



VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

Department of Urban Affairs and Planning
1021 Prince Street, Suite 200
Alexandria, VA 22314
703.706.8111 Fax: 703.518.8009

June 11, 2004

Mr. John Wilson, President
Arlington / East Falls Church Civic Association
6821 North 19th Road
Arlington, Virginia 22205

Dear Mr. Wilson:

The East Falls Church Planning Studio for Spring Semester 2004 is happy to transmit the East Falls Church Metro Area Plan.

It has been gratifying for the students and faculty to work closely with the Civic Association on this plan and we appreciate the far-sighted vision of the Association for the future of the area.

The historic photos show an attractive Arlington / East Falls Church community with a less disturbed environment, many neighborhood serving businesses, fewer cars, and a trolley connection to the Washington, D.C. core. The area was the site of the Frank Lloyd Wright Pope-Leighey House, one of his Usonian homes.

We undertook the East Falls Church Metro Area Plan with an objective of repairing the damage to the social fabric caused by the construction of Interstate 66 through the community. This work was guided and informed through a community charrette held with the Arlington / East Falls Church Civic Association.

The location of the East Falls Church Metrorail station creates the market force that should be channeled carefully in this effort. It produces the market strength that allows the station area to serve as an exciting mixed use center of the community. This will require altering the nature of the East Fall Church Metrorail station from a suburban commuter one to a true activity center. We envision a modern version of the East Falls Church trolley center.

The East Falls Church Metro Area Plan principally is an urban design project. In addition, the plan contains two special studies addressing affordable housing and neighborhood-based retail development. The affordable housing section is in the spirit of Frank Lloyd Wright's Usonian house as a means of providing affordable housing for people of moderate means. The retail analysis was done to provide a preliminary analysis of the area's market strength to support the amount of new businesses suggested in the Plan.

Thank you for your support of the East Falls Church Planning Studio. We believe that the plan contains an attractive vision for the future of your community and are confident that you have the commitment to make it a reality.

Sincerely yours,

Arthur C. Nelson, Ph.D., ASCE, FAICP
Professor and Director of Graduate Studies
Department of Urban Affairs and Planning – Alexandria Center

East Falls Church Metro Area Plan - Planning Studio Project

Virginia Polytechnic Institute and State University
Department of Urban Affairs and Planning – Alexandria Center
Spring Semester, 2004

June 11, 2004

Students:

Brian Canepa
Jennie Geisner
Hagio Tomoko
Robert Mandle
Megan Shilling
Darren Smith

Faculty:

Louis Colombo, Ph.D.
Virginia Tech
Research Associate Professor and Master
Practitioner

Geoff Ferrell, A.I.A., C.N.U.
Geoff Ferrell Associates
Principal

With assistance from:
Michael Nicolaus, A.I.A.
Torti Gallas and Partners – CHK, Inc.
Principal

TABLE OF CONTENTS

SECTIONS

1	Section One: Introduction
10	Section Two: Background
17	Section Three: East Falls Church Metro Area Preferred Alternative
38	Section Four: Community Charrette
54	Section Five: Student Proposals for Community Charrette
80	Section Six: Special Studies: * Affordable Housing * Retail Market Analysis
98	Section Seven: Conclusion - The Challenge Ahead
100	Appendix

MAPS

12	Map One: East Falls Church TOD Study Area
14	Map Two: EFC Rail Center
15	Map Three: EFC Gateway Area
18	Map Four: Plan View of EFC Preferred Alternative
20	Map Five: Rail Center Perspective View
24	Map Six: Gateway Area Perspective View
29	Map Seven: Vehicular Transportation Plan
32	Map Eight: Pedestrian-Bicycle Path Plan
34	Map Nine: New Roads Plan
40-52	Maps Ten-Sixteen: Community Charrette (Tables 1-6)
55-59	Maps Seventeen-Nineteen: Student Proposals-Team 1 (Plan View, Rail Center Perspective, Gateway Area Perspective)
70-74	Maps Twenty -Twenty-two: Student Proposals-Team 2 (Plan View, Rail Center Perspective, Gateway Area Perspective)

ACKNOWLEDGMENTS

We would like to express our sincere appreciation to the many individuals who contributed their time and expertise to the Virginia Polytechnic Institute and State University's East Falls Church Planning Studio. Of special note are the people who initially made this studio possible. Michael Nardolilli, Chair of the Metro Study Committee and AEFCCA Board Member proposed the project to Arlington County staff. James Snyder, County of Arlington Department of Community Planning, Housing and Development and James Hamre, Arlington County Department of Public Works linked Mike with the Virginia Tech Department of Urban Affairs and Planning. We are grateful for the trust that Snyder and Hamre placed in our program and for their strength to lead by standing back.

The East Falls Church Planning Studio is part of Virginia Tech's Master Planning studio project, conducted in partnership with community organizations and local governments in the Washington, D.C. area. The support of the Arlington / East Falls Church Civic Association and the County of Arlington greatly enriched the students' experience in the course. The support included the generous involvement of many individual members of the Civic Association and the County. Financial support allowed the University to provide a small stipend to Geoff Ferrell, a leading New Urbanist consultant specializing in form based zoning codes who co-taught the course with Louis Colombo. Financial assistance also was used to pay for supplies and image scanning, refreshments at the community charrette, assistance with computer-based urban design, word processing for this report, and to provide an honorarium to Michael Nicolaus, principal with Torti Gallas and Partners and a talented New Urbanist Transit Oriented Development designer.

We appreciate the help of County of Arlington staff especially including: Jim Snyder, James Brown, and Lu Hou of the Department of Community Planning and Richard Hartman of the Department of Public Works.

It also is appropriate to identify the many individuals who generously volunteered their time to share their knowledge with the class and made the studio a much richer learning experience. These include the following: regarding transit and transportation issues – Scott Peterson, Doug Hale, Jeff Griffin, and Tariq Bushnaq of WMATA, and Peter Bonaccoursi of HNTB engineers; related to urban design – Steve Schucraft, HOK and Victor Lobos, Virginia Tech; for real estate development and market research – Andy Viola, Bush Construction, David DeCamp, Grubb & Ellis, Chris Ciliverti, Akridge Companies, Juan Cameron, McCaffery Development, Paul Alexander, Delta Associates, and Randall Gross, Randall Gross / Development Economics; regarding affordable housing – Walter Webdale, John Welsh, and Alan Goldstein of the Arlington Housing Corporation, Tunji Akiwowo, County of Arlington CDBG Housing; related to economic development – Peter Bass, Arlington Economic Development; and for GIS assistance – Shafi Khan, City of Falls Church and Mary Beth Fletcher and Justin Clark of the County of Arlington.



- Team 1 included Jennie Geisner, Megan Shilling, and Darren Smith. They prepared the Team 1 powerpoint presentation for the Community Charrette, included in Section Five.
- Team 2 included Tomoko Hagio, Brian Canepa, and Robert Mandle. These students prepared the Team 2 powerpoint presentation for the Community Charrette, included in Section Five.

Virginia Tech architectural student Victor Lobos produced the plan view and perspective views for the Preferred Alternative and the student Team 1 and Team 2 proposals to the community charrette. His work was invaluable in assisting the AEFC Civic Association and the students realize their design vision.

Louis Colombo performed the final edit of all sections of the report. Lisa Rocci did the report design and production.

Historic photos of East Falls Church area courtesy of the Mary Riles Stiles Public Library, Falls Church Public Library.



introduction 1



Snyder's Hardware Store – East Falls Church

SECTION ONE: INTRODUCTION

Jane Jacobs wrote in her classic book *The Death and Life of Great American Cities* the following perspective that has special resonance for the East Falls Church area (in Peter Katz, “The 70 Percent Place”, *Government Technology*, Vol. 13: No. 7)

“When a city’s heart stagnates or disintegrates, a city as a social neighborhood of the whole begins to suffer: People who ought to get together, by means of central activities that are failing, fail to get together. Ideas and money that ought to meet, and do so often only by happenstance in a place of central vitality, fail to meet. The networks of city public life develop gaps they cannot afford. Without a strong and inclusive central heart, a city . . . falters at producing something greater, socially, culturally and economically, than the sum of its separated parts.”

