective that Duluth should provide adequate housing for households of all income ranges. It is also an issue in the sense that not all residents are likely to be receptive to this policy or technique, which runs counter to the economic structuring and economic segregation that tends to occur under market conditions. The survey of visioning participants revealed little support for promoting mixed-income housing in Duluth. However, it may still be acceptable in some locations as a redevelopment and housing tool, as may be determined appropriate during the process of preparing the community agenda.

2.4 Economic Development and Redevelopment

Town Center Redevelopment Plan Implementation

The overwhelming perception among stakeholders is that Town Center redevelopment has been slow to occur. For instance, for some time now, Duluth's old city hall block of land has been slated for redevelopment (right). There is an opportunity during the planning process to refine and extend adopted redevelopment programs and to place greater emphasis on redevelopment work programming.

Buford Highway Corridor Redevelopment and Improvement

The Buford Highway Corridor was identified as Duluth's greatest weakness. Dogged by a combination of blight, unattractive automotive uses and poor pedestrian infrastructure, Stakeholders agreed that redevelopment for this corridor should be the city's top priority.

Expansion of Medical District

There is an opportunity to create a distinctive district focused on the hospital and medical offices at the intersection of Pleasant Hill Road and McClure Bridge Road. This opportunity will be pursued during the process of proposing character areas and drawing the future development map.

Interchange Redevelopment Area

The grade-separation road improvement project at the intersection of Buford Highway and Pleasant Hill Road is viewed as an opportunity to redevelop private property at the four corners of the intersection at higher intensities that will serve Duluth's economic development and redevelopment objectives. This opportunity will be considered in the character area planning process (note: the interchange has since been completed).

Shopping Center and Other Retail Vacancies

There is concern in Duluth that there may already be too much retail use. Some residents have asked the city to consider ways in which future zoning for retail use could be curtailed until existing shopping centers and vacant retail stores are re-occupied. There is also an opportunity to consider innovative reuse opportunities and redevelopment of vacant shopping centers. In the picture shown, this vacant shopping center is located next to the hospital in Duluth and may be considered appropriately redeveloped to compliment an emerging plan for a medical district at Pleasant Hill Road and McClure Bridge Road.

Redevelopment Particulars

A strong majority of visioning questionnaire respondents (August 2007) agreed to redevelopment at higher densities and greater heights, but only in appropriate places (Q-28). Also, the institutional framework for redevelopment (e.g., the composition and roles of a redevelopment agency or downtown development authority, or both) should be described in the comprehensive plan.

Tax Incentives for Businesses

Support for providing economic development incentives was almost unanimous (Q-29) among respondents of the community visioning questionnaire (August 2007). At issue is the type and extent of incentives that Duluth can and should provide to new businesses and to retain existing businesses.

Home Occupations

Home occupations are small businesses that operate out of homes in residential neighborhoods. They are usually limited to office-related businesses as opposed to retail businesses and service providers. The community visioning survey gauged support among respondents as to whether they viewed home occupations as part of the city's overall economic development strategy. Generally, there was support to encourage home occupations if compatibility of residential neighborhoods is assured. The planning process represents an opportunity to assess the role of home occupations in the economy of Duluth and to recommend changes to policies and regulations, as may be considered appropriate.

Staff Devoted Exclusively to Economic Development/Redevelopment

During the planning process, Duluth approved the hiring of a full-time professional as part of the Planning and Development Department staff to spearhead economic development and redevelopment efforts. The plan should consider economic development objectives, work programs, and action strategies for economic development and redevelopment.

2.5 Land Use

Protection of Neighborhoods

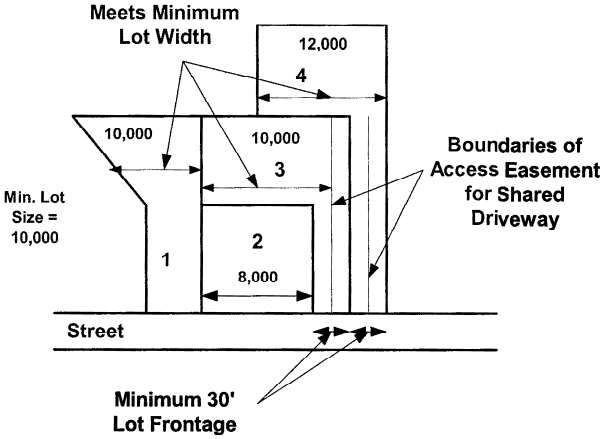
There was almost universal acceptance among respondents to the visioning questionnaire (August 2007) that incompatibilities between residential and commercial uses must be more fully addressed (Q-26). The plan will address neighborhood incompatibilities and changes to land use programs to ensure neighborhoods are protected in the future.

Formalized Homeowner Participation

A more formalized process might lessen some of the confrontation among developers, builders, neighborhood groups, and civic associations. There is interest among Duluth's citizenry to institutionalize more effective participation and to not rely only on public hearings in the land use process.

Compatibility of Infill Development

A majority of residents responding to the community visioning questionnaire (August 2007) confirmed concerns about infill development (Q-25). This also includes the related issue of "tear downs" (i.e., demolishing existing homes and rebuilding bigger homes).



Subdivision of Irregularly Shaped Parcel for Infill Development Using Flag Lot Design and Lot Size Averaging

Neighborhood, Corridor and Small Area Plans

Of the respondents to the August 2007 visioning survey, 85 percent agreed or strongly agreed that the city should engage in neighborhood or corridor studies in addition to Buford Highway (Q-30).

Consistency Between Comprehensive Plan and Land Use Decisions

Approximately 90 percent of respondents agreed or strongly agreed with instituting a "consistency" requirement that zoning be consistent with the future land use plan map (Q-31).

Need for Zoning Code Overhaul

It is anticipated that the plan will call for a comprehensive rewrite of Duluth's zoning ordinance and other related land use regulations.

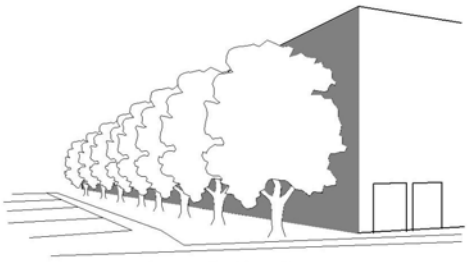
2.6 Urban Design

Retaining Small Town Feel

The vision for the City of Duluth refers to retaining the "small town" feel of the city. At issue is exactly what that means, and how it will be accomplished.

Appearance and Impact of Large Buildings

During 2007 a separate study was prepared to address the appearance and impact of large buildings. There is an opportunity to integrate that work into the comprehensive plan and the city's development regulations.



SCREENING FOR LARGE BUILDINGS WITH BLANK WALLS

Gateways and Entrances

There are opportunities for design improvements that will bring noticeable entrances into Duluth. Those opportunities will be explored in the planning process.

Citywide Wayfinding Signage Program

It has been suggested that the future economic vitality of the Duluth Town Center may depend on better signage and a more formalized "wayfinding" system. Such opportunities will be explored in the comprehensive plan.

Development and Enhancement of Railroad Theme

The comprehensive plan will consider the extent to which the city's vision and plan will contain railroad design themes. Preliminary input from the citizenry suggests there is receptiveness to this idea.

Function and Aesthetics of Commercial Areas

While Duluth's land use regulations already address architecture, there are several opportunities to enhance the function and appearance of Duluth's commercial areas and activity centers.

2.7 Community Facilities and Services

Design and Improvement of Municipal Facilities

Duluth has prepared for the future with construction of a new public safety building, a new city hall, and other improvements to facilities such as the Public Works Building (pictured right). While much has been done, the plan is an opportunity for the city to project future facility needs and continue to plan for long-term future municipal facility needs.

Permanent Home for the History Museum

A new home for the history museum will be needed and should be addressed in the community agenda.

Implementation of Park and Recreation Master Plan

Duluth has prepared and adopted a master plan for parks and recreation facilities. That plan needs to be thoroughly and comprehensively integrated into the community agenda.

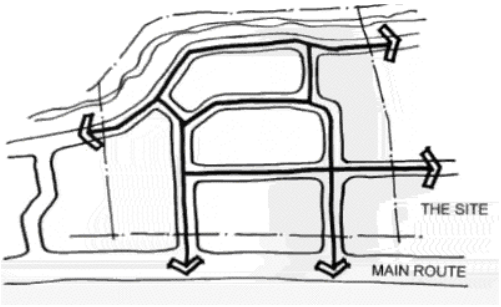
Role of Nongovernmental Organizations in Social Service Delivery

At issue is the extent to which Duluth will rely on churches and other private organizations to meet citizens' needs for social services, such as temporary housing, emergency shelter, guidance and counseling.

2.8 Transportation

Connectivity to Town Center

Stakeholders and planners believe there is a great need for safe crossing of Buford Highway between the Town Center and Proctor Square.



Traffic Congestion and Road Improvements

Congestion problems on Peachtree Industrial Boulevard, State Route 120, and Pleasant Hill Road, among others, were all identified as sources of frustration.

Proposed Rerouting of SR 120

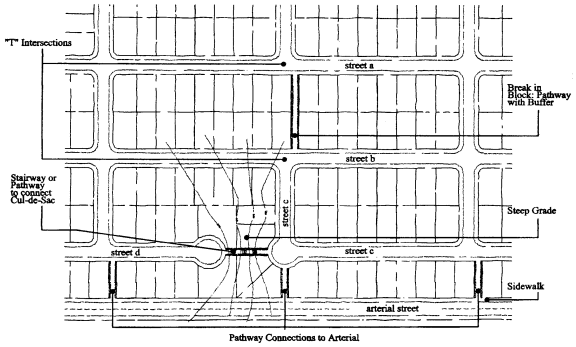
Concerns were raised about the city's plans to reroute SR 120 away from the Town Center. Stakeholders felt that the traffic diversion would have an adverse effect on the visibility of Town Center business owners.

Sidewalk Extensions and Improvements for Pedestrians

Respondents to the visioning question-naire (August 2007) overwhelmingly agreed to emphasize pedestrian and bike improvements over traffic improvements (Q-22). Plans for improving the sidewalk network will receive priority emphasis in the plan.

Retrofit of Neighborhoods with Sidewalks

Many suburban subdivisions have very wide street rights-of-way (e.g., 60 feet) and street pavement widths (e.g., 28-30 feet). Excessive pavement widths can be reduced or modified to include wider (or if they are non-existent, new) sidewalks, planting strips for landscaping and street trees and striping for bicycle lanes. One such effort is to connect two cul-de-sacs that back up to one another with a pedestrian access easement between them.



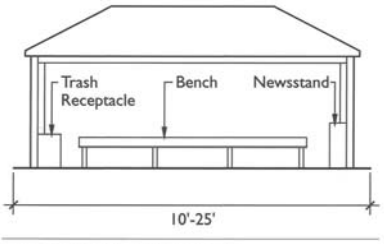
Source: Otak. 1999. *Model Development Code and User's Guide for Small Cities.* Salem: Oregon Transportation and Growth Management Program.

Trolley that Takes People Back and Forth to Railroad Museum

One stakeholder suggested this idea. It is "visionary" in the sense that right now the city has neither a railroad museum nor a trolley. This suggestion will be explored further in the planning process.

Need for Bus Stop(s) and Public Transit

A strong majority of visioning questionnaire respondents (August 2007) agree with supporting transit service in Duluth (Q-20), but there was an even distribution of agreement and disagreement when it comes to paying for them through taxes or fees (Q-21). As a long-term plan, given mounting problems of traffic congestion, Duluth's community agenda needs to address prospects for public transit.

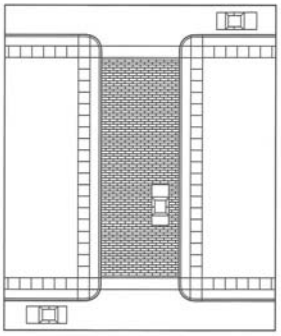


BUS SHELTER AMENITIES

Source: Khaled Shammout.

Traffic Calming

It was almost unanimous among respondents to the community visioning questionnaire (August 2007) that traffic calming projects are needed (Q-23). Traffic calming is an opportunity that will be addressed in the comprehensive plan.



Textured Surfaces

Textured surfaces are usually used in conjunction with other traffic calming devices, but may be used alone.

Source: Appleyard 1980.

2.9 Intergovernmental Coordination

Annexation

The comprehensive plan is an opportunity for the city to articulate policies regarding future annexation, and to negotiate cross-acceptance of them with Gwinnett County.

Dispute Resolution Procedure

A dispute resolution procedure is required and the plan should make reference to the appropriate procedure for resolving annexation and land use disputes between the city and Gwinnett County, and with other neighboring cities.

Water District Mandates

The Metropolitan North Georgia Water Planning District, created in 2001, has a number of mandates that the City of Duluth will have to address and which must be included in the comprehensive plan.

3.0 CITYWIDE VISION AND CHARACTER AREAS

The City of Duluth is a growing community along the Chattahoochee River. We strive to plan and manage our growth in a manner that protects our heritage and supports our small town southern charm, while capitalizing on our location within the greater Atlanta metropolitan region. With a vibrant town green that serves as our community's gathering place, we will surround it with interconnected neighborhoods, parks, and shops that promote a pedestrian-friendly environment and a diverse community of friends and neighbors. West Lawrenceville Street will become a "golden corridor," anchored on one end by the Historic Town Center and an expanding medical zone around Gwinnett Medical Center on the other end. The City will make its major streets more walkable and inviting by installing pedestrian-scale street lamps and sidewalks.

Duluth's neighborhoods will remain protected from intrusion by unwanted land uses, higher residential densities, pollution, excessive cut-through traffic, and blighting influences. Homeowners associations, civic groups and citizens will have strong voices in decisions about land use change. Neighborhoods will be improved through small area planning efforts, community development, and improvements that retrofit them for greater pedestrian access and comfort.

Commercial corridors will remain the primary economic generators in Duluth, including a revitalized, mixed-use, pedestrian-friendly Buford Highway corridor and high-quality architecture within commercial activity centers at key street intersections along Peachtree Industrial Boulevard. Duluth will actively promote economic development, with revitalization and redevelopment of Buford Highway as its highest priority. Industry will be confined to existing locations but maintained so as to provide a diverse economic base.

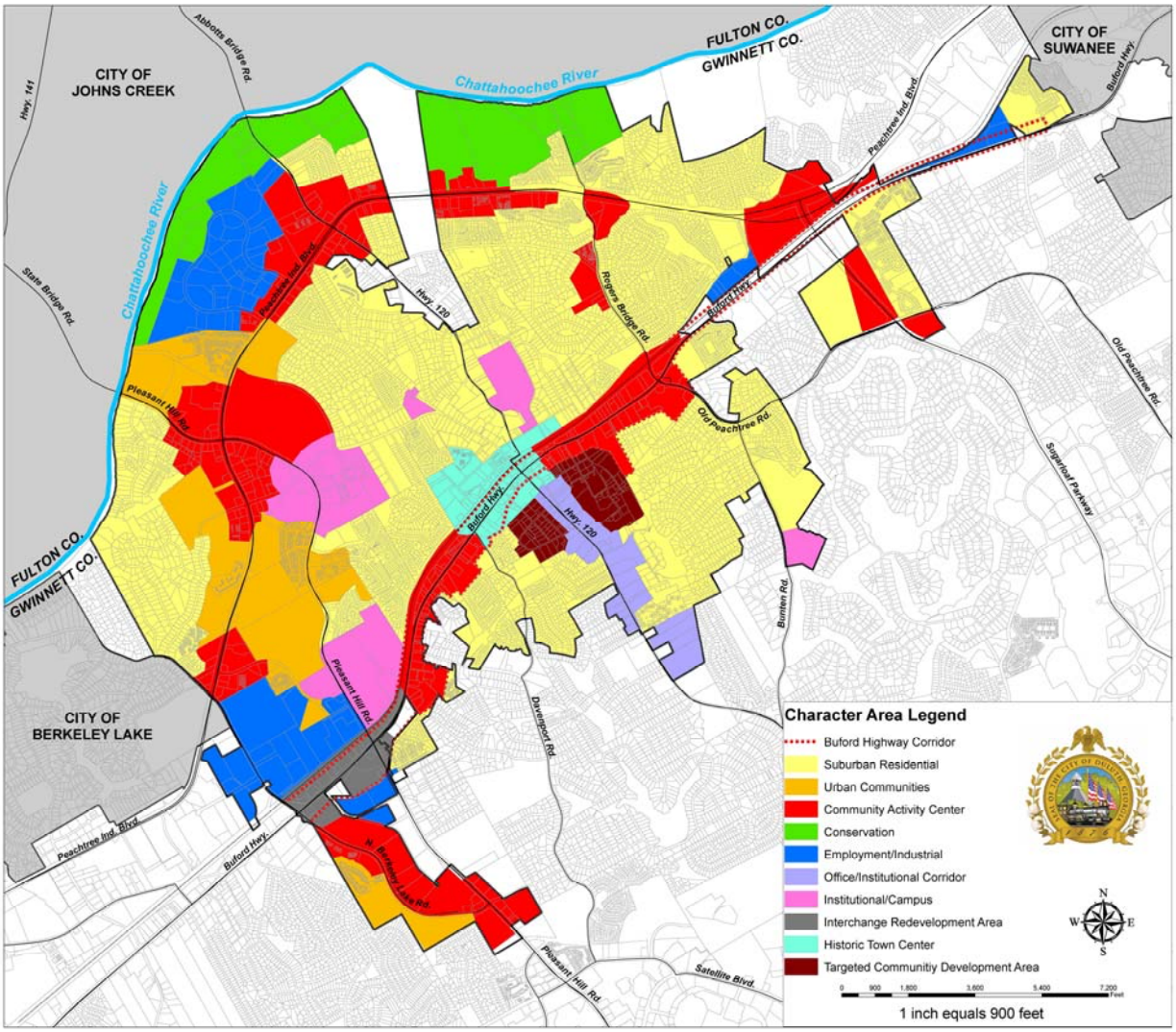
Duluth's heritage will be preserved, and a railroad museum and railroad theme will become part of its historic preservation and economic development efforts. Duluth will embrace the concepts of sustainability and environmental justice, and it will protect its natural resources from degradation. It will emphasize green architecture, green building, green infrastructure, and green communities in future planning and development efforts. The Chattahoochee River corridor will be accessible to residents by foot and bike travel. Duluth's residents will embrace and nurture the evolving diversity of its populace.

Duluth's municipal administration will continue to respond to needs with respect to its municipal facilities, which will maintain a signature of high quality and anchor evolving revitalization efforts. The city will design and install gateway improvements and a wayfinding system to spur its heritage preservation, town center planning, and economic development and corridor revitalization efforts. Duluth will remain a willing partner with Gwinnett County, nearby municipalities, religious and non-profit institutions, and regional entities in delivering community facilities and services that residents and businesses need. The city will be known as a leading example of the implementation of regional functional plans for transportation, land use, air quality, watershed protection, and human and social services delivery.

Duluth's citywide vision will be implemented with the following character areas:

- Conservation
- Suburban Residential
- Urban Communities
- Institutional/Campus
- Office-Institutional Corridor
- Community Activity Center
- Historic Town Center
- Interchange Redevelopment Area
- Buford Highway Corridor
- Targeted Community Development Area
- Employment/Industrial

Future Development Map
"Character Areas"



3.1 Conservation

Vision: An interconnected system of city parks, environmentally sensitive lands and riparian corridors which protect the environment, enhance water quality, and provide active and passive recreational opportunities. These areas will be connected to facilitate habitat movement and provide for maximum water quality enhancement.

Quality Community Objectives Realized:
Environmental Protection; Open Space Preservation; Transportation Alternatives

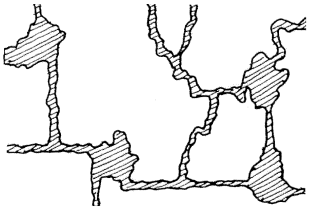
Uses and Intensities: Since these are lands that are or should be set aside for open space, uses are limited to preserve natural features. Impervious surface limitations apply within the Chattahoochee River corridor. Access and development are limited to conservation-compatible activities and may include trails and greenways in natural areas.

Compatible Future Land Use Map Categories:
Parks, recreation, and conservation.

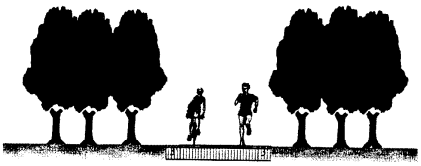
Implementation Measures: Stormwater management ordinance, relevant portions of zoning ordinance including CSO Conservation Subdivision Overlay District, Chattahoochee River Corridor overlay regulations and Regional river corridor reviews, flood plain management regulations, acquisition of land; stream bank stabilization and repair programs; green infrastructure programs.

Chattahoochee River

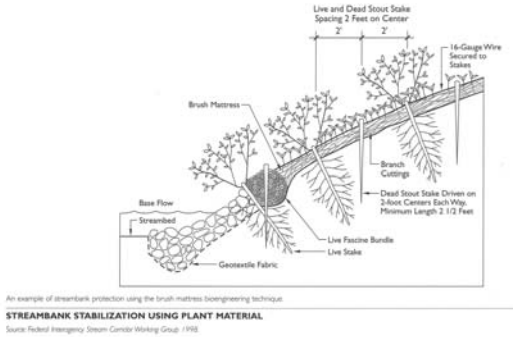
Multi-Use Trail/Greenway



Connected Network for Habitat Protection



Cross-Section of Multi-Purpose Trail



Streambank Stabilization

3.2 Suburban Residential

Vision: Conventional suburban subdivisions for predominantly single-family, detached housing within protected neighborhoods. Most neighborhoods are less than three dwelling units per acre, and are designed with cul-de-sacs and curvilinear streets. Improved pedestrian connectivity is a goal. This character area applies to the vast majority of Duluth's residential neighborhoods. While most of this character area is low density and suburban, there are opportunities for traditional neighborhood development with densities of up to 4.5 units per acre, in locations designated on the future land use plan map.

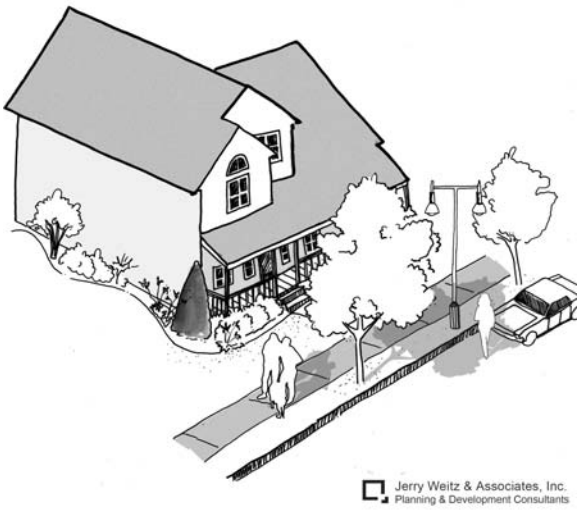
Quality Community Objectives Realized:
Housing Opportunities; Traditional Neighborhood; Heritage Preservation; Infill Development; Transportation Alternatives

Uses and Intensities: Predominantly detached, single-family dwellings and supportive civic, institutional, and recreational uses.

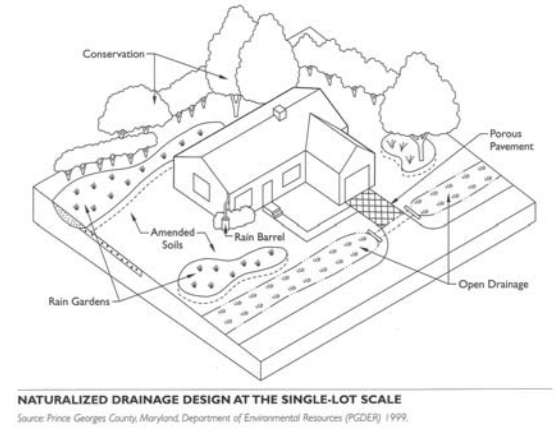
Compatible Future Land Use Map Categories:
Residential, 1 to 3 Units per Acre; Residential, 3 to 4.5 Units per Acre

Implementation: The following zoning districts: RA-200 Residential-Agriculture, R-100 Single-Family Residential, and R-75 Single-Family Residential, PRD Planned Residential Development, CSO Conservation Subdivision Overlay District

Existing Conditions



Desirable Neighborhood Conditions



Naturalized Drainage Design

Existing Conditions

3.3 Urban Communities

Vision: Predominantly attached, multi-family housing that provides affordable workforce housing and supporting recreational amenities, limited to existing locations and/or as shown on the future land use map. Conversion of apartment complexes to condominiums may be desirable as a means of encouraging homeownership and maintaining stability of urban communities.

Quality Community Objectives Realized:
Housing Opportunities; Traditional Neighborhood

Uses and Intensities: Predominantly attached, multi-family dwellings and supportive civic, institutional, and recreational uses. Existing apartment developments have densities of at least eight (8) units per acre with most complexes developed at densities of 12 to 14 units per acre.

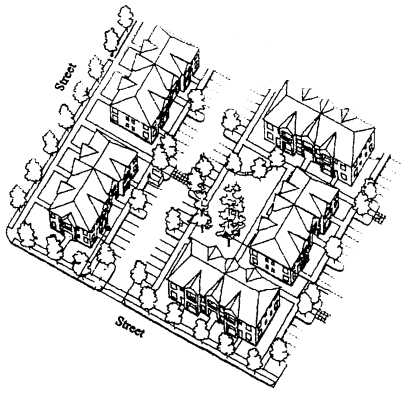
Compatible Future Land Use Map Categories:
Residential, 6 Units or More per Acre

Implementation: The following zoning districts: RM Residential Multi-Family; PRD Planned Residential Development

Existing Conditions

Apartment Building with Quality Streetscape

Townhouses



Pedestrian Connections Among Buildings

3.4 Institutional Campus

Vision: The need for this character area is grounded in the existence of large schools, many churches, and a growing hospital in the city. helping to anchor residential neighborhoods. A key feature of this character area will be a medical zone centered at the four quadrants of the intersection of Pleasant Hill Road and McClure Bridge Road, including Joan Glancy Hospital. A campus-style environment, friendly to the pedestrian, will be maintained and expanded.

Existing Conditions

Quality Community Objectives Realized: Appropriate Businesses; Employment Options; Regional Identity; Transportation Alternatives; Sense of Place

Uses and Intensities: Religious institutions, hospital (medical zone), public and private schools, and offices. Building intensities are approximately 10,000 square feet per acre, with higher intensities in the medical zone.

Compatible Future Land Use Map Categories: Public-Institutional; Office-Professional; Mixed Use

Medical Zone Potential

Implementation: The following zoning districts: O-I Office Institutional; O-N Office-Neighborhood; POD Planned Office Development; RD Research and Development.

Existing Conditions

3.5 Office-Institutional Corridor

Vision: Properties along SR 120 east of Buford Highway have witnessed a transition from residential uses to institutional uses (churches) and some office uses. This character recognizes that existing and evolving character and accommodates new office and institutional developments that are compatible with abutting residential neighborhoods and that provide greater interconnections and pedestrian access.

Quality Community Objectives Realized:
Appropriate Businesses; Employment Options; Regional Identity; Transportation Alternatives; Sense of Place

Uses and Intensities: Religious institutions, public and private schools, and offices. Building intensities are approximately 10,000 square feet per acre. Residential at densities of 3.0 to 4.5 dwelling units per acre is also appropriate.

Compatible Future Land Use Map Categories:
Public-Institutional; Office-Professional

Implementation: The following zoning districts: O-I Office Institutional; O-N Office-Neighborhood; POD Planned Office Development; PRD Planned Residential Development.

Existing Conditions


Existing Conditions


Existing Conditions


Existing Conditions

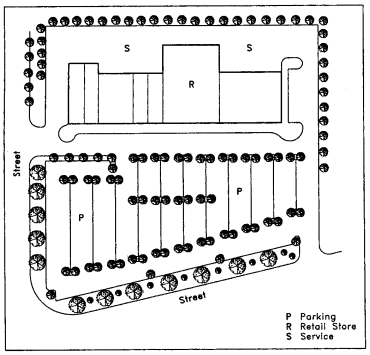
3.6 Community Activity Center

Vision: Accessible centers of businesses, services, and complementary uses, which may include mixed-use developments, in an activity center pattern concentrated at major road intersections, and contributing extensively to the economic base of the city. Exclusively commercial shopping centers that already exist are at present stable and desirable but may be redeveloped as mixed use activity centers during the planning horizon. Such areas will eventually be transformed into less automobile reliant and more pedestrian-friendly places, with better connections to neighborhoods.

Existing Conditions

Quality Community Objectives Realized: Appropriate Businesses; Employment Options; Transportation Alternatives

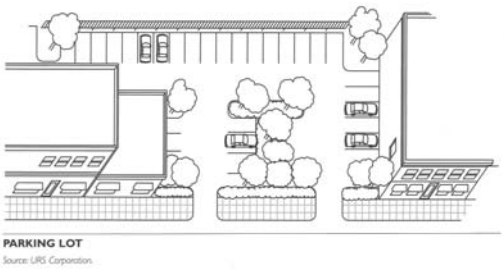
Uses and Intensities: Suburban shopping centers, offices, and mixed use developments; in some cases such areas may be redeveloped into compact, mixed-use activity centers during the planning horizon (see accompanying illustration). Existing intensity is approximately 8,000 to 10,000 square feet per acre; higher intensities are possible through redevelopment.



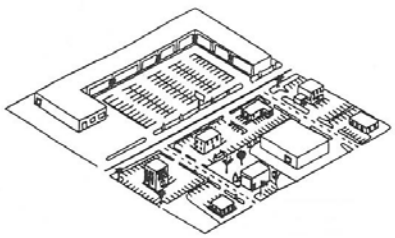
Conventional Shopping Center Layouts Provide Potential for Mixed-Use Redevelopment During the Planning Horizon

Compatible Future Land Use Map Categories: Commercial

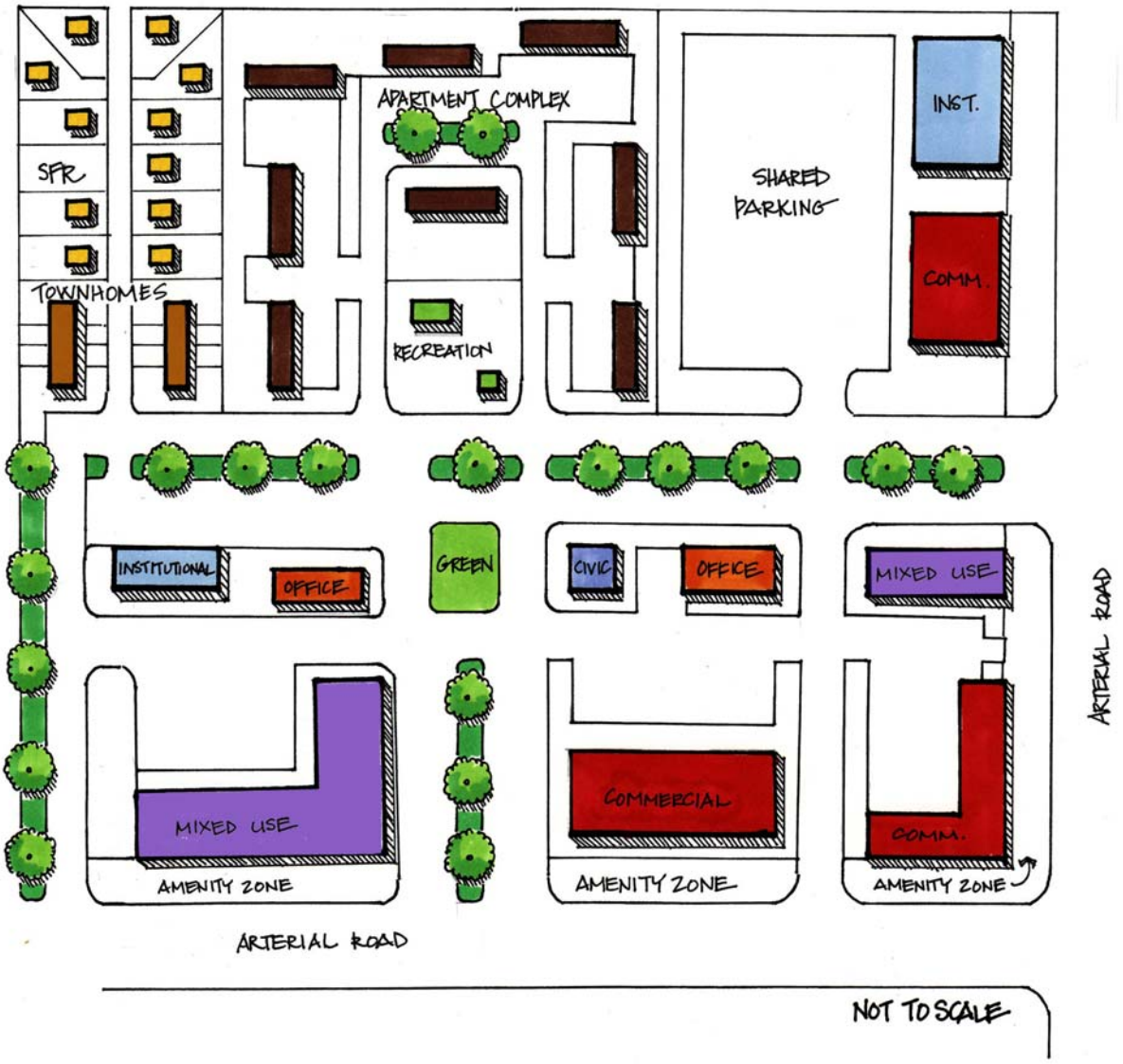
Implementation: The following zoning districts: HC Highway Commercial; C-1 Neighborhood Business; C-2 General Business; PCD Planned Commercial Development; O-I Office Institutional; O-N Office-Neighborhood; POD Planned Office Development; RD, Research and Development



Desirable Streetscape Improvements and Parking Lot Configurations



Conventional Suburban Patterns (below) transformed into mixed-use centers (above)



ILLUSTRATIVE MIXED-USE ACTIVITY CENTER

Jerry Weitz & Associates, Inc.
Planning & Development Consultants

3.7 Historic Town Center

Vision: Compact, pedestrian-friendly, mixed use area corresponding with the City's historic and revitalized downtown.

Quality Community Objectives Realized: Sense of Place; Heritage Preservation; Infill Development; Appropriate Businesses; Employment Options; Traditional Neighborhood; Housing Opportunities; Transportation Alternatives

Town Green

Downtown Businesses

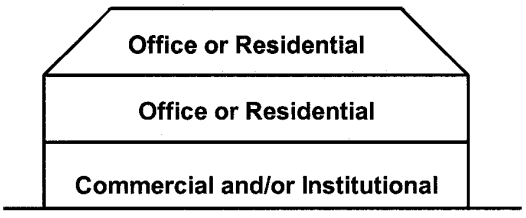
Existing Mixed-Use Development

West Lawrenceville Street

Duluth City Hall

Uses and Intensities: Residences, businesses, offices, civic buildings and uses, institutional, and mixed-use developments. Intensities as described in Livable Centers Initiative study and plan (2001).

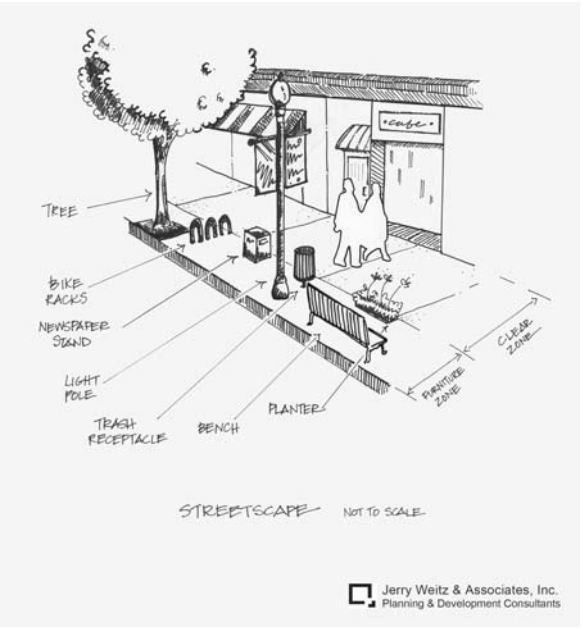
Compatible Future Land Use Map Categories:
Mixed Use



Vertical Mixed Use Desirable

Historic Town Center

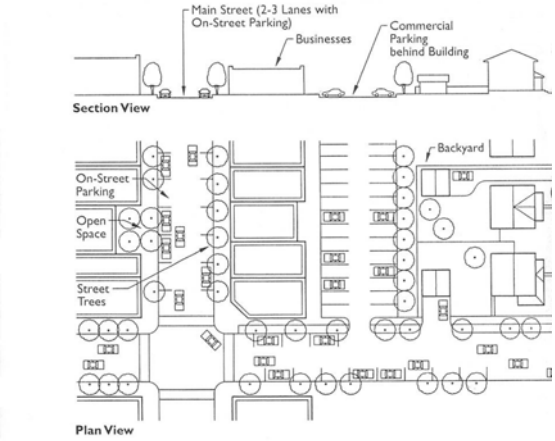
Desirable Streetscape Scene



Streetscape (Hardscape) Improvements

Implementation: The following districts: CBD Central Business District; HSO Historic Structure Overlay; CPD-C Main Street Commercial Subarea; CPD-R West Lawrenceville Street Sub-area. Development review and improvements are also subject to multi-agency review and participation, including planning commission, core preservation district review boards, and downtown development authority. Revitalization is promoted through recently approved tax allocation district.

Illustrative Rehabilitation of Building



Pedestrian Retail Development Pattern

Illustrative Vertical Mixed Use

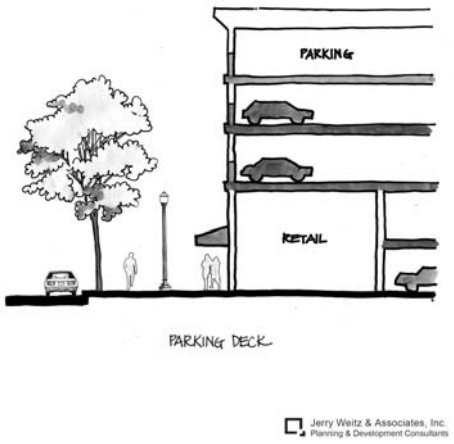
3.8 Interchange Redevelopment Area

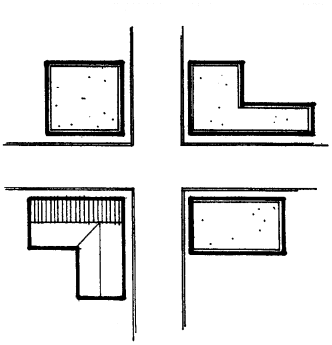
Vision: A new gateway into the city and economic development redevelopment area surrounding the grade separated intersection of Pleasant Hill Road and Buford Highway (limited-access, cloverleaf design). While the grade-separated intersection is primarily intended to move traffic through Duluth, development surrounding it will be designed in compact, pedestrian-friendly, transit-supportive pattern. Parking decks will serve the area.

Grade-Separated Road Improvement

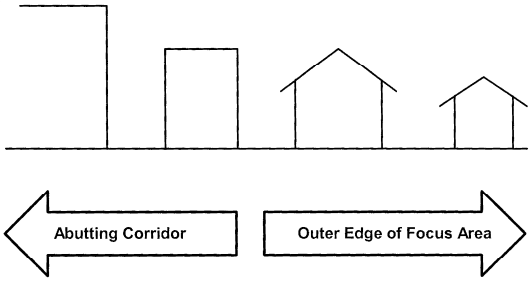
Quality Community Objectives Realized: Appropriate Businesses; Employment Options; Transportation Alternatives

Uses and Intensities: Predominantly mid-rise (up to six story) office buildings with supportive retail commercial uses, along with some institutions; Intensities of building are (up to 2.0 FAR) highest near the grade-separated intersection (focus area), with the buildings brought up to the street intersection. Intensities decrease at the edge of the character area to protect abutting neighborhoods. Mixed use development including residences is also appropriate.