Jane Jacobs could have been describing what happened to the vibrant neighborhood center that once existed at East Falls Church in Arlington. Consider this historical description of the area:

“A central business district was surrounded by a residential area that sported some graceful Victorian-era dwellings as well as newer homes. Residents could commute to work downtown from train and trolley stations within walking distance of their front doors. They needed to go no more than a few blocks for groceries, prescriptions, clothing, movies, and hot meals - not to mention the services of all the establishments and professionals common to any town.”
(John F. Iekel, “Almost Gone, But Not Forgotten,” *Novascope*, 1993)

Unlike the rest of Arlington County, East Falls Church was part of the town of Falls Church for over sixty years. During this time, three railroad stations operated in East Falls Church. The most recent station was constructed in 1895 by the Southern Railway and was later used by the Washington and Old Dominion Railway. A significant rail town grew up around these rail links. The amount of commercial and residential activity in the area is revealed by the fact that when East Falls Church successfully petitioned to rejoin Arlington County in 1936, Falls Church lost 60% of its business district, 30% of its land, and 25% of its population. (John F. Iekel, “The Neighborhood That Was: The History of East Falls Church, Virginia,” *10 Arlington Historical Magazine* 37, 39; Oct. 1995). Historic photographs maintained at the Mary Riley Stiles Public Library show dozens of bustling businesses in East Falls Church operating through the final day of freight service in 1968.

Urban Expansion and Community Decline

Starting in the 1950s, streetcars and trolleys were decommissioned as the region rapidly expanded. Their role was filled primarily by private autos using an ever expanding highway system. The core of the central business district in East Falls Church was demolished to make way for Interstate 66.

The highway designers actually placed the EFC Metro Station in the center of a freeway interchange, making double use of existing arterial streets such as Lee Highway, Washington Blvd., and Sycamore St. Not only was the business core of the community partially removed, but street use increased and the physical dimensions of roadways expanded. The presence of Interstate 66 and the widening of the street network in the East Falls Church core further served to divide the community, creating barriers to small scale commercial activity and pedestrians.

Unlike the below ground Metro Stations in the Rosslyn-Ballston corridor with development above and around the station platforms, the Metro Station at East Falls Church is a significant barrier to connectivity. The EFC Station lies above ground with few connections between the two halves of the Civic Association and is separated from the community it serves by acres of surface parking.

Interstate 66 and the East Falls Church Metro Station Area



Return of Mass Transit: Potential for Redevelopment

The presence of the East Falls Church Metrorail Station carries with it the real estate development market strength that, if properly channeled through an effective community-focused plan, can help repair many of the tears to the social fabric produced by Interstate 66.

As a final step, two weeks after the charrette the draft Preferred Alternative was presented to members of the AEFCCA Metro Committee and Board members. Their comments and suggestions were used to refine the Preferred Alternative plan as presented in this report.

The remaining portions of the report are a faithful summary of this process, beginning at the present and extending back to January 2004 when the studio began. It is edifying to see how the students' first plans have been refined and polished as a result of the process. It is hoped that the reader will take the time to see the progression in the work leading to the Preferred Alternative.

Key Elements of the Preferred Alternative.

At the start of this section, Jane Jacobs was quoted about what has come to be known as "social capital". What is important about social capital? Why its loss disastrous to a community?

Social capital is located in neighborhood places. It is based upon a broad and dense network of personal relationships contained within families, friendships, and acquaintances. It is supported by many connections among neighborhood businesses, churches, schools, and other organizations. It is strengthened by linkages to assets outside the neighborhood such as elected officials, police, teachers and school administrators, bankers, and so on. It is represented by a high level of involvement in community life. It is a shared belief in the neighborhood's capacity to organize itself to take action in relation to recognized needs. Such belief leads to the identification of local problems. Fundamentally, social capital is the neighborhood's ability to take effective action in relation to its deficiencies. Social capital is built through just such a process as the Arlington / East Falls Church Civic Association's initiation of the Metro Area Plan and through the implementation of the plan.

Some of the key elements of the Preferred Alternative in the East Falls Church Metro Area Plan that will help create place and increase social capital include the following.

- In the Preferred Alternative, the EFC Rail Center is an exciting place where there is a high level of human activity and where there are diverse choices of action. It is a place where people can live, work, dine, visit, shop, and recreate. Three distinct pedestrian places are created:
 - Within the vehicular access from Washington Blvd. - a central green space and surrounding retail shops;
 - In a restaurant area opposite a new Metro entrance - deep sidewalks accommodating outdoor dining; and
 - Along the street access from Sycamore St. crossing in front of the new Metro entrance - attractive building facades and ground floor retail close to the street.

- The predominant use is residential and hotel, which activates the sidewalks and stores and is transit-oriented. The Rail Center theme will be established by building a replica of the East Fall Church station within the civic space off Washington Blvd. and locating an historic trolley in the plaza at the new entrance to the Metro. Hotel uses are located at the center to take advantage of the EFC rail access to the Washington core, easy access and visibility from the highway, and the ability to create a critical mass between the mixed-use TOD center and the hotel. Long term public parking is reduced from 400 to 200 spaces as appropriate to the change in character of the EFC Metro from a commuter station to a community center.
- The portion of the East Falls Church Metro Plan Area across I-66 to the west is called the Gateway Area. The four block reach of Lee Highway west from I-66 is converted into Main Street with a ground floor mix of small retail and service businesses and restaurants. One end of the Main Street includes a Harris-Teeter type grocery store and the other end adjacent to I-66 includes a hotel and a mixed use office and civic building. Meeting room space, art studios, galleries, exhibition space, and perhaps a small performance theater are proposed for the Civic Building. As in the EFC Rail Center, moderate density residential uses are proposed, increasing in intensity closer to I-66 and Lee Highway and tapering toward the residential neighborhoods. The new residences will activate and create a market for the proposed Main Street retail businesses. Green space surrounds the core of the Gateway Area and a distinct pedestrian-bicycle crossing is established across Lee Highway along the Four Mile Run stream path. A better defined street wall is created by building closer to the sidewalk line and constructing “liner buildings” to infill parking lots in 1970s style office developments there. A streetscape is proposed using wider sidewalks, brick sidewalk treatment, signage, street furniture, façade design standards, and more pedestrian friendly intersection crossings.
- The two sides of the East Falls Church Metro Plan Area are united by a platform across I-66 between Lee Highway and the Washington Boulevard flyover. The plan view of the Preferred Alternative in Map 4 shows the strong connective power of the proposed platform. The structure itself can only be lightly loaded. We propose one floor retail and restaurant uses, park and garden uses. In essence, the platform becomes the center of multiple centers being proposed in the plan. The others include the three new places in the Rail Center and the Main Street along Lee Highway.
- While we cannot turn back the clock regarding the impact of Interstate 66, it is possible to calm traffic in the East Falls Church Metro Plan Area. This is done primarily by creating the conditions for slower but steady vehicular passage through the area as a result of narrower lanes; parking at the curbs; a mature street tree canopy; a healthy level of pedestrian and bicycle activity on the streets, paths, and sidewalks; street statues on Lee Highway at each end of Main Street; and conversion of some one-way streets to two-way access.

Traffic on the I-66 flyover to Washington Blvd. is calmed by altering its freeway configuration and creating signalized intersections essentially at Fairfax and Washington. Pedestrian access at the intersections is improved through curb bulb-outs, eliminating turn lanes in a few instances thereby reducing street widths, wider medians on some arterials, and enhanced design treatment of pedestrian crossings.

- The East Falls Church Metro Planning Studio strongly supports maintaining affordable housing in the area. Information provided by the County of Arlington indicates that the area is losing affordable market-rate housing at an alarming pace. Affordable housing in Arlington County actually means places to live for those with modest incomes such as teachers, police officers, municipal employees, seniors on fixed incomes, recent college graduates, retail workers, and so on. Without confronting the problem directly through affordable housing programs and regulations, East Falls Church will lose its existing social diversity. Consequently, the East Falls Church Metro Area Plan encourages establishing affordable housing targets for the area's redevelopment. In addition, the plan views the new retail, service, restaurant, and live-work development being proposed as part of a community economic development program. This suggests avoiding business chain stores and encouraging local business start-ups and expansions.

Summary of the East Falls Church Metro Area Plan Report

This report lays the groundwork for a plan to revitalize the area surrounding the East Falls Church Metro Station, including areas in Arlington County as well as the City of Falls Church. In addition to presenting a plan that outlines possible land uses and transportation treatments, it reflects a set of community goals that form the basis of the changes proposed. These goals combine the guidance of community stakeholders with the latest research-driven thought on best planning practices.

The long terms goals for the site include:

- Locally Serving Uses (Neighborhood-serving retail, community space, etc.)
- Compatible Density (Scaled to fit neighborhood context with higher density near Interstate 66 and the EFC Metrorail Station, while still maximizing use of the plan area);
- Pedestrian Orientation/Human Scale (Walkability and scaled design);
- Central Public Spaces (Plaza/Courtyard/Main Street with civic and retail uses);
- Gateway Symbol/Community Identity (Distinguishing entrances to area that can be a source of pride: Rail Center, Four Mile Run);
- Improved Connection to Surrounding Residential Areas (Pedestrian and bicycle access, bridging the community over Interstate 66);
- Efficient Use of Land Near Transit Hub (Improvements over wasted surface parking space at existing site);
- Transit/Bicycle/Non-Motorized Trip Increase; High Occupancy Vehicle (HOV) Trip Increase (Decreased congestion and improved safety);

- Economic Development and Diverse Economic Opportunities;
- Affordable Housing.

The different report sections to follow include:

- In Section Two, the report provides a depiction of the existing conditions of the study area, showing how the current site falls short in meeting the goals outlined above.
- Section Three presents the East Falls Church Metro Area Plan's Preferred Alternative including land uses, building massing, streets, pedestrian and bicycle access, trails and open space, gateways, and symbols of community identity. Plans are provided for the Rail Center and the Gateway Area across I-66, together with a platform across Interstate 66 linking the two areas and the community.
- The Preferred Alternative's creation is traced back in time by showing the results of the April 3, 2004, community charrette in Section Four. At this charrette, six groups composed of community members, students, and professionals, produced six different plan alternatives. This activity followed viewing a presentation of general planning concepts and two student designed redevelopment alternatives.
- The two initial student proposals are shown in Section Five, with a description of the issues and design hurdles that came into play during their development. The actual powerpoint presentations prepared by the students for the charrette are included in the section.
- In Section Six the report contains two more-detailed analyses of important aspects of the Preferred Alternative: affordable housing and retail/service business development. The Preferred Alternative calls for a number of new residential units on the site; this section suggests multiple strategies for ensuring that the redevelopment of the study area furthers the goal of housing affordability through developer incentives, regulation, design, and other means. Section Six also contains an analysis of the retail/service market. The Preferred Alternative proposes adding retail space to the area. This section includes a preliminary feasibility analysis of such a plan, with strategies for making it happen according to community wishes. This analysis serves as a foundation for a more thorough retail market analysis recommended by the studio team.
- The report Appendix contains more detailed socio-economic data in tabular form and the course reading list.

The East Falls Church Metro site holds great potential. Many community members have expressed a strong desire to recapture the character and function that the site once had before the construction of Interstate 66. The studio participants believe that this report and the Preferred Alternative it presents can serve as a valuable foundation to build upon, in order to create a truly unique, vibrant, and successful community place.

backgrounds



Frank Lloyd Wright's Pope-Leighey House in East Falls Church

SECTION TWO: BACKGROUND

Section Two briefly covers background information related to the East Fall Church Metro Plan study area, an area roughly defined as within a ½ mile walking radius from the Metrorail property. (See Map 1. The dashed line indicates the County of Arlington – City of Falls Church boundary.) A portion of the background is related to the people who live here and their housing occupancy. A second portion has to do with the conditions of the built environment: the area’s buildings, roads, pedestrian connections, and open spaces. This second part will provide a brief indication of some of the challenges to achieving the community’s goals. This report is not focused on the negative, but on the vision for how the goals can be achieved.

Socio-Economic Characteristics

The East Fall Church Metro Plan study area shown in Map 1 is characterized by using U.S. Bureau of the Census data from the 2000 enumeration. This requires translating the ½ mile walking radius into Census units of Tracts, Block Groups, and Blocks (County of Arlington Tract 1001, Block Group 4, Blocks 4006-4009; Tract 1011, Block Groups 2, 4, 5; and City of Falls Church Tract 5003, Block Group 1). For the data presented below, the population and household counts are based on all Census units including Blocks. Because of the unavailability of detailed data at the Block level, the remaining statistics only employ the Block Groups identified.

Population

The EFC Plan study area contains 4,330 individuals within 1,800 households. (Only considering the Block Groups, these figures are reduced a bit to 3,990 individuals and 1,650 households.) About 85% of the local population is White, compared to 60% within the County of Arlington. A little more than 4% are of Hispanic background, in contrast to nearly 19% in the County as a whole. The EFC population tends to be somewhat older than the County’s residents, represented by individuals 40 years of age or older. However, there are about 780 young people less than 19 years old living in the study area as of the 2000 Census.

Income and Occupation

Incomes in the EFC Plan study area are higher than in the County of Arlington as a whole, which is a high income county nationally. The median household income in the study area was approximately \$97,580 in 1999. This compares to a \$63,000 household median income in the County. The professions and industries of employment for local residents are consistent with higher incomes. About 72% of local residents are in Management and Professional occupations. In contrast, 16% are in Sales or Office employment. Employed local residents tend to be in the higher wage industries including Professional and Scientific (27%), Public Administration (20%), and Educational and Health Care (14%). About 12% work in Retail, the Arts, and Food Service industries.

The median educational achievement level is a Bachelor's degree, with 16% holding a Master's degree or greater. 16% of the residents completed their formal education with a High School diploma or less.

Housing

Within the EFC Plan study area, 58% of the housing units are single family detached, 21% townhouses, and 21% multi-family apartments and condominiums. 71% of the housing is owner-occupied and 29% are resided in by renters. The federal government established that a household has a rent "burden" if 30% or more of income is paid for housing expenses. In 1999, 25% of the renters and 19% of the home owners in the EFC Plan study area had a housing cost burden according to this standard. The County of Arlington is experiencing a very rapid loss of market-rate affordable housing. Nearly one-fourth of the housing units affordable at 60% of median income were lost as affordable between 2000 and 2002.

Travel to Work

About 71% of those living in the study area traveled to work in private vehicles in 2000, compared to 66% for the County. About 21% of local residents used public transportation, slightly fewer than the 23% in Arlington County. This was mostly represented by less bus ridership, since Metrorail usage in the EFC study area and the County were almost the same (19% v. 18%).

The Built Environment.

A brief review of conditions in the built environment also helps to provide a context for the Preferred Alternative. With credit to urban planning historian John W. Repp, two aerial maps are provided with imbedded thumb-nail images of the area. Map 2 shows the EFC Rail Center and Map 3 depicts the EFC Gateway Area.

The East Falls Church Metro Study Area contains many very attractive residential neighborhoods, park facilities, and open space amenities related to the Four Mile Run stream course. Some of the meaningful and attractive buildings are shown in the map images.

The nature of a planning studio, however, is to hold up to view the characteristics of the built environment that changes in the local market and economy are likely to cause to be replaced in the next 10-25 years and which may be in conflict with the community's long term goals. So, with apologies to some who may think this depiction focuses on the less attractive features of the area, the images are selected to underscore the land use and design goals that Preferred Alternative addresses.

These goals include the following:

- The need for an attractive Metrorail station entrance and access to the entrance;
- The creation of a more vibrant, useful, and attractive center of the community on the Metrorail property;
- Re-connecting the Metrorail station to the surrounding residential and commercial areas through traffic calming, pedestrian friendly street design, more attractive access paths, landscaping, and pedestrian scale land uses;
- Creating better connections among the residential areas using the same techniques;
- Reuse of the older, vehicle-oriented, industrial and service properties with a mix of uses that reflects a modern version of the rail town character of the area prior to the development of Interstate 66;
- Strengthening the bicycle, walking path, and open space amenities already present in the area.

East Falls Church metro area 3
preferred alternative



East Falls Church Trolley and Station

SECTION THREE: EAST FALLS CHURCH METRO AREA PREFERRED ALTERNATIVE

Preferred Alternative Plan

The Preferred Alternative for the East Falls Church Metro site calls for the reintegration of areas north and south of the Interstate 66 corridor, but for purposes of description it is helpful to look at the site plan in two parts: the Rail Center plan for the area north of the corridor, currently the site of the Metro parking lot; and the Gateway Area plan for the area south of the I-66 corridor along Lee Highway, which presently contains a variety of light industrial and other uses. Each half of the site is its own entity, with a complete set of interacting land uses that feed off each other. And with a set of new transportation linkages between the two sites for automobiles, buses, bikes, and pedestrians, the two complement each other to create a near-seamless community place that could be a true source of pride for area residents. Map 4 shows the plan view for the East Falls Church Metro Area Preferred Alternative.

Rail Center

North of I-66 at the Rail Center, the Preferred Alternative provides for a neighborhood center with lively civic spaces and a healthy mix of residential, retail, office, and hotel uses much along the lines of the Clarendon Market, although with an emphasis on neighborhood oriented retail, rather than destination stores. The triangle formed by the I-66 corridor, Washington Boulevard, and Sycamore Street, is bisected by a road that would intersect with Sycamore Street at the I-66 off ramp, and continue parallel to I-66 to the northwest where it would meet a large public greenspace flanked by roads that connect up to Washington Boulevard. The retail space on this site is oriented toward this new road and public greenspace, as this will be the primary route for auto, bike, and foot traffic to a new entrance to the Metro station. A small building detailed architecturally to be reminiscent of the EFC trolley station is proposed for the head of this greenspace. Above this ground-floor retail space are residential units, with the exception of a hotel in the building at the southeast corner of the triangle. The heights of these buildings are stepped away from the corner of Washington and Sycamore, in order to not impose on the surrounding single-family homes to the northeast and 4-story townhomes to the north across Washington Blvd. Map 5 contains a perspective view including building massings of the Rail Center Preferred Alternative.