Buildings Brought to Street Intersection



Decrease Height and Mass in the Focus Area

Compatible Future Land Use Map Categories: Commercial

Implementation: Multi-story office and mixed use zoning district (new). Public design standards and private expenditures for art, signage, streetscape improvements, and other unique identifying amenities; possible Community Improvement District (CID)

Duluth Town Center Plan, 2001
Source: Envision Duluth Livable Centers Initiative Report

3.9 Buford Highway Corridor

Vision: Historically, from a planning perspective, the Buford Highway corridor in Duluth has been viewed as divided into a "north" and "south." The north part of the corridor includes more recent development that is in much less need of attention from a revitalization standpoint. As stated elsewhere in this Community Agenda, Buford Highway (South) is a growing concern of the city. This area is not necessarily blighted but it is the major southern gateway to the city and is occupied mostly by commercial auto repair and related uses. The city desires to revitalize the Buford Highway South corridor into a corridor that is transit-supportive, pedestrian-friendly, with significant public presence through institutions and streetscape improvements. Appropriate connections to the Historic Town Center will be made.

Duluth has established a good precedent for redevelopment along Buford Highway South with construction of its Public Safety Building, including wide sidewalk and street presence with building pulled up to the road.

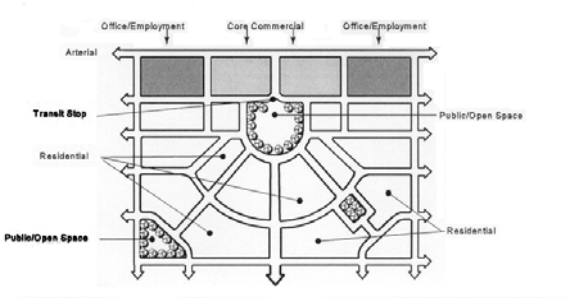
Quality Community Objectives Realized: Appropriate Businesses; Employment Options; Traditional Neighborhood; Transportation Alternatives; Infill Development; Sense of Place; Regional Identity

Possible Redevelopment Potential Buford Highway (South) Corridor

Uses and Intensities: Attractive, non-auto related, pedestrian-friendly neighborhood businesses and services, with distinctive architectural features and a scale and intensity that support redevelopment but which is compatible with and connected to adjacent residential neighborhoods. Residential and mixed-use developments are also appropriate.

Compatible Future Land Use Map Categories: Commercial; mixed use

Implementation: Buford Highway Corridor Overlay (new); public and private partnerships for revitalization and redevelopment, including downtown development authority and/or urban redevelopment agency.



Buford Highway has the opportunity to be redeveloped with transit-supportive land uses

3.10 Targeted Community Development Area

Vision: This character area corresponds with residential blocks within the originally settled area of Duluth, east of the historic town center and Buford Highway. There is a need to reverse generally deteriorating conditions in these residential neighborhoods through targeted community development and concentrated neighborhood redevelopment guided by new urbanist planning and neotraditional development principles, including rectangular or square block, lot, and street patterns. Neighborhoods are pedestrian-friendly and connected with the Buford Highway corridor and SR 120.

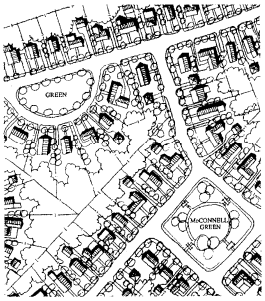
Quality Community Objectives Realized: Housing Opportunities; Traditional Neighborhood; Transportation Alternatives; Infill Development

Uses and Intensities: Predominantly detached single-family residences, with supporting neighborhood institutions and urban greens. Some other forms of housing such as duplexes and accessory apartments and townhouses may be permitted. Mixed-use developments may also be appropriate on transitional parcels between abutting commercial zones and residences.

Compatible Future Land Use Map Categories: Residential, 4.5 to 6 Units per Acre; Public-Institutional; Office-Professional and Mixed Use may be appropriate on fringes of the character area abutting existing commercial developments or on designated redevelopment sites (subject to adequate sanitary sewer).

Implementation: R-75 Single-Family Residential Planned Residential Development, and Office-Neighborhood zoning districts; Extension of sanitary sewer through CDBG and other funds; public and private partnerships for revitalization and community development, including downtown development authority and/or urban redevelopment agency.

Existing Hill Neighborhood



Traditional Neighborhood

Grid Pattern

Existing Neighborhood Conditions

3.11 Employment/Industrial

Vision: This character area corresponds with existing industrial properties and manufacturing uses. Within these areas, truck traffic is frequent, and individual institutional or light industrial establishments are not necessarily connected with one another. Truck traffic makes pedestrian compatibility difficult, but safe pedestrian passage is necessary. It is desirable to improve the aesthetics of these areas, which contribute to the city's economic base.

Existing Conditions

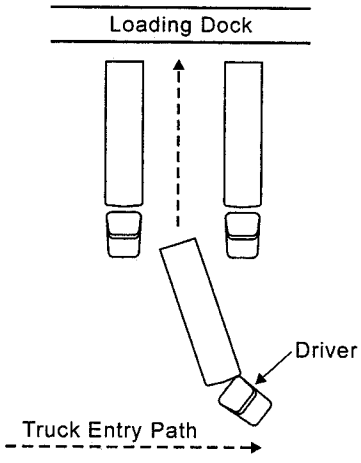
Quality Community Objectives Realized: Appropriate Businesses; Employment Options; Growth Preparedness

Uses and Intensities: Predominantly industrial and manufacturing; transportation, communication, and utilities facilities

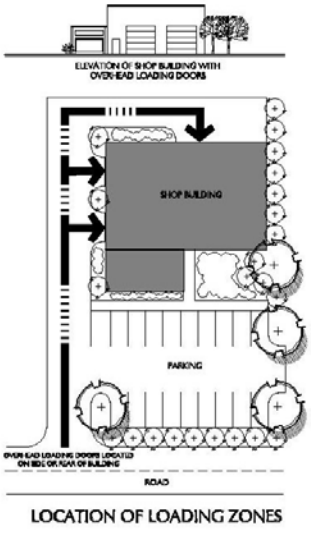
Compatible Future Land Use Map Categories: Industrial; Transportation, Communication and Utilities

Implementation: M-1 Light Industry, M-2 Heavy Industry, PID Planned Industrial Development zoning districts.

Existing Conditions



Frequent Truck Traffic in this Character Area



Appropriate Location of Loading Zones

4.0 THE NATURAL ENVIRONMENT

4.1 Environmentally Sensitive and Special Protection Areas

The Gwinnett County Community Assessment designates countywide "environmentally sensitive areas" and describes these as "an amalgamation of areas with sensitive natural resources such as wetlands, flood plains and steep slopes, and specially designated areas such as the 2000-foot Chattahoochee River corridor." The public land along the Chattahoochee River is shown on the Countywide Character Areas Map (Map 3-4 of the Community Assessment) as "Scenic Sites." In Duluth, there are no groundwater recharge areas that come under the Environmental Planning Criteria (1990).

4.2 Chattahoochee River

The Chattahoochee River is the primary environmental concern. In an effort to protect the Chattahoochee River and provide for recreation, Congress in 1978 established the Chattahoochee River National Recreational Area. This area serves as a series of parks that dot the river and provide recreation opportunities for metropolitan Atlanta residents (Atlanta Regional Commission 1992).

The Metropolitan River Protection Act (MRPA), adopted in 1973 and amended in 1998, designates a corridor of land that extends 2,000 feet from the banks of the Chattahoochee River, from Buford Dam to the downstream limits of Fulton and Douglas counties, as an area requiring special protection. Segments of rivers covered by the Metropolitan River Protection Act are specifically excluded from the definition of "protected river" as provided in the Rules for Environmental Planning Criteria. This means that the Chattahoochee River in Duluth is regulated under the Metropolitan River Protection Act (O.C.G.A. 12-5-440 through 12-5-457) rather than the Environmental Planning Criteria for Protected River Corridors (Georgia Department of Natural Resources).

Development in the 2000-foot Chattahoochee River Corridor is regulated per the Metropolitan River Protection Act and also the Chattahoochee Corridor Plan adopted by the Atlanta Regional Commission (ARC). In addition, rules and regulations were adopted by the Atlanta Regional Commission on May 28, 2003, repealing and replacing earlier rules and regulations. The rules provide for ARC's review of land development proposals in the Chattahoochee River Corridor.

The city processes applications for river corridor review per state law and administrative rules of ARC. A key aspect of the river corridor protection plan is the mapping and regulation of "land vulnerability categories." The Atlanta Regional Commission has mapped the entire corridor as lying within one of these categories. The vulnerability maps were readopted in 1998. Land disturbance and impervious surface are regulated within the corridor according to vulnerability categories shown on the maps and which have corresponding regulations (maximum percent land disturbance and maximum percent land disturbance), as summarized in Table 4.1.

Table 4.1
Vulnerability Categories and Development Regulations
Applicable in the Chattahoochee River Corridor

Vulnerability Category	Percent Maximum Land Disturbance	Percent Maximum Impervious Surface
A	90	75
B	80	60
C	70	45
D	50	30
E	30	15
F	10	2

Source: Atlanta Regional Commission. September 23, 1998. Chattahoochee Corridor Plan

The Chattahoochee Corridor Plan also establishes flood plain and buffer zone standards. The Atlanta Regional Commission readopted rules and regulations in 1998 that establish procedures and additional standards for development within the river corridor. MRPA gives local governments in the corridor the responsibility to implement the plan by reviewing and permitting development projects within the corridor, to monitor land-disturbing activities in the corridor, and to enforce restrictions in accordance with MRPA and the plan.

One of the issues raised in the planning process was how to promote greater utilization of the Chattahoochee River as a recreational resource. Although there are National Recreation Area lands along the banks of the river in Duluth, additional opportunities for land acquisition are limited. Because Duluth is mostly built out, opportunities to set aside significant open and green spaces along the river will further diminish over the next twenty years.

The Duluth Comprehensive Plan supports acquisition of a greenway along the Chattahoochee River. The Gwinnett County Community Assessment indicates that there is an option for developers to pay into a greenspace bank, in lieu of on-site green spaces, and that funds may build over the long-term such that the city will have money for land acquisition and improvements. Duluth should partner with Gwinnett County, the Trust for Public Land, the National Park Service, Friends of the Chattahoochee River, private foundations, and any others with an interest in open space and riparian corridor protection and greenway development along the Chattahoochee River, to raise the funds needed to accomplish this worthy goal.

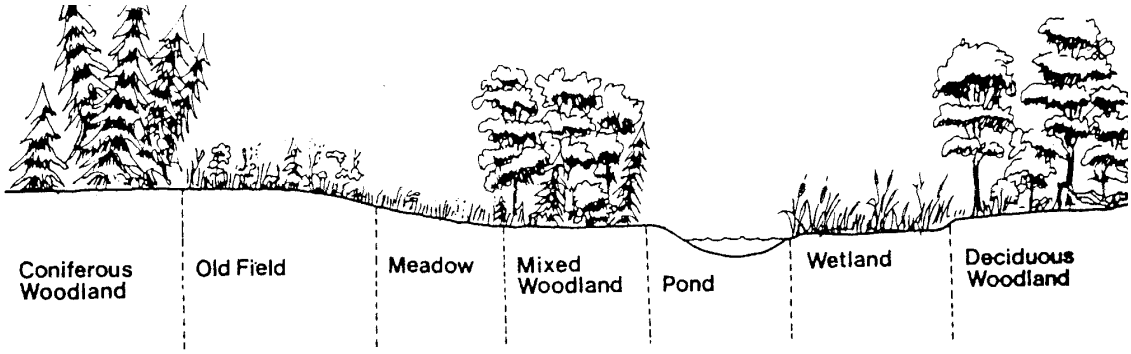
4.3 Wetlands

Wetlands are areas that are flooded or saturated by surface or groundwater often and long enough to grow vegetation adapted for life in water-saturated soil. A wetland does not have to be flooded or saturated for more than one week of the year in order to develop the vegetation and soil characteristics that qualify it as a wetland (Georgia Department of Community Affairs n.d.). Wetlands serve many functions and have a number of values. Wetlands temporarily store flood waters, thereby preventing flood damage, and they can also protect lands from erosion by reducing the velocity of water currents. They serve as pollution filters by helping to remove sediment, absorb chemicals and nutrients, and produce oxygen. Wetlands have important environmental values including improving water quality by intercepting stormwater runoff, preventing eutrophication of natural waters, and supporting delicate aquatic ecosystems (nutrient retention and removal, food chain support, migratory waterfowl usage, providing other wildlife habitat, etc.). Many wetlands are areas of groundwater recharge, and they also can

provide a source of recreation (hunting and fishing), aesthetics, and scientific research (Kundell and Woolf 1986).

In addition to the Chattahoochee River, there are several wetlands inside the city limits. Most of the wetlands are associated with the Chattahoochee River and its tributaries, while others are associated with Lake Norman. The environmental consequences of draining or filling wetlands can be detrimental to the city and county.

The state has no specific regulation to protect wetlands, and the primary protection is via the U.S. Army Corps of Engineers. The United States Army Corps of Engineers' Section 404 permitting process governs the discharge of fill material into wetlands and other water bodies. Under Section 404 of the Clean Water Act (33 U.S.C. 1344), the Corps of Engineers is authorized to issue individual and general permits. Development of wetlands is generally prohibited unless there is no practical alternative, and even then the environmental consequences must be mitigated. In 2006 Gwinnett County began planning for a Stream and Wetlands Mitigation Bank (Countywide Community Assessment, Technical Addendum, Sec. 4.1).



Source: DeChiara and Koppelman 1984. *Time-Saver Standards for Site Planning*. New York: McGraw-Hill.

4.4 Landscape Ecology and Habitat Protection

There are many ways that urban development affects the natural ecosystem that were, until recently, not well articulated. For instance, once an individual parcel or subdivision becomes bounded with walls and/or fences, that parcel ceases to be "an indistinct piece of a whole to being an independent element." Nature does not need the boundaries that we draw and the walls that we build.[1] Disturbing the soil on one property may increase the chance that exotic plants may grow there and eventually invade other portions of the site and beyond.

Even a recreational trail creates small-scale disturbances that allow access to exotic plants that otherwise may not have been able to enter an area. Zoning boundaries and boundaries between developments create distinct ecological boundary zones that can filter, block, or concentrate the movement of animals, seeds, wind, water, and nutrients, thereby isolating areas from one another and resulting in long-term and far-reaching ecological impacts on lands

[1] Freyfogle, Eric T. 1998. "Bounded People, Boundless Land." In Richard L. Knight and Peter B. Landres, eds., *Stewardship Across Boundaries*. Washington, DC: Island Press.

abutting the boundary.[2] See chapter 14 for more information about landscape ecology and its potential application in the land use planning process.

4.5 Protection of Trees and Tree Canopies

Duluth has adopted certain regulations for the protection of trees, but it has not begun to regulate for the maintenance of tree canopies in the city. Local protection measures already in place are not considered adequate, and the citizenry of Duluth desires higher levels of local protection of trees and tree canopies. The revision of land use regulations will therefore need to provide for stronger protection of trees and provisions encouraging or requiring the maintenance of tree canopy cover.

4.6 Air Quality

The U.S. Environmental Protection Agency has designated a thirteen-County area around Atlanta as a non-attainment jurisdiction for ozone. Ozone is created by a photochemical reaction of a mixture of organic compounds and nitrogen oxides (created by fuel combustion) and is a major air pollutant in the lower atmosphere. The City of Duluth will need to cooperate with any regional air quality plan mandated by the U.S. Environmental Protection Agency and transportation plan prepared by the Atlanta Regional Commission and the Georgia Regional Transportation Authority.

[2] Landres, Peter B., Richard L. Knight, Steward T. A. Pickett, and M. L. Cadensasso. 1998. "Ecological Effects of Administrative Boundaries." In Richard L. Knight and Peter B. Landres, eds., *Stewardship Across Boundaries*. Washington, DC: Island Press.

5.0 HISTORIC RESOURCES

5.1 Historic Overview of Duluth

The name of the city of Duluth, Minnesota, was inspired by a French captain and explorer, Daniel Greysolon Du Luth (1636-1710). He was born in Saint Germain Laval (Loire - France), a small village about fifty miles from Lyons. He negotiated and signed peace between Saulters and Sioux nations in the area of the city of Duluth, Minnesota, on September 15th, in 1679. The city was called Duluth in his memory. He died in Montréal in 1710.

In early eighteenth century Georgia in the area of the current City of Duluth, there were no known white settlers. The Duluth area was then a part of the Cherokee Indian territory and was an important crossroads used by the native Americans. In 1818 Gwinnett County was created by an act of the General Assembly of Georgia and the area was opened to white settlers.

In 1821, Evan Howell, the city of Duluth's forefather, developed the town of Howell Crossing that later evolved into a major artery for the railroad. With the visionary acumen of his grandson, Evan P. Howell, changes were on the horizon in 1873. The opportunity to build and link a railway system from North to South was about to unfold. Representative J. Proctor Knott delivered a speech to the United States House of Representatives entitled, "The Glory of Duluth." The pitch of his presentation weighed heavily with Congress and consequently a bill to finance the building of the railroad from Howell Crossing to Duluth, Minnesota was enacted. Grateful for the opportunity to build on a vision, Howell deemed it appropriate to rename the town of Howell Crossing “Duluth.”

At the time that Evan Howell came to the area, there was only one road opened in the section. This was the Peachtree Road, an offshoot of an old native American trail that ran along the bridge south of the Chattahoochee River. The road had been surveyed and constructed during the War of 1812 and connected Fort Daniel with the fort at Standing Peachtree, 30 miles down river.

Howell realized that more roads were needed in order for the area to develop, so he obtained permission in February 1833 to construct a road from the Chattahoochee River across his land to intersect Peachtree Road. This intersection became known as Howell's Cross Roads and was known by this name for forty years.

Howell ran his own plantation and cotton gin by ferry, and he became the town's first merchant. There are no known descendants with the Howell name currently in Duluth; however, he was the great-grandfather of the late Jack and Calvin Parsons and other descendants who became publishers of the Atlanta Constitution newspaper.

Several important dates in the history of the City of Duluth are recounted below:

1821 The Cherokee Indian Territory was settled by Evan Howell, the first successful farmer and merchant of Duluth. He moved here from Cabarrus County, North Carolina, and settled near the Chattahoochee River on the northern boundary of the new county. He built his home and began working to bring his people into this part of the county.

1871 The railroad came to Duluth and boosted the economy. With it came new prosperity and growth. The Methodist Church formed in Duluth.

1873 The town name was changed to Duluth following completion of the railroad. Duluth was named as a joke after Duluth, Minnesota when Congressman J. Proctor Knott of Kentucky made fun of the name. Today there is a Proctor Square and a Knott Street.

1876 The official Charter of Duluth was approved by the Georgia General Assembly.

1886 The Baptist church formed in Duluth.

1870 Around this time, the first public school was built in Duluth. The first brick school was built in 1907, which was destroyed by fire in 1935.

1880 First Mayor elected in Duluth, John Knox, Served until 1885.

1904 First bank built in Duluth, The Bank of Duluth.

1906 The city was officially incorporated as the City of Duluth.

1922 Georgia's First Female Mayor Elected, Alice Harrell Strickland, Mayor of Duluth.
First Hospital built in Duluth, Joan Glancy Hospital.

Source: City of Duluth website, “Duluth History”.

5.2 The Tools of Historic Preservation

Tools of historic preservation include, among many others, the following:

- Inventory of historic resources
- Nomination of worthy structures and sites to the National Register of Historic Places
- Maintenance of a history museum
- Historic societies to preserve history and promote heritage
- Establishment of local historic preservation districts
- Local Historic Preservation Commission to review certificates of appropriateness for material changes in appearance within the local historic district(s) established
- Design guidelines to influence property owner practices and to guide regulatory decisions about historic preservation

5.3 National Register of Historic Places

There is one property in Duluth currently listed on the National Register of Historic Places: The Superb, a Pullman Train constructed 1911-1923. NRHP-listed in 1999.

There are a handful of properties that might be eligible for individual listing on the National Register. Additionally, the two Core Preservation Districts (commercial and residential) (discussed below) together may be eligible for listing as a cohesive National Register Historic District.

5.4 Historic Structure Overlay District (Local)

There are seven properties currently listed on the "City of Duluth Registry of Historic Structures." See Table 5.1. These properties are described below, and shown on a map with property reference numbers "1" through "7."

Table 5.1
Properties Listed on the
City of Duluth Registry of Historic Structures

#	Name of Resource	Tax Parcel Identification #	Location and/or Address
1	Railroad Depot	Tax Parcel # 6-295-51	located at W.P. Jones Park, 3750 Pleasant Hill Rd.
2	Strickland House	Tax Parcel # 7-202-103	located at 2956 Buford Hwy.
3	McDaniel House a.k.a "Knox House"	Tax Parcel # 6-293-33	Park Café, located at 3579 W. Lawrenceville St.
4	Payne House (Corley House)	Tax Parcel # 7-202-21	3987 Main St.
5	Payne House (Montessori School)	Tax Parcel # 7-202-020	2997 Main St.
6	Methodist Church (Masonic Building)	Tax Parcel # 6-293-15B	3520 Hardy St, at parcel 6-293-201 (moved here in 2006 to make way for the construction of the new City Hall)
7	Calaboose (Jail)	Tax Parcel # 6-293-12	Jail building is in the middle of Main St. right-of-way between two one-way segments.

5.5 Assessment of Duluth's Historic Resources

The core of the City of Duluth still retains much of its historic development from the turn of the century and early twentieth century. The historic commercial downtown still remains a focal point for the community, and more so now with the development of the adjacent town green and associated development.

The vast majority of residential development in Duluth is non-historic; the historic residential properties are found ringing the downtown area. The most significant concentrations of historic homes are located on Lawrenceville Street and Main Street. Isolated properties include the Strickland House at 2956 Buford Highway.

Historic institutional buildings include the historic City Hall building and Duluth Museum on West Lawrenceville Street, the railroad depot off Pleasant Hill Road, the Masonic Building/Methodist Church recently relocated from its site adjacent to the city cemetery, and the historic jail building (Calaboose) that is currently being relocated.

5.6 Local Regulation for Historic Preservation

There are two Core Preservation Districts established by regulation in Duluth, each with its own separate review board: CPD-R (Core Preservation District – Residential) and CPD-C (Core

Preservation District – Commercial). At the request of the Planning Director, development within a Historic Structure Overlay District is reviewed by the CPD-R or CPD-C Core Preservation Review Board, whichever has jurisdiction.

5.7 Management and Promotion of Historic Resources

The city owns the Duluth Museum, located in a historic building adjacent to (old) City Hall on West Lawrenceville Street. The museum is managed by The Junior League of Gwinnett and is open by appointment. The Duluth Historic Society also plays an important role in the preservation of history and promotion of heritage. Stakeholders noted the museum will need a new, permanent home upon redevelopment of old city hall according to the redevelopment plan for the town center.

5.8 Assessment of Duluth's Preservation Program

Duluth needs a detailed historic resource survey. Duluth has not adopted a local historic preservation ordinance that establishes a Historic Preservation Commission. There are existing design guidelines for the historic commercial buildings downtown. The new development of the Town Green and associated mixed use and institutional development is compatible with the historic character of the city.

During the course of preparing this comprehensive plan, the current historic preservation program was assessed, and it was determined that the city needs to prepare and adopt an entirely new historic preservation program.

6.0 POPULATION AND HOUSING

6.1 Components of Population Change

Population consists of two types: the household population (those living in housing units) and group quarters populations (those living in institutionalized arrangements such as nursing homes, college dormitories, and correctional facilities). Population changes can be explained in terms of two components: natural increase (the number of births minus the number of deaths); and net migration (the number of persons moving into the area minus the number of persons moving out of the area). In addition, municipalities can add to their total populations through annexation (the incorporation of additional land containing population). Future annexations cannot be predicted, and so the population projections provided here are for the city limits as they existed in March 2008 and do not assume any additional annexation. Of course, the city's population could change dramatically through annexation.

Population could change without ever building another housing unit in Duluth, through the addition of group quarters accommodations. A new nursing home, if constructed, could increase the city's population. While there are no data that enable reliable projections of the group quarters population, it is reasonable to predict that as the population ages, more nursing homes will be constructed (some of which may be located in Duluth). The population projections assume that group quarters population in Duluth will increase modestly. Historically, Duluth's population has increased almost exclusively through the building of new housing units (i.e., an increase in the household population).

> "Growth is constrained by the amount of land, either vacant or redevelopable, for housing, public facilities, and other resources. Unless the local government expands its boundaries through annexation, shifts vacant land use allocation from one category to another, such as from industrial to residential, increases densities in its development regulations, or promotes redevelopment, population growth will begin to taper off."[1]

6.2 Projections

Table 6.1 shows projections of households, housing units, and population. Vacant, residentially zoned land in Duluth is dwindling; as of July 2007, there were only about 125 acres of vacant residentially zoned land remaining in the city, with a capacity of approximately 395 housing units and ultimately generating a population of about 1,000 people (See Table 9.2 of this community agenda).

Average household size in the U.S. has continued to decline over many decades, and additional decreases in overall household size are predicted in the U.S., at least until 2010, when average household size in the U.S. is anticipated to level off at approximately 2.5 persons per unit. The projections for Duluth assume a consistent average household size of 2.53 persons.

[1] Meck, Stuart, 2006. "Projections and Demand Models." Page 504 in *Planning and Urban Design Standards*. Hoboken, NJ: John Wiley & Sons.

Table 6.1
Population, Household and Housing Unit Estimates and Projections
City of Duluth

City of Duluth	2000	2008	2013	2028	2008-2028 Net Change
Households (96.4% housing units)	8,735	11,244	11,580	12,589	+1,345
Housing Units	9,061	11,664	12,012	13,059	+1,395
Household Size (persons per unit)	2.53	2.53	2.53	2.53	--
Household Population (@ 96.4%)	22,057	28,447	28,872	31,850	+3,403
Group Quarters Population	65	65	130	600	+535
Total Population	22,122	28,512	29,297	32,450	+3,938

Source: Jerry Weitz & Associates, Inc. Housing in 2008 based on permits issued 2000-2007 in Duluth as reported by the Planning & Development Department from the decennial census count through the end of 2007 (2,429 housing units added, plus 174 units which were annexed during that time).

The Community Assessment (Technical Addendum) for Gwinnett County and Municipalities indicates in Table 1.3 that Duluth's population will increase to 27,011 persons in the year 2010, 31,307 in 2020, and 34,691 in 2030. The projections provided in this Community Agenda are higher than the 2010 population projection for Duluth as provided in the Community Assessment, due in part to annexation. The projections for Duluth's total population in 2020 and 2030, as provided in the Community Assessment, appear to be too high given the limited land supply remaining for additional residential development. There is some potential for redevelopment of mixed use projects with housing in the Buford Highway corridor and elsewhere. That redevelopment potential is assumed to be a net addition of 1,000 additional housing units.

6.3 Target Population

As noted in Chapter 2 of this Community Agenda, the comprehensive plan is an opportunity to articulate what total population size the community desires to attain. In the case of Duluth, only modest population increases were desired by a majority of the respondents to the initial visioning questionnaire (August 2007). Because the projected population is in line with those desires, there does not appear to be a need to offer policies and programs that reinforce a modest increase in population. However, it should be noted that, due to a dwindling supply of residential land, for Duluth's population to continue increasing even modestly, a concerted effort at redevelopment (including mixed use projects with residential components) will be needed.

One related issue to the target population is annexation. Polices do address future annexation (see Sec. 15.4 of this Community Agenda). The annexation policy suggests only that Duluth will consider annexations upon the petition of property owners.

Duluth has prepared annexation maps of areas that might be annexed in the future. Those maps were never adopted as a formal plan or with any expression of positive intent to annex. Table 6.2 shows acreages of areas of future annexation potential. Though the identification of these properties does not constitute a formal annexation plan, they are indicative of possible city limit expansions in the future, and they demonstrate consistency with the city's desire that only modest annexations occur in Duluth.

Table 6.2
Areas Identified for Potential Annexation
City of Duluth

Name of Annexation Area	Acreage	No. of Parcels	Probable Land Use(s)
Blue Ridge Industrial Park	251.2	89	Industrial
S. side of Pleasant Hill Road @ Bank St.	28.2	7	Commercial
Both sides of Pleasant Hill Road to Steve Reynolds Blvd.	66.3	5	Commercial
SR 120 (Duluth Highway)	64.9	6	Residential and office
Burton Farm Property (Albion Farm Road, to Peachtree Ind. Blvd. to Chattahoochee River)	224.2	109	Residential and open space
Buford Highway and Sugarloaf Pkwy.	86.9	24	Commercial
Buford Highway (south side) to Scales Road	48.4	5	Residential and commercial
Total Shown	770.1	245	

Source: Duluth Department of Planning and Development. Updated March 17, 2008 to account for recent annexations.

6.4 Housing for Seniors

The Duluth Community Agenda provides a number of policies that are written to assist with regard to this issue. In Chapter 15 (see Sec. 15.5), policies support a number of actions that are designed to help the city better respond to housing needs for seniors – these include encouraging group quarters housing and housing for seniors, such as life-cycle and mixed-generation communities, and housing for the disabled, among others.

6.5 Overcrowding of Housing Units

The list of issues and opportunities (Chapter 2) included concerns for housing overcrowding. The U.S. Census Bureau provides statistics for housing occupancy for each decennial census, but the Community Assessment does not refer to such data or indicate overcrowding is an issue in Gwinnett County. The policies (Chapter 15) call for the enforcement of housing and property standards codes, but such codes do not necessarily address the issue of overcrowding. For instance, the International Property Maintenance Code (2006) requires that every living room shall contain at least 120 square feet, and every bedroom shall contain at least 70 square feet.

Some local governments have specifically addressed concerns about overcrowding of housing units with an additional ordinance that establishes a minimum square footage per adult occupant. Local governments are allowed to adopt such ordinances by authority of Georgia's fair housing legislation: "Nothing in this article [Article 4, Fair Housing] limits the applicability of any reasonable local, state, or federal restrictions regarding the maximum number of occupants permitted to occupy a dwelling" (O.C.G.A. 8-3-205).

Duluth has already adopted such a requirement. Sec. 5-234, "Dwelling Space," of the Duluth City Code provides that each dwelling shall contain at least 650 square feet of floor area for the first occupant thereof and at least 100 square feet of floor area per additional occupant. Since this code provision appears to be adequate, no additional implementation measure is provided for in this community agenda.

6.6 Conversion of Apartments to Condominiums

It was suggested during the planning process that the conversion of apartment complexes to condominiums, if encouraged, would promote greater homeownership and also stabilize older multi-family housing in Duluth. This opportunity is one that most probably will have to play out in the private marketplace. There appears to be little by way of public policy that can be done to encourage the conversion of apartments to condominiums.

6.7 Mixed-Income Housing

When a revised, web-based survey was instituted, respondents were basically mixed in terms of whether they supported or did not support mixed-income housing. Because mixed-income housing is an important mechanism for providing affordable housing, despite considerable opposition from about half of the population, this community agenda contains a policy (see Sec. 15.5) supportive of mixed-income housing within mixed-use developments and as a part of redevelopment within the Buford Highway corridor. It is also noted that the Envision Duluth Livable Centers Initiative Study (2001) calls for mixed-income housing in the Duluth Town Center. It is believed that by limiting the area of applicability to specific areas only, such a policy will be more acceptable generally.

6.8 Hill Street Area Community Development

The “Hill Street” Community needs to be the focus of targeted community development efforts in Duluth. Duluth has acknowledged the community development needs of the Hill Street community in prior comprehensive plans. The city has applied for and implemented community development block grant programs in this area, but more efforts are needed.

7.0 EMPLOYMENT

Employment figures for municipalities are very difficult to come by, since there are few if any sources that use city limits as the unit of geography. One exception to that is the U.S. Census Bureau, which produced a special spreadsheet on employment for the 2000 Census. According to that source, Duluth had 17,218 persons employed within the city limits in 2000.

7.1 New Employment on Vacant Land

The City's GIS Manager provided acreage estimates of undeveloped land by zoning district. For nonresidential land uses, the acreages are shown in Table 7.1 below, along with assumptions that allow for estimates of future employment.

Table 7.1
Employment Estimate of Vacant Non-residential Land
City of Duluth

Zone	Acres	Square Feet Per Acre	Building Estimate (square feet)	Efficiency Ratio	Square Feet Per Employee	Estimated Future Employment
C-1	2.9	6,500	18,850	75%	1 per 500	28
C-2	117.9	8,000	943,200	75%	1 per 500	1,415
HC	28.8	8,000	230,400	75%	1 per 500	346
CPD-C	3.5	6,000	21,000	75%	1 per 500	32
O-I	22.3	8,500	189,550	75%	1 per 500	284
M-1	33.9	10,000	339,000	75%	1 per 550	462
PUD	66.3	8,000	530,400	75%	1 per 500	796
Total	275.6	--	2,272,400	--	--	3,363

Source: Square feet per acre based on Tables 4-1 and 4-2 of *Planner's Estimating Guide: Projecting Land-Use and Facility Needs*, by Arthur C. Nelson. (Chicago: Planners Press, 2004).

7.2 Employment Added through Annexation

The City's GIS Manager also provided acreage estimates of employment-generating land uses that were annexed since the census was undertaken. Between 2000 and 2007, Duluth annexed approximately 112 acres of commercial development (already constructed) and 63 acres of industrial and manufacturing development. Using the same assumptions presented in Table 7.1, Duluth annexed an estimated 1,344 employees in commercial development and 859 industrial and manufacturing employees; counting these and some marginal growth in employment of existing businesses, institutions, and industries, the current employment estimate for the City of Duluth is approximately 20,000.

7.3 Employment Projections

Employment projections are provided in Table 7.2. The vacant non-residential land shown in Table 7.1 is assumed to develop uniformly during the 20-year planning horizon.

Table 7.2
Employment Projections, 2008-2028
City of Duluth

	2000	2008	2013	2018	2023	2028
Employment	17,218	20,000	20,841	21,682	22,523	23,363

Source: 2000 employment from Census 2000 PHC-T-40. Estimated Daytime Population and Employment-Residence Ratios: 2000. Projections by Jerry Weitz & Associates, Inc.

7.4 Jobs-Housing Balance in 2028

The job-housing unit ratio in the year 2028 for the City of Duluth is shown in Table 7.3. In evaluating the jobs-housing unit ratios, it is an accepted practice to strive for a jobs-housing unit ratio of between 1.3 and 1.7, with 1.5 considered to be a relative balance.[1] One has to keep these figures in perspective, however. Balance in terms of quantifiable jobs-housing unit ratios does not necessarily imply there is a "qualitative" balance in the county or city, such that the jobs available are filled by the resident labor force.

Table 7.3
Jobs-Housing Ratio in 2028
City of Duluth

Jobs in 2028	Housing Units in 2028	Jobs-Housing Unit Ratio
23,363	13,059	1.8

Source: Calculated by Jerry Weitz & Associates, Inc. based on other tables

7.5 Area Employment

The U.S. Census Bureau publishes annually County Business Patterns and Zip Code Business Patterns. The most recent year available for the zip code data is 2005. Except for the northernmost part of Duluth, the city is within zip code 30096. However, the 30096 zip code extends well south of the city to include Berkeley Lake and well southeast of Duluth to include the Gwinnett Place Mall area (i.e., all the way to Interstate 85 and slightly beyond). The estimated employment in 2005 for zip code 30096 was 44,195 persons.

[1] Weitz, Jerry. 2003. *Jobs-Housing Balance.* Planning Advisory Report No. 516. Chicago: American Planning Association Research Department. The reason why a jobs-housing unit ratio of 1.5 is considered balanced is because there are generally 1.5 workers per housing unit.

8.0 ECONOMIC DEVELOPMENT AND REDEVELOPMENT

The citywide vision emphasizes the redevelopment of properties along Buford Highway south of SR 120, and the revitalization and redevelopment of the Historic Town Center. The Community Agenda supports the further articulation of more specific strategies for redevelopment and the appropriate options for financing that redevelopment for the Buford Highway corridor, in the Historic Town Center and other such areas. All financing options to facilitate the redevelopment of these areas should be considered.

8.1 The Historic Town Center (Downtown)

The primary effort to date by Duluth has been the redevelopment of the Historic Town Center. The city completed a Livable Communities Initiative (LCI) study and plan for the Town Center. Implementation has been successful, through construction of the town green, which serves as a central gathering place in the city. Mixed use development has been constructed abutting the town green, including commercial businesses on the ground floor with residential on upper stories. Multi-family dwellings have been constructed within walking distance of the town green. The city has invested in the Town Center redevelopment concept with the Festival Center and the new City Hall. And Duluth is actively working with private businesses to redevelop the old Duluth City Hall site, and to further enhance businesses in the downtown. There is more to do, however; Duluth needs to maintain existing businesses and attract new ones to the Historic Town Center. While its prior efforts have been laudable, there is a higher level of staffing, funding, and commitment needed by the municipality in order to ensure its Town Center expands, redevelops, and meets community expectations, consistent with its 2001 plan.

8.2 Redevelopment of South Buford Highway

This is by far the most significant economic development and redevelopment issue in Duluth, according to respondents to the questionnaire. The Buford Highway Corridor was identified as Duluth's greatest weakness, since it is dogged by a combination of blight, unattractive automotive uses, and poor pedestrian infrastructure.

There is full support in the community to redevelop Buford Highway. Duluth has taken a very positive step toward stimulating redevelopment by constructing its new public safety center in the corridor (see also later discussion in this chapter). Many efforts, described in this chapter, need to be implemented to ensure redevelopment – these tools of redevelopment are described in this chapter). First and foremost, however, Duluth needs to sponsor an update to its corridor planning efforts for south Buford Highway. Past efforts have included both consultant and staff preparation of inventories, additional regulations, and program activities. A more comprehensive subarea plan, including redevelopment programs and infrastructure requirements, needs to be prepared. The city also needs to seriously explore incentive zoning techniques, and if appropriate apply them to the corridor. Of all the subarea planning efforts called for in this Community Agenda, south Buford Highway should be the first and highest priority.

8.3 Expansion of Medical District

The health care industry is one of the strongest growing economic sectors. Part of the city's overall economic development strategy is to foster a healthy and expanding medical center at Pleasant Hill Road and McClure Bridge Road, where the existing hospital is located. As noted in the discussion of character areas, the combination of vacant land and a vacant shopping

center provide the opportunity to make this important intersection in Duluth an identifiable medical center district, with its own unique identity. Programs and efforts associated with this objective could contribute substantially to growth of the city's economic base. Additionally, this Community Agenda calls for preparation of a more detailed subarea plan that will bring together the land use, urban design, and economic development/redevelopment objectives of this Community Agenda into one coherent overall strategy and implementation program.

8.4 Interchange Redevelopment Area

As noted in Chapter 3 (Vision and Character Areas), there is an opportunity to promote new development or redevelopment surrounding the new grade-separated interchange of Buford Highway and Pleasant Hill Road. At this intersection of two major arterials in the center of the city, there is an opportunity to focus more intensive, urban development that will enhance the economic base of the city. Survey respondents articulated concerns about going to greater heights with buildings, and generally disliked the suggestion of a more "urban" feel in suburban Duluth. However, this interchange area is the most acceptable place in the city to concentrate more intense employment with taller buildings. The details of development or redevelopment in this interchange area are not well articulated, beyond the basic intentions established for the character area in Chapter 3. Duluth needs to prepare a subarea plan for this interchange that will bring to consensus the community's desires and objectives for this area.

8.5 Establishment of a Redevelopment Agency

Duluth can appoint an urban redevelopment agency, or a downtown development authority, with appropriate duties and responsibilities as provided under applicable provisions of Georgia law, to spearhead redevelopment efforts.

8.6 Incentives for Redevelopment

Questionnaire results reveal that citizens support tax subsidies or incentives in order to promote redevelopment. Tax breaks for businesses and industries at the local level may be tricky, given constitutional provisions for the fair and equitable taxation of all properties in the city. It may be worthy in light of the community's desire to further explore the prospect of tax incentives for redevelopment. Another way of providing incentives for redevelopment, in addition to ensuring the appropriate infrastructure exists, is to shorten and lessen the costs of the redevelopment process. Duluth could expedite redevelopment proposals that are consistent with its redevelopment objectives. The city should adopt incentive zoning techniques, as have been applied in the Gwinnett Place Community Improvement District and other places in Gwinnett County. The city can also waive, reduce, or otherwise subsidize the various fees associated with the development process, such as development permits, soil erosion control fees, building permits, inspections, certificates of occupancy, and business registrations.