A secondary greenspace is located across the proposed road from the new Metro entrance, serving as a courtyard for the residences as well as a turnabout for auto traffic. Deep sidewalks are provided to contain outdoor dining for first floor restaurants surrounding this courtyard. This space is connected to Washington Boulevard to the north by a pedestrian path passing between the two buildings flanking the space. Underground parking is provided in this structure.

The new Metro entrance features a restored trolley car from the original trolley line that served the area. The trolley car is tucked in between the two buildings that sit on either side of the entrance.

To the west of the primary greenspace sits an additional residential building that would have three levels of parking behind and underneath the ground-floor retail facing the green. The building's internal courtyard is two stories above ground, on top of the parking levels. The reorientation of the fly-over coming across from south of I-66 brings it to a 90-degree intersection with Washington Boulevard, allowing the building to squarely face both Washington and the fly-over, as well as freeing space for another building to the west. In this space the plan suggests another hotel due to its visibility and easy access from I-66. The Washington Boulevard and north Sycamore Street frontages along the entire Rail Center are made up of office-condo flex space that can adapt to market circumstances without significantly affecting the architectural character of the structure.

The primary green is oriented in the sightline of a proposed new bicycle/pedestrian bridge over the I-66 corridor. This bridge combines with the addition of sidewalks to the fly-over and improvements to the Lee Highway bridge over I-66 to provide multiple bicycle/pedestrian linkages between the two halves of the site. At the foot of this bridge on the northern site, between the bridge and the primary green, would be space for a civic plaza with a fountain or some other symbolic/aesthetic installation. Again, this space would be lively and well-trafficked by virtue of its location as the focal point of the northern site and the entry for many bicyclists and pedestrians to the new Metro entrance.

Another linkage between the Rail Center and the Gateway Area is a new platform that rises above the I-66 corridor at the grade of the current Lee Highway overpass. This Plaza would resemble Market Square in front of City Hall in Alexandria and contain fountains and flower beds. The Plaza could be used for Saturday auctions, a farmer's market, and community events. The platform is bounded by Lee Highway, Washington Boulevard, and the fly-over, and supports small-scale retail buildings and restaurants flanking an ornamental public plaza, and adjacent to a new park. This platform provides a conduit to connect the Rail Center and the Gateway Area with a public space which people will enjoy passing through or lingering.

The Rail Center includes the existing Kiss and Ride lot which sits just south of the current Metro entrance along Sycamore Street. The Preferred Alternative locates a mixed office/residential building on this site, making use of the steep topography to allow for a large building without imposing on the surrounding single-family homes. Charrette participants proposed various community serving businesses here such as day care and a senior center. Parking is located behind the "liner" leased or condo space at the street front on the first two floors.

The plan for the Rail Center represents a significant improvement over the existing Metro parking lot, and makes best use of the unique shape and topography of the site to create a workable layout of building footprints and transportation connections, a sustainable mix of uses, and some potentially beautiful and well-loved public spaces.

Totals for the Rail Center Preferred Alternative are as follows (all figures represent gross square footage, affordable housing figures are included in parentheses):

Rail Center (including existing Kiss & Ride lot)			
	Square Footage (Gross Sq. Ft.)	Equivalence	Parking Requirement
Retail (non-restaurant)	39,424		115 spaces
Restaurant	11,989		
Hotel	97,209	222 Rooms	156 spaces
Office/Flex	108,145		284 spaces
Apartment/Condo	621,131 (124,226)	488 units (75 units)	488 spaces
Metro Park & Ride			200 spaces
Totals	900,280 (124,226)	488 residentl units (75 affrd units) 222 hotel rooms	1,243 spaces

Parking

The parking figures included in the table above represent a shift in use from a Metro commuter center to a more vital Neighborhood Center serving the community. Long term parking is reduced from 400 spaces to 200. The total parking requirement shown above is based on the County of Arlington’s standard ratios of new development by use to the number of needed parking spaces. These spaces might be lowered through a traffic impact analysis of the Preferred Alternative. Several features of the Preferred Alternative recommendations might produce a lower parking requirement. (Also see Section 7 for recommendations) These include: better pedestrian and bicycle accessibility to the Rail Center, expanded use of the ART and George shuttle bus service, requirements for local businesses to have aggressive Transportation Demand Management (TDM) plans, and the location of a Commuter Connections facility on the site. The table above includes a conservative estimate of the number of spaces needed for the Flex Office portion of the development, 284 spaces. As an example, if we assume that half of the Flex Office space was used for residences, the parking requirement might drop by nearly 90 spaces. In general, the plan recommends that the Preferred Alternative be tested to determining whether the required number of parking spaces might be reduced.

Gateway Area

The other part, of the study site, the Gateway Area, is focused around Lee Highway, and presents many opportunities for constructive redevelopment. The project team envisions Lee Highway being flanked on both sides by ground-floor retail between Jefferson Street and the bridge over I-66. In addition to this specialty retail presence, revisions to the streetscape including various improvements to the pedestrian experience will contribute to a “Main Street” environment. Map 6 contains the perspective view for the Gateway Area Preferred Alternative.

The Preferred Alternative calls for some new roadway connections and alignments that help complete the street grid to provide better circulation and create more functional building sites. This includes connecting Maple Avenue across Four Mile Run to link it to the Fire Station site and on to Lee Highway. Another new road links Westmoreland Street and the fly-over; Fairfax Drive is removed and the fly-over realigned to meet this new connector at a right angle before continuing over the Interstate. In addition, the plan calls for a new road bisecting the large block surrounded by Jefferson Street, Lee Highway, Maple Avenue, and Columbia Street. Improved connections are provided for cyclists and pedestrians as well, as the trail along Four Mile Run is carried past Lee Highway to the southwest, and links back to the Washington and Old Dominion Trail (along with the new bridge to the Rail Center) via a new trail connection.

Moving south and west from the bridge over I-66, the plan outlines sites for a hotel to the northwest of Lee Highway, and a medium-density residential block to the southeast. Behind this residential block, on the other side of the new street, sit two rows of townhouses with a greenway corridor serving as a buffer for the existing single-family homes along 19th Road. Across Westmoreland Street from this block is the Silverwood site already under construction. Its plan is consistent with the Preferred Alternative’s call for ground-floor retail along Lee Highway, as well as the scaling back of density from Lee Highway to the single-family homes to the southeast. It also features a complex of townhouses between the single homes and the higher-density residential block along Lee Highway. Across Lee Highway from the Silverwood site is a newly-platted building site that contains a structure that could accommodate a mix of civic and arts spaces, perhaps a small theater, along with flex-office uses.

Continuing northwest across Four Mile Run and the Arlington County-Falls Church boundary, the plan calls for a medium-density residential complex to fill the block formed by the creek, Lee Highway, Jefferson Street, and Maple Avenue, with an underground parking lot and circular courtyard. Across Lee Highway from this block, the plan fills in the street wall by placing liner buildings in front of the three large office buildings situated in the middle of the block and currently surrounded by a large parking lot. These buildings would line Lee Highway and Gresham Place with retail and office/flex uses.

The Lee Highway – Jefferson Street intersection becomes a focal point, with the possibility for a statue or other symbolic feature in the middle, to both slow traffic and signify the beginning of the “Main Street” area to traffic approaching from the west. The plan calls for the northwest corner of this intersection to be filled by a medium density residential building, while the block to the south would feature an assisted-living structure. Finally, on the corner of Lee Highway and Columbia Street sits a medium-sized grocery store. Another statue or gateway feature is called for on Lee Highway just west of the I-66 overpass to define the eastern end of Main Street.

The mixture of uses outlined above is appropriate for this stretch of the Lee Highway corridor. The various existing parking lots, warehouses, and light-industrial uses are an under-utilization of the site, which has the potential to be a real neighborhood gateway and much better serve area residents, while still accommodating flows of regional traffic. Totals for the Gateway Area Preferred Alternative are as follows (all figures represent gross square footage, affordable housing figures are included in parentheses):

Gateway Area (including platform)	Square Footage (Gross Sq. Ft.)	Equivalence	Parking Requirement
Retail (non-restaurant)	71,098		208 spaces
Restaurant	21,263		62 spaces
Grocery	50,000		146 spaces
Hotel	208,068	475 rooms	475 spaces
Office/Flex	190,946		649 spaces
Total Residential	1,055,927		
Apartment/Condo		549 units (82 units)	713 spaces
Townhouse		38 units (7 units)	84 spaces
Assisted Living		274 units (54 units)	137 spaces
Civic	38,919		119 spaces
Totals	1,636,221	861 residentl units (143 affrd units) 475 hotel rooms	2,593 spaces

Connections

Overall benefits of the plan also include a fully integrated ring of greenspace, making connections for cyclists, pedestrians, and wildlife. New connections include the extension of bike routes along Four Mile Run to provide an alternative to the routing of the Washington and Old Dominion Trail. In addition, the Preferred Alternative connects neighborhoods to the north of the Rail Center by virtue of a pathway through the Verizon site, reaching from Lee Highway to Washington Boulevard. The realignment of roads and revision of streetscapes, including changes to lane widths and improvements to sidewalks, generally serve to calm traffic and make the entire area more pedestrian friendly. These changes are further detailed in the following section on Transportation.

Preferred Alternative Transportation and Access Plan

The current layout of the East Falls Church Metro study area is designed for high-speed vehicular traffic. From the highway dynamics of the flyover to the twelve-foot (or greater) lane widths, the area is designed for automobile speed. Our plan includes several traffic calming measures to help shape the Transit Oriented Development into a safer, pedestrian-oriented space (Arlington County, [Neighborhood Traffic Calming Program](#)).

These measures consist of:

- The placement of one statue or monument at the intersection of Fairfax Drive and Lee Highway and a second statue at the intersection of Jefferson Street and Lee Highway slowing traffic and helping distinguish the Main Street area.
- Introducing bulb-outs along Lee Highway, Washington Boulevard, and Sycamore Street in order to offer protected on-street parking and to shorten pedestrian crossing distances.
- Narrowing lane widths to ten feet to decrease traffic speed.
- Employing special brick crosswalks along Lee Highway and Washington Boulevard to highlight the pedestrian crossings to motorists.
- The use of medians along Washington Boulevard and Sycamore Street to encourage safe, pedestrian access to the Metro station.
- The planting of street trees to increase drivers' visual friction and create greater spatial enclosure.

Street Transformation

In order for traffic calming measures to be successful, changes made to the existing roads must accommodate the traffic flow. Motorists traveling to the Metrorail station may only account for slightly under half of total Metro users in East Falls Church, but with 16,000 cars daily crossing the intersection at Washington Boulevard and Sycamore Street, total commuter traffic requires consideration. (O.R. George & Associates, Inc., [Data Collection Summary: East Falls Church](#), 2001 & Arlington County, [Regular Traffic Counts](#), 2001) While the Metro parking will be housed in a multi-level parking garage buried within the west side of the current lot, commuters will still require ample passage around the East Falls Church Metro study area. Map 7 contains a key to the EFC vehicular transportation plan.

While new development is proposed in the Preferred Alternative for the East Falls Church Metro study area, the mix of uses proposed may not lead to significantly increased traffic. In Leach's case study of the Rosslyn-Ballston corridor, he found that between 1972 and 2002, there were constructed 11,000 new housing units, 16 million square feet of office space, 950,000 square feet of retail space, and about 1,900 new hotel rooms. However, by 2002 this growth had generated "only modest levels of additional traffic on local streets". (Dennis Leach, "The Arlington County Case Study, The Rosslyn-Ballston Corridor", [The New Transit Town](#), in publication.)

How did this occur? It likely resulted from some combination of increased Metrorail use, good housing-jobs balance so that trips to work could be made on foot or bicycle, greater housing density closer to the Metrorail stations, and an increase in neighborhood serving retail and service businesses so that vehicular trips by existing residents decreased - offsetting the new trips produced by development.

Specific numbers for each section of the transit-oriented development include:

Washington Blvd. (Shown in red)

- There will be two ten-foot lanes traveling eastbound and two traveling westbound throughout its reach shown in Map 7 to Lee Highway with a ten-foot median separating them. Eight-foot parking lanes with bulb-outs at the corner of Sycamore Street will guarantee a street width of sixty-six feet. Twelve-foot sidewalks will also be placed on both sides.
- The left turn lane onto Sycamore Street will be eliminated as it only accounts for 1.2 -1.6% of eastbound traffic during peak hours. (O.R. George & Associates, Inc., Data Collection Summary: East Falls Church, 2001)
- One eastbound through lane will be eliminated since the immediate merge area on the eastern side of Sycamore Street leads to a one-lane passage, which currently creates traffic jams in the intersection. The right turn lane will be preserved as it handles a high volume of traffic.
- Traffic lights will be placed both at the corner of the flyover and at the mid-point of the Rail Center to facilitate turning and to provide pedestrians with a means to cross.

Sycamore St. (Shown in blue)

- There will be five ten-foot lanes and two eight-foot parking lanes with bulb-outs located at the Washington Boulevard intersection. A ten-foot median will also be included (three northbound lanes south of Washington Boulevard and three southbound lanes north of Washington Boulevard). The street width will be seventy-six feet with twelve-foot sidewalks on both sides.
- Both southbound and northbound right turn lanes will be removed with right turns being possible from the adjoining through lanes. Right turns only account for 2.2 – 4.7% of northbound traffic and 2.7 – 6.9% of southbound traffic during peak hours. (O.R. George & Associates, Inc., Data Collection Summary: East Falls Church, 2001)
- The westbound off-ramp of Interstate 66 is modified to tighten the turning radius onto Sycamore Street and slow traffic.

Flyover – Renamed Cherry Hill Road (Shown in green)

- Traffic will travel in two directions with one ten foot eastbound and one ten foot westbound lane. The street width will be twenty feet with one twelve-foot sidewalk.
- A traffic light will be placed at the south west end of the flyover to accommodate traffic entering the thoroughfare from the south and provide access to the new road proposed there.

Lee Highway Overpass (Shown in pink)

- There will be three eastbound lanes shown in Intersection 1 on Map 7 to handle the 26,000 cars that pass through daily with the right lane being converted to a dual through and right turn lane. (Arlington County, Regular Traffic Counts, 2001)
- The westbound lanes on the south side of the overpass will be reduced to two by eliminating the left turn lane onto the flyover. This is made possible by eliminating Fairfax Drive on the east side of Lee Highway and redirecting the traffic to the flyover. Left-turning traffic heading southbound on Lee Highway north of the overpass will be directed onto Washington Boulevard (now 2 way) and can avoid using the flyover.
- The cartway width will be fifty feet with ten-foot sidewalks on both sides.

Lee Highway Corridor (Shown in yellow)

- The current number of lanes (two eastbound, two westbound) will be maintained, but narrowed to ten feet. Two eight-foot on-street parking lanes will be added with bulb-outs at the corner of the new Fairfax Drive and at regular intervals westbound on Lee Highway. The total street width will be fifty-six feet with additional twelve-foot sidewalks.
- A lane cutting perpendicular to Lee Highway will give the Fire Station direct access to a major transportation route.

Bus & Kiss and Ride Traffic

In addition to the pedestrian element of the Rail Center, bus connections and Kiss and Ride areas will be provided. Space will be made available on the west side of Sycamore Street for saw-tooth bus bays along with shelters for riders. The Kiss and Ride space previously located to the south of Interstate 66 will be moved near to the new Metrorail station entrance. Normal parking spaces will be reserved for Kiss and Ride or taxi use during peak hours. The access points to the Kiss and Ride area adjacent to the Metro stop should help alleviate traffic in the Washington Boulevard and Sycamore Street intersection. Kiss and Ride and bus user totals are slightly higher than those of pedestrians and bicyclists (Parsons Transportation Group, East Falls Church Station Access Study, 2001).

Metro Users	Total Persons	Percentage of Metro Study Area Population
Morning Bus Users	327	7.5
Afternoon Bus Users	284	6.6
Morning Kiss and Ride Users	528	12.2
Afternoon Kiss and Ride Users	413	9.5

Pedestrian/Bicycle/Mass Transit Plan: Reestablishing Connectivity

At present, pedestrian and bicycle connectivity is extremely limited by inadequate routes and unsafe road crossings. Several steps have to be taken to balance the priorities between motorists and pedestrians.

This is accomplished by:

- Improving intersections to encourage safe street crossings.
- Creating a footpath adjacent to the Verizon station, running from Lee Highway to Washington Boulevard.
- Erecting a joint bicycle/pedestrian bridge over Interstate 66, leading into the center of the Transit Oriented Development in the Rail Center.
- Forming a more substantial bicycle/pedestrian path across Lee Highway leading to the bridge. This is done by widening and clearly marking the path to prevent bicyclist/pedestrian/vehicle conflict. Proper lighting and the inclusion of benches or water fountains also help create a friendlier atmosphere.
- Broadening the footpath through Four Mile Run to accommodate both bicyclists and pedestrians.
- Fashioning a wide, brick-textured, walkway across Lee Highway at Four Mile Run.

Map 8 indicates the pedestrian and bicycle path connections contained in the EFC Preferred Alternative.

Pedestrian & Bicycle Traffic

The augmented number of pedestrian connections should lead to increased foot traffic, benefiting both Metro ridership and local retail. Currently, the numbers of pedestrians and bicyclists traveling to and from the Rail Center are relatively small (Parsons Transportation Group, East Falls Church Station Access Study, 2001).