8.7 Shopping Center and other Retail Vacancies

There is concern in Duluth that existing vacant retail spaces, such as the shopping center across McClure Bridge Road from the hospital fronting Pleasant Hill Road, will become a blight on the community. Vacant, unused spaces provide a negative image in the community. Duluth, like other communities north of Atlanta, may be "over-retailed" in the sense that there is more retail space than the local or regional market can support. Some residents have asked the city to consider ways in which future zoning for retail use could be curtailed until existing shopping

centers and vacant retail stores are re-occupied. Vacant shopping centers are also an opportunity to implement innovative reuse opportunities and redevelopment concepts.

Duluth at one time considered an additional ordinance that would address this issue. That ordinance was not passed, but it may be appropriate for the city to reconsider an ordinance that limits property owners from deliberate vacancies (such as leasing to large-scale retailers to avoid competition, and other appropriate requirements.

8.8 Staff Devoted Exclusively to Economic Development/Redevelopment

At the time of this writing, Duluth's Department of Planning and Development did not have a full-time professional engaged exclusively in economic development and redevelopment activities. After the conclusion of the planning process, Duluth's City Council approved a new position, economic development director, who will strengthen the city's staffing for economic development and revitalization.

8.9 The Role of Home-Based Businesses

The city's zoning ordinance allows for home occupations. Over time, with changes in the national and global economy, more and more people are able to work from home and/or establish home-based businesses. This small segment of the economy should not be overlooked in Duluth's economic development efforts. City regulations can provide flexibility for the establishment of home occupations while still maintaining peace and quiet in Duluth's residential neighborhoods.

8.10 Infrastructure Requirements for Economic Growth

In order to ensure the continued development of the city's economy, there is a need to determine whether sufficient water and sewer capacity will be available at the time such development occurs or is expected to occur. In this sense, Duluth must work with Gwinnett County's public utilities department to ensure that infrastructure needs to serve expanded industry and commercial development in Duluth can be adequately served with water and sanitary sewer.

A key aspect that must be addressed in the near future is the lack of sewer along parts of south Buford Highway. Since Gwinnett County is the sewer provider, Duluth must work cooperatively with the county to plan and program the extension of sewer to the remaining parts of the corridor. Redevelopment depends on it. Secondly, on-site stormwater management will be required for redevelopment to occur in the Buford Highway corridor. Duluth needs to conduct an engineering study that will inventory existing drainage conditions in the corridor and plan a series of regional detention and water quality enhancement facilities so that new development can be attracted to the corridor and redevelopment efforts are not stymied by high private costs to comply with regional state, and federal water quality regulations. The advance provision of stormwater detention facilities serving multiple redevelopment sites in the Buford Highway corridor should be one of Duluth's highest priorities, second only to ensuring that sanitary sewer is extended there.

8.11 Education and Skills Development of the Labor Force

Quality public and private schools are an important component of the fabric and attributes of a successful community. In addition to their role in the education of young people, their siting and

integration into the community can position them as important resources for not only their individual neighborhoods, but for the community at large.

8.12 Leveraging Private Reinvestment with Municipal Capital Projects

With the location of the new public safety complex on Buford Highway, Duluth has not only made a wise choice from the standpoint of a central location, but it has also taken the opportunity to use its investment in civic buildings to strategically leverage and enhance private reinvestment in redevelopment areas.

8.13 Investment by Ethnic Communities

During the planning process, efforts were made to engage ethnic communities, which have grown remarkably in significance and numbers over the past several years. Outreach programs included an effort to translate the community visioning survey into different languages and a proposal to hold special focus group sessions with ethnic groups; neither of these proposals was implemented, however, due in part to change in city staffing in the planning and development department and also some reluctance on the part of ethnic groups to participate. People of different ethnic backgrounds have moved into Duluth, especially Koreans, who are building commercial shopping centers and providing other contributions to the community. The objectives of investors in the ethnic communities should be determined and Duluth should encourage the channeling of those resources in ways that fit with the overall goals of the community.

CHAPTER 9
LAND USE

A set of maps and regulatory provisions establish the overall framework for land use policy and regulation in the City of Duluth. It is important that the citizens and developers understand clearly the role that each component plays in the city's land use framework:

9.1 Existing Land Use Map

This map (see this Chapter) is descriptive only; it shows how land is used inside the city limits. It does not in itself suggest policy or regulate land. It is used to inform character area delineation and land use planning efforts.

9.2 Future Development Map

This map (see Chapter 2) provides broad-brush policy guidance; it is required by the state's administrative rules for local planning. Consistent with the intent of the state planning rules, the Duluth Community Agenda contains a map of character areas, called the "future development map," which has been revised to take into account public input received during implementation of the community participation program (including visioning workshops). The future development map emphasizes character and design, as opposed to recommendations for specific land uses.

9.3 Future Land Use Plan Map

Under the state administrative rules for local planning, a future land use plan is optional. However, for local governments that have adopted zoning ordinances, a future land use plan is often considered to be essential in guiding rezoning decisions, which must consider the land use compatibility of proposed zoning actions with adjacent and nearby land uses. This community agenda provides a future land use map (see this Chapter).

9.4 Zoning Districts on the Official Zoning Map

The official zoning map is regulatory in nature – that is, it designates each parcel within a zoning district and therefore limits the uses to which each parcel can be used. Zoning districts in Duluth include single-family residential districts of varying lot sizes, high density residential districts, planned development districts, office-professional districts, neighborhood and general commercial districts, and light industrial districts. The official zoning map can be changed either upon successful application by a property owner (after review by the Planning Commission and approval by the Mayor and City Council), or by the Mayor and City Council in a more comprehensive, legislative process of readopting or amending the zoning ordinance and official zoning map.

9.5 Existing Land Use

Table 9.1 shows acres of existing land use in the years 2000, 2003, and 2007. Also, an existing land use map (2007) is provided on the following page. Vacant, residentially zoned land is summarized in Table 9.2 for purposes of estimating future population potential.

Table 9.1
Existing Land Use, 2000, 2003, and 2007
City of Duluth (Acres)

	Acres			Percent
Existing Land Use	**2000**	**2003**	**2007**	**2007**
Agriculture	39.4	39.4	0	--
Low Density Residential	n/c	1,351.8	1,565.5	24.3%
Medium Density Residential	n/c	698.2	890.5	13.8%
High Density Residential	n/c	556.0	410.0	6.4%
All Residential (Residential Subtotal)	2,434.8	2,606.0	2,866.0	44.5%
Public / Institutional	262.6	282.6	343.3	5.3%
Office / Professional	136.3	137.5	225.7	3.5%
Commercial / Retail	378.0	584.7	529.6	8.2%
Mixed Use	-	-	55.0	0.9%
Light Industrial	229.0	285.9	167.1	2.6%
Heavy Industrial	131.6	134.3	198.5	3.1%
Transportation / Communication / Utilities	38.7	47.9	86.2	1.1%
Rights-of-Way	786.0	798.6	944.3	14.7%
Parks / Recreation / Conservation	512.3	520.3	614.9	9.6%
Undeveloped	999.8	539.2	400.9	6.2%
Total	**5,948.5**	**5,976.4**	**6,431.5**	**100%**

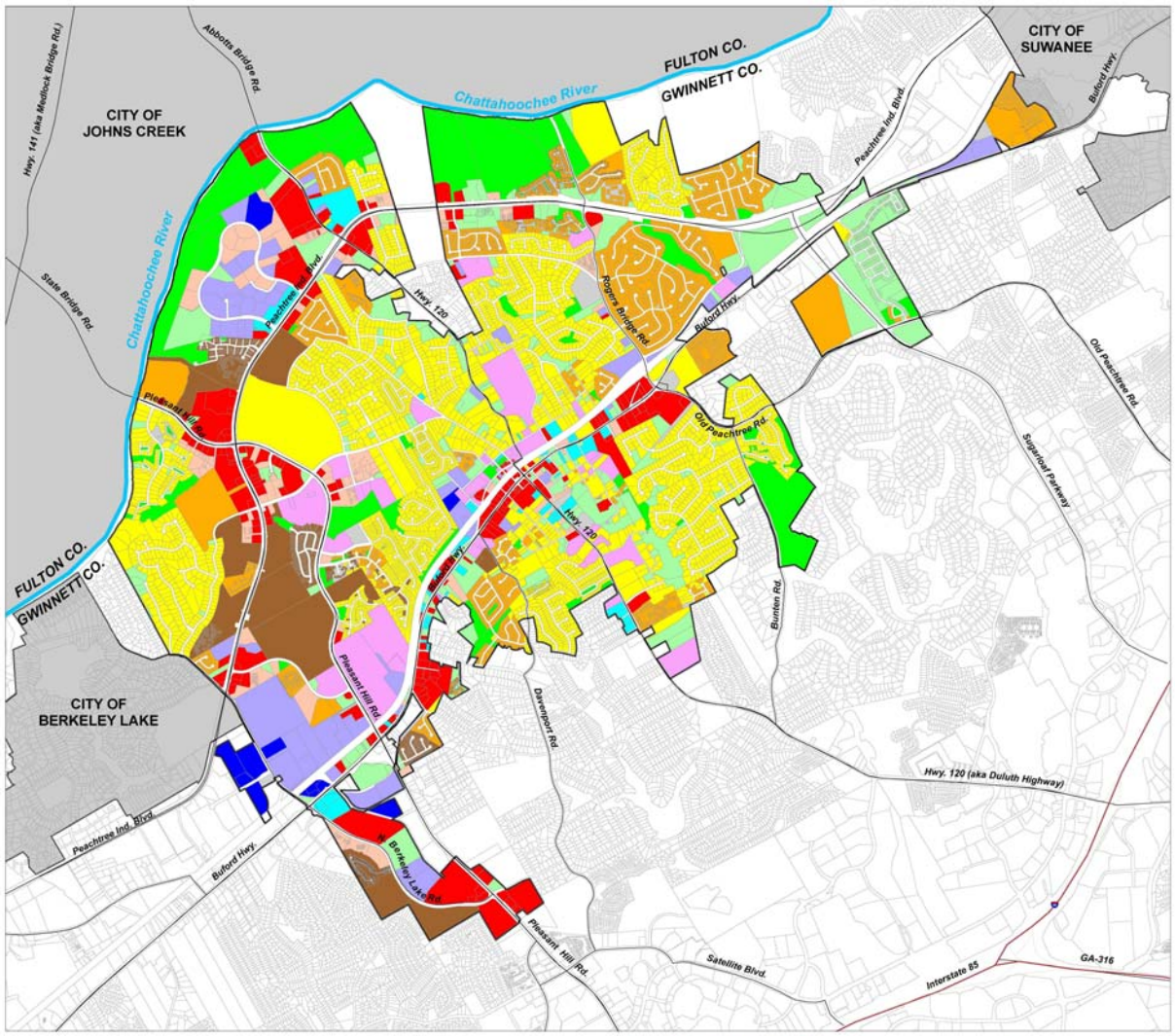
Source: City of Duluth Department of Planning and Development, July 2007.

Table 9.2
Residentially Zoned Vacant Land by Zoning District
City of Duluth 2007

Zoning District	Acres Vacant	Density Zoned (predicted units per acre)	Total Housing Units	Persons Per Unit	Future Population (full occupancy)
R-100	88.0	2.42	213	2.75	586
R-75	8.8	3.63	32	2.60	83
RM	20.4	6.0	122	2.40	293
PRD	5.1	4.5	23	2.65	61
CPD-R	2.8	1.7	5	2.75	14
Total	125.1	3.2	395	2.53	+1,037

Source: Vacant acres from City of Duluth Department of Planning and Development, July 2007.

2007 Exisiting Land Use Map



Existing Land Use Categories

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial/Retail
- Public/Institutional
- Light Industrial
- Heavy Industrial
- Office/Professional
- Transportation/Communication/Utility
- Mixed Use
- Parks/Recreation/Conservation
- Undeveloped

N
W E
S

1 inch equals 800 feet

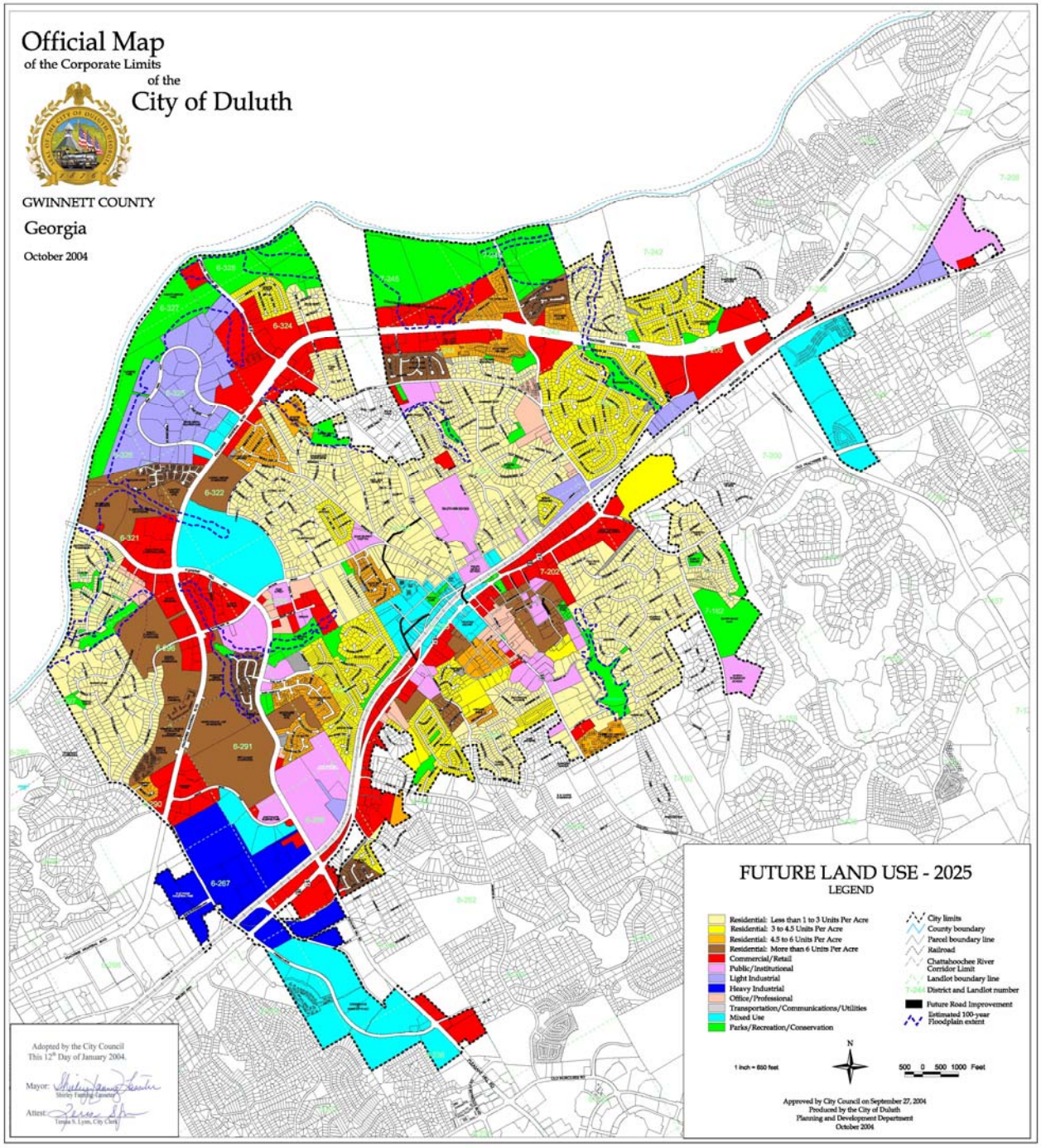
Map drafted July 16, 2007

Produced by City of Duluth

GIS data sources:
Atlanta Regional Commission
Gwinnett County
City of Duluth

9.6 Future Land Use

A future land use plan map is provided and described in this section.



Residential, 1 to 3 Units per Acre

Low density (1-3 units per acre) residential development is a predominant land use in Duluth. Several subdivisions in the center of the city, between Peachtree Industrial Boulevard and Buford Highway, are classified as low density residential. Neighborhoods east of Buford Highway and north of SR 120 are also included in this category, as well as the Sweetbottom Plantation subdivision along the Chattahoochee River south of SR 120. The vast majority of property included in this category is already developed.

Residential, 3 to 4.5 Units per Acre

Nearly all of the land in this category is already developed. Neighborhoods in this density category are located in the following major areas of the city: the northern portion of the city, north and south of Peachtree Industrial Boulevard, in the center of the city northwest of Buford Highway south of the Duluth Town Center, and behind commercial properties fronting on the east side of Buford Highway.

Residential, 4.5 to 6 Units per Acre

This residential category is located in various parts of the city but primarily along Peachtree Industrial Boulevard north of Pleasant Hill Road. Development in this category consists of detached single-family homes on small lots and some attached units such as townhouses. There is some redevelopment potential in an existing neighborhood near the center of the city along Knott Street, Fox Street, and Hall Circle.

Residential, 6 Units or More per Acre

There is little vacant land in this land use category. The vast majority of development in this category is located along Peachtree Industrial Boulevard south and west of Pleasant Hill Road and consists of apartment and condominium complexes at densities of approximate 12 units or more per acre. Existing apartment complexes in this area include Wesley Plantation, Howell Station, Bradford Creek, Berkeley Landing (formerly Summer Chase), Northwoods Lake, and Tree Summit. Another concentration of apartment development exists north of Pleasant Hill Road west of Peachtree Industrial Boulevard, including River Oaks, Plantation Trace, and Hampton Bridge. Townhouse and condominium developments are also classified in this category and include Berkeley Woods, Berkeley Crossing, Charleston Bay, Regency Park, Woodhaven, and Chattahoochee Cove.

Public-Institutional

This category includes state, federal and local government uses, and institutional land uses. Government uses include city halls and government building complexes, police and fire stations, libraries, post offices, schools, etc. Institutional uses include colleges, churches, cemeteries, hospitals, etc. While these public and institutional uses are sometimes located, appropriately, within residential neighborhoods, they are usually located with access to major thoroughfares. This designation on the future land use plan map corresponds with existing public and institutional uses in Duluth. Until the last decade, Duluth had surprisingly few public-institutional uses within the city limits. There are several schools located in the city.

Office-Professional

Only small amounts of land in the City of Duluth are designated as office-professional. Those that do exist are predominantly developed and located between commercial and residential areas.

Transportation, Communication and Utilities

This future land use plan map category corresponds with major transportation routes and railroad right-of-way in Duluth.

Commercial

This future land use plan map category corresponds with land dedicated to non-industrial business uses, especially retail sales and services. Offices are also included. Commercial uses in Duluth follow both a linear and an activity center pattern along major roads and at major road intersections. Nodes of commercial development are located at the following intersections:

- Pleasant Hill Road and Peachtree Industrial Boulevard, extending south to Howell Ferry Road. The Hudgens Property comprises the fourth (NE) quadrant of this activity center and is currently undeveloped. The Hudgens property, upon its development, will make this is the largest activity center in the city.

- Abbotts Bridge Road (SR 120) and Peachtree Industrial Boulevard, which is developed at all four quadrants.

- A commercial activity center emerging in the northeast portion of the city along Peachtree Industrial Boulevard where it nears Buford Highway. Sugarloaf Parkway leads into this area, and planners anticipate large-scale retail development within this northern commercial activity center.

- A smaller, existing commercial (neighborhood retail) activity center at the intersection of Peachtree Industrial Boulevard and Summit Ridge Parkway.

- A commercial activity center at Pleasant Hill Road and North Berkeley Lake Road.

In addition to this activity center pattern of commercial use, Buford Highway (U.S. 23 and SR 13) is a commercial corridor throughout most of the city limits. Almost all of the properties fronting on Buford Highway are zoned for commercial uses. The northern portion of Buford Highway consists of more recent commercial development. The Peachtree Industrial Boulevard corridor might be considered as a linear pattern of commercial uses, although it is not a continuous commercial corridor because commercial uses are interrupted by residential uses.

Mixed Use

This category is for multi-use and mixed-use sites. The primary concentration of mixed use is in the Historic Town Center, according to the LCI Master Plan (see figure in Chapter 3):

Industrial

Industrial uses are divided into "light" and "heavy" in terms of both the future land use map and the official zoning map. The vast majority of industrial uses are concentrated in two locations. One is the River Green Business Park west of Peachtree Industrial Boulevard south of Abbotts Bridge Road (SR 120) and north of Pleasant Hill Road. This area is fully developed with light industrial uses along River Green Parkway. A concentration of heavy industrial uses exists between Peachtree Industrial Boulevard and Buford Highway south of Summit Ridge Parkway and east of Pleasant Hill Road. Light industrial development will extend this heavy industrial area east along North Berkeley Lake Road. Other, scattered, light industrial land uses exist in the northern part of the city along the railroad paralleling Buford Highway.

Park/Recreation/Conservation

This future land use plan map category corresponds with the flood plains along the Chattahoochee River and streams and creeks in the City, as well as land dedicated to active or passive recreational uses. These lands may be either publicly or privately owned and may include playgrounds, public parks, nature preserves, wildlife management areas, national forests, golf courses, recreation centers, or similar uses.

In Duluth, this land use classification includes dedicated open spaces such as city parks and the Chattahoochee River National Recreation Area, as well as water bodies and lot remnants (which may or may not be parkland) within subdivisions.

9.7 Appearance and Impact of Large-Scale Development

During the process of preparing this Community Agenda, the City of Duluth engaged a planning consultant to analyze the sites containing existing large-scale (i.e., 75,000 square feet or more in a building) development, and analyzing the various impacts associated with such large-scale development. That study was undertaken in large part in response to community concerns about the location of a Wal-Mart store on the north side of the city. The study effort was completed in approximately 90 days and the Duluth City Council adopted a new "large-scale buildings" ordinance which addresses the architecture and site design of new large-scale development and addresses other impacts.

9.8 Protection of Neighborhoods

The protection of existing residential neighborhoods takes on added importance as infill development becomes more likely, and as redevelopment efforts occur. This objective should be thoroughly considered when revising the city's zoning ordinance.

9.9 Compatibility of Infill Development

Duluth should prepare and adopt design standards and guidelines for compatible residential infill development. These guidelines should ensure that residential infill development, including "teardowns" are compatible with the architectural design, density and site characteristics of the surrounding neighborhood.

9.10 Homeowner Group Participation in Land Use Petitions

Considerable discussion has ensued during the planning process as to whether a more formalized role should be given to homeowner groups in Duluth with regard to rezoning, special use permit, and other local land use decision-making processes. Generally, questionnaire results show strong support for instituting a more formalized process. For instance, Fulton County provides a community information meeting in advance of public hearings before the Planning Commission and City Council in rezoning matters. Discussion with developers who participated in a roundtable discussion (a second phase public participation opportunity) on the development process in Duluth also expressed receptiveness to such an idea; adding another meeting might seem to lengthen the process, but working out potential disagreements between developers and neighborhood interests prior to public hearings can actually expedite the decision.

9.11 Consistency between Comprehensive Plan and Land Use Decisions

One of the more important issues addressed by the Planning Commission was whether the Comprehensive Plan should remain merely a guide to decision making, or whether rezoning decisions should be required to be consistent with the future land use plan map and comprehensive plan policies. Input during the community participation process revealed significant support for making the plan binding on future development decisions.

After considerable discussion, it was decided (with guidance from the Planning Commission as Steering Committee) not to include a policy supporting consistency between the comprehensive plan (including future land use plan map) and rezoning and other land use decisions. There are at least four reasons for this. First, no comprehensive plan, including the future land use plan map, is ever perfect, and any errors, omissions, or short-sightedness on the part of the plan would then pose a potential obstacle to what might be sound, alternative development proposals. Secondly, the plan is one-dimensional in the sense that it offers only one future vision (and land use recommendation for individual properties), and if consistency was required, it would not allow (without amendment) other viable, alternative for land use to those designated on the future land use plan map.

Third, a consistency requirement would necessitate a plan amendment process, and for proposals inconsistent with the plan, there would now be two applications filed (one to amend the plan and one for the rezoning or other action). This would mean additional staff resources to process additional applications, and more time spent by the Planning Commission and City Council to consider such additional requests. Fourth, experience via other local governments with consistency requirements of this sort reveals that when a proposal is inconsistent with the future land use plan map or comprehensive plan generally, the person or developer proposing the inconsistency simply files for a change to the future land use plan map or plan generally, and, more often than not, such proposals are approved. This demonstrates some of the futility of the consistency requirement and underscores the first and second points against pursuing a consistency requirement, i.e., that no plan is ever perfect and that viable alternatives to the plan are likely to exist and be approved.

9.12 Preparation of Subarea or Refinement Plans

The work program calls for Duluth to prepare and adopt small area studies and plans, starting with the south Buford Highway corridor. The Buford Highway redevelopment corridor has been

identified as the highest priority for more focused study and refined land use planning. Such studies should consider, as appropriate: redevelopment issues and opportunities; appropriate development standards and types; the impact of planned transportation improvements (including transit); security and public safety (e.g., crime prevention through design); the provision of workforce housing; the provision of mixed-use, live-work designations and mixed-income housing developments.

9.13 Rewrite of Zoning Ordinance

One of the most important efforts to implement the Comprehensive Plan is to comprehensively rewrite the city's zoning ordinance. That work is already underway at the time the Community Agenda was being revised for final adoption. Such rewrite efforts must comprehensively address the recommendations in this Community Agenda (for example, use of incentive zoning techniques to spearhead revitalization of the Buford Highway Corridor), as well as those recommendations in the Envision Duluth Livable Centers Initiative Study and Report (Plan) that are still considered valid today.

10.0 URBAN DESIGN

Planning for improved urban design includes an assessment of the city's existing urban design, an inventory of urban design initiatives found within adopted planning documents, a constructive critique of the city's adopted urban design policies, and articulation of new urban design policies and programs.

10.1 Streetscapes

The streetscape encompasses all of the elements found along roads and streets in the city. These elements may include street trees, benches, waste receptacles, sidewalks, crosswalks, bike lanes, bike racks and landscape areas. Street furniture refers to streetscape elements such as waste receptacles, benches, and pedestrian scale lighting. These elements help create an enjoyable and functional urban streetscape. A successful streetscape will combine these elements applying a consistent style, quality and material throughout the town center. Developing a cohesive and attractive streetscape in Duluth will contribute to community identity while providing a long-lasting and functional pedestrian area for citizens and visitors. At this time, efforts to improve streetscapes are concentrated in the downtown (historic town center).

10.2 Open Spaces

Open spaces are land areas which are not occupied by buildings or other man-made improvements. These spaces can include actively used areas like parks or plazas and unused areas like adjacent wooded lots. These areas can provide social gathering places and shaded areas for cooling the urban microclimate.

10.3 Gateways and Wayfinding Systems

Gateways refer to the providing clear delineation of entrances to downtown or the community generally. Such signage can be used to help visitors locate the town center, local attractions, and public parking. Directional signage will be especially important as the downtown redevelops.

Businesses must have adequate advertising to attract motorists traveling through the city. A system of tasteful community directional signage would help downtown merchants gain more business. The improvement of "gateways" and initiation of a formal "wayfinding" system, as discussed in this chapter (see also the LCI study) would also help stimulate business in the downtown. Additionally, the City of Duluth engaged a consult to develop a "branding" product that will help to meet these objectives.

10.4 Urban Design Assessment for Gateways and Streetscapes

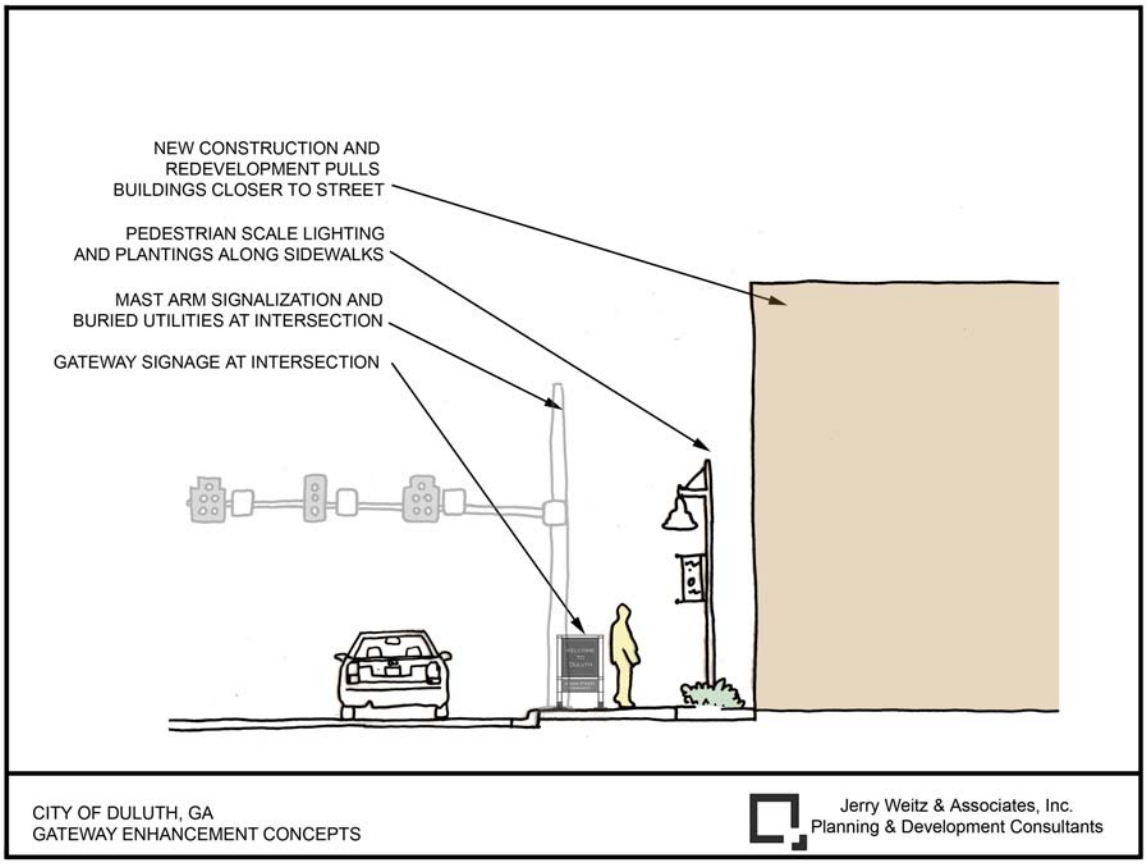
The focus of this urban design assessment is on strategic gateway areas and related streetscapes that mark entry into the City of Duluth. Several key elements were considered regarding development of potential gateways, including streetscape, signage, definition of public space and adjacent land use. The four major gateway intersections identified are:

- Buford Highway & West Lawrenceville Street
- Buford Highway & Pleasant Hill
- Buford Highway & Old Peachtree Road
- Pleasant Hill & McClure Bridge Rd/Howell Ferry Road

There are many opportunities for development of gateway features at each of the four locations. Each gateway has the potential to create a sense of arrival into the City of Duluth, marking a clear departure from other areas in the county. Distinctive entries can enhance city image and civic pride, and can also be accomplished without sacrificing the existing sense of place inherent in a historic community such as Duluth.

Ultimately, a gateway area should project local character and identity; in other words, the goal is to “make a place” that is functional, attractive and unique. A successful prototype for such place-making is the downtown revitalization and creation of the Town Green, Festival Center and Amphitheater, and new City Hall complex. Emulating the design and scale of this type of project along Duluth’s major corridors, as appropriate, could produce very inviting and distinct gateways for the City of Duluth. Recommendations for gateways are also included in the LCI study.

Gateway enhancement may include the development of streetscape facilities such as widened sidewalks, landscaping and street trees, a consistent and well-designed citywide system of signage, consolidated intersection traffic lighting, and burying overheard wires when possible. Increased safety and comfort for pedestrians are also encouraged through well-marked crosswalks where appropriate, enhanced pedestrian lighting, and improved bus stops, among other things.



Appropriate adjacent land uses can also support the enhancement of gateway areas. For example, high quality mixed use commercial, office and residential developments accommodate both vehicular and pedestrian traffic and, therefore, feature buildings pulled to the street with a strong relationship with the public realm. In this scenario, an attractive streetscape is very important to private development in the scenario and can result in sponsorship of potential gateway amenities. The incorporation of green space into a high-density mixed use development at gateway intersections can also enhance the private and public experience of that area.

One area of particular challenge and opportunity is Proctor Square at Buford Highway and West Lawrenceville Street. A mixed use redevelopment with a strong retail component has the potential to recreate this intersection and provide a visual and, possibly functional, connection between this area of Duluth and the revitalized downtown. Along with a robust redesign of the streetscape and creation of green space to mirror that of the Town Green, the Proctor Square area could become a landmark gateway area, and perhaps a kind of “Downtown South.” Reinvestment in this quadrant of Buford Highway also has the potential to enhance adjacent neighborhoods that are currently experiencing decline.

In a similar vein, the vacant and undeveloped properties located at Pleasant Hill and McClure Bridge Rd/Howell Ferry Road present a unique opportunity to further enhance the intersection as a gateway area. Future development could support the existing features of the medical

center landscape and signage with the addition of increased pedestrian-oriented streetscape elements.

10.5 Function and Aesthetics of Commercial Areas

Duluth, during the course of preparing this comprehensive plan, also had a planning consultant conduct an independent study and recommendations for improving the aesthetics of large-scale buildings (i.e., those with square footages of 75,000 square feet or more). That study resulted in adoption of a large-scale buildings ordinance which regulates aesthetics of such buildings.

10.6 Development and Enhancement of Railroad Theme

Duluth will continue to consider the extent to which the city's vision and plan will develop with a railroad design theme. Preliminary input from the citizenry suggests there is receptiveness to this idea.

11.0 COMMUNITY FACILITIES AND SERVICES

11.1 Public Safety

This general category includes crime, law enforcement (sheriff, police, courts, corrections) fire protection and rescue operations, emergency medical services, 911, emergency management and animal control.

Duluth has its own police department and municipal court. The municipal court handles traffic violations and other city code violations within the city limits. Gwinnett County provides fire and emergency management services to the residents of Duluth, per intergovernmental agreement (see Chapter 13) and it is funded through a special tax district. Although the city has its own police force and department, it continues to be served by the Gwinnett County Sheriff's Department which provides certain countywide law enforcement services.

The relocation of the Duluth Police Department to a new Public Safety Facility on Buford Highway (South) at Davenport Road has provided a large (43,000 square foot), modern facility that will meet the needs of the Police Department for many years to come. The location of this facility was strategic as well as based on Buford Highway being a central dispatching point in the city, geographically. Siting the new public safety facility on Buford Highway (South) will provide a possible stimulus to redevelopment in the Buford Highway Corridor as well as along Davenport Road.

11.2 Health, Education, Welfare, and Social Services

This category of community facilities and services includes hospitals, nursing homes, public welfare programs, public and private school systems and institutions of higher learning, libraries, and public cemeteries. Public health facilities are provided through Gwinnett County, as are hospitals and libraries. Schools are provided by the Gwinnett County Board of Education and numerous private schools. Generally, the City of Duluth is not engaged in facilities and services of this type. Duluth will rely on churches and other private organizations, and to a lesser extent Gwinnett County, to meet citizens' needs for social services, such as temporary housing, emergency shelter, guidance and counseling.

11.3 General Administrative Facilities

This category includes administrative offices for city and county personnel, including city clerk, city management, building inspections, planning and zoning, and business registration among others. Duluth, this year, opened its 43,000 square foot city hall on the square in the town center. The city also has a precinct on Main Street consisting of 2,442 square feet.

11.4 Utility-type Operations

Utility operations include solid waste collection and disposal, water systems, sewer systems, and stormwater management. Duluth adopted a resolution on September 7, 1993, adopting the countywide soild waste management plan.

A stormwater utility may be a viable approach to correcting existing storm drainage problems, maintaining stormwater detention ponds, and enhancing stormwater management (and, therefore, water quality). Establishment of a stormwater utility and user fee is needed to provide

funding to correct existing storm drainage problems, maintain stormwater detention ponds, and enhance stormwater management. Development of a stormwater utility is included in the city's short-term work program. Because such a program is a huge and expensive undertaking, and needs to be done on a watershed basis rather than according to a single political boundary, it is anticipated that intergovernmental coordination with Gwinnett County will be the key to implementation.

11.5 Park, Recreation, and Cultural Facilities

The City of Duluth owns six parks, including: Roger's Bridge Park, Scott Hudgens Park, W.P. Jones Park, Taylor Memorial Park, Church Street Park, and Bunten Road Park. Major existing facilities (buildings) include the festival center in Duluth Town Center (8,000 square feet), a large building at Bunten Road Park (28,054 square feet), and small buildings at tennis courts.

Land is scarce in Duluth, and there are few large, contiguous parcels of land remaining within the present corporate limits that are suitable for the development of parks. Such limits on land will require Duluth to think more innovatively about adding to its parks and recreation land inventory. Such innovations might include, for instance, using power line and sewer easements for trails, designating "community greens" within developed areas, reclaiming space behind shopping centers or within shopping center parking lots, installing gardens on top of buildings, and considering community-based asset management strategies, among others.

Duluth needs to find a new home for the history museum. The city is considering purchasing the Strickland House, preserving it as a historic building, and making it a railroad museum or the new home of the current history museum. If this alternative cannot be implemented, the city will need to find another suitable location for the history museum and railroad museum (if it decides to pursue that recommendation).

The city in 2007 completed a Parks and Recreation Master Plan (August 27, 2007), which is adopted by reference in this Community Agenda. It is noted here that the Parks and Recreation Master Plan provides for a higher population projection in 2015 (34,065) than is specified in this Community Agenda for Duluth in the year 2028 (32,450). This means the master plan provides for facilities that will meet Duluth's needs through the year 2030 and perhaps beyond. The Parks and Recreation Master Plan is consistent with the vision and policies of this Comprehensive Plan in many respects, too numerous to mention here. However, it is particularly noteworthy that the master plan evaluates and recommends how to improve Chattahoochee River corridor access at Rogers Bridge Park, including restoration of Rogers Bridge across the river for pedestrian and bicycle access purposes. The plan also indicates that several greenway trails are currently in various stages of planning, including the Rogers Bridge Bikeway, the Western Gwinnett Bikeway, and the Chattahoochee River Greenway.

The plan's analysis of National Recreation and Park Association (NRPA) standards in relation to Duluth's current supply indicates that Duluth currently has an adequate supply of active sports land and facilities, but the current quantities of passive land and facilities are below NRPA Standards.

11.6 Transportation and Public Works

The city's modern, recently constructed public works building consists of 9,225 square feet.

11.7 Municipal Facility Needs and Capital Programming

Duluth has done an outstanding job of meeting its future capital facility needs, with construction of modern city government buildings, including city hall, the public safety center, and the public works facility. In addition, improvements are planned for Duluth's park and recreation facilities. One remaining facility Duluth needs to explore is a new home for the Duluth History Museum, since it will ultimately be displaced by downtown redevelopment north of the Town square.

12.0 TRANSPORTATION

An accessible, efficient and safe transportation network is a vital component of the City's general well being. The transportation network enables residents to travel to work, receive services, obtain goods, and interact with others. Transportation is especially crucial in the area of economic development where access to transportation facilities plays a major role in a prospective industry's decision to locate in a particular area.

People travel along the streets of Duluth for a variety of trip purposes. Local trips satisfy needs within communities and between neighborhoods and commercial areas. Trips to and from Duluth are made by those who work elsewhere and/or those who choose to satisfy a portion of their shopping and recreation outside the City. Longer distance trips through the city are made by those who live and work beyond the City. The transportation system must provide mobility for all of these trips purposes.

Duluth is responsible for the maintenance, resurfacing, and repair of local streets that are not the responsibility of Gwinnett County. Improvements of state and federal routes are predominantly funded through federal transportation budgets.

The Countywide Community Assessment provides much of the background detail on existing conditions of the road network and other travel modes in Gwinnett County, including Duluth.

12.1 The Transportation-Air Quality Connection

Duluth is in the metropolitan Atlanta non-attainment area with regard to nationally designated ambient air quality standards (Federal Clean Air Act). In metro Atlanta, 52 percent of nitrogen oxides (NOx) emissions (one of the pollutants that, with sunlight and heat, create ozone, a primary component of smog) come from on-road mobile sources: cars and trucks. As such, local land use and transportation policies of the City are expected to comply with regional transportation plans and work toward implementation of the State Implementation Plan. Violations of air quality standards are regional, but all local governments need to investigate transportation-related sources that contribute to air quality non-attainment and propose and implement plans, programs, and regulations that will help implement regional and State plans for removing non-attainment status. Gwinnett County and Duluth's transportation plans emphasize multi-modal transportation access over widening major thoroughfares, and they are therefore consistent with the need to improve air quality in the region.