Metro Users	Total Persons	Percentage of Metro Study Area Population
Morning Pedestrians	654	15
Afternoon Pedestrians	418	9.6
Morning Bicyclists	43	1
Afternoon Bicyclists	46	1.1

Platform Across Interstate 66: Linking the Rail Center and the Gateway Area

A large, public space connecting the Rail Center and Gateway Area will be established in the form of a platform placed over Interstate 66 between the flyover and the Lee Highway overpass. The platform will not only act as a gathering point for local citizens, but will also encourage the flow of non-vehicular traffic from the Gateway Area to the Rail Center.

The careful design and placement of structures and greenery on the platform will increase visual friction for drivers, thereby slowing traffic to reasonable speeds. The platform plays a key function in reestablishing a sense of community by joining the two sides of East Falls Church that were separated by the construction of Interstate 66.

Map 9 represents the new roads being proposed in the Preferred Alternative. A Plan strategy is to increase street connectivity, thereby dispersing traffic rather than concentrating it.

community charrette 4



East Falls Church- Lee Highway and Fairfax Drive, 1946

SECTION FOUR: COMMUNITY CHARRETTE

A critical part of the East Fall Church Metro Area Plan process was the planning and design charrette held with the Arlington / East Fall Church Civic Association on April 3, 2004. Section Four reports the wealth of ideas obtained from the community at this all-day meeting.

More than 50 individuals participated in the charrette. The community members were divided into six groups at separate tables. A professional planner or architect and a student from the studio class assisted each of the groups. Each group was given a 1" to 100' scale aerial map of the study area, a set of marking pens, pencils, erasers, a code sheet indicating which colors represent the different land uses, and sheets of tissue on which to draw and make notes. Then each group was asked to develop its own plan for both the Rail Center and the Gateway Area.

Each part of Section Four summarizes the plan developed by the groups, referred to as Tables 1 through 6. The drawings on tissue were scanned and the images superimposed on aerial maps of the East Falls Church study area. The drawings exhibit the great enthusiasm of the participants and contain a depth of information and knowledge. Sometimes there are upside-down notations on the drawings when the map's orientation is kept consistent from table to table. Our apologies to the reader for this inconvenience.

This section begins the chronological documentation of the Preferred Alternative. A fairly high level of consistency was found among the groups and almost all of the recommendations with general agreement found their way into the Preferred Alternative.

One significant change that was made in the Preferred Alternative compared to the student team plans created prior to the charrette was the platform above Interstate 66 linking the east and west sides of the EFC community. The high level of agreement in favor of the platform led to its inclusion in the final plan. Construction costs on recent projects indicate that the costs for the structural deck are in the \$150 to \$160 per square foot range. Special finishes including such things as pavers, planters, landscaping, and irrigation add about \$15 to \$25 per square foot. This does not include anything elaborate like fountains. It is preferable to keep buildings independent from the platform, but single-story, stick-built structures covering part of the surface are acceptable. These only are very preliminary cost estimates and need to be confirmed through a professional engineering analysis.

Charrette Table 1

Table 1 introduced key elements previously outlined in the East Falls Church Metro vision statement: increased connectivity, mixed-use facilities, gateway markers, and community space. (See Map 10) The Table envisioned the following as important attributes of the new development:

- A pedestrian greenway would stretch over Interstate 66, spill out into a plaza, and continue over Washington Boulevard. through the current Verizon facility.
- A new Metrorail station entrance would be constructed in the middle of the pedestrian greenway over I-66.
- Once exiting from the greenway into the Rail Center plaza, a pedestrian thoroughfare alongside the Metro would serve as a pathway to Sycamore Street. The wall along the Metro would be lined with first floor retail.
- Within the Rail Center, mixed-use residential/retail buildings would be constructed. First floor retail would line Sycamore Street as well as both sides of the proposed new greenway. Beginning at Sycamore Street along Washington Boulevard towards Lee Highway, the buildings would gradually increase in height, from an initial three to four stories above underground parking to an eventual 6-7 stories. The initial lower densities would be designed to mirror the residential townhouses across Washington Boulevard.
- Buses would enter the site from either Washington Boulevard or Sycamore Street and loop through as currently occurs. Bus bays would be located within the site as they are now.
- Kiss & Ride would remain at its current location, but a new facility would be constructed to accommodate drop-off type uses, such as day care or a senior center.
- Washington Boulevard would become two-way between Lee Highway and Sycamore Street.
- The Washington & Old Dominion (W&OD) trail would be rerouted away from its current location (running between the south side of I-66 and the row of houses on 19th Road) and instead follow the road network.
- The development in the Gateway Area would be principally five-story, mirroring the residential development already approved at Lee Highway and Westmoreland Street.
- First floor streetfront retail would line the buildings along Lee Highway, creating a “Main Street”.
- Gateway markers would be placed at all major entrances to the site. These include: Lee Highway & Washington, Sycamore & Washington, Sycamore & 19th Road, and Lee Highway & Westmoreland (across from the new proposed residential development where a tower is already planned).
- A new road would be created connecting Fairfax and Westmoreland.
- The existing Econo Lodge would remain a hotel use, but become a more upscale operation. The building would be surrounded (on the east and facing Westmoreland) by office uses.

Charrette Table 2

Table 2 featured diverse viewpoints on improvements necessary to make the area around the East Falls Church Metrorail Station a better community place. (See Map 11) For the most part, participants agreed on these goals:

- Maximize the revenue-generating ability of the land by providing opportunities for commercial and residential development of moderate density.
- Improve the circulation and safety of automobiles, bicycles, and pedestrians, including a strong desire to strengthen connections between areas north and south of the I-66 corridor.
- Minimize the impact that new development would have on existing neighborhoods, as well as ameliorate the impact associated with the fact the site is situated in the middle of a highway interchange.

Rail Center:

The group concentrated on a redevelopment plan for the existing Metro parking lot and connecting this site to the surrounding area. The considerations that figured in this discussion were creating optimal retail locations, improving access to the Metrorail station while maintaining convenient parking, ensuring a mixture of uses that would create steady activity, and providing easy circulation for buses. The key components of Table 2's plan were:

- Division of the site into three large blocks, separated by two north-south roads that would connect Washington Boulevard to a new road immediately parallel to I-66.
- Retail space oriented both internally to the site, and externally to Washington and Sycamore – a solid first-floor retail presence (represented on Map 11 in red) along both streets as well as the principal north-south street bisecting the site from Washington.
- This north-south street would essentially be a round-about with greenspace in the center and could provide one-way or two-way circulation.
- A new entrance to the Metrorail station at the south end of this space, while retaining the existing entrance.
- All three blocks created would include a mixture of office, condo, and apartment space, with parking underneath and retail on the first floor.
- Bus circulation would take place around the eastern-most block, with stops on both sides of the block.

Gateway Area:

- A public plaza on a platform above I-66 would connect the Rail Center to the Gateway Area, stretching from the east side of the flyover to the west end of the Metrorail platform.
- This platform could be faced on the north by artist studios or similar flex-space.
- Pedestrians would proceed from this plaza along Fairfax Drive to Lee Highway. The south side of Fairfax and both sides of Lee Highway between the I-66 overpass and the county line would have retail space along the street, establishing a "Main Street".
- Participants expressed a strong desire for a grocery store somewhere in this area, believing the industrial site between the Fire Station and Lee Highway to be the best location.
- The remaining space would become medium-density residential, tapering in height toward the single-family homes to the southeast, with a section of townhouses. The townhouses would line a new road connecting Fairfax and Westmoreland.

General Bicycle and Pedestrian Connectivity:

Participants also proposed enhancements to bicycle/pedestrian safety and connectivity, including a continuation of the trail along Four Mile Run to link Lee Highway and Sycamore, a bike/ped linkage between Lee Highway and Washington via the Verizon site, new and/or better sidewalks in the neighborhood south of the Metro station, and pedestrian improvements to major intersections, especially at Washington and Sycamore.

Charrette Table 3

Throughout the charrette process, the participants of Table 3 showed support for New Urbanist principles. There was a frustration that the once-cohesive neighborhood of East Falls Church had transitioned to a commuter stop. A primary goal of the group was to increase the area's social capital through decreasing reliance on vehicles and promoting mixed use development. (See Map 12)

Table 3 actively pursued higher density growth, seeing it as adding to, rather than taking from, the public spaces along the Gateway and Rail Center Areas. From the flexible use of the buildings to the emphasis on pedestrian connectivity, the restoration of the community was the group's chief concern, addressing it through the following means.