According to the Atlanta Journal-Constitution (March 24, 2008), metro Atlanta failed to meet the federal Clean Air Act requirement for ground-level ozone. The U.S. Environmental Protection Agency informed the state of Georgia it failed to meet the compliance deadline, and that the region's status has been reclassified from "marginal violator" to "moderate violator." Georgia will have to submit, by the end of 2008, a plan to comply with the standard. The region will have to meet tougher limits on ground-level ozone by 2013. Hence, there are air quality challenges ahead for the region, and moving toward alternative modes to the automobile by the City of Duluth will ensure that the city contributes progress toward meeting regional, state, and federal air quality objectives and requirements.

12.2 Regional Transportation Plan (RTP)

The Atlanta Regional Commission, the federally designated Metropolitan Planning Organization for Atlanta and the surrounding eighteen counties, has identified existing and future capacity needs for Gwinnett County through the Mobility 2030 Regional Transportation Plan. The Regional Transportation Plan (RTP) is the Atlanta Regional Commission's long-range plan which includes a balanced mix of projects such as bridges, bicycle paths, sidewalks, transit services, new and upgraded roadways, safety improvements, transportation demand management initiatives and emission reduction strategies. By federal law, the RTP must cover a minimum planning horizon of 20 years and be updated every four years in areas which do not meet federal air quality standards. A Transportation Improvement Program (TIP) is developed annually based on the long-range RTP.

Given the lack of adequate funding to improve transportation in the Atlanta Region, the Atlanta Regional Commission has moved toward a strategy that recommends focusing the limited transportation funds on a Regionally Strategic Transportation System, including interstate freeways and highways, existing and future regional transit service, and important principal arterials and other facilities that provide continuous, cross-regional mobility (Source: Sec. 7.7.5, Countywide Community Assessment, Technical Appendix).

12.3 Gwinnett County Comprehensive Transportation Plan

Gwinnett County has prepared a countywide master transportation plan in coordination with its new comprehensive plan. The details of that plan were not fully available at the time of this writing. The countywide plan fully addresses the road network serving Duluth, and improvements recommended over the short-term and long-term are articulated in that plan.

12.4 Congestion Management System

The Congestion Management System (CMS) is a systematic process used by the Atlanta Regional Commission for analyzing and managing congestion by providing information on system performance. This, in turn, provides the agency and government entities with opportunities and strategies for alleviating congestion and maximizing the efficiency of the transportation system. In order to manage a transportation system, a CMS provides continuous monitoring and evaluation of travel conditions in the region. The monitoring system relies on a variety of tools of evaluation, provides feedback regarding congestion hotspots, and suggests potential causes of the congestion. Based on the type, location, and cause of the congestion, a monitoring system can identify and evaluate alternative actions and ultimately assess and implement cost-effective, efficient, and effective transportation solutions.

The following roadways in or near Duluth appear on the 2005 list of CMS roadways:

1. GA 120 (Duluth Highway/West Pike Street
2. GA 13 (Buford Highway)
3. Pleasant Hill Road
4. Peachtree Industrial Boulevard
5. Sugarloaf Parkway

12.5 Duluth's Major Roadway Network

The Gwinnett County Community Assessment, Technical Appendix (see Map 7-2), provides the functional classifications of roads in the county according to the Georgia Department of Transportation's functional classification system. Peachtree Industrial Boulevard, Buford Highway (US 23/SR 13), SR 120, and Pleasant Hill Road are all classified as "Urban Principal Arterials." North of Duluth, Peachtree Industrial Boulevard is classified as a "Rural Principal Arterial." Old Peachtree Road is classified as an "Urban Collector Street."

12.6 Regionally Programmed Road Projects

Except for pedestrian improvements (see Table 12.2), the County Joint Community Assessment, Technical Appendix, does not mention any projects within the City of Duluth that are a part of the Mobility 2030 Long Range Project List. However, there is a roadway capacity project for Buford Highway (US 23/SR 13) north of SR 120 (see Map 7-12 of the technical appendix). In addition, there are a number of projects listed in the 2006-2011 Transportation Improvement Program within or near the City of Duluth (see Table 7.3 of the technical appendix), as shown in Table 12.1.

A number of significant road improvements are planned which may have an impact on future growth in the downtown. The relocation of SR 120 in the downtown (eliminating a jog), the hospital connector from McClure Bridge Road to State Route120 and a new road from Davenport to McClure Bridge, all will help stimulate redevelopment in the downtown area and provide alternative access to relieve traffic bottlenecks.

Table 12.1
Regionally Programmed Transportation Improvements
In the City of Duluth Listed in the
2006-2011 Transportation Improvement Program

Project No.	Project Type	Description	From	To	Fiscal Year
GW-271	Roadway capacity	Pleasant Hill Road	Chattahoochee River	Old Norcross Road	2005
GW-300	Roadway Operations	Buford Highway (US 23/SR 13) ATMS	DeKalb County line	Sugarloaf Parkway	2007
GW-326	Roadway Operations	Pleasant Hill Road ATMS	Steve Reynolds Blvd.	Fulton County line	2006
GW-AR 240	Roadway Operations	Davenport Road Extension	Hill Street	Buford Highway (US 23)	Authorized
GW-AR 241	Study	SR 120 Realignment			Authorized

Source: Table 7.3 of the Gwinnett County Community Assessment, Technical Appendix.

12.7 Access Management

Providing access to adjacent properties is one of the primary purposes of a road. However, when the road is a congested urban arterial such as Peachtree Industrial Boulevard or Buford Highway, frequent parcel by parcel access can degrade operations due to the friction of turning vehicles and can provide extra conflict points, increasing crash potential. Effective management of access points (see transportation policies) can preserve through capacity along arterials.

12.8 Traffic Operations Management and Intersection Improvements

Traffic signal operations control movements at intersections, where through movement capacity is most limited. An optimally timed and coordinated signal system can significantly reduce travel delay and stops along a corridor. Intersection safety is also important, as intersections typically have more conflict points and experience more crashes than roadway segments. Improvements to reduce conflicts and enhance driver expectancy can reduce crash frequency and severity. The following consequences can occur in situations where access is poorly management and improvements are not made to the roadway system:

- An increase in vehicular crashes
- More collisions involving pedestrians and cyclists
- Accelerated reduction in roadway efficiency
- More traffic in residential areas due to overburdened arterials
- Homes and businesses adversely impacted by congestion
- Increased commute times, fuel consumption, and vehicular emissions
- Degraded air quality

12.9 Local Street Network Planning

The conventional hierarchy of streets (i.e., local collectors joining collector streets which empty onto arterial streets) has resulted in limited travel route options and congestion of collectors and arterials in suburban areas. A fully developed suburban residential area is unlikely to have many physical options for installing additional local streets, and those options that may exist are not often easily accepted by existing residents. In cases where some undeveloped land exists among developed subdivisions in the area, planners and developers can propose additions to the system of local roads so that a connected pattern of local streets will form a more accessible local street network.

12.10 Public Transportation

Gwinnett County Transit provides local bus service to much of the southern portion of the Interstate 85 corridor, but not yet directly to the Duluth area. A transit center is located relatively close to Duluth, adjacent to Gwinnett Place Mall (Countywide Community Assessment, Technical Addendum, Sec. 7.2.1). Similarly, Gwinnett County Express Bus Service is provided along SR 141 (into north Fulton County) and along Interstate 85, but not directly to Duluth.

There is a project in the 2006-2011 Transportation Improvement Program, scheduled for 2008, to construct an Arterial Bus Rapid Transit (BRT) facility at SR 13 (Buford Highway) from Pleasant Hill Road to the Marta Lindbergh Station in the City of Atlanta (Table 7.3, Gwinnett County Joint Community Assessment, Table 7.3). Note that this improvement coincides with the designation of the “interchange redevelopment area” surrounding Pleasant Hill Road and Buford Highway (SR 13). Hence there is an opportunity, from the standpoint of connecting land use and transportation, for transit-oriented development in that character area.

12.11 Improving Availability of Transit Service

Transit is a key component to providing travel alternatives to the automobile. Frequent local transit service can provide an extension to the walking environment for travel within activity areas. Other local trips can feed activity areas so that users can avoid activity center parking

and congestion. Longer distance transit trips can provide higher speed access to nearby and distant activity areas. Transit availability and frequency of service are two important factors in attracting riders as an alternative to automobile travel. Improving the availability of transit can also free up cars on the road and thereby expand road capacities without the high costs or negative impacts associated with the widening of roads.

12.12 Rail Service

The Norfolk Southern Rail Line runs through the center of Duluth, on the west side of Buford Highway (US 23/SR 13). It is a heavily used rail route, carrying 25-29 trains per day (see maps 7-8 and 7-9 of the Gwinnett County Community Assessment, Technical Appendix).

12.13 Freight Mobility and Land Use Planning

The Atlanta Regional Commission has prepared a draft Atlanta Regional Freight Mobility Plan. That plan consists of 110 pages, and Chapter 7 of the plan provides strategies and recommendations. In particular it encourages a clustering of freight-related land uses. That plan may have some relevance in Duluth, as it relates to freight movements to and from Duluth's industrial areas which are concentrated along the railroad corridor running through the city.

In 2007, the Atlanta Regional Commission hired Wilber Smith and Associates to prepare a report titled "Opportunities for Integrating Freight Transportation and Land Use Planning: Gwinnett County, Georgia Case Study." That case study was conducted as part of ARC's Freight Mobility Study, which is important in the context of ARC's Regional Transportation Plan. The purpose of that case study is to provide policy-makers in Gwinnett County with strategies for improving the relationship between freight related land uses and less intense land uses such as residential development. The study did not cover the City of Duluth, but applied to the area northeast of Duluth, including Old Peachtree Road and a part of Suwanee. That report may be useful in terms of addressing incompatibilities between industrial freight locations and residential neighborhoods.

12.14 Commuter Rail

Commuter rail has been cited as a potential transportation alternative. Commonly-cited benefits of commuter rail include the following: reduced congestion costs; improved quality of life (by providing alternative means of transportation); reduced road/highway maintenance costs; improved air quality; improved commute time for commuter rail passengers; avoided cost of automobile operations; economic development; more efficient use of nonrenewable resources (conserves fuel use); enhancement of safety (train travel is safer than highway travel); and stimulation of more efficient and economic land use by concentrating development along corridors. Previous studies (2003, 2001 and 1995) of possible commuter rail projects identified seven prospective commuter rail corridors, including a Gainesville (Norfolk Southern). The most recent study of commuter rail in the Atlanta metro area by the State of Georgia explored the market for the seven Georgia DOT-identified commuter rail lines, out a distance of 80 miles from downtown Atlanta. It concluded that implementation of commuter rail in the Atlanta region is feasible (Source: R.L. Banks Associates and Wilbur Smith Associates, *Commuter Rail Plan Update: A Report to the Transit Planning Board, Georgia Department of Transportation, and Metro Atlanta Chamber of Commerce*).

The proposed commuter rail service would operate through Hall, Gwinnett, DeKalb and Fulton Counties. The route generally parallels I-85 between Gainesville and Atlanta. The total length of the commuter rail corridor between Gainesville and Atlanta would be 53.3 route miles. This line allows a maximum track speed of 50 mph (freight) and 79 mph (passenger) between Gainesville and Armour. Amtrak train service goes through Duluth on this corridor. Station locations proposed for the Atlanta-Gainesville commuter rail corridor in prior studies have included Gainesville, Oakwood (downtown-Main Street), Sugar Hill, Suwanee, Duluth (Pleasant Hill Road/Buford Highway), and Norcross (Jimmy Carter Boulevard/South Peachtree). Track and signal capital costs for the Atlanta-Gainesville corridor are estimated at $113 million (Source: R.L. Banks Associates and Wilbur Smith Associates, *Commuter Rail Plan Update: A Report to the Transit Planning Board, Georgia Department of Transportation, and Metro Atlanta Chamber of Commerce*)It is uncertain at this time whether the Atlanta-Gainesville commuter rail line project is feasible and will received funding.

12.15 Pedestrian and Bicycle Systems

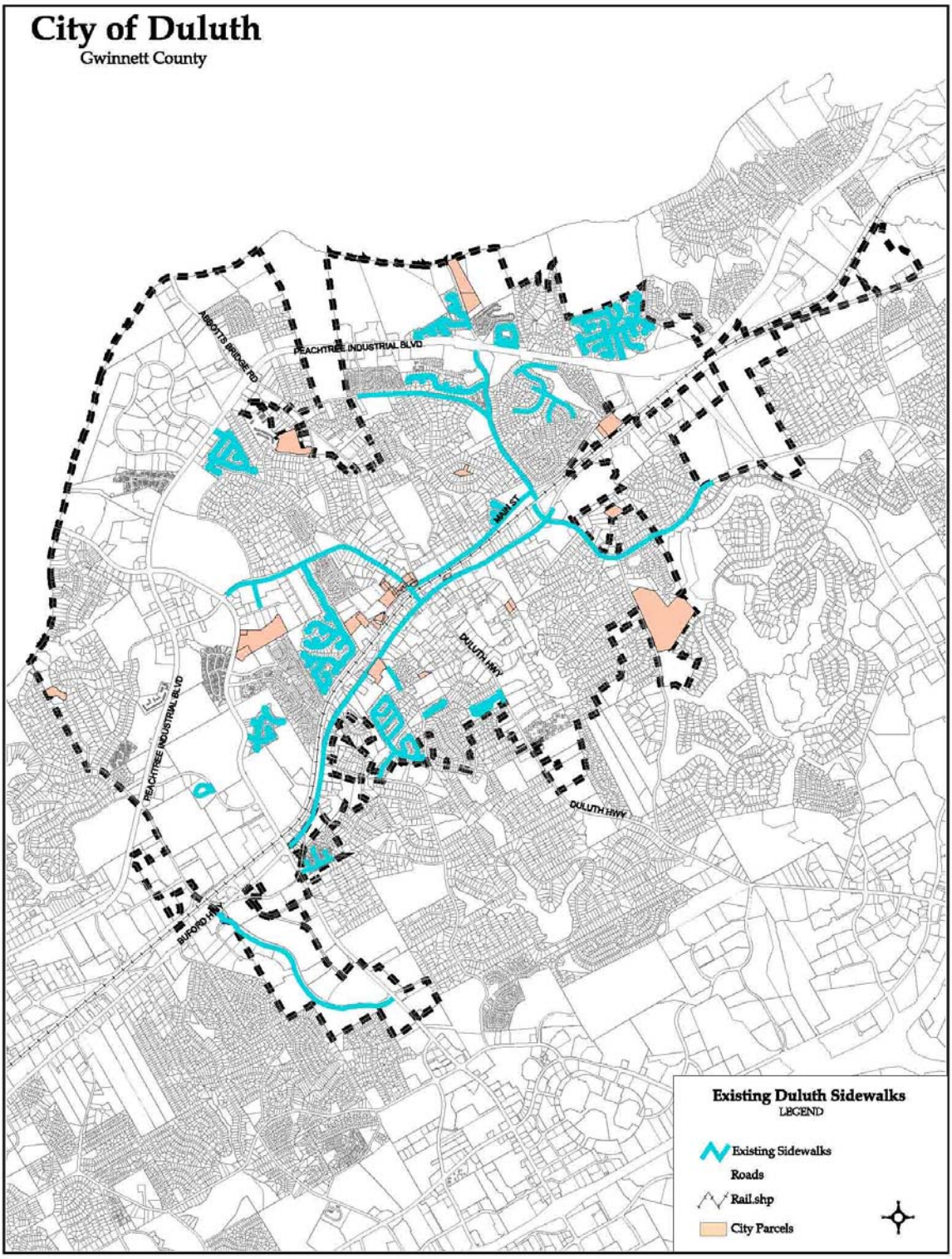
Sidewalks and bicycle lanes are critical transportation infrastructure elements necessary for providing alternative travel options versus automobile traffic. Providing connectivity to existing community facilities (such as schools, libraries, and parks) is an important use of the pedestrian and bicycle network. Providing additional connectivity to planned transit facilities/routes and activity centers is another critical area to reduce the need for automobile travel. Because improved networks of sidewalks and bikeways can reduce the reliance on automobile travel, such improvements can expand capacity of the road network inexpensively and also improve the quality of life for Duluth's residents.

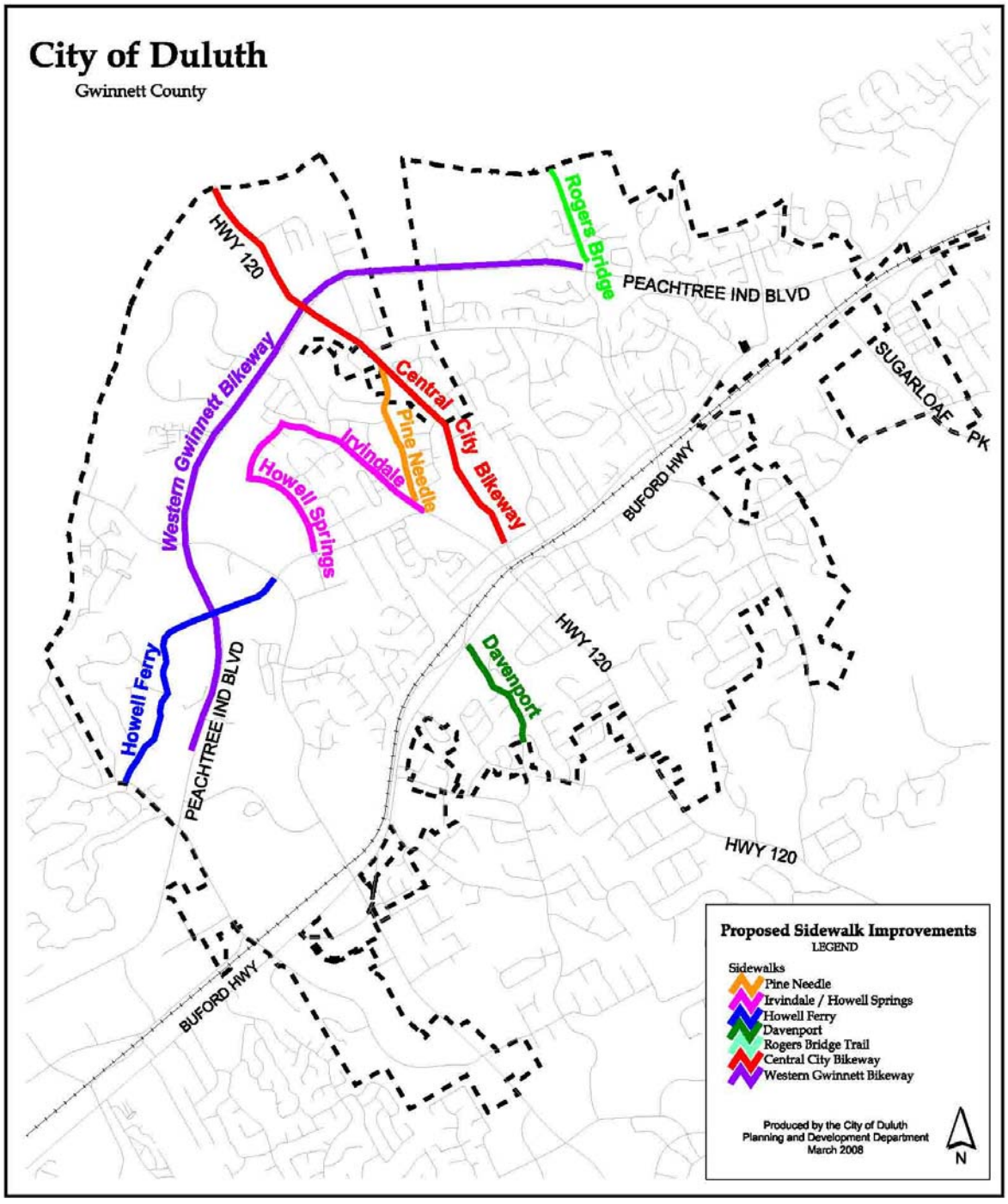
Table 12.2
Regionally Programmed Bicycle and Pedestrian Projects
In the Transportation Improvement Program

RTP Project No.	Facility Type	Description	From	To	Sponsor	Opening Year
GW-329	Pedestrian	Davenport Road Extension Sidewalks	Buford Hwy.	N. of Hardy Industrial	City of Duluth	2008
GW-AR-BP106	Pedestrian	Duluth residential loop along Irvindale Rd., Howell Mead Dr. and Howell Spring Dr.			City of Duluth	2009
GW-AR-BP107	Pedestrian	SR 120 (West Lawrenceville St.)	Buford Hwy.	Duluth Middle and High Schools	City of Duluth	2009
GW-AR-BP108	Pedestrian	US Highway 23 (Buford Highway)	SR 120 (Duluth Hwy.)		City of Duluth	2010
GW-AR-BP 105	Multi-use Bike/Ped	Western Gwinnett Bikeway: Segment 1	Berkeley Lake Rd.	Abbotts Br. Rd.	City of Duluth	2010

Source: Table 7.1 in Gwinnett County Joint Community Assessment Technical Addendum.

The existing sidewalk network and proposed facility improvements are shown on maps on the following pages.


City of Duluth
Gwinnett County
ABBOTTS BRIDGE RD
PEACHTREE INDUSTRIAL BLVD
MAIN ST
DULUTH HWY
DULUTH HWY
PEACHTREE INDUSTRIAL BLVD
BUFORD HWY
Existing Duluth Sidewalks
LEGEND
Existing Sidewalks
Roads
Rail.shp
City Parcels


City of Duluth
Gwinnett County
HWY 120
Rogers Bridge
PEACHTREE IND BLVD
SUGARLOAF PK
Central City Bikeway
Pine Needle
Irvindale
Howell Springs
Western Gwinnett Bikeway
BUFORD HWY
Howell Ferry
PEACHTREE IND BLVD
Davenport
HWY 120
HWY 120
BUFORD HWY
Proposed Sidewalk Improvements
LEGEND
Sidewalks
Pine Needle
Irvindale / Howell Springs
Howell Ferry
Davenport
Rogers Bridge Trail
Central City Bikeway
Western Gwinnett Bikeway
Produced by the City of Duluth
Planning and Development Department
March 2008
N

12.16 Choosing Types of Bicycle Facilities

Standards for bicycle networks depend on the primary user. Skilled bicyclists prefer to travel on the street system along with automobiles, but they are a small percentage of all bike riders. Children and casual adult cyclists must be separated from high-speed, high-volume traffic or they will not ride; they outnumber skilled riders 20 - 1 (Ewing 1997, 63-64).[1] These findings suggest that, if resources for bikeway improvements are limited, then planning bicycle paths that will accommodate children and unskilled bicyclists will be more responsive to demands.

Generally, there are four types of bicycle facilities: bicycle paths, bicycle lanes, shared-road facilities and paved shoulders. Bicycle paths are the most accommodating and safest for all bicyclists. Bicycle lanes also tend to encourage increased use. Shared-road facilities may be acceptable and safe in certain circumstances but will probably not encourage bicycle use. Paved shoulders should not be selected as an alternative unless the other facility types cannot be accommodated due to cost considerations or safety concerns. As noted by Pinsof and Musser (1995):[2]

> "For experienced cyclists, wide curb lanes or paved shoulders may be all that is necessary to encourage riding on major arterials. For those cyclists less experienced at riding in traffic, designated bicycle lanes or an alternative on-street route may be the facility of choice."

Note that the city's LCI study, Envision Duluth (2001), provides additional information and recommendations with regard to the provision of bicycle facilities.

12.17 Street Lighting

The City needs knowledge about where the greatest street-lighting needs are before it can propose or improve the street lighting system. Total annual cost of operation is an important consideration in determining whether to provide night time visibility via street lighting. The necessary visibility will vary according to the classification of roadway. Street lights should be required to conform to construction standards and specifications for light levels, glare reduction, uniformity, and color.

12.18 Parking for the Downtown

The Community Agenda calls for a compact, pedestrian-friendly, mixed-use downtown area as a part of the visioning effort, including a viable downtown main street commercial area. Additional development will require more parking facilities, and detailed planning efforts may be needed to provide for off-site parking areas in appropriate locations to serve the City's Historic Town Center.

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[1] Ewing, Reid. 1997. *Transportation & Land Use Innovations: When You Can't Pave Your Way Out of Congestion*. Chicago: Planners Press.

[2] Pinsof, Suzan Anderson, and Terri Musser. 1995. *Bicycle Facility Planning*. Planning Advisory Service Report No. 468. Chicago: American Planning Association.

13.0 INTERGOVERNMENTAL COORDINATION

More and more, effective planning efforts for community facilities, environmental protection, transportation, and land use are increasingly beyond the abilities of single jurisdictions. This chapter identifies Duluth's major intergovernmental partners, areas where intergovernmental coordination is ongoing, and issues that may require intergovernmental cooperation in the future. The examples of possibilities for intergovernmental coordination are intended to be illustrative, not exhaustive. Duluth should continue to look for ways to increase the levels of cooperation in all functional areas.

13.1 Gwinnett County

Gwinnett County is a major service provider, and the many ways in which Duluth must coordinate and cooperate with Gwinnett County are too numerous to begin to enumerate or describe here. It is recognized however, that ongoing cooperative relationships with Gwinnett County with regard to countywide services and other city-county issues is absolutely essential.

Although public schools are not provided at the municipal level, the city should explore intergovernmental strategies with the Gwinnett County Board of Education to ensure that all schools meet the city's goals of high quality education for its residents and the positive community integration of school facilities. There may also be opportunities to jointly provide for both school and city use of school recreational facilities in the city.

13.2 Municipalities in Gwinnett County

Duluth's municipal boundaries abut the City of Berkeley Lake to the south and Suwanee to the north. The Countywide Community Assessment shows an area of potential annexation by Berkeley Lake that is sandwiched in between the two cities (see Map 3-5). The Duluth Planning Commission has identified the need to have regularized dialogue with adjacent local governments with regard to road construction, road maintenance, zoning applications, and other issues.

13.3 Atlanta Regional Commission

The Atlanta Regional Commission (ARC) is much better known for its role in regional environmental, land use, and transportation planning. However, ARC is actually a service provider in many respects. The agency provides planning data and technical services to local governments. It sponsors regional plans for community facilities and services, including water supply, wastewater management, transportation and air quality, human services, public safety, and other functional planning areas. ARC is designated as the Area Agency on Aging by the Georgia Department of Human Resources and administers federal funds for projects. The regional agency is also working with the Georgia Regional Advisory Council (Region 3) in various workforce development programs. ARC is fostering cooperative approaches to solve regional problems and address extraterritorial issues. ARC also provides training for citizens and planning officials, provides a monthly Land Use Coordinating Committee for planners in the regions, and conducts numerous workshops and sponsors conferences on planning-related topics. ARC is a "regional development center" (now "regional commissions" under a revision to state law, and in that sense also has review responsibilities with regard to local comprehensive planning.

Duluth interacts regularly with the Atlanta Regional Commission in it role as regional service provider, metropolitan planning organization, regional planning agency, and in some cases, regulator of regionally important resources (e.g., the Chattahoochee River Corridor). ARC has regularly prepared and updated a regional development plan, known as *Regional Development Plan Land Use Policies: Livability for People and Places.* As with all local governments in the region, Duluth is expected to embrace regional plans and policies and implement them to the extent practicable.

13.4 U.S. National Park Service

The Chattahoochee River National Recreation Area (NRA) is managed by the National Park Service. The City has cooperated with the National Park Service in the past with regard to planning and coordinating recreational opportunities. There are other opportunities for cooperation with the National Park Service, including joint-management and policing arrangements, among others. Park Service Rangers and City police should be open to coordination mechanisms that will help satisfy common objectives and secure economies in service provision. Any bridges for the Chattahoochee River path system within the National Recreation Area will likely require coordination with the Park Service. A revised master plan for the NRA was underway at the time of this writing.

13.5 Metropolitan North Georgia Water Planning District

This district was established by the Georgia General Assembly in 2001 via Senate Bill 130 to address the pressing need for comprehensive water resources management in metropolitan north Georgia. The main purpose of the district is to promote intergovernmental coordination for all water issues, to facilitate inter-jurisdictional water-related projects, and to enhance access to funding for water-related projects among local governments.

The district's jurisdiction encompasses 16 counties including Gwinnett. It is required by State law to prepare three long-term plans (which it completed in 2003): a long-term wastewater management plan; a water supply and water conservation management plan, and a district-wide watershed management plan. These regional plans are very important and have a major bearing on the future of how water, sewer, and stormwater management facilities will be provided in Duluth. They are summarized below.

District-wide Watershed Management Plan

This plan (September 2003) sets forth strategies and recommendations for effective watershed management and stormwater control. The watershed plan provides requirements for local programmatic efforts, including six model ordinances which provide for post-development stormwater management, floodplain management, conservation/open space development, illicit discharge and illegal connection controls, litter control and stream buffer protection. Additional measures for TMDLs, source water watersheds, substantially impacted areas and comprehensive water quality monitoring programs are also included. The watershed plan includes provisions for extensive public awareness and education efforts.

Long-term Wastewater Management Plan

This plan (September 2003) sets forth strategies for comprehensive wastewater management efforts. The wastewater plan outlines a long-term implementation schedule for consolidating public wastewater treatment systems into fewer, larger facilities that produce reusable water.

The wastewater plan provides for comprehensive wastewater planning to establish future sewer service areas and calls for more intensive management of privately owned septic systems. Additional measures for septic system management, with particular attention on locally defined "critical areas" are also included.

Water Supply and Water Conservation Management Plan

This plan (September 2003) calls for a future of intensive water demand management and an aggressive water conservation program. The water conservation plan outlines 10 water conservation actions that require new policies, new laws and new responsibilities for both utilities and consumers. Additional measures for water supply planning, reservoirs, interconnections and emergency plans are also included.

13.6 Service Delivery Strategies

In 1997, the State passed the Service Delivery Strategy Act (HB 489). This law mandates the cooperation of local governments with regard to service delivery issues. Each county was required to initiate development of a service delivery strategy between July 1, 1997, and January 1, 1998. Gwinnett County completed its Service Delivery Strategy in 1999. Service delivery strategies must include an identification of services provided by various entities, assignment of responsibility for provision of services and the location of service areas, a description of funding sources, and an identification of contracts, ordinances, and other measures necessary to implement the service delivery strategy. Duluth is and must continue to be included in the Gwinnett County Service Delivery Strategy.

Changes to service arrangements described in a service delivery strategy require an update of the service delivery strategy and an agreement by all parties. Because of this provision, it is likely that the need for intergovernmental coordination with regard to service delivery strategies will continue into the future. In addition, service delivery strategies must be updated every ten years. The Service Delivery Strategy Act also mandates that land use plans of different local governments be revised to avoid conflicts.

13.7 Intergovernmental Agreements

Duluth has a number of intergovernmental agreements with Gwinnett County, described in the 1999 Service Delivery Agreement. This section summarizes those agreements.

Fire Protection. Fire protection is provided to Duluth by Gwinnett County via formal intergovernmental agreement, which was effective June 10, 1974.

Animal Control. Duluth contracts with Gwinnett County for animal control (ordinance adopted by the City of Duluth on May 23, 1988).

Law Enforcement Communication. Duluth has a law enforcement communication intergovernmental contract with Gwinnett County which was entered into May 19, 1994. On that same date, Duluth agreed with Gwinnett County to the "Combined Drug Squad Participation Agreement."

Water System. A Water System Purchase Agreement was entered into between Gwinnett County and the city of Duluth on December 30, 1991. Gwinnett County purchased

Duluth's water system for $3.7 million. System assets included approximately 56 linear miles of water mains, a booster station, and approximately 3,200 water meters.

Storm Drainage. A stormwater agreement was reached between Gwinnett County and Duluth on March 24, 1997. Gwinnett County and Duluth entered into a Storm Drainage Maintenance Agreement on July 28, 1998. Duluth agreed on September 17, 1996 to a stormwater management ordinance with Gwinnett County.

Transportation/Public Works. A Roadway Resurfacing and Maintenance Agreement was reached between Gwinnett County and the City of Duluth on September 4, 1991. As of 1990-1991, Duluth had 51.52 total miles of streets, of which 43.7 miles were the maintenance responsibility of Duluth and 7.82 miles were the responsibility of Gwinnett County. Gwinnett County and Duluth have a Construction Assistance Agreement for Buford Highway and Main Street, entered into December 8, 1994.

13.8 Annexation and Land Use Dispute Resolution

The Gwinnett County Service Delivery Strategy makes reference to land use plan compatibility and dispute resolution procedures (effective June 30, 1999, revised July 16, 1999). Duluth is listed as a party to that agreement. Recently, Gwinnett County Board of Commissioners (BOC) has interposed land use objections with regard to various petitioners seeking annexation into municipalities in the county.

Recent objections by the Gwinnett County Board of Commissioners to annexations by municipalities have led to the need to mediate disputes. This issue of annexation and land use disputes will need significant attention in the future, and the City and county must attempt to cooperate, seeking resolution of disagreements.

One probability for annexation in the future is the property known as the Burton Farm. The Burton Farm constitutes a large unincorporated area within the city. This area when developed may or may not be compatible with adjacent land uses and consistent with Duluth's land use objectives. Annexation of the property and detailed land use planning for the tract can help avoid this uncertainty. If annexation is not possible, continued conversation and coordination with the Gwinnett County Department of Planning and Development must occur.

13.9 Development of Regional Impact (DRI)

The Development of Regional Impact (DRI) process was created by the Georgia Planning Act of 1989 and rules adopted by the Georgia Department of Community Affairs. It provides for regional and local government review of projects that meet certain thresholds for size (e.g., number of dwelling units). This process provides an opportunity for local governments to communicate and coordinate with regard to land use policy and improvements to community facilities and services. After the Georgia Regional Transportation Authority was created in 1999, it established its own rules for DRIs. GRTA, ARC, and the Georgia Department of Community Affairs all play significant roles in this process.

14.0 IMPLEMENTATION TECHNIQUES

This chapter provides a comprehensive review of the techniques that are available for Duluth to implement its comprehensive plan. This chapter is a useful reference source for identifying additional ways to implement the comprehensive plan, but which may not be used in the short-term. Discussion of these implementation techniques does not necessarily suggest that Duluth will utilize each and every one of these techniques, whether in the short-term or during the twenty-year planning horizon. For more information on which techniques which will be utilized in implementing the city's comprehensive plan, see Chapter 15, "Policies by Functional Area," and Chapter 16, "Short-term Work Program." These implementation techniques are organized by functional area, generally corresponding to chapters of this community agenda as well as the way issues and opportunities, policies, and the short-term work program are organized.

14.1 The Natural Environment

Clean Water Act

The 1972 amendments to the Federal Water Pollution Control Act, better known as the Clean Water Act, is the nation's primary legislation for establishing surface water quality standards, protection, and pollution clean-up. The intent of the legislation is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The legislation allows individual states to establish their own quality standards for water used for purposes other than drinking. Programs of the Clean Water Act include:

- Section 208: State water quality standards and management plans addressing the non-degradation of swimming and drinkable waters and the identification and use of best management practices to control point and nonpoint pollution sources);
- Section 303(d): State total maximum daily load prioritization process for the clean-up of impaired waterways;
- Section 402: National Pollutant Discharge Elimination System (NPDES) permit system for point and nonpoint sources of water pollution, including stormwater management permits and the monitoring of urban stormwater discharges into regulated streams. Beginning in 2003, storm sewer systems serving fewer than 100,000 persons require NPDES permits.
- Section 404: Wetlands permitting system for the draining and filling of wetlands.[1]

Wetland Mitigation Banks

An alternative method to restoring or maintaining wetlands, this technique allows developers to replace wetlands in one location with wetlands that are bought through credits from another person or agency on another site. In principle if not in practice, a wetland in a mitigation bank is supposed to equal the wetland that has been lost or damaged, thus meeting federal policy that there should be no net loss of wetlands (reference, Clean Water Act, Sec. 404). There are reportedly more than 400 wetland mitigation banks nationwide.[2]

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[1] Daniels, Tom, and Katherine Daniels. 2000. *The Environmental Planning Handbook for Sustainable Communities and Regions*. Chicago: Planners Press, pp. 107-108.

[2] Pittman, Craig. 2007. Banking on a Loss. *Planning* Vol. 73, 11 (December), pp. 4-9.

Table 14.1
Typical Wetland Mitigation Measures

1. Limit wetland uses to those with minimal impact on natural values (e.g., parks, growing of natural crops)
2. Limit development densities (e.g., require large lot sizes)
3. Cluster development on upland sites to protect sensitive and hazardous areas.
4. Elevate structures on pilings or other open works.
5. Route access roads, sewers, and water supply systems around the most sensitive areas.
6. Where appropriate, fence wetlands and floodplains to protect natural vegetation and water quality and to reduce erosion.
7. Replant wetland and other vegetation where destruction of vegetation cannot be avoided.
8. Reduce erosion in exposed areas through rip-rap or other measure.
9. Construct fish pools in channelization projects; install fish ladders at dams.
10. Manage game to enhance and reestablish species.
11. Use slit fences and similar measures to control run-off from construction sites; construct detention ponds to trap sediments.
12. Operate dams to provide sufficient flows for downstream fish and wildlife and to periodically flush wetlands.
13. Construct new wetlands and other wildlife areas by diking, land acquisition, or other means to compensate unavoidable losses.[3]

Conservation Easement

A conservation easement is a nonpossessory interest of a holder in real property imposing limitations or affirmative obligations, the purposes of which include retaining or protecting natural, scenic, or open-space values of real property; assuring its availability for agricultural, forest, recreational, or open-space use; protecting natural resources; maintaining or enhancing air or water quality; or preserving the historical, architectural, archeological, or cultural aspects of real property. (Georgia Code Section 44-10-2)

Land Trust

A land trust is a private, nonprofit conservation organization formed to protect natural resources, such as productive farm or forest land, natural areas, historic structures, and recreational areas. Land trusts purchase and accept donations of conservation easements. They educate the public about the need to conserve land and some provide land-use and estate planning services to local governments and individual citizens.

Conservation Subdivision

A conservation subdivision is a subdivision where open space is the central organizing element of the subdivision design and that identifies and permanently protects all primary and all or some of the secondary conservation areas within the boundaries of the subdivision.

[3] American Planning Association. 1988. *Protecting Non-Tidal Wetlands*. Planning Advisory Service Report Number 412/413.

Community Greenspace Preservation

Georgia's program of community greenspace preservation is set forth in Title 36, Chapter 22 (O.C.G.A. 36-22-1 et seq.). It creates a Georgia Greenspace Commission and a Georgia Greenspace Trust Fund. Counties are authorized to initiate processes for developing countywide greenspace programs, which must meet certain criteria to make projects eligible for state funding. This program, which was started under the Administration of Gov. Roy Barnes' administration, has been largely superseded by Gov. Sonny Purdue's land conservation partnership program.

The Trust for Public Land

The Trust for Public Land, Southeast Region, is working to protect the Chattahoochee River, which is considered by some to be the most endangered urban river in America. The Trust has launched the Chattahoochee River Land Protection Campaign to protect natural lands along the river from North Georgia to Columbus - helping restore the quality of drinking water while providing a major new recreational resource for metro Atlanta (Trust for Public Land 1999).

Landscape Ecology

Landscape ecology analyzes how plants and animals are spatially distributed and move through land mosaics. It is a specialized science highly related to land use planning and has emerged as a useful tool for practicing land use planners. Descriptions of key terms and principles of landscape ecology are provided in the following table.

Table 14.2
Terms and Principles of Landscape Ecology

Term	Description and Principles
Patch	An area, whether consisting of vegetation, pasture, disturbed area, or resource (e.g., wetland), that exhibits a degree of isolation. Patches may be as small as a single tree. A large patch is likely to have more habitats present, and therefore contain a greater number of species than a small patch. Removal of even small patches can cause habitat loss, reduce the population size of certain species, and reduce habitat diversity.
Edge	The outer portion of a patch where the environment differs significantly from the interior of the patch. Higher proportions of edge habitats (i.e., such as in the division of a patch) give rise to a greater number of edge species and a reduction in the number of interior species. Shapes of patches can be manipulated to accomplish ecological function or objective. Edges act as filters that dampen influences of the surroundings on the patch interior. Most natural edges are curvilinear, complex, and soft (unlike most man-made edges that are straight, simple, and hard). The presence of coves and lobes along an edge provides greater habitat diversity. Circular edges tend to increase the numbers of interior species. The ecologically optimum is one that is "spaceship" shaped, with a rounded core, plus some curvilinear boundaries and "fingers" for species dispersal.

Corridors	Stream or river systems are corridors of exceptional significance. Corridors may also act as barriers or filters to species movement (e.g., roads, power lines, and trails). A row of "stepping stones" (small patches) is not as good for species movement as a corridor, but it is better than no corridor at all.
Connectivity	Providing higher quality linkages between habitat patches results in strong positive net benefits for enhancing biodiversity.[4]

Georgia Urban Forest Council

The Georgia Urban Forest Council, headquartered in Macon, works in conjunction with the Georgia Forestry Commission to improve urban forestry programs throughout the State. The Council provides education, technical support, leadership and policy development in order to improve the quality of life in urban areas. The Council is involved in the projects such as the following: Landmark and Historic Tree Program; Urban and Community Forestry Assistance Grant Program; Arborist Certification; Project Learning Tree; tree protection and land development ordinances; Increasing the availability of desirable trees for the public; Georgia's Annual Urban Forestry Conference; and the Annual Urban Forestry Awards Program. The Council serves as a potential partner in urban forestry programs and a source of technical assistance.

Tree City USA

Tree City USA recognition can contribute to a community's pride. Tree City USA can serve as a blueprint for planting and maintaining the community's trees.

Waste Diversion

Waste diversion is the elimination of waste going to a final disposal facility. Methods to accomplish waste diversion include source reduction, recycling, and composting. It is important for local governments to obtain proper and accurate information related to various waste diversion options and to asses their associated costs to ensure selection and implementation of viable and effective initiatives for their communities.

Source reduction is any action that avoids the creation of waste and is accomplished by the reuse of products, the redesign of products and packaging which use less material, and the elimination of paper and product distribution (such as junk mail). Source reduction practices can be used in homes, schools, offices, and commercial sectors and include using durable, washable items instead of throwaway paper and plastic; using refillable products such as cartridge toners and household cleaners; reusing scrap paper and plastic bags; using electronic information delivery instead of paper; and using grass clippings for mulch rather than disposing. Local governments can reduce disposable solid waste by 5 to 10 percent with effective source reduction education efforts in schools, government institutions, office, industrial, commercial and residential sectors.

Recycling is the process by which materials that would otherwise become solid waste are collected, separated, processed and reused or returned to use in the form of raw materials or

[4] Dramstad, Wenche E., James D. Olson, and Richard T.T. Forman. 1996. *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning*. Washington, DC: Island Press.

products. Local governments may implement a variety of recycling methods including buyback and drop-off centers, curbside recycling collection, multifamily collection programs, and commercial, institutional and industrial recycling programs. Governments may also become involved in the processing and preparation of recyclables at material recovery facilities (MRF) for their ultimate transfer and sale to end-user markets.

Composting involves the natural, biological decomposition of organic material, reducing these materials by up to 50 percent of their original volume. Composting provides an effective method for waste diversion as organic materials normally account for 65 percent of the solid waste stream. Composting can be done on-site in backyards with table scraps, coffee grounds, fruit peelings, tea bags, napkins, grass clippings, tree trimmings, leaves, brush, and weeds. Composting can also be done off-site at state-regulated public and private facilities which are capable of processing large quantities of organic waste.

The Georgia Comprehensive Solid Waste Management Act, passed in 1990 by the Georgia General Assembly, mandates that local governments develop solid waste management plans which effectively reduce per capita solid waste disposal by 25 percent. As part of the Act's designated Minimum Planning Standards and Procedures, each jurisdiction's management plan must include a waste diversion element that identifies its public and private waste reduction and recycling initiatives. This includes its use of drop-off centers, buy-back centers, recovered materials processing facilities (MRF), curbside collection programs, commercial and industrial programs both in-house and those operated in cooperation with a local government program, source reduction and reuse programs, composting and mulching programs, and policies related to financial incentives, waste audits, and waste exchanges. The Minimum Standards also require each local government to report annually on its progress in meeting statewide solid waste reduction goals through such waste diversion efforts.

There are a number of waste diversion policies and tools which can be used by local governments to accomplish solid waste management plan goals. Governments can implement mandatory or voluntary recycling programs, coupled with a strong education campaign, to maximize participation and to help offset the soaring costs of waste disposal. Volume-based disposal programs, such as pay-per-bag systems, can be employed, providing residents with a financial incentive to recycle. Volume-based programs require a curbside recycling or drop-off recycling program to provide an alternative to disposal. Governments can develop procurement ordinances to be used by public and private sector organizations that give preference to recycled-content materials whenever economically and practically feasible.

Governments can also require waste haulers to provide recycling services for both residences and commercial establishments as a condition of obtaining a license to operate in the jurisdiction. Additionally, haulers can be required, as part of the operating contract, to offer outlets for at least three recyclable materials, to report the amount of waste and recyclables collected and the location of final disposal or end markets, and to offer landscape waste collection services. According to survey information captured in the Georgia Solid Waste Management Report for 2004, such contract requirements between a government and private waste hauler gives the local government its greatest degree of management control over its waste stream.

Jurisdictions can amend building codes to require the provision of space for the collection, storage, and loading of recyclable materials in all new construction and major renovation projects for multifamily, commercial, institutional and industrial structures. Governments can also work with local construction/demolition (C/D) contractors to more closely examine the

generation and management of C/D debris, to identify local C/D markets and/or potential market opportunities, and to set quantitative C/D recycling goals.

The Georgia Department of Community Affairs (DCA), Office of Environmental Management, offers technical assistance to local governments in starting and maintaining waste diversion programs. The Office can help with developing RFPs, contracts and procedures; planning and funding; public education; and with implementing a variety a waste diversion programs. The Georgia Environmental Facilities Authority (GEFA) makes grants and low-interest loans to cities, counties, and authorities for solid waste systems and improvements. Grants can be used to evaluate waste diversion programs, build recycling and composting infrastructure, and to develop education programs to promote waste reduction, recycling, and composting.[5]

Composting

Composting is the controlled, natural, biological decomposition of organic material (yard trimmings, paper, and food waste) which reduces these materials by 30 to 50 percent of their original volume. Organic materials may account for up to 65 percent of a community's solid waste stream, so composting can be an effective method of waste diversion. The process of composting produces carbon dioxide, water, minerals, and stabilized organic matter, called compost. Because of its high organic content, compost is a valuable soil amendment. Composting has been successfully used for the stabilization of sewage sludge, industrial waste, landscape waste, food waste, and other municipal waste.

Backyard (on-site) composting can be done by property owners. Local governments can encourage this effort by providing education and even composting bins. Organic material such as table scraps, coffee grounds, fruit peelings, tea bags, napkins, grass clippings, tree trimmings, leaves, brush, and weeds can all be composted. Material can be simply heaped into piles and allowed to sit, secured in chicken wire hoops, or placed in rodent-proof bins and optionally turned occasionally to speed the process. Compost is ready to use when it is reduced to dark, rich humus and can be added to soil to help keep plants healthy, improve soil structure, hold moisture, provide plant nutrients, and introduce beneficial organisms into the soil. Property owners may collect leaves and/or grass and place them (mulch) directly on top of flowerbed gardens or around trees and bushes. Mulching mowers can also be used to eliminate the need to collect grass clippings while returning nutrients to the soil. Local governments may also provide grinding services to help property owners deal with limbs and large debris. The material can then be used as mulch or added to a compost pile.

Local governments opting to compost can build or contract with private entities to operate off-site composting facilities. These operations are capable of processing large quantities of organic wastes but require careful decision making regarding the technology used and associated costs.

The minimal technology off-site approach involves forming large (9-foot high by 15-foot wide) rows of compostable material, known as windrows, and turning them about once a year with a front-end loader. Decomposition takes between one and three years using this approach. The main advantages are low capital and operating costs as well as minimal attention and space

[5] *Planning and Urban Design Standards*, American Planning Association, John Wiley & Sons, Inc., 2006; Georgia Department of Community Affairs, Minimum Planning Standards and Procedures for Solid Waste Management, updated 2004, www.georgiaplanning.com; Georgia Environmental Facilities Authority, www.gefa.org.

requirements. Drawbacks include odor caused by the infrequent turning, thus requiring a large buffer zone between the composting site and nearby residential and commercial areas.

Aerated static pile composting requires that the composting mixture be placed in piles and mechanically aerated with forced air. This method is less labor intensive and usually less costly than the windrow method, with composting time reduced to two months. In-vessel composting takes place in an enclosed vessel which includes drums, silos, digester bins, and tunnels to control temperature, humidity and oxygen to speed decomposition to a matter of a few weeks. The in-vessel method has high capital and operating costs but requires less land-area and produces minimal odor, leachate, and scavenging impacts.

The location and design of a composting facility, whether public or private, must be based on proximity to populated areas and prevailing wind direction, and must include appropriate site buffers to minimize odor, runoff, and scavenging problems. Odor, noise, dust, particulate matter, and industrial traffic are also created from various processing activities which include waste tipping, shredding, screening, and transferring operations.

Municipalities involved with composting usually begin with yard waste. The Environmental Protection Agency estimates that yard trimmings comprise up to 15 percent of the waste entering landfills in the U.S. Since landfill space is costly and numerous options for reducing, reusing and recycling yard trimmings exist, the Georgia Comprehensive Solid Waste Management Act, passed in 1990 by the Georgia General Assembly, banned the disposing of yard trimmings in lined landfills and the mixing of yard trimmings with municipal solid waste. The Act also mandated that yard trimmings be sorted and stored to facilitate collection or composting.

Governments starting a composting program must consider development costs related to facility siting and permitting, construction, equipment purchase, and operating, monitoring, and maintenance. Costs will vary depending on the type of technology selected and on the effectiveness of existing waste separation and recycling programs. Costs associated with transferring and marketing the final product must also be considered.

Governments can reduce composting operation costs by sharing equipment with their public works departments. Establishing line items for composting and yard trimming programs in the general fund budget allows funding from traditional revenue sources such as property taxes and local option sales taxes. Governments can also establish enterprise funds, adopt “pay as you throw” programs, and compete for grants and loans available from State funding sources. The Georgia Department of Community Affairs’ (DCA) Local Development Fund is a grant program that can be used for certain-small scaled solid waste management projects, including yard trimmings diversion. The Georgia Environmental Facilities Authority (GEFA) also makes grants and low-interest loans to cities, counties, and authorities for solid waste systems and improvements. Grants can be used to evaluate waste diversion programs, to build recycling and composting infrastructure, and to develop education programs to promote waste reduction, recycling, and composting.[6]

[6] *Planning and Urban Design Standards*, American Planning Association, John Wiley & Sons, Inc., 2006; Georgia Department of Community Affairs Information Brochures - Composting at Home in Georgia and Dealing with Yard Trimmings www.georgiaplanning.com; Georgia Environmental Facilities Authority, www.gefa.org.

Heat Islands

An urban heat island is a metropolitan area which is significantly warmer than its surroundings. Heat islands form when urban development replaces natural land cover with sun-absorbing pavement, buildings, and other infrastructure. The intensity of the heat island effect depends on the area's weather and climate, proximity to water bodies, and topography. The warming effect is most pronounced during calm, clear weather conditions and in summer and winter months. The effects are also present at night as urban surfaces retain much of the heat stored in roads, buildings, and other structures.

A major cause of the heat island phenomenon is the displacement of trees and vegetation by urban structures. Trees and vegetation cool the air by providing shade which reduces the amount of solar radiation transmitted to underlying surfaces. Shaded walls are 9˚F to 36˚F cooler than the peak surface temperatures of unshaded surfaces and reduce heat transfer to the surrounding air. Trees and vegetation also cool the air by absorbing water through their roots and evaporating it through leaf pores, a process called evapotranspiration. Evapotranspiration alone can result in peak summer temperature reductions of 2˚F to 9˚F while adding cooling moisture to the air.

Building materials used in urban areas compound the heat island effect. Asphalt roads, tar roofs, and other dark, sun-absorbing materials hold heat, keeping cities hotter for a longer period of time. Over 90 percent of the roofs in the United States are dark colored. These low-reflectance surfaces on the tops of shopping malls, warehouses, and office buildings can reach temperatures of 150˚F to 190˚F in summer months. Likewise, black asphalt parking lots can reach 195˚F on a hot summer day and generate significant pollution from gas fumes emitted by parked cars. Most urban building materials are also watertight, preventing moisture from dissipating the sun's heat through evaporation.

Tall buildings provide multiple surfaces for the reflection and absorption of sunlight. Heat is trapped between the buildings and narrow streets. This "canyon-effect" increases the efficient heating of urban areas. Waste heat from vehicles, factories, and air conditioners also add warmth to their surroundings. Other contributors include slower wind speed blocked by tall buildings, air pollution, and heat produced by humans.

Some cities benefit from the warming effects of heat islands during winter months as warmer temperatures reduce heating energy needs and help to melt roadway ice and snow. In the summertime, however, these same cities will experience the negative effects of the heat with increased levels of air conditioning demand, air pollution, greenhouse gas emissions, tree and vegetation stress, human discomfort, and heat related illness and mortality. Research has shown that a one-degree temperature increase boosts the risk of ground-level ozone, or smog, formation by three percent. Such ground level ozone can permanently damage lungs and exacerbate chronic bronchitis, asthma, and other cardiopulmonary disorders. The same one-degree temperature increase also adversely impacts energy costs by increasing the demand for cooling power by two percent.

The NASA-funded Project Atlanta, conducted in the late 1990s, measured how the rapid growth of Atlanta's metropolitan area impacted the region's climate and air quality. The project found that Atlanta's heat island encompassed 17 square miles, centered on the downtown business district, and that the temperature in Atlanta was 5˚F to 10˚F warmer than in outlying areas. This excess heat produces clouds, increases thunderstorms, and magnifies smog. Project Atlanta

has led to follow-up research by NASA to develop improved urban air quality modeling systems which will allow governments and stakeholders to quantify the air quality benefits from various heat island mitigation strategies.

There are a number of steps that communities can take to lessen the impacts of heat islands. One strategy is the use of "cool" roofs. Cool roofs use building materials that are highly reflective and light in color which absorb less of the sun's heat and result in cooler surrounding air temperatures. Another roof alternative is the "green" roof where plants, shrubs, and small trees are either planted or applied to the rooftop, thereby increasing evapotranspiration which cools and cleans the surrounding air. Cool paving materials, in shades of white, beige, light gray or terra cotta, can also be used which minimize the absorption of solar heat and the subsequent transfer of this heat to the surrounding area. Likewise, porous paving materials can be used which allow water to filter into the ground, keeping the pavement cool when moist. Finally, increasing the tree and vegetation cover in a city will effectively reduce the urban heat island effect. Research conducted in New York City showed that street trees offered the greatest potential for cooling, followed by cool and green roofs, light colored surfaces, and open plant spacing.

A local government can implement a heat reduction program to improve air and water quality, reduce energy consumption, and increase comfort. A comprehensive heat reduction program will include: 1) an education component for builders, developers, engineers, architects, and homeowners; 2) incentives such as reduced developer's fees, density bonuses, expedited review processes, and reduced parking requirements with implementation of heat reducing elements; 3) an awards program to recognize heat reducing developments; 4) tax credits for property owners who implement heat reduction strategies; 5) quality growth methods that preserve natural vegetation, reduce the amount of paved surfaces, protect open space and farmland, and require effective parking and street standards; 6) development regulations to require heat reducing materials in building codes; and 7) a tree ordinance to protect and sustain the tree canopy in urban areas. Implementing a program will require involvement from a variety of stakeholders and support from the public but will benefit the community with healthier air, cleaner water, lower energy costs, cooler temperatures, and an aesthetically pleasing urban landscape.[7]

Green Roofs

A green roof is a roof of a building that is partially or completely covered with vegetation and soil. Developed more than 30 years ago in Germany, this roofing system consists of a waterproof membrane at the roof base, a root barrier, an optional insulation layer, drainage layers, a filter fabric for fine soils, the growing mediums, and the plant material. Green roofs can be used on industrial facilities, residences, offices, and commercial buildings. They provide an alternative to traditional, heat absorbing roofing materials, such as dark-colored rubber, asphalt, and tar, which can reach temperatures of 150˚F to 190˚F in summer months and contribute to increased energy use, air pollution, and temperatures in urban areas.

[7] Atlanta's Urban Heat Island, http://svs.gsfc.nasa.gov; Heat Island Effect, Environmental Protection Division, http://epa.gov; Georgia Department of Community Affairs, Quality Growth Toolkit, www.georgiaplanning.com; Planning and Urban Design Standards, American Planning Association, 2006; Cool Communities, www.CoolCommunities.org.

Green roofs provide a number of environmental, ecological, and social functions. As a stormwater management device, green roofs act as a sponge during rainstorms, absorbing much of the water that would otherwise run off. Research has shown that 75 percent of rainwater from a rain event of one-half inch or less is retained on a green roof consisting of three to five inches of soil or growing medium. As a natural filtration device, green roofs filter rainwater, resulting in the breakdown and detoxification of non-point source pollutants, nitrogen, and phosphorous. The roof's plant materials also help to cleanse the air by collecting airborne particles and by storing carbon.

Green roofs function to combat the urban heat island effect - the warming phenomenon that occurs in most urban areas. Traditional urban infrastructure and building materials soak up the sun's radiation and re-emit it as heat, making cities at least 7˚ F hotter than surrounding areas. Green roofs reduce this warming effect by providing shade and by releasing water from plants to the surrounding air, a process called evapotranspiration. On hot summer days, the surface temperature of a vegetated rooftop can be cooler than the air temperature, whereas the surface temperature of a traditional rooftop can exceed the air temperature by up to 90˚ F.

Green roofs have also been found to dramatically improve a roof's insulation value. Both summertime cooling needs and wintertime heating loss can be reduced by as much as 26 percent on buildings with green roofs. The presence of the vegetated material also protects the underlying roof material by eliminating exposure to the sun's ultraviolet radiation and extreme daily temperature fluctuations.

A green roof provides an urban habitat for plants, insects, and animals that otherwise have limited natural space. Rooftop greenery complements surrounding wild areas by providing stepping stones for songbirds, migratory birds, and other wildlife facing such natural habitat shortages. Green roofs also offer an attractive alternative to traditional roofs, addressing growing concerns about urban quality of life. They provide an aesthetically pleasing environment for humans who use them as outdoor gardens, and they help to reduce noise transfer from the outside.

There are two types of green roofs, intensive and extensive. Intensive roofs require a minimum of one-foot of soil depth. They can accommodate large trees, shrubs, and well-maintained gardens and add 80 to 150 pounds per square foot of load to the building structure. Rooftop access must be accommodated as intensive green roofs require significant maintenance for their complex irrigation and drainage systems.

Extensive green roofs require only one to five inches of soil depth and are capable of sustaining many kinds of vegetative ground cover and grasses. These roof systems add only 12-50 pounds per square foot of load to the building structure, depending on the materials used. They are usually not designed for public assess and require minimal irrigation, drainage, and maintenance.

Green roofs do have higher up-front costs than traditional roofs as they require more material and labor for installation. An extensive green roof starts at $8 per square foot, compared to a traditional roof which starts at $1.25 per square foot. The up-front costs of green roofs, however, are countered by their energy savings of up to 26 percent. Another factor affecting price is the fact that green roof contractors are limited in number. As the demand for rooftop gardens increases in the U.S., and as additional contractors come into the business, up-front costs will likely decrease.

Green roof technologies are well-established in Europe as a result of government legislation and financial support. European policies include subsidies to offset green roof installation costs, discounts on stormwater fees, use as mitigation compensation to offset natural resource loss, and the integration of green roof design into development regulations. Other initiatives include design competitions, media coverage, and the exemplary greening of public buildings to raise awareness. In the U.S., green roofs are gaining attention as prominent cities have begun accelerating green roof projects and the implementation of green roof policies and practices. The U.S. Environmental Protection Agency (EPA) is in the process of detailing national policies and practices relevant to green roof projects and incentives.

The Atlanta City Hall's fifth floor cafeteria became home to the first city-owned green roof in the Southeast in 2003. The City of Atlanta and the Georgia Department of Watershed Management undertook the construction of the green roof to demonstrate the environmental and health benefits of this roofing alternative. The rooftop garden is 3,000 square feet and includes 2,000 square feet of vegetated areas and 1,000 square feet of pavers. The garden has a simple drainage system but no supplemental irrigation system. The landscape is composed of over 2,800 plants from 31 species. The Atlanta City Hall rooftop garden has attracted interest from local government officials, gardeners, and design, construction and landscape professionals and is open to the public during cafeteria operation hours during the week.[8]

Cool Roofs

Over 90 percent of the roofs in the United States are dark-colored and made from rubber, asphalt, and tar materials. These heat-absorbing surfaces reach temperatures of 150˚F to 190˚F in summer months and contribute to: increased cooling energy use and higher energy bills; higher peak electricity demand, raised electricity production costs, and a potentially overburdened power grid; reduced indoor comfort; increased air pollution due to the intensification of the heat island effect; and accelerated deterioration of roofing material, increased roof maintenance costs, and high levels of roofing waste sent to landfills.

"Cool" roofs are those made from materials that very effectively reflect the sun's energy away from the roof surface. Cool roof materials have two important surface properties: a high solar reflectance, or albedo; and a high thermal emittance. Solar reflectance is the percentage of solar energy that is reflected by a surface. Thermal emittance is the percentage of energy a material can radiate away after it is absorbed. Roof materials that are both highly reflective and emissive are up to 70˚F cooler than traditional materials during peak summer weather, resulting in roofs that reach 100˚F to 120˚F versus dark roofs which peak at 190˚F. Benefits of cool roofs include lower annual electricity bills, reduced peak electricity demand, reduced roof maintenance and replacement expense, increased indoor comfort, and reduced heats island effect, air pollution, and smog formation.

Cool materials for low-slope roofs, commonly found on commercial and industrial buildings, are mainly bright white in color, although non-white colors are becoming available. Products used include single-ply materials and coatings. Single-ply materials are large sheets of pre-made roofing that are mechanically fastened over the existing roof and sealed at the seams. Coatings are applied using rollers, sprays, or brushes over an existing, clean, leak-free roof surface.

[8] Atlanta City Hall Pilot Green Roof, www.greenroofs.com; City of Atlanta Online – City Hall Green Roof, www.atlantaga.gov; Heat Island Effect, Environmental Protection Division, http://epa.gov; *Planning and Urban Design Standards*, American Planning Association, 2006; Cool Communities, www.CoolCommunities.org.

Placing light-colored material on the roof, such as river rock, can also be used to make a roof more reflective, and thus, cooler.

Sloped roofs with more than two inches of rise per 12 inches of run are found mostly on houses and small commercial buildings. They are typically covered with clay or concrete tiles, metal roofing, shingles, or shakes. Cool materials for sloped roofs are currently limited to clay or concrete tiles. These materials use special pigments that reflect the sun's infrared heat which allows the roof to stay cooler. Lower priced cool shingles or coated metal roofing products for sloped residential roofs are not yet available. The U.S. EPA's Energy Star Program and the Cool Roof Rating Council are two sources of information on cool roofing products and specification for both low-sloped and sloped roofs.

Initial material costs for cool roofs are comparable with traditional roofing materials, with some cool products costing less and some costing up to 20 percent more. The cool, protective coatings can be reapplied every 10 to 15 years and reduce, if not eliminate, the need for expensive roof-tear-offs. Thus, the maintenance savings along with the energy consumption savings, which average 20 percent, make installing a cool roof a viable and environmentally friendly option for builders and property owners.

Georgia was the first state to recognize the energy saving benefit of cool roofs with its model energy code for commercial buildings. The "Georgia White Roof Amendment" requires the use of additional insulation for roofing systems whose surfaces do not meet certain thresholds for both solar reflectance and emittance. The Amendment also requires compliance with the American Society of Heating, Refrigerating, and Air Conditioner 90.1 energy efficiency standards. Georgia's regulation has served as a model for change in building codes which address both energy conservation and environmental concerns.[9]

14.2 Historic Resources

National Register of Historic Places

This is the federal government's official list of cultural resources worthy of preservation, documented and evaluated according to uniform standards established by the National Park Service, which administers the program.

Local Historic Preservation Ordinance

This is an ordinance that identifies procedures for creating local historic districts and administering the review of building renovations or alterations to properties located within the district. It typically establishes a historic preservation commission that is charged with the review of development proposals within historic districts.

[9] Cool Roof Rating Council, www.coolroofs.org; Energy Star Reflective Roof Products, www.energystar.gov; Heat Island Effect, Environmental Protection Division, http://epa.gov; Planning and Urban Design Standards, American Planning Association, 2006; Cool Communities, www.CoolCommunities.org.

14.3 Population and Housing

Mixed-Income Housing

Mixed-income housing provides housing for people with a broad range of incomes on the same site, development, or immediate neighborhood.

14.4 Economic Development and Redevelopment

Community Development Block Grant

The nation's Community Development Block Grant (CDBG) is a grant program administered by the U.S. Department of Housing and Urban Development on a formula basis for entitlement communities, and by the state Department of Community Affairs for non-entitled jurisdictions. This grant allots money to cities and counties for housing rehabilitation and community development, including public facilities and economic development. There is much discretion on how CDBG funds can be used (within some constraints), as long as they benefit low- and moderate-income households. For instance, funds can be targeted to provide infrastructure or be directed at upgrading and expanding the affordable housing stock.

Development Authority

Georgia law and the Georgia Constitution authorize the creation of development authorities pursuant to Chapter 62 of Title 36, the "Development Authorities Law" (O.C.G.A. 36-62-1 et seq.). Such authorities have a number of powers, including acquisition of real or personal property.

Downtown Development Authority

A municipality may establish a downtown development authority pursuant to the Downtown Development Authorities Law (O.C.G.A. Title 36, Chapter 42, O.C.G.A. 36-42-1 et seq.), to revitalize and redevelop central business districts. Such authorities have a number of powers that can aid in its objectives, including the acquisition of real property, issuance of revenue bonds, and to serve as an urban redevelopment agency pursuant to Chapter 61 of Title 36 of the Georgia Code.

City Business Improvement Districts

Cities are authorized to establish city improvement districts pursuant to the City Business Improvement District Act (Chapter 43 of Title 36, O.C.G.A. 36-43 et seq.). Such districts are another means of restoring and promoting commercial and business activity within business districts of municipalities.

Tax Increment Financing

A financing technique that allows a local government or redevelopment agency to target a group of contiguous properties for improvement – a TIF district or, in Georgia, tax allocation district – and earmark any future growth in property tax revenues in the district to pay for initial and ongoing improvements there. This growth in tax revenue is the "tax increment." Georgia

authorizes use of this tool pursuant to the state constitution and Chapter 44 of Title 36, known as the Redevelopment Powers Law (O.C.G.A. 36-44-1 et seq.).

14.5 Land Use

Floor-Area Ratio (FAR)

A floor-area ratio (FAR) is a regulatory technique that expresses the amount of allowable building in terms of the amount of land involved in the development. Specifically, the ratio is the total floor area of the building or buildings on a lot or parcel divided by the gross area of the lot or parcel.

Overlay District

An overlay district is a defined geographic area that encompasses one or more underlying zoning districts and that imposes additional requirements above those required by the underlying zoning district. An overlay district can be coterminous with existing zoning districts or contain only parts of one or more such districts.

Planned Unit Development

This is a form of development usually characterized by a unified site design for a number of housing units, clustered buildings, common open space, and a mix of building types and land uses in a slightly more dense setting than allowable on separate lots.

Jobs-Housing Balance

This involves an examination of the relationship between jobs and housing, and between where jobs are or will be located and where housing is or will be available. Jobs/housing balance is often expressed in terms of a ratio between jobs and the number of housing units. The higher the jobs/housing ratio, the more jobs the area has relative to housing. A high ratio may indicate to a community that it is not meeting the housing needs (in terms of either affordability or actual physical units) of people working in the community.

New Urbanism

New urbanism is a set of principles or school of thought that suggest neighborhoods should be built like those that existed before the advent of the automobile. Characteristics of new urbanism or new urban developments include a street network that forms a connected grid, houses built close to the street (i.e., little or no setback) with front porches, alleys (where appropriate) and garages located at the rear of the lot, and on-street parking, among others. For more information see the Charter for the New Urbanism.

Fiscal Impact Studies

Efforts that attempt to estimate the likely net costs to a community associated with a proposed development project or the ultimate buildout of the community based on alternative development scenarios. Duluth completed a fiscal impact study in 2003 and 2004.

Specific Plans

Specific plans describe in more detail the type of development planned for a particular area than found in the comprehensive plan, combining the planning objectives for an area and the implementation techniques to achieve them. Specific area plans typically focus on some unique feature of the geographic area that they encompass, and can relate to local conditions that cannot be fully addressed by conventional zoning. Although particularly suited to application for large, undeveloped land areas, the specific plan may be used to guide the buildout of partially developed areas with potential for infill and redevelopment.

Specific plans have been implemented by local governments in the State of California, where they are recognized for their value as an implementation tool. Under California law, a specific plan must contain text and diagrams that specify the land uses within the area covered by the plan, the infrastructure needed to serve the proposed land uses, development standards and criteria, and capital improvements and financing measures necessary to implement the plan. Under California law, a specific plan is adopted either by resolution or ordinance following a public hearing process by the planning commission and governing body. It then typically serves to supplement, and in some cases, supercede the conventional zoning regulations for the property(ies).[10]

Nuisance Ordinances

Nuisance ordinances provide regulations that prevent or mitigate nuisances. A nuisance is anything that causes hurt, inconvenience, or damage to another, and the fact that the act done may otherwise be lawful, shall not keep it from being a nuisance. The inconvenience complained of shall not be fanciful, or such as would affect only one of fastidious taste, but it shall be such as would affect an ordinary, reasonable person.

Transfer of Development Rights

Cities and counties in Georgia are authorized to establish transfer of development rights programs pursuant to Chapter 66A of Title 36 (O.C.G.A. 36-66A-1 et seq.).

Code Enforcement Board

Cities and counties in Georgia are authorized to establish code enforcement boards pursuant to Chapter 74 of Title 36, the "Local Government Code Enforcement Boards Act (O.C.G.A. 36-74-1 et seq.). Such boards, if established, have the power to conduct hearings, and issue orders having the force of law to command whatever steps are needed to bring code violators into compliance.

[10] Georgia Department of Community Affairs, Model Land Use Management Code, Commentary at §9-1 Downtown Specific Plans.

14.6 Urban Design

Design Guidelines

Design guidelines are statements and illustrations that are intended to convey the preferred quality for a place.

Livable Centers Initiative

The Livable Centers Initiative (LCI) is a grant program offered by the Atlanta Regional Commission (ARC) that encourages local jurisdictions to plan and implement strategies that link transportation improvements with land use development strategies to create sustainable, livable communities. The primary goals of the program are to: Encourage a diversity of mixed-income residential neighborhoods, employment, shopping and recreation choices at the center/corridor level; Provide access to a range of travel modes including transit, roadways, walking and biking; and Develop an outreach process that promotes the involvement of all stakeholders. The region has received more than $135 million in planning and transportation funds to further LCI concepts in 86 distinct areas in the region.

Leadership in Energy and Environmental Design (LEED)

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™, developed by the U.S. Green Building Council (USGBC), is a voluntary, consensus-based, national standard for developing high performance, environmentally sustainable buildings and communities. LEED was created to: Define “green building” by establishing a common standard of measurement; Promote integrated, whole-building design practices; Recognize environmental leadership in the building industry; Stimulate green competition; Raise consumer awareness of green building benefits; and Transform the building market.

The Rating System addresses six major areas, which include: Sustainable sites; Water efficiency; Energy and atmosphere; Materials and resources; Indoor environmental quality; and Innovation and design process. LEED certification is granted solely by the U.S. Green Building Council. To earn certification, a building project must meet certain prerequisites and performance benchmarks ("credits") within various categories. Projects are awarded Certified, Silver, Gold, or Platinum certification depending on the number of credits they achieve.

LEED is the most widely used rating system in the U.S. with certification serving as proof that a building is environmentally responsible, profitable, and a healthy place to live and work. LEED certified buildings: Cost less to operate in terms of energy and water; Reduce the energy and water impact on the local infrastructure; Provide superior indoor environmental quality in terms of air, noise, and lighting; Reduce waste sent to landfills, both during construction and after; Reduce harmful greenhouse gas emissions; Are leading the transformation of the built environment; Are built as designed and perform as expected; Qualify for tax rebates, zoning allowances, and other incentives established by local governments; and Demonstrate an owner’s commitment to environmental stewardship and social responsibility.

A building project team may initiate the LEED certification process with project registration at www.usgbc.org. Once registered, the project team will receive access to essential information, software tools, and USGBC communications. Throughout the project, the team will prepare documentation and calculations to satisfy the prerequisites and credit requirements.

The USGBC recommends that projects be registered early in the design phase to ensure an integrated green design approach between the architects, engineers, owners, and operators.

The cost for LEED certification is based on the project type and reduced with membership in the USGBC. The Council recommends that the project have a LEED Accredited Professional on the team as the process requires significant technical documentation and knowledge. USGBC offers both online and in-class training workshops.

The LEED program encourages smart growth and new urbanism best practices by promoting the location and design of neighborhoods that reduce vehicle miles traveled and communities where jobs and services are accessible by foot or public transit. The criteria require efficient energy and water use, especially important in urban areas where infrastructure is overtaxed.

Local governments can encourage LEED certification to help achieve comprehensive land use plan goals related to environmentally sound, sustainable development. The State Energy Strategy for Georgia, prepared by Governor Perdue's Governor's Energy Policy Council in December of 2006, identifies incentives to accomplish this. Financial incentives include tax credits and deductions, and low-cost financing or grants for projects that reduce energy consumption. Non-financial incentives include expedited permitting of LEED projects, density bonuses, technical assistance and training for the private sector, and public recognition of exemplary energy performance projects.

Georgia ranks among the top 10 states in the country in the number of LEED registered projects. As of October 2006, metropolitan Atlanta had 53 LEED certified and registered projects. The Georgia Department of Natural Resources has the most registered LEED projects of any state agency in the country, further demonstrating Georgia's interest in and commitment to environmental protection and the conservation of natural resources.[11]

Wayfinding Systems

Wayfinding systems assist motorists and pedestrians to major destination points within an urban environment. They consist of a large variety of vehicular and pedestrian signs, maps, gateways, banners, and informational kiosks. An appropriately designed wayfinding system will: 1) improve access, identification, and connectivity to major areas and destinations in a downtown; 2) provide clear direction to both first time visitors and residents and reduce misdirected travel; 3) reflect the community's image, structure, and vision and make the area more user-friendly through helpful, distinctive graphics; 4) improve vehicular, pedestrian, and cycling safety with appropriately placed information; and 5) create a memorable experience.

A wayfinding system can include a number of architectural, landscape, urban design and print elements. A visitor's center or kiosk can be used and strategically placed to disperse information to orient visitors. For communities with transit, these might be located near major stations. Gateways can be used to distinguish and separate areas or districts within a community. A gateway can be a sign, landmark, or an artistic or symbolic structure. Landmarks are prominent buildings, public art, and other significant public realm features that can be used to orient people within a particular area. Landmarks are typically identified on guide maps which also highlight various destinations, major roads and routes, amenities such as parking and

[11] U.S. Green Building Council, www.usgbc.org, 2007; The State Energy Strategy for Georgia - Governor's Energy Policy Council, December 14, 2006; Georgia Department of Natural Resources, http://georgiastateparks.org, 2007.

public restrooms, and the wayfinding elements and signs to follow. Finally, landscaping and streetscaping (such as street lighting) can also be incorporated along commercial corridors to extend the community identity beyond its downtown.

Effective wayfinding signs must be visually attractive and consist of a vocabulary that provides direction to drivers, pedestrians, cyclists, and transit users. Signs must also be designed to complement and not compete with street, regulatory, and storefront signs for the attention of motorists and pedestrians. There are a number of sign types that can be used. Fabric or vinyl banners are commonly used to provide an identity for the community. These are often seen along a continuous main street, usually hanging from decorative street lamps or poles, and are used to designate one's presence within the community. Logo trailblazers are a sign type used for major heritage corridor routes. They may also be used along bike and river trails. Arrival signs can be used to mark destinations, landmarks, historic sites, and parking. Arrival signs may include interpretive information and should be placed so that they are visible from a vehicle. Directional signs may consist of interstate logos which direct vehicles to interstate exits or street and route signs which also provide distance information. Directional signs typically follow Department of Transportation design standards and are oriented to either vehicles or pedestrians.

The appropriate placement of wayfinding signage is critical to effectively communicate information to specific audiences. A common method is to use a hierarchy of urban elements to direct vehicles and pedestrians, being careful to avoid using an excessive number of messages. Such a hierarchy should start at the edge of the downtown and use city gateways, interstate signs, and state road signs to direct visitors to the various areas within the downtown. At the edge of each area, distinctive area gateways and directional signs should be used to direct visitors to major roads, landmarks, parks, and also to smaller sub-areas. Inside each sub-area, directional, parking, trailblazers, and arrival signs should direct visitors to destinations, amenities, and parking. Also in each subarea, pedestrian signs, maps, and interpretive kiosks should also be placed to provide further information. It is also important to place exit wayfinding information for visitors so they may easily exit each area and access the interstate or primary arteries leaving the downtown.

The American Planning Association, in its *Planning and Urban Design Standards*, suggests a checklist of action items that local communities can use when developing a wayfinding system. They are to:

1. Create a mission statement for the wayfinding system;
2. Analyze the specific urban condition, including project goals, vehicular, pedestrian, and transit routes, and destination criteria;
3. Convene the stakeholders who will be involved in developing the system to understand their needs and establish the role they will play in the process;
4. Review the regulatory approval system before developing a design;
5. Use multiple design elements to devise more complex systems, instead of relying on one element;
6. Incorporate complementary design elements;
7. Limit the amount of information per sign to ensure visibility and comprehensibility;
8. Use colors and type that enhance legibility;
9. Create signs that are attractive to pedestrians, even if they are oriented only to the motorist;
10. Plan routes based on the history and development of the city;
11. Build signs to withstand physical, stylistic, and technological changes; and

12. Develop a maintenance and management system prior to wayfinding system installation. This includes a plan for sustaining existing signs, a process for adding and deleting destinations, and a process for expansions to the system. Approximately three to five percent of the elements of a wayfinding system are damaged or destroyed every year.[12]

14.7 Community Facilities and Services

Development Impact Fees

Cities and counties in Georgia are authorized to prepare and adopt development impact fee programs pursuant to O.C.G.A. 36-71-1 et seq., the Development Impact Fee Act, which can be used to fund system improvements (roads, water and sewer, parks and recreation, public safety, and libraries) needed to serve new development.

Capital Improvements Element

This implementation technique is a component of a comprehensive plan adopted pursuant to O.C.G.A. 50-8-1 et seq. which sets out projected needs for system improvements during a planning horizon established in the comprehensive plan, a schedule of capital improvements that will meet the anticipated need for system improvements, and a description of anticipated funding sources for each required improvement.

Cost-Benefit Analysis

A method of analysis used as a guide to decision making, which estimates the costs and benefits of a proposed development project, development program or government regulation.

Drought Preparedness and Water Conservation

Water supply is among the most important elements in determining carrying capacity and the limits to population and economic growth. Some communities have responded to the threat of drought with drought preparedness programs. For communities that supply water, such a program should provide evidence of drought-condition water yields and identify new long-term sources of water supply. Water utilities should also review rate structures to ensure that they rise as households and businesses use more water (i.e., water conservation pricing as opposed to average cost pricing).