Rail Center

- Special emphasis was placed on increasing pedestrian access and usage to the redeveloped Rail Center with:
 - Two new entrances to the station approximately 150 feet west of the current entrance on both sides of Interstate 66.
 - A pedestrian bridge over Interstate 66 at the western edge of the current Metro parking lot.
 - A plaza above Interstate 66 and the Metrorail entrances.
 - A new pedestrian thoroughfare replacing the Verizon switching station, connecting Underwood Street to Washington Boulevard.
- Higher-density, mixed use development was proposed at the Metro parking site with:
 - Residential or hotel uses on the east side next to Sycamore.
 - Mixed retail and office buildings with underground parking on the west side.
 - A pedestrian street from Washington dividing the two halves, leading to a new Metrorail entrance, and lined with retail businesses.
- Medium density development would supplant some of the single family homes to the south of Interstate 66 with:
 - Townhomes penetrating two blocks into the residential area.
 - A mixed use office and retail structure on the current Kiss and Ride lot with a height limit of roughly thirty feet.
- The current bus loop would be maintained with Kiss and Ride access placed in its center.

Gateway Area

- Consistent importance was placed here on pedestrian routes with:
 - A large plaza located directly between the Fire Station and Lee Highway, combined with a visible pedestrian route to the Metro plaza area. A pedestrian/bicycle bridge over Lee Highway accentuates this path.
 - Maintained pedestrian paths along Four Mile Run that are distinct from the biking routes.
- The creation of a Main Street atmosphere along Lee Highway including:
 - Mixed use development with ground floor retail above flex live/work space.
 - A mixed office/residential area placed directly behind the "liner" flex buildings on the north side of Lee Highway, west of Four Mile Run.
- The edge of Main Street and Interstate 66 would be comprised of:
 - Retail fronting the pedestrian/bicycle route.
 - Medium density residential space to support local retail businesses and with easy access of the Rail Center.

Linking the Rail Center with the Gateway Area:

- A deck was constructed over I-66 from Lee Highway on the west to the new Metrorail entrance on the east, creating a large open space. Small buildings with shops and restaurants would surround this open space.
- A one-way loop road was provided on the deck for vehicular access to the stores and buildings around the open space.
- Retail and service shops were located close by the Metrorail entrances. Suggested uses included restaurants (carry out), dry cleaning, hair cutters/stylists, convenience stores, and similar stores.
- These shops should be small in scale and community focused. Their primary customers would be Metro commuters and area residents, not large scale chains drawing customers from outside East Fall Church.

Other Land Uses:

- A “village” atmosphere was fostered by building 2-3 story “villas” on northeast corner of the Rail Center. Smaller sized units in these buildings would provide affordable housing.
- The height of the buildings should be 3 stories or fewer and buildings should be sited throughout the site.
- Civic/office uses such as a civic center and senior center would be encouraged.
- A small green space would be located on the corner of Washington Boulevard and Sycamore Street.

Charrette Table 5

Citizens participating in the Table 5 group lived in the north, northwest, and south parts of the East Falls Church Metro study area. All agreed that improvements to the study area would be beneficial to the surrounding neighborhoods. The most frequently discussed topic during the charrette was the need to improve pedestrian access. Additionally, most expressed the need for convenience retail, cafés and/or restaurants, civic space, and performance and/or studio space for the arts. There was common agreement that adding more residences to the area as a result of the area's redevelopment would help sustain desired improvements. (See Map 15)

- Pedestrian Improvements; Connectivity:

Group members expressed difficulty crossing Washington Boulevard to get to the Metro station at peak traffic times.

Citizens' Remedy: Build an elevated pedestrian walk across Washington Boulevard, connecting the north side of Washington with the existing Metrorail platform. Make improvements to Washington Boulevard, such as widening a landscaped median and narrowing the lanes, to "Boulevardize" the road.

The citizens recognized that pedestrian paths and bicycle trails in the study area are underutilized, threatened by vehicles, and do not connect places well.

Citizens' Remedy: Connect bicycle trails to sidewalks, pedestrian paths, and green spaces/parks. Remove the trail behind power station. Use Lee Highway as a main pedestrian path, improving the sidewalk on the Interstate 66 overpass. Create multiple paths to the Rail Center and the Gateway Area. Design the proposed sidewalks and trails for handicapped accessibility. Build a park platform over I-66, linking the Metrorail station with the neighborhood across the highway. The platform would provide another access route between the Gateway Area and the Rail Center. Create a pedestrian/bicycle link between the platform and the neighborhood to the south by crossing the west side of the power station site.

- Civic and Retail Improvements

The citizens expressed the need for places like cafés and small shops within walking distance from homes.

Citizens' Remedy: Locate cafes, restaurants and convenience retail in the Rail Center. Build civic spaces in the form of art studios and program space in either/both the Rail Center and the Gateway Area (e.g. the Alexandria Torpedo Factory). Create a Main Street along Lee Highway in the Gateway Area with consistent streetscape improvements. Establish a park or green space at the intersection of Lee Highway and the Washington and Old Dominion trail in the Gateway Area.

- Housing

Citizens' Purpose: Incorporate new residential units to support desired retail and civic improvements. In the Rail Center, construct residential units above all first floor retail components. In the Gateway Area, build several large buildings that contain retail on the first floor with residences on the upper floors. Residential buildings with retail components should be consistent in height with the Silverwood project, 5 to 6 stories.

Charrette Table 6

The primary concern of the charrette participants at Table 6 was the lack of activity at the East Falls Church Metro Center Area. This absence of pedestrian vitality conveys a perception of danger or susceptibility to criminal acts for residents and visitors alike. Barren (but often full) parking lots, little pedestrian presence, and limited connection of the Metro site to the surrounding neighborhoods all contribute to this feeling. (See Map 16)

Further exacerbating the problem, few opportunities for commerce exist in the vicinity of the East Falls Church neighborhoods, resulting in minimal pedestrian activity in the public realm. A small convenience store in a gas station at the intersection of Washington Boulevard and Lee Highway provides the closest opportunity, but hardly presents an opportunity for enjoyable shopping experiences and community engagement. The locations of the next closest retail centers (approximately 1.5 – 2 miles) force all but the most hardy individuals to use their cars to shop for daily goods and services. Ultimately, residents indicated that the inclusion of neighborhood-focused retail businesses and services would, together with an improved pedestrian infrastructure and well-designed street spaces, provide valuable assets for the community.

These basic ideas helped to formulate the following elements for the Table 6 plan:

- Creation of a mixed-use, 24-hour neighborhood center in the Rail Center that will serve the needs of the immediate community, containing such uses as convenience retail and commercial activities that will stimulate community interaction (coffee shops, cafes, etc.). This includes retail spaces on Sycamore Street adjacent to the Metrorail entrance.
- Focus on moderate density (5-6 story) residential development in the Rail Center, incorporating affordable housing
- Focus on moderate density (5-6 story) mixed-use office/residential/retail development in the Gateway Area, compatible with the approved Silverwood project on Westmoreland Street.
- Incorporation of a significant amount of functional public space that operates with a civic program to provide a place for community gatherings and to facilitate the success of the neighborhood retail areas (e.g., public plazas, sidewalk kiosk space, farmer's market, etc.). Attractive civic green spaces in the redevelopment plan are located in the core of the Rail Center and in the Kiss and Ride site, south of the Metro entrance off Sycamore Street.
- Placement of parking below grade to maximize use of developable land.
- Improvement of the connection to the Rail Center from Lee Highway by adding pedestrian improvements and traffic calming to the Washington Boulevard "fly-over".
- Creation of a "Main Street" environment along Lee Highway by constructing buildings oriented towards the street encouraging pedestrian traffic.
- Accommodation of additional density along Lee Highway by stepping down or tapering building heights toward existing residential neighborhoods.
- Realignment of the Washington and Old Dominion pedestrian and bike trail along the existing pedestrian-only trail through Isaac Crossman Park at Four Mile Run to incorporate existing open space into a more regional framework.
- Creation of a public space at the Washington and Old Dominion trail crossing at Lee Highway and use of the crossing as an opportunity to provide an "announcement" of entry/exit to Arlington County.

student proposals for 5
community charrette



Elliot's Groceries and Provisions, c. 1920

SECTION FIVE: STUDENT PROPOSALS FOR COMMUNITY CHARRETTE

Prior to the EFC charrette, the students divided into two teams to explore initial redevelopment plans for the East Falls Church Metro Plan Area. Team 1 and Team 2 each prepared a plan and these were presented to the community at the April 3rd charrette.

Developing the plans expanded the students' understanding of the social and physical conditions of the EFC area, created a solid base of understanding of physical planning and design, and tested redevelopment solutions for the area. This effort prepared the students to act as planning professionals during the community meeting.

The initial redevelopment plans formulated by Team 1 and Team 2 are summarized in Section Five below. These summaries include the plan view and perspective views of the Rail Center and the Gateway Area. Also included are the powerpoint presentations made by the teams at the charrette.