For other communities, whether they supply water or not, a drought preparedness program should address the receipt, storage, and distribution of emergency water supplies, general water demand management, restrictions on outdoor water use for landscaping and swimming pools, watering lawns, and washing vehicles, and water conservation education programs. Communities can prepare water audits, which are studies of how efficiently water is being used and the potential to conserve water. Where water supply is a significant limitation, major new

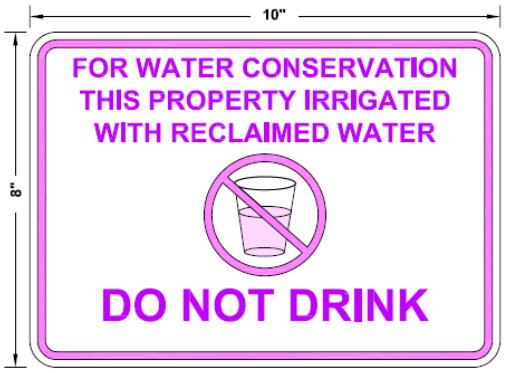
[12] AASHTO Green Book, *A Policy on Geometric Design of Highways and Streets*, 5th Edition, American Association of State Highway and Transportation Officials, 2003; Atlanta Regional Commission – Community Choices Toolkit – Context Sensitive Street Design, www.atlantaregional.com; Georgia Department of Community Affairs, Georgia Quality Growth Practices - Toolkit of Best Practices – Downtown Planning, www.dca.state.ga.us/toolkit/; *Manual on Uniform Traffic Control Devices*, Federal Highway Administration, 2003; *Planning and Urban Design Standards*, American Planning Association, 2006.

developments or expansions of water service area should be reviewed against projected future water supplies.

In the early 1990s, Congress mandated national water efficiency standards for new toilets (1.6 gallons per flush), showerheads (2.5 gallons per minute), and faucets.[13] In 2007, Georgia Governor Sonny Perdue mandated reduction in water consumption by 10 percent from the prior winter's usage. Ways to conserve water include finding and fixing leaks, checking toilets, and using smaller water budgets for cleaning. Outdoor water conservation tips include using native plants (which are more drought tolerant), Xeriscaping, weed control, and rain barrels.

Water Reuse or Gray Water

Reused wastewater, sometimes referred to as "gray water" or "reclaimed water," is wastewater from sewage treatment plants that receives at least secondary treatment before being used for agricultural, industrial, landscaping, or other uses. Gray water is subject to standards set by the U.S. Environmental Protection Agency which are based on the anticipated level of human contact. Gray water helps conserve potable water when lower quality water (i.e., "gray water" will serve the purpose).



Reclaimed water is delivered to homes and businesses through an underground distribution system entirely separate from the drinking water system. Reclaimed water can serve in many capacities where it is unnecessary to use high-quality, potable (or drinkable) water. Uses of reclaimed water include: irrigating lawns and landscaping designs; irrigation of edible crops that will be peeled, cooked or thermally processed before consumption is allowed; use in fountains or decorative pools; and fire-fighting. Reclaimed water systems can save extensive amounts of drinking water each day. Use of gray water is less expensive for the vast majority of customers. Promoting greater use of reclaimed water among private developments helps to delay the need for developing costly new water sources and building or expanding very expensive treatment plants. Promotion of water reuse can also help a community to comply with permits relating to its water supply and wastewater treatment.[14]

Emergency Management and Emergency Preparedness

The likelihood is good that disaster will strike any community within the 20-year planning horizon of a comprehensive plan. Fire professionals often are tasked with taking the lead in managing emergencies. That assignment of responsibility is logical because they deal with fires, rescues, hazardous materials, and many other life-threatening situations. They have the

[13] Daniels, Tom, and Katherine Daniels. 2000. *The Environmental Planning Handbook for Sustainable Communities and Regions*. Chicago: Planners Press, pp. 73-74, 86.

[14] Daniels, Tom, and Katherine Daniels. 2000. *The Environmental Planning Handbook for Sustainable Communities and Regions*. Chicago: Planners Press, pp. 85. Flowery Branch, GA, Subdivision and Land Development Regulations, Sec. 1305, Reclaimed Water.

communications to organize responses, can mobilize the proper equipment, and have the tactical skills needed to make rescues and extractions. Without implying a challenge to the responsibility of fire professionals, and beyond the obvious specialized contributions of disaster management planners, what is the role for the local government planner in times of such crises? Disaster mitigation, preparedness, response, and recovery long have been parts of local government planning, though it is probably not often that emergency management is integrated into the local government's comprehensive plan.

Table 14.3 indicates there are four phases of comprehensive emergency management.[15]

Table 14.3
Phases of Comprehensive Emergency Management

Phase	Description	Illustrative Roles for Planners
Mitigation	Eliminate or reduce long-term risks	Building codes, land-use management, risk mapping, vulnerability analyses
Preparedness	Develop operational capabilities to respond	Public information, hazards analysis, mutual aid agreement, resource management
Response	Actions immediately before, during and directly after an emergency	Instructing the public, staffing emergency operations center, resource mobilization
Recovery	Return vital life-support systems to minimum standards or improved levels	Public information, reassessment of emergency plans, reconstruction, temporary housing

Local governments should conduct community hazard vulnerability analyses to identify the types of environmental extremes (e.g., floods, tornadoes, hurricanes, earthquakes), technological accidents (e.g., toxic chemical releases,), and deliberate incidents (e.g., sabotage or terrorist attack involving chemical, biological, radiological/nuclear, or explosive/flammable materials) to which their communities may be exposed. Plans for each potential hazard (e.g., flood, tornado, hazardous material releases, etc.) should be integrated into a comprehensive plan for multi-hazard emergency management.[16]

Environmental Justice

Environmental justice is fair treatment for people of all races, cultures, and incomes in the development of environmental laws, regulations, and policies. Fair treatment means that no group, including a racial, ethnic, or socioeconomic group, should bear a disproportionate impact from industrial, municipal, or business operations or the implementation of government programs and policies. Meaningful involvement means that all people have an opportunity to participate in decisions that may affect their environment and/or health, that the public's

[15] Hawkins and McClees 1988; Rubin 1986

[16] Excerpts from Chapter 7 of *Emergency Management: Principles and Practice for Local Government,* Second Edition (December 2007), published by International City/County Management Association.

contribution can influence the regulatory agency's decision, that their concerns will be considered in the decision making process, and that the decision makers seek out and facilitate the involvement of those potentially affected.[17]

Based on Title VI of the Civil Rights Act of 1964 which addressed discrimination on the grounds of race, color, or national origin, the environmental justice movement was propelled in the early 1990's when a bipartisan coalition of academic social scientists and political activists met with the Environmental Protection Agency (EPA) to discuss their findings that environmental risk was higher for minority and low-income populations. Research and study by the EPA supported these findings and led to the creation of the EPA Office of Environmental Justice and Executive Order 12898 – "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations", signed by President Bill Clinton in 1994. The purpose of the Order was to focus federal attention on the environmental and human health conditions of minority and low-income populations and to develop strategies to address disproportionately high and adverse human health or environmental effects of federal programs on these populations. The Order defined "protected" minority and low-income populations as those of African American, Hispanic, Asian, American Indian, Alaskan Native, Native Hawaiian or other Pacific Islander origin or those whose household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

From a land use and transportation planning standpoint, environmental justice public policy strives to ensure that all people, regardless of race, color, national origin, or income, enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, play and work. This means plans and programs must: 1) avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects on minority populations and low-income populations; 2) ensure the full and fair participation by all potential affected communities in the decision-making process; and 3) prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Common planning efforts requiring environmental justice compliance include the siting of various types of facilities (such as sewage and waste facilities, airports, parks, health clinics, cultural centers, etc.), the siting of transportation and streetscaping improvements and facilities, and the mitigation of contaminated sites or economically challenged areas.

To identify and address potential impacts on environmental justice populations, analysis and community outreach are needed. The first area of analysis involves assessing the demographic composition of an area to identify populations who need to be targeted for special outreach, and determining whether these groups should be considered protected. GIS is critical for depicting graphically and quantitatively where the disadvantaged populations are located. Census data, information from neighborhood organizations; schools; major employers; local businesses; churches; elected officials; social service, health, economic development, and transit agencies; and chambers of commerce may also be used. Field surveys, photographs, and local knowledge may supplement and support findings.

The second area of analysis is the definition and assessment of impacts. Impacts to be considered include accessibility and mobility; safety; property values; jobs and business income; displacement and relocation; community cohesion; cultural resources; green spaces; noise;

[17] Environmental Protection Agency, www.epa.gov.

visual, air, and water quality; and hazardous materials. GIS, once again, is critical for depicting graphically and quantitatively where the disadvantaged populations may be suffering disproportionate negative impacts or relative deprivation of environmental or health amenities.

Community outreach is the other major component of environmental justice compliance. Involvement should be sought from environmental justice populations, the elderly and disabled, those with limited English proficiency, low literary populations (those with lower than fifth grade reading and comprehension skills), and transportation-dependent populations. Public involvement should be tailored to target audiences and their different capabilities, languages, and constraints. Methods include public, neighborhood, school, and other civic meetings; placing documents in libraries, schools, government buildings, on the internet, and in locations traditionally frequented by underserved groups; newspaper and radio meeting announcements; information booths at malls and public events; and targeted focus groups. Such outreach to all segments of a community combined with an equitable allocation of dollars and broad-based community partnerships help to ensure that impacts are balanced and equitable to all populations.[18]

14.8 Transportation

Traffic Calming

Traffic calming is concerned with reducing vehicle speeds, vehicle noise, visual impacts, and sometimes traffic volumes. Techniques consist of a series of raised speed humps, raised tables, or other devices along with appropriate traffic control signage to slow speeding and/or discourage cut-through traffic. Traffic calming techniques use various means to influence the behavior of motorists: physical, psychological, visual, social, and legal (regulatory and enforcement). Although traffic management and calming techniques are often used in areas other than residential neighborhoods, most programs are focused in residential areas, where traffic problems are more prevalent and have the most influence on the day-to-day livability of the community.[19] Traffic calming techniques must meet acceptable engineering principles.

Safe Routes to School Program

The Safe Routes to Schools Program is a Federal-Aid program of the U.S. Department of Transportation's Federal Highway Administration (FHWA). The Program was created by Section 1404 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users Act (SAFETEA-LU). The SRTS Program is funded at $612 million over five Federal fiscal years (FY 2005-2009) and is to be administered by State Departments of Transportation (DOTs). The Program provides funds to the States to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The purposes of the program are: to enable and encourage children, including those with disabilities, to walk and bicycle to school to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and to facilitate the planning, development, and implementation of projects and activities that will improve safety

[18] Atlanta Regional Commission, 2030 Regional Transportation Plan, Environmental Justice Issue Paper, www.atlantaregional.com; Environmental Protection Agency – Compliance and Enforcement – Environmental Justice, www.epa.gov; Planning and Urban Design Standards, American Planning Association, 2006.

[19] Georgia Department of Transportation, *Statewide Bicycle and Pedestrian Initiative – Pedestrian Facilities Design Guide*, Updated July 25th 2003.

and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8). Each State administers its own program and develops its own procedures to solicit and select projects for funding. The program establishes two distinct types of funding opportunities: infrastructure projects (engineering improvements) and non-infrastructure related activities (such as education, enforcement and encouragement programs).[20]

Traffic Impact Study

A traffic impact study is an analysis and assessment, conducted by a qualified professional, that assesses the effects that a discretionary development proposal's traffic will have on the transportation network in a community or portion thereof. Traffic impact studies vary in their range of detail and complexity depending on the type, size and location of the proposed development.

INTERGOVERNMENTAL COORDINATION

Mutual Aid Agreements

Counties and municipalities are authorized by Georgia law (O.C.G.A. 36-69-1 et seq.) to enter into contracts and mutual aid agreements with counties or municipalities for the provision of law enforcement services in a local emergency.

Service Delivery Strategy

A service delivery strategy is an intergovernmental arrangement among city governments, the county government, and other affected entities within the same county for delivery of community services, developed in accordance with the Service Delivery Strategy Law (O.C.G.A. 36-70-20 et seq.). A local government's existing Strategy must be updated concurrent with the comprehensive plan update. To ensure consistency between the comprehensive plan and the agreed upon Strategy: (1) the services to be provided by the local government, as identified in the comprehensive plan, cannot exceed those identified in the agreed upon strategy and (2) the service areas identified for individual services that will be provided by the local government must be consistent between the plan and Strategy.

[20] FHWA Safety: http://safety.fhwa.dot.gov/saferoutes/overview.htm

15.0 POLICIES BY FUNCTIONAL AREA

15.1 Natural Resources

1. **Preservation Generally.** The natural environment should be preserved as much as possible. Preserving natural features helps maintain air and water quality, as well as provides visual and recreational amenities for local citizens.

2. **Environmentally Sensitive Areas.** Prevent development from occurring in, or significantly encroaching upon environmentally sensitive areas, such as floodplains, wetlands, and groundwater recharge areas, by preparing and adopting additional regulations as necessary to protect environmentally sensitive areas. At minimum, this includes development regulations to meet or exceed Georgia Department of Natural Resources' Part V Environmental Planning Criteria.

3. **Innovative Land Practices that Preserve the Environment.** Encourage innovative land development practices that focus on preserving environmentally sensitive land areas and open space.

4. **Minimize Water Quality Impacts.** The location and intensity of development should be sited so as to minimize the negative effects of that development on water quality, both during and after construction. Major considerations concerning water quality should include: organic pollution from infiltration and surface runoff; erosion and sedimentation; water temperature elevation; nutrients such as nitrogen and phosphorous; and toxic materials.

5. **Wetlands.** Preserve wetlands where they exist, or as a last resort if they cannot be preserved on-site, mitigate wetland loss by increasing ecologically equivalent wetlands on other appropriate sites (i.e., wetland mitigation through wetland banking). Any proposal for development involving the alteration of, or an impact on, wetlands should be evaluated according to the following (based on Ga. DNR Rule 391-3-16-.03):

    - Whether impacts to an area would adversely affect the public health, safety, welfare, or the property of others.

    - Whether the area is unique or significant in the conservation of flora and fauna including threatened, rare, or endangered species.

    - Whether alteration or impacts to wetlands will adversely affect the function, including the flow or quality of water, cause erosion or shoaling, or impact navigation.

    - Whether impacts or modification by a project would adversely affect fishing or recreational use of wetlands.

    - Whether an alteration or impact would be temporary in nature.

    - Whether the project contains significant State historical and archaeological resources, defined as "Properties On or Eligible for the National Register of Historic Places."

- Whether alteration of wetlands would have measurable adverse impacts on adjacent sensitive natural areas.

- Where wetlands have been created for mitigation purposes under Section 404 of the Clean Water Act, such wetlands shall be considered for protection.

6. **Floodways and Floodplains.** Prohibit development within floodways and restrict or prohibit development in flood plains. If development within flood plains is allowed, flood plain storage should not be decreased from its present state. In no event shall development be permitted that inhibits the flow of floodwaters.

7. **National Flood Insurance Program.** Continue to participate in the National Flood Insurance Program. Periodically amend the flood damage prevention/floodplain management ordinance to comply with changes to ordinances specified by the Federal Emergency Management Agency.

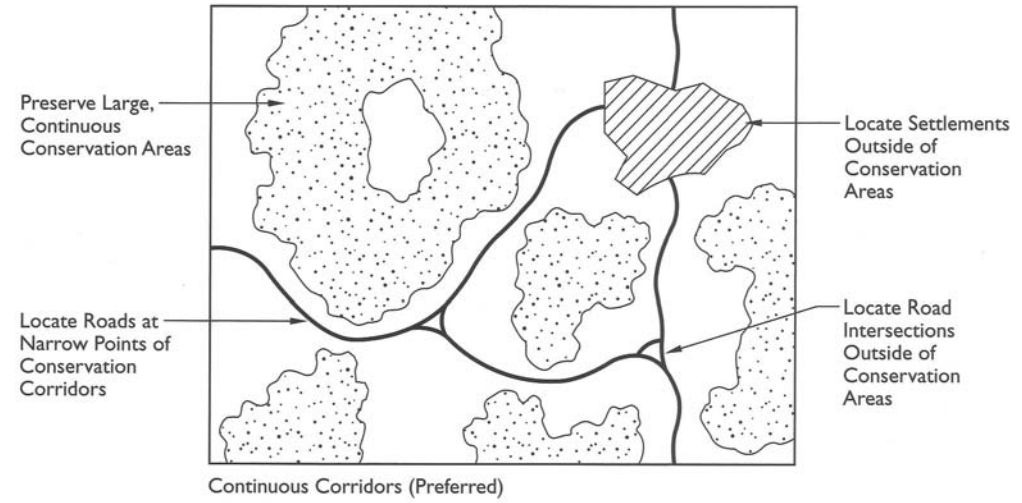
8. **Best Management Practices.** Implement best practices for water pollution control and stormwater management, including but not limited to: biofilters (vegetated swales/strips), wet ponds, and constructed wetlands.

9. **Municipal Practices.** Ensure that the City, in its own activities, follows the same environmental policies as required of private developers.

10. **Encourage Conservation Subdivisions.** Encourage conservation subdivision development, where opportunities exist. (Conservation developments cluster structures on developable land in order to conserve land and/or provide public open space).

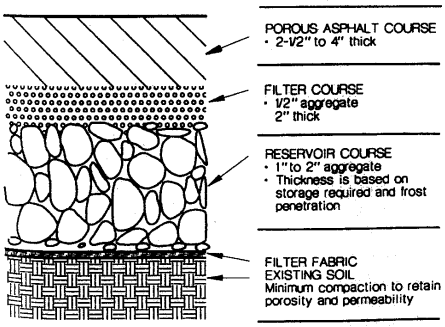
11. **Acquire Conservation Lands.** Seek out opportunities to acquire conservation lands and park spaces.

12. **Connectivity of Open Spaces.** Creation of new open space and connection to existing or planned open spaces are priorities for Duluth and will be sought in the review of development proposals, as appropriate. The requirement of open spaces, and their designs, will be considered on a case-by-case basis, taking into account the city's objectives of creating pedestrian-friendly, mixed-use places and destinations in the town center and accessible linkages to them. Improving accessibility to parks and creating pedestrian links between the open spaces and the public park(s) in the town center will greatly strengthen the urban core of the City and will therefore be a key guiding principle when reviewing open space proposals.



Source: Planning and Urban Design Standards. 2006. John Wiley & Sons. p. 139.

13. **Permeable Surfaces.** Use permeable surfaces for parking lots in non-residential developments, if appropriate.



Typical Porous Pavement Section

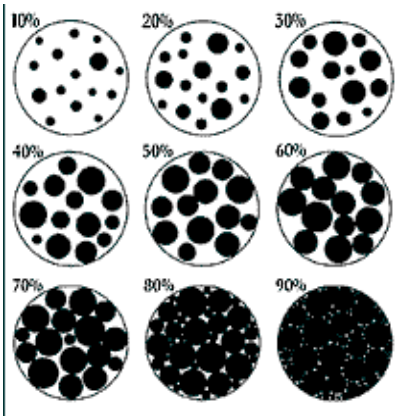
Source: Parker, Dave, et al. 2002. "Design of Stormwater Management Facilities." In The Dewberry Companies, *Land Development Handbook* (2nd ed.). Figure 22.37, p. 525. New York: McGraw-Hill.

14. **Street Trees.** Encourage or require the planting of street trees in subdivisions and new land developments.

15. **Tree Protection and Preserve Tree Canopy.** Restrict the cutting of trees, require the replacement of trees with trees of like species and value, and preserve and enhance tree canopy, by adopting, amending, and enforcing a tree preservation ordinance.

16. **Tree Canopy Guidelines.** Unless more restrictive requirements are adopted by ordinance, use the following goals, recommended by American Forests (2002) for the preserving tree canopy, as a guide in development planning:

- 40 percent tree canopy overall.
- 50 percent tree canopy in suburban residential areas
- 25 percent tree canopy in urban residential areas
- 15 percent tree canopy in business districts



17. **Water Conservation.** Promote the conservation of water by residents and businesses to meet regional and state objectives or directives. Participate in private and public educational efforts that are designed to assist in water conservation. Ensure that Duluth has its own municipal water conservation program.

15.2 Energy

1. **Sustainability and Energy Efficiency.** Promote sustainable and energy-efficient development (2006 Regional Development Plan Policy #10).

2. **Reduce Energy Consumption.** Reduce energy consumption through comprehensive planning and urban design that incorporates strategies for both mobile and non-mobile energy efficiency.

3. **Support Programs to Increase Energy Efficiency.** Support programs to increase energy efficiency and reduce life-cycle costs of all construction projects, including public and institutional projects.

4. **Utilize Programs.** Continue to support the Low Income Home Energy Assistance Program (LIHEAP) and the Weatherization Assistance Program as means towards greater energy conservation.

5. **Encourage Renewable Energy Applications.** Develop and encourage appropriate applications of renewable energy.

6. **Recognize Relation of Energy Efficiency and Mobility.** Recognize that providing transportation options and good urban form design is the first step to changing pollution intensive choices for mobility. Actively promote alternative transportation modes through the planning and implementation of bicycle and pedestrian pathways and transit systems.

7. **Efficient Lighting Practices.** Develop community based lighting design guidelines that promote energy efficiency and safety while reducing light pollution or "sky-glow," light trespass on adjacent properties, and glare.

15.3 Historic Resources

1. **Compatible Character.** The traditional character of the community should be maintained through preserving and revitalizing historic areas of the community, encouraging new development that is compatible with the traditional features of the community, and protecting other scenic or natural features that are important to defining the community's character (Quality Community Objective, Historic Preservation).

2. **Protect Historic Resources.** Provide strategies to preserve and enhance historic resources (2006 Regional Development Plan Policy #13). Retaining community character through the preservation, protection and retention of Duluth's historic resources is a primary goal of the local preservation program. The following historic preservation objectives and policies should be followed collectively in order to provide the optimum financial and redevelopment benefits to the city as it moves forward with its preservation program.

3. **Increase Community Support.** Strive to increase community support for historic preservation. Continue to expand upon programs and activities that will instill an appreciation and pride in Duluth's past.

4. **National Register Listings.** Add eligible properties to the National Register of Historic Places.

5. **Historic Districts and Landmarks.** Add to locally designated historic districts and landmarks or create new one(s), as appropriate.

6. **Incentives.** Provide incentives to protect and preserve historic resources.

7. **Reuse of Historic Buildings.** The reuse of historic buildings is encouraged, provided the architectural character of the building is retained.

8. **Co-sponsorship of Programs.** Encourage the co-sponsorship by other entities and organizations of preservation and heritage education programs.

15.4 Population

1. **Annexation.** Consider municipal boundary expansion opportunities as appropriate, including properties identified as potential annexation areas and when unincorporated property owners petition for annexation.

2. **Diversity in City Employment.** As the City's ethnic population continues to increase, it should make efforts to attract culturally diverse and multi-lingual employees that reflect this growing diversity within the community.

15.5 Housing

1. **Housing Opportunities.** Quality housing and a range of housing size, cost, and density should be provided in the City (Quality Community Objective, Housing Opportunities).

2. **Housing Variety.** Encourage a variety of home styles, densities and price ranges in locations that are accessible to jobs and services to ensure housing for individuals and families of all incomes and age groups (2006 Regional Development Plan Policy #8).

3. **Mixed Income Housing.** Encourage the development mixed income housing communities within mixed-use developments and within the Buford Highway corridor.

4. **Group Quarters Housing.** Attached housing for seniors and group quarters housing are encouraged to be located within mixed-use developments and along major arterial road corridors.

5. **Life Cycle and Mixed Generation Communities.** Encourage "life cycle" or "mixed generation" communities that provide for persons of different age groups (including seniors) to live in the same community as they age.

6. **Design and Location of Senior and Disabled Housing.** Houses should be made available for seniors and disabled persons that contain a single-level with no-step entrances and wide doorways (Aging in Place, Best Housing Practice, Regional Development Plan Guidebook). Senior housing should be located in close proximity to public transit, recreation, and health care facilities.

7. **Minimum House Sizes.** Minimum house sizes in the zoning ordinance should provide flexible alternatives, and the smallest minimum house sizes should be allowed within proposed planned unit developments.

8. **Variances for Affordable Housing.** Consider allowing for deviations from land development improvement standards (e.g., road width, curb requirements, etc.), for projects that demonstrate consistency with affordable housing objectives.

9. **Avoid Regulatory Barriers.** In amending the city's zoning and development regulations, the city should consider the potential impact of such amendments on housing affordability, in order to possibly avoid creating or sustaining "regulatory barriers."

10. **Housing for Persons with Disabilities.** Avoid regulations and practices that would discourage the provision of housing for persons with disabilities.

11. **Nonprofit Housing Organizations.** Encourage the creation of, and cooperate with, community-based housing organizations in the pursuit of more affordable workforce housing.

12. **Housing and Property Standards Codes.** Allocate appropriate resources to expand the enforcement function of housing and property standards codes (housing maintenance, yards, etc.).

13. **State and Federal Housing Programs.** Pursue federal and state financial assistance programs to improve areas of substandard housing.

15.6 Economic Development

1. **Appropriate Businesses.** The businesses and industries encouraged to develop or expand in Duluth should be suitable for the City in terms of job skills required, linkages to other economic activities in the City or region, impact on the resources of the area, and future prospects for expansion and creation of higher-skill job opportunities (Quality Community Objective, Appropriate Business).

2. **Range of Jobs Available.** A range of job types should be provided in each community to meet the diverse needs of the local workforce (Quality Community Objective, Employment Options).

3. **Relation to Land Use Plan.** Avoid rezonings from commercial zoning categories to residential zoning districts, in order to prevent the reduction of land designated in the future land use plan for economic development; where such changes are justified, recognize that such changes may affect the future economic base of the city.

4. **Revitalization Tools.** Pursue the implementation of revitalization tools, including Tax Allocation District, Community Improvement District, and/or other available techniques.

5. **Emphasis on Redevelopment.** Future economic development strategies should place the highest priority on redevelopment over new development.

6. **Expedite Redevelopment Projects.** Consider, and if appropriate implement, ways to expedite the process of reviewing and approving redevelopment projects that are consistent with adopted redevelopment policies, objectives, and plans.

7. **Heritage Tourism.** Promote heritage tourism in Duluth as a way to educate citizens and visitors of Duluth's history and cultural identity and to enhance the local economic base.

8. **Small Businesses.** Promote the development of small businesses in the City.

9. **Home Occupations.** Home occupations, when compatible with the neighborhood, are recognized as part of the overall City economic development strategy and are encouraged, subject to compliance with applicable zoning laws. Consider distinguishing between "major" and "minor" home occupations and regulate appropriately.

10. **Positive Business Climate.** Create and maintain a positive climate for business in the City.

11. **Balanced Regulation.** Balance the need to regulate the design and appearance of commercial and other properties with a positive regulatory environment that is sensitive to the need for businesses to be competitive in the marketplace.

12. **Education and Training.** Educational and training opportunities should be readily available in the City – to permit City residents to improve their job skills, adapt to technological advances, or to pursue entrepreneurial ambitions (Quality Community Objective, Educational Opportunities).

13. **Business Marketing and Retention.** The city should work with business owners to assist them with marketing and to ensure that business retention objectives are met.

14. **Partnerships.** Partner with private industry and/or other agencies (county, cities, DDA, etc.) to promote economic development opportunities that will benefit the City of Duluth, Gwinnett County, the region, and the State of Georgia.

15. **Promotion and Recruitment.** The City of Duluth should actively and deliberately promote the City to business interests worldwide, recruiting industry and commerce.

15.7 Land Use

1. **Plans.** Use the Future Development Map (Character Areas) and the Future Land Use Map as a guide to decision-making.

2. **Mixed Use Development.** Promote mixed use developments in appropriate areas, especially the Town Center and Buford Highway Corridor.

3. **Protect Neighborhoods from Incompatible Land Uses.** Protect the city's established residential areas from encroachment by incompatible land uses.

4. **Neighborhood Input in the Decision-making Process.** Applicants for rezonings and special uses are strongly encouraged if not required to meet with adjacent property owners or homeowners associations prior to public hearings on such petitions.

15.8 Urban Design

1. **Generally.** Enhance the City of Duluth's image as a unique community and retain that image in attractive and orderly development that preserves existing character of a historic railroad community. Cultivate distinctiveness so that the City of Duluth remains unique among Gwinnett County and Metro Atlanta communities. Encourage private preservation of buildings and associated landscapes that have historic significance and/or architectural merit. Promote the cultural value of historic buildings along the railroad corridor as significant for being part of Duluth's original urban structure.

2. **Architectural Requirements.** Promote the highest quality of development. Reevaluate and reconsider architectural and site design standards as appropriate to encourage increased quality of site development, architectural detailing and materials. Implement design controls through the large-scale buildings ordinance, requirements in the zoning ordinance, and through other appropriate means.

3. **Compatibility and Small Town Character.** Require new development to respect the scale and character of nearby structures and minimize or mitigate abrupt and excessive differences.

4. **Streetscape Improvements.** Aesthetically appealing transportation routes are desired and will be created throughout Duluth. Street trees should be installed, and will be required, to create shaded sidewalks for pedestrians and improve the visual quality of local streets and state routes. Street furniture zones and landscape strips will be established along sidewalks within appropriate character areas. All streetscape

improvements will be coordinated with Georgia Department of Transportation when working along state routes or making use of Transportation Enhancement (TE) funds.

5. **Focusing of Efforts.** Continue to focus community improvement initiatives on the downtown area as well as along the Buford Highway corridor.

6. **Town Center.** Development in the town center should include mixed uses, following the guidelines to insure appropriate scales, setbacks, materials, and signage are achieved.

7. **Buford Highway Corridor Redevelopment.** Encourage rehabilitation or upgrade of aging residential neighborhoods, commercial centers, and industrial areas, specifically targeting the redevelopment of oversized parking lots and underutilized large properties.

8. **Gateways.** Improve community identity. Create civic gateways to the City that produce a sense of arrival. These entryways may incorporate streetscape elements, signage, landscaping, architectural features, and combinations of land uses that enhance the image and function of the City. Encourage the provision of public green spaces in gateway areas as private development occurs.

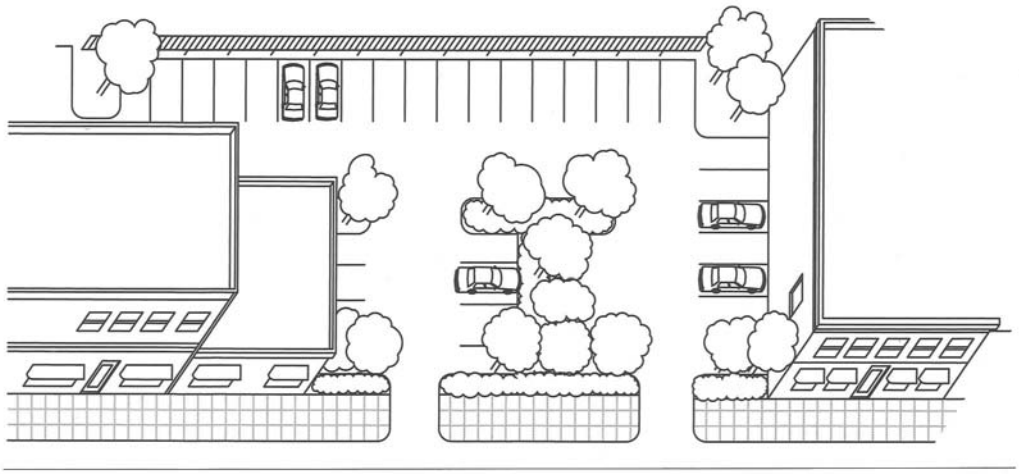
9. **Signage and Wayfinding.** A community-wide signage system should be developed to contribute to the city's urban design and economic development objectives. Signage should be installed at gateway locations and along major corridors that directs visitors to key destinations, such as the town center and local attractions, as well as to public parking and municipal buildings.

10. **Beautification.** Support ongoing community-based streetscape beautification partnerships.

11. **Landscaping.** Require the greening of Duluth's major corridors through the continued planting and maintenance of street yards, and the provision of street trees along major corridors. Landscape materials should consist of drought resistant plant varieties complementary to the area.

12. **Screening.** Screen negative views through site planning, architectural, and landscape devices.

13. **Parking.** Adequate parking will be provided within the City. Parking should be situated so that the parking is located at the rear or side of the building. If circumstances require front parking areas, proper screening from the roadway will be provided.



PARKING LOT

Source: URS Corporation.

Source: Planning and Urban Design Standards. 2006. John Wiley & Sons. p. 445.

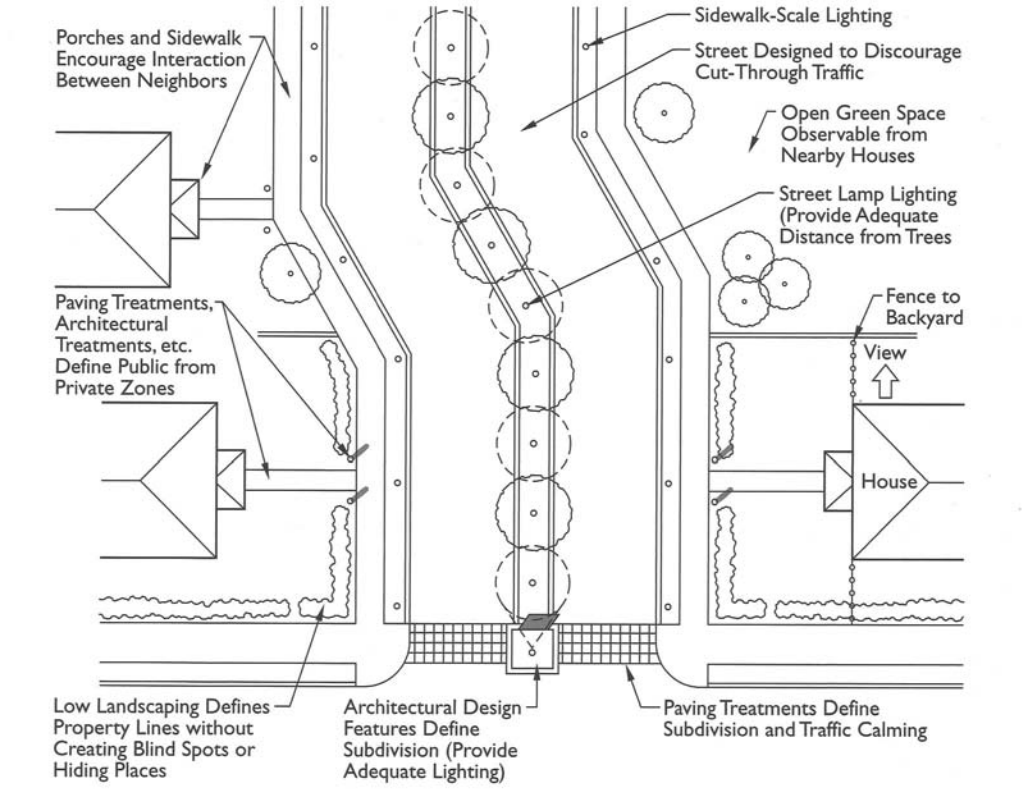
PARKING STRUCTURE

Source: URS Corporation.

Source: Planning and Urban Design Standards. 2006. John Wiley & Sons. p. 445.

14. **Streetscape Improvement Standards.** Pedestrian lighting and street furniture shall be consistent throughout the City, unless varied to be consistent with character. Street furnishings and landscape elements should possess long-lasting quality and be well-maintained.

15. **Crime Prevention through Environmental Design.** Encourage, where appropriate, developments that follow principles of crime prevention through environmental design.



CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN—PLANNING FOR SUBDIVISIONS

Source: Architectural Graphic Standards, *10th edition 2000.*

Source: Planning and Urban Design Standards. 2006. John Wiley & Sons. p. 475.

15.9 Community Facilities and Services

1. **Level of Service Standards.** Establish and maintain level-of-service and/or performance standards for all community facilities and services provided by the City.

2. **Police Protection.** Ensure that the police department has adequate but not excessive personnel, equipment, and training. Maintain a target officer to population ratio as may be established by national professional organizations.

3. **Sewerage.** Coordinate with Gwinnett County to expand sewerage services, promoting increased opportunities for all types of development.

4. **Municipal Parks and Recreation Department.** Maintain a park/recreation department to supplement countywide park and recreation facilities.

5. **Parkland Designation.** Designate lands for future parks, recreation, open space, and conservation.

6. **Solid Waste Management.** Implement the City's comprehensive solid waste management plan. Pursue waste diversion, composting, and recycling strategies.

7. **Location Policy.** While abiding by principles of efficiency in terms of optimal geographic locations for City facilities and services, the City should use its investment in civic buildings (e.g., new city hall) to strategically leverage and enhance private reinvestment in redevelopment areas.

8. **Public-Private Co-Delivery.** Identify, and capitalize on, opportunities for innovative public-private ventures in the arrangement, provision, and delivery of various City facilities and services.

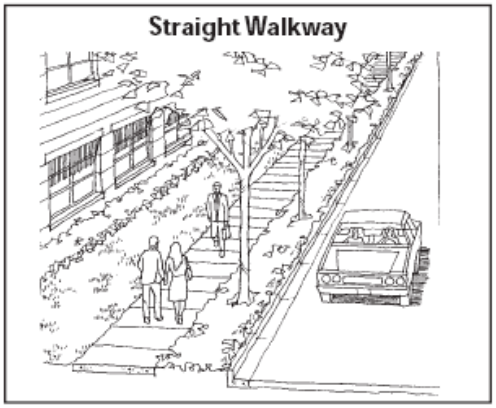
15.10 Transportation

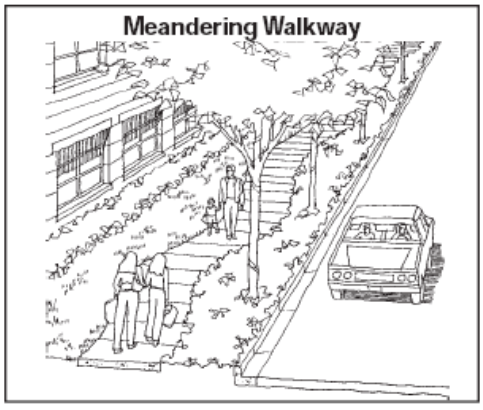
1. **Local Street Improvements.** Improve geometrics of local street intersections where they pose traffic safety problems.

2. **Downtown Public Parking.** Ensure adequate off-street parking facilities downtown, including public parking.

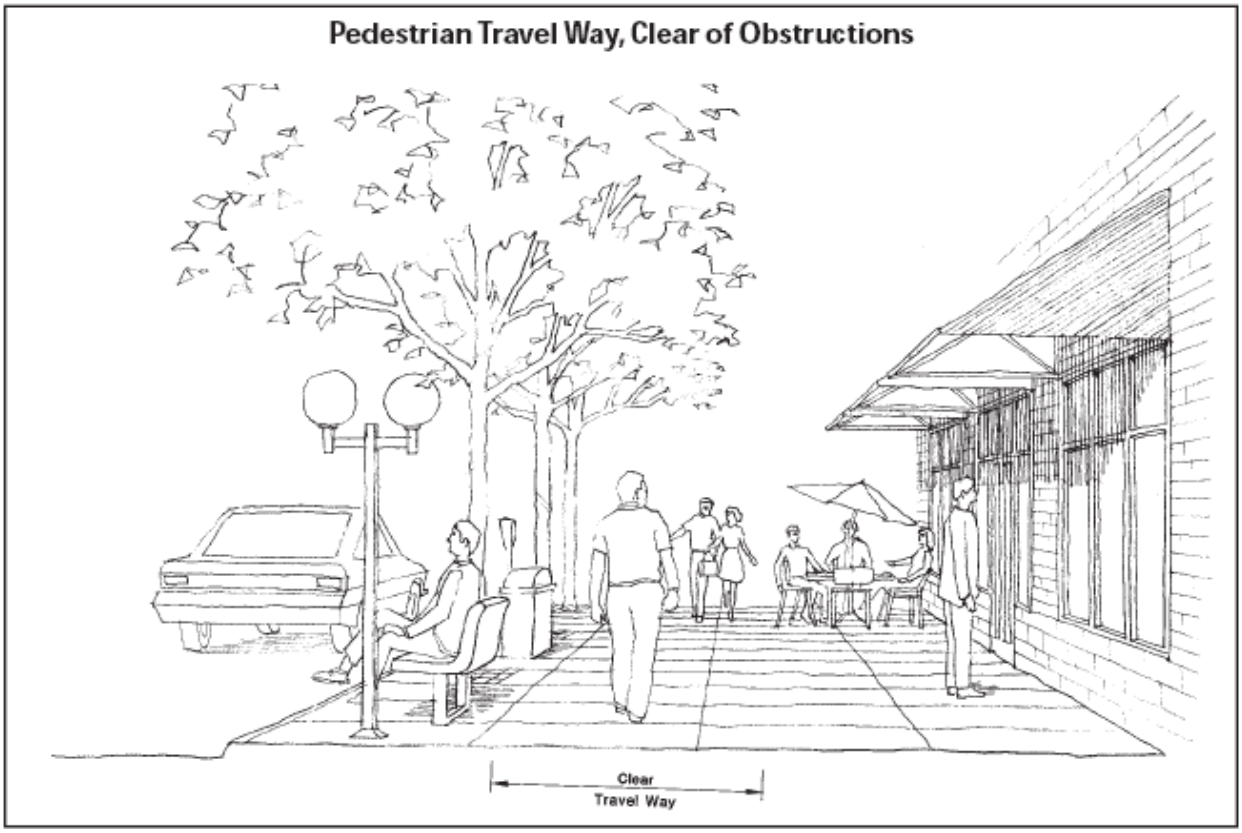
3. **Context-Sensitive Design.** Provide for street designs that pay appropriate attention to concepts of compatibility, livability, sense of place, and urban design, in addition to conventional traffic engineering considerations. Utilize context-sensitive roadway design to promote streets that are built appropriately to fit the land uses surrounding them. For example, a downtown main street should be built with narrower lanes, wider sidewalks, and streetscape elements in its design, in order to encourage lower speeds and accommodate pedestrians.

4. **Pedestrian/Sidewalk System.** Improve the network of pedestrian facilities (sidewalks) in the city. Create a safe and accessible pedestrian network throughout the City of Duluth. Sidewalks of required widths, well-marked crosswalks and approved pedestrian-scaled lighting should be installed to create an inviting and well used pedestrian system. All new construction and redevelopment within the City should include a combination of these facilities. All new facilities must meet current American with Disabilities Act (ADA) standards. Additional funding will be sought to create and improve pedestrian facilities within existing areas of the City, but when development occurs it will be the responsibility of developers to improve facilities along their public street frontages and internal to the development. The city should identify ways to retrofit older suburban subdivisions with sidewalks.



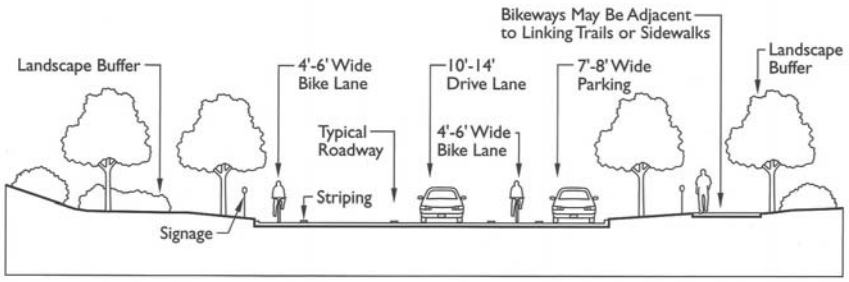


Source: Georgia Department of Transportation, Pedestrian Guide, Figures 63 and 64.



Source: Georgia Department of Transportation, Pedestrian Guide, Figure 71.

5. **Bike Paths and Bikeways.** Provide bike paths and bikeways in appropriate locations in the city. Direct bicycle and pedestrian investments toward those corridors and areas best suited for foot and bicycle traffic and which have the greatest potential to provide convenient and safe mobility alternatives. Develop and adopt protocol for roadway re-striping to better accommodate bicyclists on roadway segments where excess pavement width is available. Adopt guidelines or standards that recommend appropriate crossing facilities and treatments for pathways as they cross at uncontrolled locations.



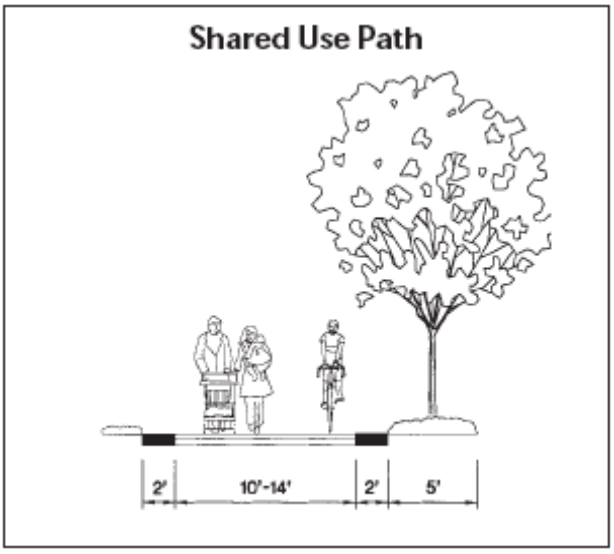
Bike lanes are often found along urban road sections, where maneuvering space is limited and a defined lane is needed for rider safety.

BIKE LANE

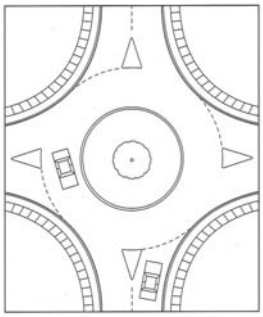
Source: Brauer & Associates, Ltd. 2004.

Source: Planning and Urban Design Standards. 2006. John Wiley & Sons. p. 259.

6. **Multi-use Trails.** Continue pursuing opportunities to construct multi-use trails or greenways throughout the city.

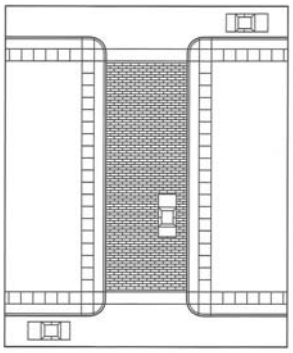


7. **Traffic Calming.** Consider future needs for traffic calming (raised speed humps, raised tables, etc) to slow speeding and/or discourage cut-through traffic.



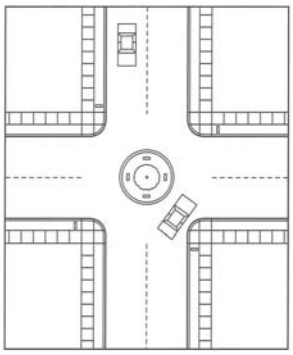
Roundabouts
Roundabouts are circular raised islands installed at intersections on higher-volume streets such as collectors and arterials and are often used in place of traffic signals or four-way stops. They require yield-at-entry design and must be well marked and visible. Roundabouts have been found to have significantly lower accident rates than signalized intersections with equivalent speed limits.

Source: Ewing 1999.



Textured Surfaces
Textured surfaces are usually used in conjunction with other traffic calming devices, but may be used alone.

Source: Appleyard 1980.



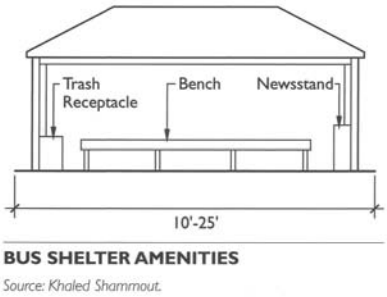
Traffic Circles
A traffic circle is a raised island located at an intersection around which traffic has to circulate. Yield signs are often placed on all four approaches. Traffic circles are used on residential streets in lieu of four-way stop signs.

Source: Appleyard 1980.

Source: Planning and Urban Design Standards. 2006. John Wiley & Sons. p. 239-240.

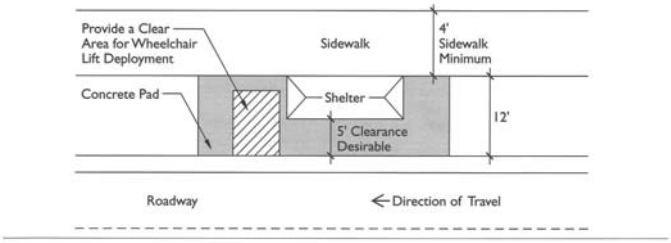
8. **No Truck Routes.** Designate routes for truck prohibition where needed.

9. **Public Transportation.** Continue to work with Gwinnett County Transit and GRTA to improve transit access to, from, and within the city. Efforts should be made to tie into county and regional public transportation programs, where and when they are available. Work with county and regional transportation agencies to designate locations for public transit stops within the city. Stay informed and involved in discussions relating to transit expansion in Gwinnett County as well as neighboring jurisdictions.



BUS SHELTER AMENITIES

Source: Khaled Shammout.



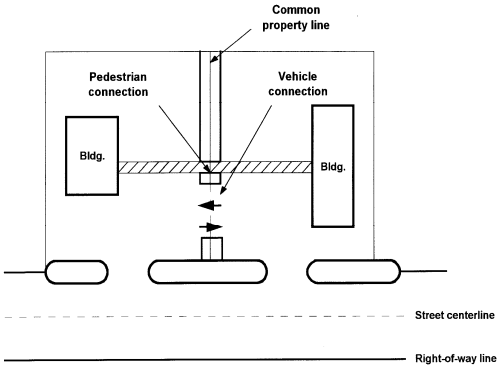
BUS SHELTER PLACEMENT

Source: Khaled Shammout.

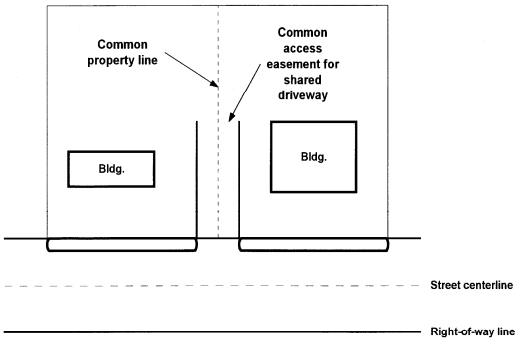
Source: Planning and Urban Design Standards. 2006. John Wiley & Sons. p. 270.

10. **Connectivity.** During site plan and development permit review, measures should be made to connect streets to provide a local street network that serves as an alternative to the arterial and collector street system. This includes consideration of a grid-street pattern in all places where such design is feasible and practical. It also means discouraging, limiting, or prohibiting cul-de-sacs in some cases, and providing for stub connections at property lines to tie into future compatible development on adjoining properties.

11. **Inter-parcel Access.** Encourage or require inter-parcel vehicle access points between contiguous and compatible commercial and office developments.

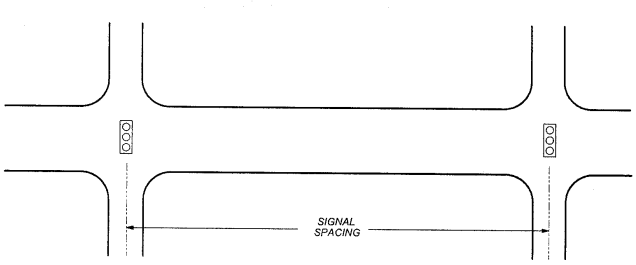


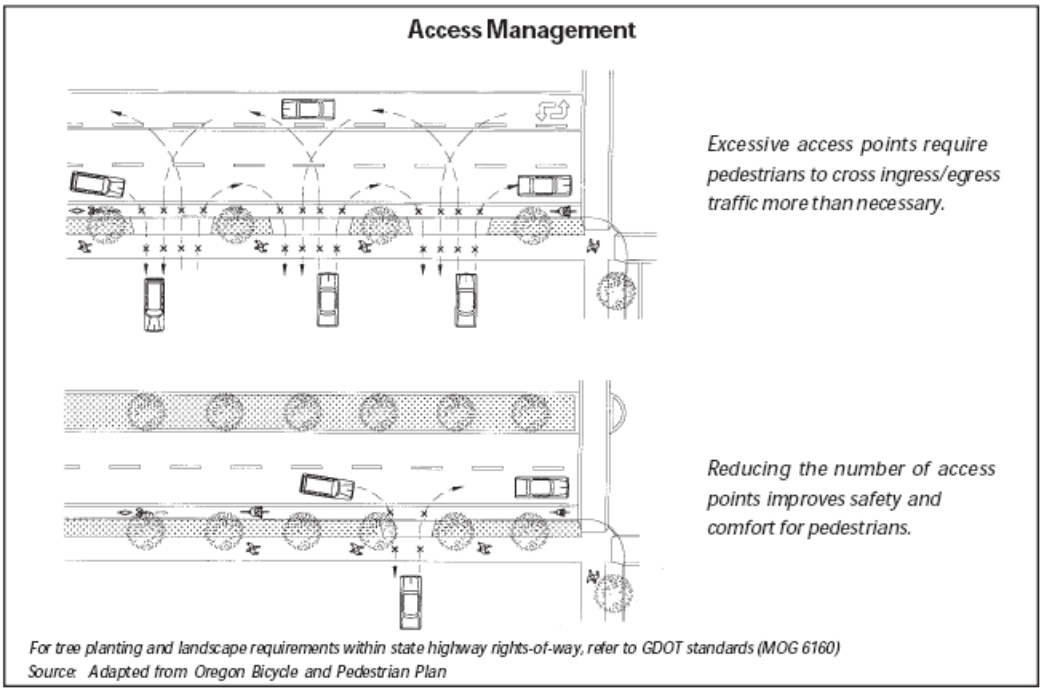
Interparcel Connections for Pedestrians and Vehicles



Common Access Easement and Shared Driveway

12. **Access Management.** Apply state and local standard for access management along arterial and collector streets, including but not limited to specifications for curb cut location and separation, traffic signal spacing, and deceleration lanes.

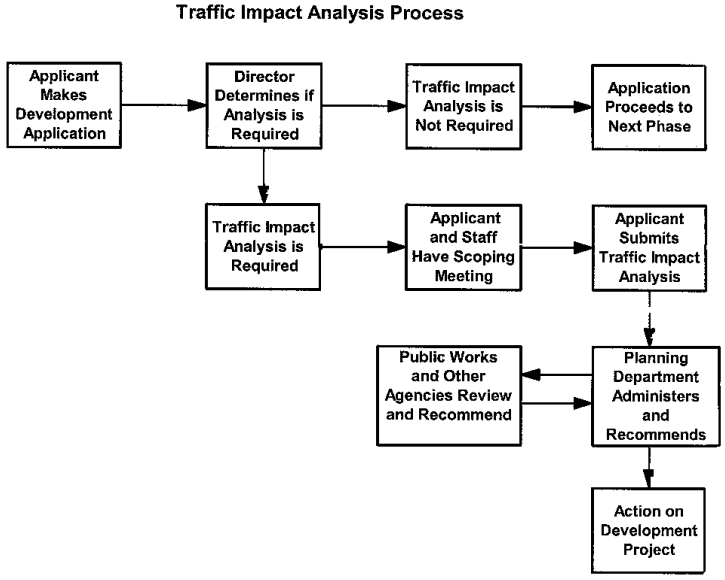




Source: Georgia Department of Transportation, Pedestrian Guide, Figure 77.

13. **Railroad and Road Grade Separation.** Maintain safe railroad crossings for drivers, bicyclists, and pedestrians, and consider opportunities and where feasible implement projects that separate at-grade road and railroad intersections.

14. **Traffic Impact Studies.** When a development proposal would be expected to generate 1,000 vehicle trips or more, or 100 or more vehicle trips during any a.m. or p.m. peak hour, a traffic study should be required. In other cases at the discretion of the City Engineer a traffic impact study may be required.



Traffic Impact Analysis General Process

15. **Commuter Rail.** Continue to monitor studies by the Georgia Department of Transportation regarding commuter rail service prospects in the Atlanta metropolitan region, in particular, the Atlanta to Gainesville commuter rail line. Support efforts to implement commuter rail if determined feasible and in the best interests of Duluth's residents and the state.

15.11 Intergovernmental Coordination

1. **Regional Cooperation.** Regional cooperation should be encouraged in setting priorities, identifying shared needs, and finding collaborative solutions, particularly where it is critical to success of a venture, such as protection of shared natural resources (Quality Community Objective, Regional Cooperation).

2. **Regional Solutions.** Regional solutions to needs shared by more than one local jurisdiction are preferable to separate local approaches, particularly where this will result in greater efficiency and less cost to the taxpayer (Quality Community Objective, Regional Solutions).

3. **Support for Regional Policies.** Coordinate local policies and regulations to support regional policies (2006 Regional Development Plan Policy #17). Ensure that goals and implementation programs of the City's Comprehensive Plan are consistent with adopted coordination mechanisms and consistent with applicable regional and State programs.

4. **Regional Bicycle and Pedestrian Plan.** Strive for consistency with the Atlanta Regional Commission's Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan, which includes recommended policies for local governments that, when implemented, can increase mobility, safety, accessibility, and connectivity region wide for bicyclists and pedestrians. Also, work with organizations such as PEDS to coordinate safe routes to school programs and PATH for bike/pedestrian connections.

5. **Intergovernmental Agreements.** Periodically assess existing intergovernmental agreements and develop new agreements as appropriate.

6. **Information Sharing.** Share resources and information with all government entities.

7. **Cooperative Land Use Planning.** Participate in cooperative efforts between Gwinnett County and its cities to jointly plan land uses, which contributes to the overall future development and quality of life throughout the county, region, and state.

8. **Avoid Competition.** Avoid competition between Duluth and the nearby cities of Suwanee and Berkeley Lake, and turn competitive situations into opportunities for cooperation. Initiate and maintain regularized dialogue with adjacent local governments with regard to road construction, road maintenance, zoning applications, and other issues.

9. **Conflict Resolution.** Resolve conflicts with other local governments through established mediation processes or other informal or formal means.

10. **Interagency Economic Development.** Promote intergovernmental and interagency coordination in economic development activities.

11. **Water District.** Adopt, and amend as necessary, plans and regulations to be consistent with the mandates and requirements of the Metropolitan North Georgia Water Planning District.

12. **Water and Sewer.** Work with Gwinnett County to plan and implement extension of water service, and sanitary sewer service to areas that have failing septic tanks, where cost effective to do so.

13. **Water Conservation.** Participate in water conservation planning by the county and region.

14. **Emergency Preparedness.** Periodically review and revise the disaster preparedness and emergency management plans in conjunction with Gwinnett County.

16.0 SHORT-TERM WORK PROGRAM

16.1 Implementation Responsibilities

The Duluth Department of Planning and Development is the primary administrative agency responsible for implementation of the Comprehensive Plan, Community Agenda. However, other municipal departments have important responsibilities in their respective service areas, and the City Administrator must propose and approve funding levels appropriate to carry out the many programs suggested here.

The Duluth Planning Commission provides overall support for plan implementation and should periodically investigate the progress of plan implementation. Other agencies, including historic preservation boards also have roles in plan implementation. Ad-hoc committees can be formed, such as the one created for the large buildings study, as needed to help guide the process of implementation. At any time, a particular program may rise in level of importance such that the Duluth Mayor and City Council address program particulars directly, or through committees.

16.2 Consolidated Short-term Work Program

Table 16.1 provides the specific actions needed to implement Duluth's Comprehensive Plan.

Table 16.1
Consolidated Short-Term Work Program
City of Duluth, 2008-2012

Description	Year(s) To Be Implemented	Estimated Cost ($)	Responsible Party	Possible Funding Sources
NATURAL RESOURCES				
Review tree protection regulations and amend as part of the zoning ordinance to include tree canopy requirements	2009-2010	(include in zoning code rewrite)	Planning Department	Operating Budget
HISTORIC PRESERVATION				
Provide more detailed mapping and historic information for historic resources in Duluth	2009	$10,000	Planning Department	Operating Budget
Comprehensively revise the city's local historic preservation regulations, including expanded boundaries where appropriate	2009-2010	$20,000	Planning Department	Operating Budget
Publicize the benefits and incentives of National Register District status	2008-2012		Duluth Historic Society	Volunteer function
Reconsider the boundaries of the existing local historic district	2009-2012		Planning Department	
Create a citywide local landmark program	2011-2012		Planning Department	Operating Budget
Apply for Certified Local Government (CLG) status (historic preservation) and pursue grant funding opportunities	2011-2012		Planning Department	Operating Budget
HOUSING				
Review annexation, rezoning, and master plan proposals for consistency with housing policies	2008-2012	Staff function	Planning Dept.	Operating budget
Increase enforcement of housing and property appearance standards, including the hiring of one additional code enforcement officer	2009	$40,000 plus benefits	Planning Dept.; City Manager/ City Council	Operating budget – code enforcement division
Explore prospects with developers for converting aging apartment complexes to condominiums	2008-2012	Staff function	Planning Dept	Operating budget
Continue to apply for Community Development Block Grant funds for improving the Hill Street community	2008-2012	Staff function	Planning Dept	Operating budget
Develop desired parameters for mixed-income housing in appropriate locations	2009-2010	(part of zoning code rewrite)	Planning Dept	Operating budget
ECONOMIC DEVELOPMENT AND REDEVELOPMENT				
Contact community program coordinators at colleges, universities and technical institutes to determine how they can assist with the City's economic development and redevelopment efforts	2008	Staff function	Economic Development Director	Operating budget
Hire economic development director	2008-2009	$50,000 plus benefits	City Manager/ City Council	Operating budget
Continue historic town center redevelopment plan implementation	2008-2012	Unknown	Economic Development Director	Operating budget; LCI implementation
Establish tax allocation district and prepare redevelopment plan	2008-2009	Unknown	Economic Development Director	Operating budget

Description	Year(s) To Be Implemented	Estimated Cost ($)	Responsible Party	Possible Funding Sources
Evaluate and consider establishing an appropriate redevelopment agency	2008-2009	Staff function	Economic Development Director	Operating budget
Work with Gwinnett County to extend sanitary sewer to south Buford Highway	2010-2012	Staff function	Economic Development Director	Possible funding via CDBG
Aggressively market opportunities for redevelopment	2008-2012	Staff function	Economic Development Director	Operating budget
Work with Town Center merchants to identify and conduct promotional and branding activities that would market Duluth as a destination point	2008-2012	Staff function	Economic Development Director	Operating budget
Review possibility of providing tax incentives to redevelopers of vacant retail centers	2008-2012	Staff function	Economic Development Director	Operating budget
Consider offering tax incentives to businesses for relocating to Duluth	2008-2012	Staff function	Economic Development Director	Operating budget
Engage ethnic communities to coordinate investment objectives	2008-2012	Staff function	Economic Development Director	Operating budget
LAND USE AND CHARACTER AREAS				
Formalize homeowner group participation in zoning and special use permit review processes	2008-2009	Staff function	Planning Department	Operating Budget
Rewrite and readopt the City's zoning code	2009-2010	$60,000	Consultant and Planning Department	Operating Budget
Prepare and adopt residential infill development requirements or guidelines	2009-2010	(include in zoning rewrite)	Consultant and Planning Department	Operating Budget
Subarea Plan Priority #1: Buford Highway	2009	$40,000	Consultant and Planning Department	Operating Budget
Subarea Plan Priority #2: Medical District at Pleasant Hill Road and McClure Bridge Rd.:	2010	$30,000	Consultant and Planning Department	Operating Budget
Subarea Plan Priority #3: Interchange Redevelopment Area (Buford Highway and Pleasant Hill Road)	2010	$30,000	Consultant and Planning Department	Operating Budget
Monitor shopping center (retail) vacancies and consider additional regulations as appropriate regarding vacant retail spaces	2008-2012	Staff function	Planning Department	Operating Budget
Amend the comprehensive plan as appropriate any time the city annexes an accumulated area of 100 acres or more	(As applicable)	Staff function	Planning Department	Operating Budget
Revise and resubmit for state and regional review this short-term work program	2012	Staff function	Planning Department	Operating Budget
URBAN DESIGN				
Duluth Streetscape (Main St.)	2008-2012	Unknown	City	Federal Grant
Plan and implement gateway enhancement activities	2008-2012	Unknown	Planning dept.; Public Works	Capital Budget
Complete and implement a citywide wayfinding/ signage program	2009-2012	Unknown	Planning Department;	Operating budget

Description	Year(s) To Be Implemented	Estimated Cost ($)	Responsible Party	Possible Funding Sources
Continue to explore development of a railroad theme	2009	Staff function	Planning Department;	Operating budget
Monitor administrative design process for large-scale buildings, and amend large scale buildings ordinance as appropriate	2009	Staff function	Planning Department;	Operating budget
COMMUNITY FACILITIES: SOLID WASTE MANAGEMENT				
Continue to develop strategies for reducing solid waste in accordance with the Georgia Comprehensive Solid Waste Management Act	2008-2012	$76,555 annually	Public Works	Operating budget
COMMUNITY FACILITIES: WATER AND SEWER				
Develop city water conservation campaign, implementing objectives of the Metropolitan North Georgia Water Planning District	2008-2012	Unknown	Gwinnett County with city assistance	Operating budget
STORMWATER MANAGEMENT				
Continue supporting Gwinnett County's Storm Water Stenciling Program	2008	Unknown	Public Works	Operating Budget
Hire engineering consultant to conduct study of stormwater retention and quality control facilities in the south Buford Highway corridor to enhance redevelopment potential	2009	$50,000	Public Works; Planning Department	Operating Budget
Work with Gwinnett County to fulfill requirements of Georgia Environmental Protection Department's regulations in developing a plan for non-point source pollution	2008-2012	Staff function	Public Works.	Operating Budget
Respond to mandates of the Metropolitan North Georgia Water Planning District in terms of implementing its Districtwide Watershed Management Plan	2008-2012	$22,000	Public Works	Operating Budget
Consider partnering with Gwinnett County to establish a countywide stormwater utility	2008-2012	Staff function	Public Works	Operating Budget
COMMUNITY FACILITIES – PARKS AND RECREATION				
Acquire lands within designated greenways for recreation	2008-2012		Mayor and City Council	City Capital Budget
Review possibility of City-owned passive park along the Chattahoochee River made up of City-owned and CRNRA parcels owned by the National Park Service.	2008-2012		Parks and Recreation	City Capital Budget
Improve functionality of Church Street Park by improving Greenspace	2008-2012	$521,813	Parks and Recreation	City Capital Budget
Design and installation of new playground within Taylor Memorial Park	2008-2012	$195,910	Parks and Recreation	City Capital Budget
Improve functionality within Rogers Bridge Park with creation of dog park, great lawn, quiet corner, playground and trailhead	2008-2012	$3,270,570	Parks and Recreation	City Capital Budget
Acquire 10-acre parcel for Rogers Bridge Park expansion	2008-2012	Unknown	Parks and Recreation	City Capital Budget
Improve functionality of Scott Hudgens Park with pedestrian circulation system, spectator improvements, river overlooks, two playgrounds and picnic shelters.	2008-2012	Unknown	Parks and Recreation	City Capital Budget

Description	Year(s) To Be Implemented	Estimated Cost ($)	Responsible Party	Possible Funding Sources
Look into possibility of acquiring 12-acre AT&T golf parcel for Scott Hudgens Park expansion, as well as an 18-acre undeveloped parcel on southwest corner of the park	2008-2012	Unknown	Parks and Recreation	City Capital Budget
Improve circulation within W.P. Jones Park, install 10,000 square foot skate park facility, replace train depot with new community building	2008-2012	Unknown	Parks and Recreation	City Capital Budget
Improve neighborhood connectivity to W.P. Jones Park with clearly-defined trail connections	2008-2012	$2,136,449	Parks and Recreation	City Capital Budget
COMMUNITY FACILITIES -- OTHER				
Explore possibility of including the Railroad Museum as part of the Town Center	2008	Staff function	Economic Development Director	
Relocate Duluth History Museum	2008-2009		Mayor and City Council	Capital Budget
Inventory existing facilities and services provided by nongovernmental organizations in social service delivery	2008-2009	Staff function	Planning Department	Operating Budget
TRANSPORTATION – ROADS				
Complete Pleasant Hill Road and Buford Highway intersection interchange reconstruction	October 2008	Unknown	Georgia Department of Transportation	Transportation Improvement Program (ARC)
Gateway to State Route 120 at Buford Highway to improve pedestrian access and safety.	2008-2012	Unknown	Planning Department; Public Works	Transportation Improvement Program (ARC)
Davenport Road extension connecting Hill Street	2008-2012	Unknown	Planning Department; Public Works	Transportation Improvement Program (ARC)
Implement transportation policies at the time of site plan and preliminary plat review	2008-2012	Unknown	Planning Department	Development Review Process
SR 120 realignment from Norfolk Southern railroad tracks to Hill Street	2008-2012	Unknown	Planning Department; Public Works	Transportation Improvement Program (ARC)
Ridgeway Road extension and Hospital Connector providing additional points of access for Ridgeway Road, Abbott's Bridge Road, Irvindale Road, and McClure Bridge Road	2008-2012	Unknown	Planning Department; Public Works	Transportation Improvement Program (ARC)
Study the need for traffic calming measures and install traffic calming devices as appropriate	2010-2011	Unknown	Planning Department; Public Works	Operating Budget
TRANSPORTATION -- TRANSIT				
Develop plan for bus shelters along Buford Highway	2009	(part of subarea study)	Planning Department; Public Works	Operating Budget
Work with and encourage Gwinnett Transit to bring bus service to Duluth	2008-2012	Staff function	Planning Department	Operating Budget
SIDEWALKS AND BIKE WAY PROJECTS				
Provide improved crossing of Buford Highway between Town Center and Proctor Square.	2009-2011	Unknown	Public Works	Georgia Dept. of Transportation; private funds
Davenport sidewalk installation from Buford Highway to Bromley Rowe	2008-2012	Unknown	Public Works	Capital Budget

Description	Year(s) To Be Implemented	Estimated Cost ($)	Responsible Party	Possible Funding Sources
Irvindale Loop sidewalk construction along McClure Bridge Road, Howell Mead Road, Postal Drive and Howell Springs Drive	2008-2012	Unknown	Public Works	Capital Budget
Western Gwinnett Bikeway providing a multi-use trail adjacent to Peachtree Industrial Boulevard from Summer chase to Rogers Bridge Road	2008-2012	Unknown	Public Works; Parks & Recreation	Capital Budget
Chattahoochee River recreation trail adjacent to Rogers Bridge Road connecting Scott Hudgens Park and Rogers Bridge Park	2008-2012	Unknown	Public Works; Parks & Recreation	Capital Budget
Abbotts Bridge Road Sidewalks from Main Street to Duluth High School	2008-2012	Unknown	Public Works	Capital Budget
Rogers Bridge Road Bikeway	2012	Unknown	Public Works	Capital Budget
Central City Bikeway	2012	Unknown	Public Works	Capital Budget
Investigate measures to retrofit existing neighborhoods with sidewalks	2010-2012	Staff function or consultant	Planning Department; Public Works	Operating Budget
INTERGOVERNMENTAL COORDINATION				
Monitor annexations by Berkeley Lake and Suwanee in areas south and north of the city, respectively, and comment on consistency of annexation proposals with city plans	2008-2012	Staff function	Planning Department	Operating Budget
Seek to implement coordination strategies with the Gwinnett County Board of Education	2008-2012	Staff function	City Administrator	Operating Budget
Participate in Land Use Coordinating Committee meetings of the Atlanta Regional Commission	2008-2012	Staff function	Planning Department	Operating Budget
Initiate dialogue with the U.S. National Park Service regarding joint-management and policing arrangements	2008-2012	Staff function	City Administrator	Operating Budget
Participate in efforts to update master plans of the Metropolitan North Georgia Water Planning District	2008-2012	Staff function	Planning Department; Public Works	Operating Budget
Reconsider, and revise as appropriate, existing intergovernmental agreements	2008-2012	Staff function	City Administrator	Operating Budget

Table 16.2 provides a summary of major initiatives to implement the character area recommendations of this Community Agenda.

Table 16.2
Major Implementation Measures for Duluth's Character Areas

Character Area	Resource Protection	Design Guidance	Land Use Regulation	Community Facilities	Intergovernmental Coordination
Conservation	River corridor reviews; land acquisition	Standards for greenways	Flood plain ordinance; Enhanced protection of trees and tree canopies	Development of greenways in river corridor and elsewhere	National Park Service; Gwinnett County, abutting municipalities
Suburban Residential	Buffers through zoning regulations	Infill development compatibility guidelines	Zoning districts (single-family residential)	Funding to connect or retrofit with sidewalks	
Urban Communities	Encouragement of condominium conversions		Zoning districts (multi-family residential; Large buildings ordinance		
Institutional/Campus			Small area plan for medical district (priority #2)	Hospital (public)	
Office-Institutional Corridor			Zoning districts (office and institutional)		
Community Activity Center		Site planning standards in zoning ordinance	Zoning districts (office and institutional)		
Historic Town Center	Historic landmark designations and local historic districts; National Register nominations	LCI study has been completed (2000); guidelines for mixed-use development	Zoning districts and overlay district	Anchored by new City Hall and Festival Center	
Interchange Redevelopment Area			Small area plan (priority #3)		
Buford Highway Corridor		Gateways delineation; streetscape improvements	Small area plan (priority #1)	Anchored by Public Safety Center; extension of sewer, multi-site detention plan	Sewer extension by Gwinnett County
Targeted Community Development Area	Historic resources inventory				CDBG funds through Gwinnett County
Employment/Industrial					

16.3 Funding Sources

This section summarizes some of the primary funding sources available to the City of Duluth, especially with regard to future transportation projects.

LCI Implementation Program

A primary funding recommended to implement transportation-related improvements of the LCI Study is the LCI Implementation Program.

Transportation Enhancement Activity Program

Additional funding may be secured from the Transportation Enhancement (TE) activity program, which provides funding for streetscaping and greenway implementation

Congestion Mitigation Air Quality (CMAQ)

This program provides funding for projects contributing to attainment of national ambient air quality standards. Types of projects eligible for CMAQ funds include transit improvements, shared-ride services, traffic flow improvements, transportation demand management strategies, pedestrian and bicycle facilities and programs, and alternative fuel programs.

Surface Transportation Program (STP)

These funds are available in limited amounts for bicycle and pedestrian connections and for road improvements on major roadways.

Community Development Block Grant (CDBG)

The nation's Community Development Block Grant (CDBG) is a grant program administered by the U.S. Department of Housing and Urban Development on a formula basis for entitlement communities, and by the state Department of Community Affairs for non-entitled jurisdictions. This grant allots money to cities and counties for housing rehabilitation and community development, including public facilities and economic development. CDBG funds can be used for a variety of projects that will benefit low- and moderate income households or fulfill one of the approved national objectives.

Special Local Option Sales Tax (SPLOST)

SPLOST funds are available through Gwinnett County and have been programmed for a variety of capital improvements.

Land and Water Conservation Fund (LWCF)

This grant program is administered by the Georgia Department of Natural Resources, Grants Administration and Planning Division. LWCF provides 50 percent matching grants for acquisition of real property and development of facilities for the general purpose of outdoor recreation.

Local Development Fund (LDF)

This grant program, provided by the Georgia Department of Community Affairs, provides small sums (maximum of $10,000) for a wide range of municipal improvement projects. To be eligible, the recipient must be a qualified local government, meaning that it has met DCA comprehensive planning, reporting, and solid waste management requirements. A local cash or in-kind match no less than dollar for dollar of the grant amount is required.

Downtown Development Revolving Loan Fund

This program is administered by the Georgia Department of Community Affairs. It provides low-cost, reasonable-term loans to small and middle-sized communities in implementing quality downtown development projects (generally up to $200,000 per project). Loan terms are usually no longer than 15 years. Interest rates are normally fixed at below market values.

Local Assistance Road Program (LARP)

This program is administered by the Georgia Department of Transportation. It provides funds to resurface roads and streets with deteriorated pavements and to maintain the structural integrity of roads. The selection of projects is based on an engineering evaluation of need, service to be provided versus cost, local government priority, and availability of funds.

17.0 GLOSSARY OF PLANNING TERMS

The following terms have been defined to increase reader understanding of this document. With regard to some terms, there is not a consensus in the planning profession on how they can be defined.

Alley: A strip of land dedicated to public use providing vehicular and pedestrian access to the rear of properties which abut and are served by a road or street.

Block: An area of land within a subdivision that is entirely surrounded by public streets, public lands, railroad rights-of-way, watercourses, or other well defined and fixed boundaries.

Block Width: The distance as measured along rear property lines between intersecting streets.

Buildout: A theoretical condition or imagined future that assumes development occurs on all available vacant lands at densities and intensities according to the future land use plan map, or allowed by current zoning, or both. Buildout is typically quantified by assigning a land use to each vacant parcel to be developed and multiplying the acreage of vacant land by the units per acre (residential) or floor-area ratio to determine additional housing units and square footage of non-residential development.

Capital Improvement: An improvement with a useful life of ten years or more, by new construction or other action, which increases the service capacity of a public facility.

Capital Improvements Element: A component of a comprehensive plan adopted pursuant to O.C.G.A. 50-8-1 et seq. which sets out projected needs for system improvements during a planning horizon established in the comprehensive plan, a schedule of capital improvements that will meet the anticipated need for system improvements, and a description of anticipated funding sources for each required improvement.

Character Area: A specific geographic area within the community that: has unique or special characteristics to be preserved or enhanced (such as a downtown, a historic district, a neighborhood, or a transportation corridor; has potential to evolve into a unique area with more intentional guidance of future development through adequate planning and implementation (such as a strip commercial corridor that could be revitalized into a more attractive village development pattern); or requires special attention due to unique development issues (rapid change of development patterns, economic decline, etc.). Each character area is a planning sub-area within the community where more detailed, small-area planning and implementation of certain policies, investments, incentives, or regulations may be applied in order to preserve, improve, or otherwise influence its future development patterns in a manner consistent with the community vision.

Character Area Map: A map showing character areas. Local planning requirements require a "preliminary" character area map be provided in the community assessment report.

Community Agenda: The portion of the comprehensive plan that provides guidance for future decision-making about the community, prepared with adequate input from stakeholders and the general public. It includes: (1) a community vision for the future physical development of the community, expressed in the form of a map indicating unique character areas, each with its own strategy for guiding future development patterns; (2) a list of issues and opportunities identified

by the community for further action; and (3) an implementation program that will help the community realize its vision for the future and address the identified issues and opportunities.

Community Assessment: The portion of the comprehensive plan that is an objective and professional assessment of data and information about the community prepared without extensive direct public participation. It includes: (1) a list of potential issues and opportunities the community may which to take action to address, (2) evaluation of community policies, activities, and development patterns for consistency with Quality Community Objectives; (3) analysis of existing development patterns, including a map of recommended character areas for consideration in developing an overall vision for future development of the community; and (4) data and information to substantiate these evaluations and the potential issues and opportunities. The product of the Community Assessment must be a concise and informative report (such as an executive summary), to be used to inform decision-making by stakeholders during development of the Community Agenda portion of the plan.

Community Participation Program: The portion of the comprehensive plan that describes the local government's program for ensuring adequate public and stakeholder involvement in the preparation of the Community Agenda portion of the plan.

Comprehensive Plan: A 20-year plan by a county or municipality covering such county or municipality and including three components: a Community Assessment, a Community Participation Program, and a Community Agenda. The comprehensive plan must be prepared pursuant to the local planning requirements for preparation of comprehensive plans and for implementation of comprehensive plans, established by the Georgia Department of Community Affairs in accordance with O.C.G.A 50-8-7.1(b) and 50-8-7.2.

Connectivity: A term that refers to the existing or future, desired state of connections that enable mobility between and among various uses and activities. Connectivity can refer to the street network, in terms of whether it provides connections (e.g., through streets), or is "disconnected" in terms of dead-end streets with cul-de-sacs.

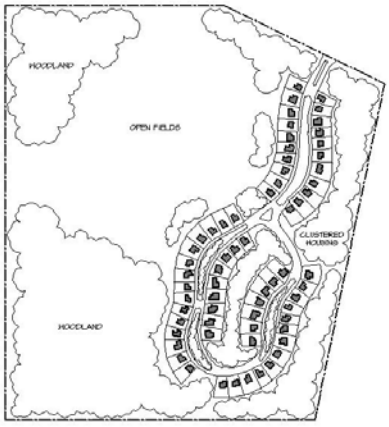
Connected grid street network.

Conservation: The management of natural resources to prevent waste, destruction, or degradation.

Conservation Area: Any land set aside for conservation of the land in its natural state.

Conservation Easement: A nonpossessory interest of a holder in real property imposing limitations or affirmative obligations, the purposes of which include retaining or protecting natural, scenic, or open-space values of real property; assuring its availability for agricultural, forest, recreational, or open-space use; protecting natural resources; maintaining or enhancing air or water quality; or preserving the historical, architectural, archeological, or cultural aspects of real property. (Georgia Code Section 44-10-2)

Conservation Subdivision: A subdivision where open space is the central organizing element of the subdivision design and that identifies and permanently protects all primary and all or some of the secondary conservation areas within the boundaries of the subdivision.



CONSERVATION SUBDIVISION

Corridor: An area of land, typically along a linear route, containing land uses and transportation systems influenced by the existence of that route.

Cul-de-sac: A dead-end street of limited length having a primary function of serving adjoining land, and constructed with a turnaround at its end.

Density: The quantity of building per unit of lot area; for example, the number of dwellings per lot area (gross square foot or per acre).

Design Guidelines: Statements and illustrations that are intended to convey the preferred quality for a place.

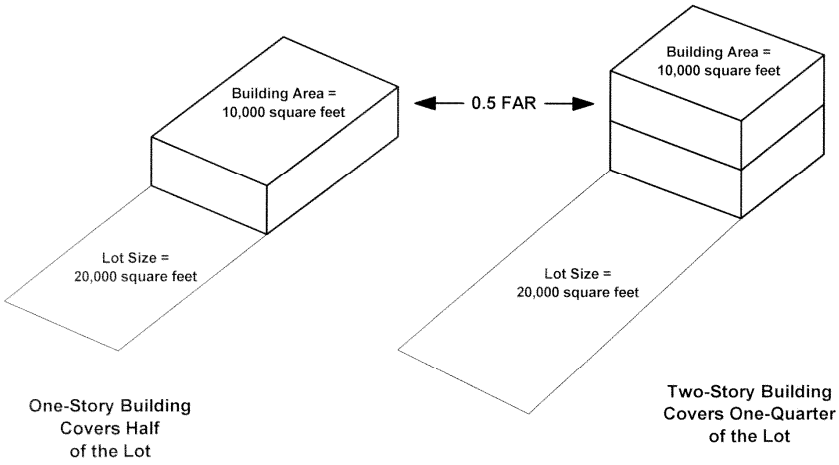
Façade: The face (exterior elevation) of a building, especially the face parallel to or most nearly parallel to a public street.

Flag Lot: A tract or lot of land of uneven dimensions in which the portion fronting on a street is less than the required minimum width required for construction of a building or structure on that lot. Such lots have elongated access from the road and a conventionally proportioned building site at the rear of the lot.

Flood Hazard Boundary Map: An official map of a community, issued by the Federal Insurance Administration, where the boundaries of areas of special flood hazard have been defined as Zone A.

Flood Insurance Rate Map: An official map of a community, issued by the Federal Insurance Administration, delineating the areas of special flood hazard and/or risk premium zones applicable to the community.

Floor-Area Ratio (FAR): The total floor area of the building or buildings on a lot or parcel divided by the gross area of the lot or parcel.



Floor Area Ratio

Footcandle: A unit of illuminance on a surface that is everywhere one foot from a uniform point source of light of one candle and equal to one lumen per square foot. One footcandle (FC) is the equivalent of 10.76 Lux (1 Lux = 0.0929 FC).

Future Land Use Plan Map: A map showing long-term future land uses desired in the community. Such a map is "optional" in the local planning requirements. A future land use plan map will be prepared and made a part of the Community Agenda. The future land use plan map is different from the character area map, in that it provides specific recommendations for future land uses and generally provides detail at the parcel level.

Gated community: Residential areas containing lots and that restrict access to roads and spaces. Gates can include guard houses, electronic arms operated by card, codes, or remote control devices. Visitors must stop to be verified for entry.

Goal: A statement that describes, usually in general terms, a desired future condition.

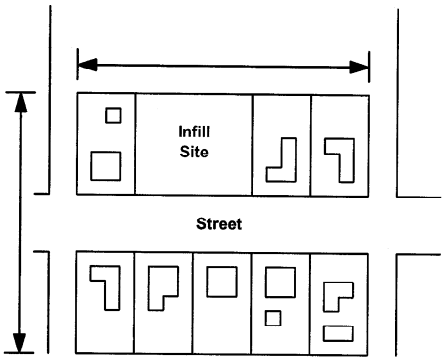
Greenspace: defined as open, undeveloped land, either in public or private ownership. Usually used in connection with property that has the potential of being developed for park or other public usage.

Greenway: defined as a linear park, usually including a trail or series of trails. It generally has relatively minor development. The Greenway is often used as an attempt to preserve green space in a very urban area, such as under a power line easement.

Hydrologic Atlas 18: A map prepared by the Georgia Department of Natural Resources (DNR) and published by the Georgia Geologic Survey in 1989, which identifies the most significant groundwater recharge areas of Georgia as spotted areas labeled as "areas of thick soils."

Impact: The effect of any direct man-make actions or indirect repercussions of man-made actions on existing physical, social, or economic conditions.

Infill: Development that occurs on vacant, skipped-over, bypassed, or underused lots in otherwise built-up sites or areas.



Infill Site and Established Residential Area

Jobs/Housing Balance: An examination of the relationship between jobs and housing, and between where jobs are or will be located and where housing is or will be available. Jobs/housing balance is often expressed in terms of a ratio between jobs and the number of housing units. The higher the jobs/housing ratio, the more jobs the area has relative to housing. A high ratio may indicate to a community that it is not meeting the housing needs (in terms of either affordability or actual physical units) of people working in the community.

Land Trust: A private, nonprofit conservation organization formed to protect natural resources, such as productive farm or forest land, natural areas, historic structures, and recreational areas. Land trusts purchase and accept donations of conservation easements. They educate the public about the need to conserve land and some provide land-use and estate planning services to local governments and individual citizens.

Level of Service: A measure of the relationship between service capacity and service demand for public facilities in terms of demand to capacity ratios or the comfort and convenience of use or service of public facilities, or both.

With regard to roads:

Level "A" is a condition with low traffic volumes, high speeds and free-flow conditions.

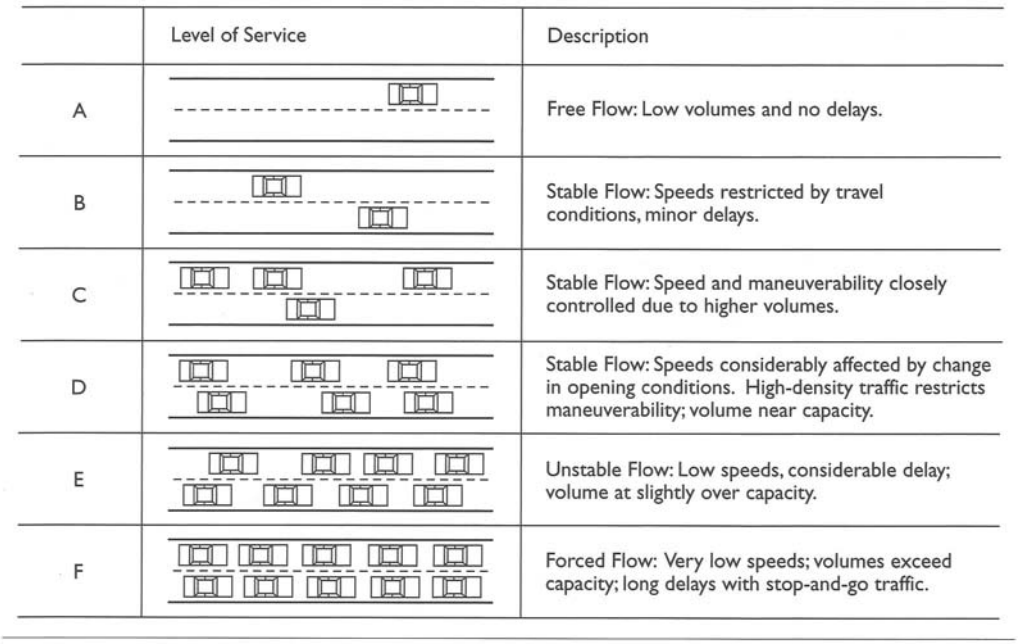
Level "B" is a condition with light traffic volumes, minor speed restrictions and stable flow.

Level "C" is a condition with moderate traffic volumes, where speed and maneuvering are restricted to a limited degree by the amount of traffic.

Level "D" is a condition with heavy traffic operating at tolerable speeds, although temporary slowdowns in flow may occur.

Level "E" is a condition of very heavy flow and relatively low speeds. Under Level "E" the traffic is unstable and short stoppage may occur.

Level "F" is a condition of extremely heavy flow, with frequent stoppage and very slow speeds. It is an unstable traffic condition under which traffic often comes to a complete halt.



LEVEL OF SERVICE

Source: Bucher, Willis & Ratliff Corporation.

Source: Planning and Urban Design Standards. 2006. John Wiley & Sons. p. 523.

Local Historic Preservation Ordinance: An ordinance that identifies procedures for creating local historic districts and administering the review of building renovations or alterations to properties located within the district. It typically establishes a historic preservation commission that is charged with the review of development proposals within historic districts.

Local Planning Requirements: The standards and procedures for local government planning that shall be followed in preparation of local comprehensive plans, for implementation of local comprehensive plans, and for participation in the comprehensive planning process.

Mixed-Use Development: A single building containing more than one type of land use; or a single development of more than one building and use, where the different types of land uses are in close proximity, planned as a unified, complementary whole.

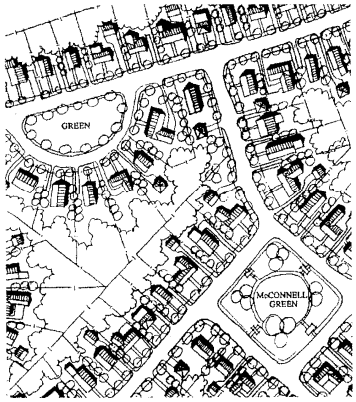
Mixed Use, Horizontal: Two or more different types of uses are placed next to each other (but not attached), planned as a unit, and connected together with pedestrian and vehicular access. For instance, a subdivision containing single-family dwellings that is adjacent to a neighborhood commercial development and office complex.

Mixed Use, Vertical: Where two or more different uses occupy the same building usually on different floors. For instance, retail on the ground floor and office and/or residential uses on the second and/or third floors.

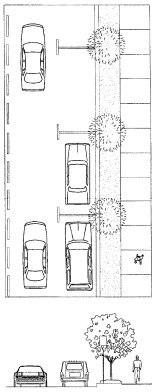
Mixed-Income Housing: Housing for people with a broad range of incomes on the same site, development, or immediate neighborhood.

National Register of Historic Places: The federal government's official list of cultural resources worthy of preservation, documented and evaluated according to uniform standards established by the National Park Service, which administers the program.

New Urbanism: A set of principles or school of thought that suggest neighborhoods should be built like those that existed before the advent of the automobile. Characteristics of new urbanism or new urban developments include a street network that forms a connected grid, houses built close to the street (i.e., little or no setback) with front porches, alleys (where appropriate) and garages located at the rear of the lot, and on-street parking, among others. For more information see the Charter for the New Urbanism.



Illustrative new urban or traditional neighborhood development.


On-street parking is one characteristic of "new urban" developments.

Nuisance: Anything that causes hurt, inconvenience, or damage to another, and the fact that the act done may otherwise be lawful, shall not keep it from being a nuisance. The inconvenience complained of shall not be fanciful, or such as would affect only one of fastidious taste, but it shall be such as would affect an ordinary, reasonable person.

Objective: A statement that describes a specific future condition to be attained within a stated period of time. Typically, objectives are more numerous than goals, and they are typically organized according to the topics in the goals statements.

Open Space Ratio: The proportion of a given lot, excluding land occupied by principal buildings and uses, accessory structures and uses, and parking or other impervious surfaces, which remains in an undeveloped state and is specifically designated as open space.

Overlay District: A defined geographic area that encompasses one or more underlying zoning districts and that imposes additional requirements above those required by the underlying zoning district. An overlay district can be coterminous with existing zoning districts or contain only parts of one or more such districts.

Package Treatment Plant: A sewage treatment facility, usually privately operated, typically having a treatment capacity of less than one million gallons per day. In most cases, a package treatment plant is considered a temporary means of wastewater treatment until connection to a public sanitary sewerage system is available.

Pedestrian-Friendly: Physical attributes, characteristics, and designs that are intended to be more accommodating to pedestrian traffic than what is typically achieved by conventional designs.

Plaza: An open area adjacent to a civic or commercial building that functions as a gathering place and may incorporate a variety of non-permanent activities, such as vendors and display stands.

Planned Unit Development: A form of development usually characterized by a unified site design for a number of housing units, clustered buildings, common open space, and a mix of building types and land uses in a slightly more dense setting than allowable on separate lots.

Projection: A prediction of future conditions that will occur if the assumptions inherent in the projection technique prove true.

Qualified Local Government: A county or municipality that: adopts and maintains a comprehensive plan in conformity with the local planning requirements; establishes regulations consistent with its comprehensive plan and with the local planning requirements; and does not fail to participate in the Georgia Department of Community Affairs' mediation or other means of resolving conflicts in a manner in which, in the judgment of the Department, reflects a good faith effort to resolve any conflict.

Recharge Area: Any portion of the earth's surface where water infiltrates into the ground to replenish an aquifer.

Redevelop: To demolish existing buildings or to increase the overall floor area existing on a property, or both, irrespective of whether a change occurs in land use.

Redevelopment Area: An area identified as requiring specific action by the local government for revitalization, reinvestment, and/or reuse to occur.

Rules for Environmental Planning Criteria: Those standards and procedures with respect to natural resources, the environment, and vital areas of the state established and administered by the Georgia Department of Natural Resources pursuant to O.C.G.A. 12-2-8, including, but not limited to, criteria for the protection of water supply watersheds, groundwater recharge areas, wetlands, protected mountains and protected river corridors.

Service Area: A geographic area defined by a municipality, county or intergovernmental agreement in which a defined set of public facilities provides service to development within the area. Service areas shall be designated on the basis of sound planning or engineering principles, or both.

Service Delivery Strategy: The intergovernmental arrangement among city governments, the county government, and other affected entities within the same county for delivery of community services, developed in accordance with the Service Delivery Strategy Law. A local government's existing Strategy must be updated concurrent with the comprehensive plan update. To ensure consistency between the comprehensive plan and the agreed upon Strategy: (1) the services to be provided by the local government, as identified in the comprehensive plan, cannot exceed those identified in the agreed upon strategy and (2) the service areas identified for individual services that will be provided by the local government must be consistent between the plan and Strategy.

Stakeholder: Someone (or any agency or group) with a "stake," or interest, in the issues being addressed.

State Planning Recommendations: The supplemental guidance provided by the Georgia Department of Community Affairs to assist communities in preparing plans and addressing the local planning requirements. The plan preparers and the community must review these

recommendations where referenced in the planning requirements in order to determine their applicability or helpfulness to the community's plan.

Short-Term Work Program: That portion of the Implementation Program that lists the specific actions to be undertaken annually by the local government over the upcoming five years to implement the comprehensive plan.

Streetscape: The design of a street, including the roadbed, sidewalks, landscape planting, furnishings along the street, and the character of the adjacent building façade.

Street Furniture: Those features associated with a street that are intended to enhance the street's physical character and use by pedestrians, such as benches, bus shelters, trash receptacles, planting containers, pedestrian lighting, kiosks, etc.

Tax Allocation District: (see "Tax Increment Financing")

Tax Increment Financing: A financing technique that allows a local government or redevelopment agency to target a group of contiguous properties for improvement – a TIF district or, in Georgia, tax allocation district – and earmark any future growth in property tax revenues in the district to pay for initial and ongoing improvements there. This growth in tax revenue is the "tax increment."

Traffic Calming: The combination of primarily physical measures that reduce the negative effects of motor vehicle use. Measures may include speed humps, raised crosswalks, speed tables, textured surfaces, traffic circles, and others.

Traffic Impact Study: An analysis and assessment, conducted by a qualified professional, that assesses the effects that a discretionary development proposal's traffic will have on the transportation network in a community or portion thereof. Traffic impact studies vary in their range of detail and complexity depending on the type, size and location of the proposed development.

Transit: Bus, light rail, and heavy rail facilities.

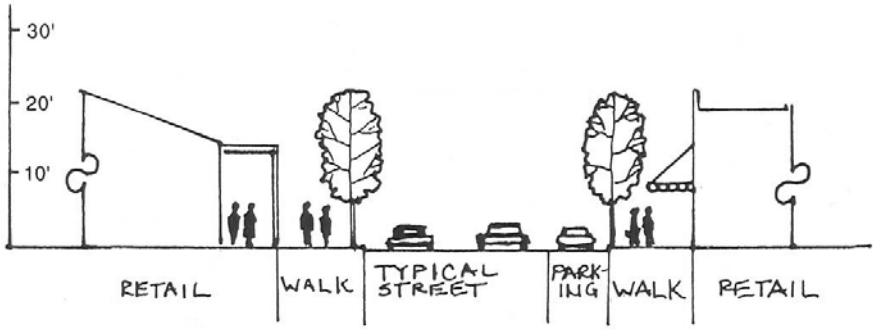
Village: A small, compact center of predominantly residential character but with a core of mixed-use commercial, residential, and community services. A village typically has a recognizable center, discrete physical boundaries, and a pedestrian scale and orientation.

Vision: A written statement that is intended to paint a picture of what the community desires to become, providing a complete description of the development patterns to be encouraged within the jurisdiction.

Visioning: A planning process through which a community creates a shared vision for its future.

Volume-to-capacity Ratio: A measure of the operating capacity of a roadway or intersection, in terms of the number of vehicles passing through, divided by the number of vehicles that theoretically could pass through when the roadway or intersection is operating at its designed capacity. Abbreviated as "v/c." At a v/c ratio of 1.0, the roadway or intersection is operating at capacity. If the ratio is less than 1.0, the traffic facility has additional capacity.

Walkable or Walkability: The broad range of community design features that support walking.



Workforce Household: A family or household that earns no more than eighty percent (80%) of the area's median household income.

Workforce Housing: Housing that is affordable to workforce households.

Workplace: A place of employment, base of operation, or predominant location of an employee.

Source: Compiled by Jerry Weitz & Associates, Inc., from various sources, including but not limited to regulations prepared by the same firm, Rules of the Georgia Department of Community Affairs, Model Land Use Management Code of the Georgia Department of Community Affairs, *A Planners Dictionary* (Michael Davidson and Fay Dolnick, Planning Advisory Service Report No. 521/522, 2004), and *Planning and Urban Design Standards*, 2006, by American Planning Association and John Wiley & Sons, Inc.

18.0 SOURCES OF BEST PRACTICES AND GUIDANCE

The following list of resources is provided for future reference in the planning process. The sources cited here provide useful information with regard to "best practices" and are useful in the plan implementation process.

18.1 Environment, Natural Resources, Sustainability

American Planning Association. 1988. *Protecting Non-Tidal Wetlands*. Planning Advisory Service Report Number 412/413.

Arendt, Randall. 1996. *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks*. Washington, DC: Island Press.

Arnold, Jr., Chester L., and C. James Gibbons. Impervious Surface Coverage: The Emergence of a Key Environmental Indicator. *Journal of the American Planning Association* 62, 2: 243-258.

Atlanta Regional Commission. September 23, 1998a. Chattahoochee Corridor Plan.

Atlanta Regional Commission. September 23, 1998b. Metropolitan River Protection Act Rules and Regulations.

Benedict, Mark A., and Edward T. McMahon. 2006. *Green Infrastructure: Linking Landscapes and Communities*. Washington, DC: Island Press.

Daniels, Tom, and Katherine Daniels. 2000. *The Environmental Planning Handbook for Sustainable Communities and Regions*. Chicago: Planners Press.

Dater, Tony. 2007. "Toward More Sustainable Communities." *Practicing Planner*, Vol. 5, No. 4.

Dramstad, Wenche E., James D. Olson, and Richard T.T. Forman. 1996. *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning*. Washington, DC: Island Press.

Duerksen, Christopher J., Donald L. Elliot, N. Thompson Hobbs, Erin Johnson, and James R. Miller. 1997. *Habitat Protection Planning: Where the Wild Things Are*. Planning Advisory Service Report Number 470/471. Chicago: American Planning Association.

Freyfogle, Eric T. 1998. "Bounded People, Boundless Land." In Richard L. Knight and Peter B. Landres, eds., Stewardship Across Boundaries. Washington, DC: Island Press.

Georgia Department of Natural Resources, Environmental Protection Division. 1990. Chapter 391-3-16, Rules for Environmental Planning Criteria.

Georgia Department of Natural Resources, Game and Fish Division, Endangered Wildlife Program. 1977. Georgia's Protected Wildlife.

Georgia Department of Natural Resources, Game and Fish Division. n.d. Georgia's Protected Species.

Girling, Cynthia, and Ronald Kellett. 2005. *Skinny Streets and Green Neighborhoods: Design for Environment and Community*. Washington, DC: Island Press.

Jeer, Sanjay, Megan Lewis, Stuart Meck, Jon Witten, and Michelle Zimet. 1997. *Nonpoint Source Pollution: A Handbook for Local Governments*. Planning Advisory Service Report Number 476. Chicago: American Planning Association.

Hendler, Bruce. 1977. *Caring for the Land: Environmental Principles for Site Design and Review*. American Society of Planning Officials.

Krier, Richard, with Julie Westerlund. 2007. "The Art of Planning and Low Impact Development to Reduce Pollution and Improve Sustainable Neighborhood Character." *Practicing Planner*, Vol. 5, No. 4.

Kundell, James E., and S. Wesley Woolf. 1986. Georgia Wetlands: Trends and Policy Options. Athens: University of Georgia, Carl Vinson Institute of Georgia.

Landres, Peter B., Richard L. Knight, Steward T. A. Pickett, and M. L. Cadensasso. 1998. "Ecological Effects of Administrative Boundaries." In Richard L. Knight and Peter B. Landres, eds., *Stewardship Across Boundaries*. Washington, DC: Island Press.

Mantel, Michael A., Stephen F. Harper, and Luther Propst. 1990. *Resource Guide for Creating Successful Communities*. Washington, DC: Island Press.

McElfish, Jr., James M. 2004. *Nature-Friendly Ordinances: Local Measures to Conserve Biodiversity*. Washington, DC: Environmental Law Institute.

McHarg, Ian L. [1992]. *Design with Nature*. New York: John Wiley and Sons, Inc.

Our Built and Natural Environments: A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality. 2001. U.S. Environmental Protection Agency, EPA 231-R-01-002.

Pivo, Gary, Robert Small, and Charles R. Wolfe. 1990. Rural Cluster Zoning: Survey and Guidelines. *Land Use Law and Zoning Digest* 42, 9: 3-9.

Protecting Water Resources with Higher Density Development. January 2006. Washington, DC: U.S. Environmental Protection Agency, EPA 231-R-06-001.

Stokes, Samuel N., et al. 1989. *Saving America's Countryside: A Guide to Rural Conservation*. Baltimore: Johns Hopkins University Press.

Thorow, Charles, William Toner, and Duncan Erley. 1975. *Performance Controls for Sensitive Lands: A Practical Guide for Local Administrators*. Planning Advisory Service Report No. 307, 308. Chicago: American Society of Planning Officials.

Toward a Sustainable America: Advancing the Prosperity, Opportunity, and a Healthy Environment. May 2999. Washington, DC: The President's Council on Sustainable Development.

Trust for Public Land. Fall 1999. Chattahoochee Campaign Update. Life & Land: Georgia Newsletter for the Trust for Public Land.

University of Georgia, School of Environmental Design. 1997. Land Development Provisions to Protect Georgia Water Quality. Atlanta: Georgia Department of Natural Resources.

Using Smart Growth Techniques as Stormwater Best Management Practices. December 2005. Washington, DC: U.S. Environmental Protection Agency, EPA 231-B-05-002.

18.2 Housing

Casselman, Joel. 2004. "Visitability: A New Direction for Changing Demographics." *Practicing Planner*, Vol. 2, No. 4.

DeChiara, Joseph, Julius Panero, and Martin Zelnik. 1995. *Time-Saver Standards for Housing and Residential Development*, 2nd Ed. New York: McGraw-Hill.

National Multi Housing Council/National Apartment Association. n.d. *Creating Successful Communities: A New Housing Paradigm*.

Not In My Backyard: Removing Barriers to Affordable Housing: Report to President Bush and Secretary Kemp. 1991. Washington, DC: Advisory Commission on Regulatory Barriers to Affordable Housing, U.S. Department of Housing and Urban Development.

The Case for Multifamily Housing. 2003. Washington, DC: Urban Land Institute.

Smart Growth Network Subgroup on Affordable Housing. 2001. *Affordable Housing and Smart Growth: Making the Connection*. Washington, DC: Smart Growth Network and National Neighborhood Coalition.

Why Not in My Backyard? Removing Barriers to Affordable Housing: An Update to the Report of the Advisory Commission on Regulatory Barriers to Affordable Housing. February 2005. Washington, DC: U.S. Department of Housing and Urban Development.

18.3 Land Use, Design, Smart Growth

"A Smart Growth Tour: Tracking Regional Progress Towards Community Design Excellence." n.d. SMARTRAQ Georgia Tech, Urban Land Institute Atlanta, and Atlanta Regional Commission.

American Institute of Architects. 2001. "Communities by Design: Influencing Your Community's Quality of Life." Washington, DC: American Institute of Architects.

American Planning Association. 2002. *Growing Smart Legislative Guidebook: Model Statutes for Planning and the Management of Change*. Chicago: American Planning Association.

Arendt, Randall. 1999. *Crossroads, Hamlet, Village, Town: Design Characteristics of Traditional Neighborhoods, Old and New*. Planning Advisory Service Report No. 487/488. Chicago: American Planning Association.

Atlanta Regional Commission. March 2003. *Regional Development Plan Land Use Policies: Livability for People and Places*. Atlanta: Atlanta Regional Commission.

Atlanta Regional Commission. 2004. *Regional Development Plan Guidebook*. Atlanta: Atlanta Regional Commission.

Beaumont, Constance E. 1994. *How Superstore Sprawl Can Harm Communities and What Citizens Can Do About It*. Washington, DC: National Trust for Historic Preservation.

Benfield, F. Kaid, Jutka Terris, and Nancy Vorsenger. 2001. *Solving Sprawl: Models of Smart Growth in Communities Across America*. Washington, DC: Natural Resources Defense Council, Island Press.

Beyard, Michael D., and Michael Pawlukiewicz. 2001. *Ten Principles for Reinventing America's Suburban Strips*. Washington, DC: Urban Land Institute.

Bullard, Robert D. Glenn S. Richardson, and Angel O. Torres. Summer 2001. "The Costs and Consequences of Suburban Sprawl: The Case of Metro Atlanta." *Georgia State University law Review*, Vol. 17, No. 4, pp. 935-998.

Cobb County Community Development Agency. November 2003. "Infill Development: Models and Guidelines for Successful Infill Development." Marietta, Georgia.

Commercial and Mixed-Use Development Code Handbook. n.d. Salem, OR: Oregon Transportation and Growth Management Program.

Congress for the New Urbanism. 2004. *Codifying New Urbanism: How to Reform Municipal Land Development Regulations*. Planning Advisory Service Report. No. 526. Chicago: American Planning Association.

Duany, Andres, and Emily Talen. 2002. "Transect Planning." *Journal of the American Planning Association* Vol. 68, No. 2, pp. 245-266.

Frumkin, Howard, Lawrence Frank, and Richard Jackson. 2004. *Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities*. Washington, DC: Island Press.

Geisner, Jennie. 2006. "Live/Work and Work/Live Spaces: Potential Economic Development Applications." *Practicing Planner*, Vol. 4, No. 2.

Getting to Smart Growth II: 100 More Policies for Implementation. 2003. Washington, DC: Smart Growth Network and International City/County Management Association.

Getting to Smart Growth: 100 Policies for Implementation. 2002. Washington, DC: Smart Growth Network and International City/County Management Association.

Illuminating Engineering Society of North America. 1999. *Lighting for Exterior Environments: An IESNA Recommended Practice*. RP-33-99.

Kaiser, Edward J., David Godschalk, and F. Stuart Chapin, Jr. 1995. *Urban Land Use Planning*. Urbana: University of Illinois Press.

Katz, Peter. 2004. "Form First: The New Urbanist Alternative to Conventional Zoning." *Planning* (November 2004).

Local Government Commission. 2003. *Creating Great Neighborhoods: Density in Your Community*. Washington, DC: National Association of Realtors.

Local Tools for Smart Growth: Practical Strategies and Techniques to Improve Our Communities. n.d. National Association of Counties, The Joint center for Sustainable Communities, and Smart Growth Network.

McMahon, Edward T. 2004. "Better Models for Commercial Development: Ideas for Improving the Design and Siting of Chain Stores and Franchises." Washington, DC: Conservation Fund.

Ndubisi, Forster O. 1992. *Planning Implementation Tools and Techniques: A Resource Book for Local Governments*. Athens, GA: Institute of Community and Area Development

Nelson, Arthur C., and James B. Duncan. 1995. Growth Management Principles and Practices. Chicago: Planners Press.

Oregon Transportation and Growth Management Program. 1998. *The Principles of Smart Development*. Panning Advisory Service Report No. 479. Chicago: American Planning Association.

Otak. 1999. *Model Development Code and User's Guide for Small Cities*. Salem: Oregon Transportation and Growth Management Program.

Pivo, Gary. 2005. "Creating Compact and Complete Communities: Seven Propositions for Success." *Practicing Planner*, Vol. 3, No. 2.

Platt, Rutherford H. 2004. *Land Use and Society: Geography, Law, and Public Policy*, Rev. Ed. Washington, DC: Island Press.

Porter, Douglas R. 2008. *Managing Growth in America's Communities*, 2nd Ed. Washington, DC: Island Press.

Porter, Douglas R. January 1998. "Flexible Zoning: A Status Report on Performance Standards." *Zoning News*: 1-4.

Porter, Douglas R., Patrick L. Phillips, and Terry J. Lasser. 1988. *Flexible Zoning: How It Works*. Washington, DC: Urban Land Institute.

Rouse, David, and Nancy Zobl. 2004. "Form-Based Zoning." *Zoning Practice* 5 (May 2004).

Rouse, David, Nancy L. Zobl, and Graciela P. Gavicchia. 2001a. "Beyond Euclid: Integrating Zoning and Physical Design. Part One: The Evolution of Physical Design in Zoning." *Zoning News* (October 2001).

Rouse, David, Nancy L. Zobl, and Graciela P. Gavicchia. 2001b. "Beyond Euclid: Integrating Zoning and Physical Design. Part Two: Integrating Zoning and Physical Design." *Zoning News* (November 2001).

Schiffman, Irving. 1999. *Alternative Techniques for Managing Growth.* Berkeley: University of California, Berkeley, Institute of Governmental Studies Press.

Tracy, Steve. 2003. *Smart Growth Zoning Codes: A Resource Guide*. Sacramento: Local Government Commission.

U.S. Department of Agriculture, Forest Service. September 2001. *The Built Environment Image Guide for the National Forests and Grasslands.*

Waters, John C. 1983. *Maintaining a Sense of Place: A Citizen's Guide to Community Conservation*. Athens, GA: Institute of Community and Area Development, University of Georgia.

18.4 Community Facilities and Services

Atlanta Regional Commission. n.d. *Platforms for Progress: Atlanta Regional Goals for Today…Indicators for Tomorrow*. Atlanta: Atlanta Regional Commission.

Ben-Zadok, Efraim. 2007. "Managing Fast Growth and Crowded Schools: Florida School Concurrency from Voluntary to Mandatory." *Practicing Planner*, Vol. 5, No. 3.

Burchell, Robert W., et al. 1994. *The Development Impact Assessment Handbook*. Washington, DC: Urban Land Institute.

Catalog of State Financial Assistance Programs. March 2002. Georgia Department of Community Affairs.

Hawkins, Jr., Thomas M., and Hugh McClees. 1988. "Emergency Management." *Managing Fire Services*, 2nd Ed., Ronny J. Coleman and John A. Granito, Editors. Washington, DC: International City Management Association, pp. 319-346.

"Introduction to Infrastructure Financing." March 1999. *IQ Service Report*, Vol. 31, No. 3. International City/County Management Association.

Rubin, Claire B. 1986. "Comprehensive Emergency Planning and Management." In Frank S. So, Irving Hand, and Bruce D. McDowell, Editors, *The Practice of State and Regional Planning*. Chicago: American Planning Association, in cooperation with the International City Management Association pp. 613-626.

Smith, Brooke Ray. 2007. "Financing Green Stormwater Management with Impervious Surface Charges." *Practicing Planner*, Vol. 5, No. 3.

18.5 Transportation

American Association of State Highway and Transportation Officials. 1994. *A Policy on Geometric Design of Highways and Streets*. Washington, DC: AASHTO.

Burden, Dan, with Michael Wallwork, Ken Sides, Ramon Trias, and Harrison Bright Rue. 2002. *Street Design Guidelines for Healthy Neighborhoods*. Sacramento: Local Government Commission, Center for Livable Communities.

Ewing, Reid. 1999. *Pedestrian- and Transit-Friendly Design: A Primer for Smart Growth*. Washington, DC: Smart Growth Network.

Ewing, Reid, with Robert Hodder. 1999. *Best Development Practices: A Primer for Smart Growth*. Washington, DC: Smart Growth Network.

Ewing, Reid. 1997. *Transportation & Land Use Innovations: When You Can't Pave Your Way Out of Congestion*. Chicago: Planners Press.

Ewing, Reid. 1996. *Best Development Practices: Doing the Right Thing and Making Money at the Same Time*. Chicago: Planners Press.

Georgia Department of Transportation, *Statewide Bicycle and Pedestrian Initiative – Pedestrian Facilities Design Guide*, Updated July 25th 2003.

Institute of Transportation Engineers. 1999. *Traditional Neighborhood Development Street Design Guidelines*. Washington, DC: Institute of Transportation Engineers.

Kulash, Walter M. 2001. *Residential Streets*, 3rd Ed. Washington, DC: Urban Land Institute, National Association of Home Builders, American Society of Civil Engineers, and Institute of Transportation Engineers.

Marriott, Paul Daniel. 1998. *Saving Historic Roads: Design and Policy Guidelines*. New York: John Wiley & Sons, Inc.

Morris, Marya. 1996. *Creating Transit-Supportive Land-Use Regulations*. Planning Advisory Service Report No. 468. Chicago: American Planning Association.

Oregon Transportation and Growth Management Program. 1998. *Main Street…When a Highway Runs Through It: A Handbook for Oregon Communities*. Salem, OR: Oregon Transportation and Growth Management Program.

Otak. November 1999. *The Infill and Redevelopment Code Handbook*. Salem: Oregon Transportation and Growth Management Program.

Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions. January 2006. Washington, DC: U.S. Environmental Protection Agency, EPA 231-K-06-001.

Pinsof, Suzan Anderson, and Terri Musser. 1995. *Bicycle Facility Planning*. Planning Advisory Service Report No. 468. Chicago: American Planning Association.

Stover, Vergil G., and Frank J. Koepke. 1988. *Transportation and Land Development*. Washington, DC: Institute of Transportation Engineers.

18.6 General

Ames, Steven C. 1993. *A Guide to Community Visioning: Hands-On Information for Local Communities*. Oregon Chapter, American Planning Association.

Association County Commissioners Georgia, Georgia Municipal Association, Georgia Department of Community Affairs, and Carl Vinson Institute of Government, The University of

Georgia. 1997. *Charting a Course for Cooperation and Collaboration: An Introduction to the Service Delivery Strategy Act for Local Governments*. Atlanta: Georgia Department of Community Affairs.

Davidson, Michael, and Fay Dolnick. 1999. *A Glossary of Zoning, Development, and Planning Terms* Planning Advisory Service Report No. 491/492. Chicago: American Planning Association.

DeChiara, Joseph, and Lee E. Koppelman. 1984. *Time-Saver Standards for Site Planning*. New York: McGraw-Hill.

The State of the Cities 2000: *Magaforces Shaping the Future of the Nation's Cities*. 2000. U.S. Department of Housing and Urban Development.

CITY OF DULUTH
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July 21, 2008

Atlanta Regional Commission
ATTN: Haley Fleming, Review Coordinator
40 Courtland Street NE
Atlanta, GA 30303

RE: CITY OF DULUTH COMMUNITY AGENDA TRANSMITTAL

Ms. Fleming:

This letter is in reference to the Comprehensive Plan Community Agenda document for review by the Atlanta Regional Commission. Under this cover, you will find the following documents:

- Hard Copy of the Comprehensive Plan Community Agenda
- Resolution from the Duluth City Council authorizing this transmittal
- Form updating the status of items from the previously adopted short-term work program
- Data disc containing electronic copies of all of the above items plus:
  - GIS shape files related to Comprehensive Plan Community Agenda.
  - PDF files of maps used in conjunction with this document.

If you require any further documents or information to complete this review, please don't hesitate to contact me at ccollins@duluthga.net or 770.497.5315. Thank you and have a great day.

Thank you for your attention to this matter.

Sincerely,

Chris Collins
Senior Planner

RESOLUTION

WHEREAS, the City of Duluth is in the process of Developing a 2030 Comprehensive Plan to guide the City in future development and redevelopment efforts; and

WHEREAS, the adoption of the Comprehensive Plan's Community Agenda will provide additional long range guidance to development while preserving existing aspects of the Community; and

WHEREAS, the City of Duluth's Planning Staff is seeking authorization to submit a draft of the 2030 Comprehensive Plan – Community Agenda to the Department of Community Affairs (DCA) and the Atlanta Regional Commission (ARC) for review;

IT IS FURTHER ORDAINED AND RESOLVED that this Resolution shall authorize the City of Duluth's Planning Department to submit the March 31, 2008 draft Comprehensive Plan – Community Agenda to the Department of Community Affairs (DCA) and the Atlanta Regional Commission (ARC) for their review.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IT IS SO RESOLVED this 14th day of July, 2008, by the Mayor and Council of the City of Duluth, Georgia.

Attest:

City Clerk

Mayor

Those Voting in Favor of the Resolution:

Council Member

Council Member

Council Member

Council Member

Council Member

Those Voting Against the Resolution:

Council Member

Council Member

Council Member

Council Member

Council Member

COUNTY OF GWINNETT
STATE OF GEORGIA

RESOLUTION NO: ____

**A RESOLUTION OF THE
CITY OF DULUTH CITY COUNCIL
ADOPTING THE COMMUNITY AGENDA
(COMPREHENSIVE PLAN)**

WHEREAS, A comprehensive plan is required for municipalities and counties in Georgia in order to maintain their Qualified Local Government Status; and

WHEREAS, In accordance with Rules of the Georgia Department of Community Affairs, Chapter 110-12-1, the City prepared a Community Assessment and a Community Participation Program; and

WHEREAS, the City implemented its Community Participation Program; and

WHEREAS, State administrative rules require that the Community Agenda be prepared and submitted for regional and state review prior to its adoption locally; and

WHEREAS, A resolution authorizing regional and state review was approved by City Council, the Community Agenda was submitted for review, and the review of the Community Agenda was completed in 2008; and

WHEREAS, The Community Agenda was prepared with guidance from the Duluth Planning Commission as steering committee for the effort, and it has been revised to account for certain if not all comments made in the regional and state review; and

WHEREAS, City Council held an advertised public hearing on the draft Community Agenda, prior to the community agenda being transmitted to the Atlanta Regional Commission for regional and state review; and

WHEREAS, Notice of said public hearing was given in advance; and

WHEREAS, Drafts of the Community Agenda have been made available to the public;

NOW THEREFORE IT IS HEREBY RESOLVED by the City Council of the City of Duluth, Georgia, as follows:

1.

Adoption. The community agenda, revised and dated November 2008, is hereby adopted. The community agenda specifically includes, among other components, the future development (character area) map, the future land use map, policies, and short-term work program.

2.

Amendment and Planning Commission Responsibilities. The community agenda may be revised by City Council from time to time. Specifically, it is the intent of City Council to update the future land use map as conditions warrant, and to amend and revise the community agenda when appropriate or required to do so. It is the intent of the City Council to consult with the Duluth Planning Commission in such processes of amending the community agenda. The Duluth Planning Commission is charged with responsibilities to monitor implementation of the Community Agenda and may initiate recommended changes to the comprehensive plan for the Duluth City Council's consideration.

3.

Publication of Plan. City staff is directed to publish the adopted Community Agenda and make it available for use by the public.

4.

Transmittal of Adopted Plan. A copy of the approved community agenda and this resolution upon its adoption shall be submitted to the Atlanta Regional Commission.

RESOLVED this 8th day of December 2008.

Mayor, City of Duluth

ATTEST

City Clerk
City of Duluth