Team 1 EFC Redevelopment Proposal

In order to transform the East Falls Church Metro study area into a lively Transit Oriented Development, Team 1 focused on improvements in transportation, community identity, and land use.

Transportation

Bicycle/Pedestrian Connections: One of the challenges of the EFC Metro Study Area was the disjointedness between the Rail Center and the Gateway Area, particularly in terms of bike/pedestrian connections. For example, the Team found it dangerous and unpleasant to try and traverse several key pedestrian connections, such as the Lee Highway bridge over Interstate 66 or crossing Washington Boulevard to the Rail Center. In the interest of encouraging safe non-automotive transportation, the following elements were introduced:

- Lee Highway overpass improvements (lane narrowing, sidewalk widening).
- New bike/pedestrian bridge across I-66 to the Rail Center.
- New bike/pedestrian linkages between Four Mile Run Trail, Washington & Old Dominion Trail, and the Metrorail station.
- Streetscape, intersection improvements, and traffic calming measures: sidewalk additions, lane narrowing, on-street parking, bulbouts, landscaping, and clearly marked crosswalks.

Automobile Connections/Parking: Although one of the goals of Transit Oriented Development is to encourage people to be less dependent on their cars, it was important to ensure sufficient parking spaces for the new retail and residential facilities. It was also crucial to improve the road network throughout the site to prevent gridlock and offer a number of connections for motorists. Team 1 introduced the following elements into its plan:

- Hidden underground parking structure (principal garage for the Rail Center would be tucked into the west corner of the existing parking lot alongside I-66 to take advantage of the ~30 foot grade differential). The parking structure would be easily accessible from major thoroughfares.
- On-street parking throughout the site (Washington Boulevard, Lee Highway, Sycamore Street). Not only does this increase parking availability, but it also serves as a traffic calming measure for pedestrians.
- Additional street-grid connections (new road connecting Westmoreland Street & Fairfax Drive, new road alongside the fire station, realignment of the I-66 flyover to offer a new access point to the proposed residential development).

Community Identity

One of the key elements of the EFC Metro Study Area vision statement was to create a “place” for residents of the community to identify as their own. In order to accomplish this, Team 1 focused on building social capital and introducing community-defining elements.

- **Physical Elements:** Large plaza in the Rail Center to encourage community gatherings; ornamental roundabout on Lee Highway to signal entrance into the community; new Metro entrance on a civic square to draw in passerbys; a fountain with ledge seating for people of all ages to gather around and enjoy; a clock tower that could be seen from a distance and act as a gateway marker.
- **Social Elements:** Farmer’s Market; community activities on the plaza green; arts building; day care; senior citizen center; coffee shops. The purpose of these elements is to create an environment where neighbors will get to know one another and form the networks that create and strengthen social capital.

Land Use

Team 1 sought to evolve from past uses of the EFC Metro Study Area, which were residential, retail, industrial, etc. – all separately managed rather than blended together to function as a cohesive unit. The entire site was transformed to support mixed-use development, primarily residential and retail, but allowing for small office space and hotel uses as well. The blending of these various uses creates a site with continuous 24 hour activity, making it a safe and pleasant environment for residents, visitors, and people working there.

- **Retail Space:** Neighborhood serving businesses, grocery store on Lee Highway, Lee Highway as a “Main Street” with streetfront ground floor retail, ground floor retail lining the road through the Rail Center.
 - Rail Center: 63,100 sq. ft.
 - Gateway Area: 140,000 sq. ft.

- Residential Space: Diverse residential types (townhouses, condos, apartments), availability of affordable housing. Within the Rail Center, buildings are seven stories high on the corner of Sycamore Street and Washington Boulevard. Two buildings alongside the Metro will be two stories high and will be live/work flex units with ground floor retail. Buildings range in height in the Gateway Area from three to six stories.
 - Rail Center: 400 condo/apartment units.
 - Gateway Area: 850 condo/apartment units, 12 townhouses.
- Public Space: Civic meeting space (to be used at the community's discretion e.g. meeting hall, library, community police station, etc.), recreational greenspace.
- Office: Small office use (professional community serving uses: dentists, doctors, small law offices, etc.)
 - Gateway Area: 110,000 sq. ft.
- Hotel:
 - Gateway Area: 238,980 sq. ft. (545 rooms).

Team 2 EFC Redevelopment Proposal

Place Identity

In order to help define the East Falls Church Metro study area as a “place”, a distinct and attractive character should be established. Several methods are used to strengthen the place identity of the EFC Metro Plan Area:

- Creating a gateway:
 - Gateway symbols will be installed at the corners of the Westmoreland Street and Lee Highway intersection.
 - Architectural features on building facades and special road surfaces will be used to define the entry points to the area.
- Creating a central place:
 - Central spaces are key to providing a sense of community and will be located on Lee Highway as a “Main Street”, and in the redeveloped Rail Center, as a plaza-style public area. This proposal effectively creates two neighborhood centers.
 - These places are enhanced by the mixed-use development of office, retail, and residential structures.

Emphasizing Non-Vehicular Traffic

Currently, the East Falls Church Metro study area primarily serves as a conduit for commuter travel that is heavily reliant on single occupancy vehicles. This plan seeks to reintroduce the benefits of increased pedestrianism and Metrorail usage.

- Pedestrian orientation:
 - The integration of the urban form into the environment offers a friendlier pedestrian atmosphere.
 - By expanding sidewalks and adding on-street parking, traffic is calmed and pedestrians are more apt to frequent storefront retail.
- Pedestrian reconnection:
 - The introduction of sidewalks on the flyover to Washington Boulevard as well as a pedestrian bridge over Interstate 66, from 19th Street to the Rail Center, help join the two sides of the East Falls Church Metro study area.
 - Bicyclists are encouraged to make use of paths, as they will be widened to accommodate both pedestrians and bicycles.
 - Clear pedestrian routes will be designated across both Washington Boulevard and Lee Highway at key points such as Four Mile Run, which helps connect area greenspace.

- Mass transit focus
 - The mixed-use redevelopment of the Rail Center will be aided by placing the Metro entrance in the center of the development.
 - Both the Kiss and Ride facility and bus bays will be placed within the Rail Center to encourage the utilization of the Metrorail and patronization of local retail.

Land Use

A great deal of emphasis is placed on creating a higher density, mixed-use redevelopment that can assist in community revitalization. The Rail Center in this proposal is more urban in quality, with narrower vehicular access surrounded by taller building creating a well-defined built environment.

- Land use numbers include:
 - Rail Center: 600 residential units, 30,000 sq. ft. retail space, 80,000 sq. ft. office space. Retail will be focused along the internal street of the site, with residential property containing relatively high levels of affordable housing.
 - Gateway Area: 250 residential units, 22 town houses, 625,000 sq. ft. of office space, 20,000 sq. ft. retail space, 120-unit hotel. Retail will be facing Lee Highway, acting as a Main Street front.
- Density
 - Rail Center: Higher density structures will be placed closer to the Metro entrance and Interstate 66, away from single family homes on Washington. This will activate the public spaces and provide necessary retail demand.
 - Gateway Area: Medium density buildings and town houses will be used to transition to the surrounding area.
- Parking
 - Parking at the Rail Center will be housed in a multi-level garage on the west end of the lot. The topographical incline is conducive to sub-grade construction.
 - On-street parking will be introduced along Lee Highway, Washington Boulevard, and Sycamore Street to help alleviate strain on the garage, slow traffic, and encourage pedestrianism.

“In the development of the image, education in seeing will be as important as the reshaping of what is seen. Indeed, together they form a circular, or hopefully a spiral, process: visual education impelling the citizen to act upon their visual world, and this action causing them to see even more acutely. A highly developed art of urban design is linked to the creation of a critical and attentive audience. If the art and audience grow together, then our cities will be a source of daily enjoyment”

Kevin Lynch, Image of the City

6 special studies affordable housing and retail



Fairfax Drive in East Falls Church

SECTION SIX: SPECIAL STUDIES

AFFORDABLE HOUSING AND RETAIL

Two elements of Preferred Alternative for the East Falls Church Metro Area Plan that warrant special attention are the provision of affordable housing and the market demand for the level of retail / service offerings proposed to be constructed. The following two report sections address these topics in more detail.

Affordable Housing

Introduction

The U.S. Dept. of Housing and Urban Development (HUD) defines housing “affordability” as housing that costs a household less than 30 percent of its annual income. Households that pay 30 percent or more of their total annual incomes on housing fall into the category of “cost burdened.” It may be problematic for these households to afford necessities such as food, clothing, transportation, and medical care. Currently in the U.S. there are 12 million households (including both renters and owners) that pay more than 50 percent of their annual income on housing. Additionally, a full-time worker earning minimum wage cannot afford a market-rate, two-bedroom apartment anywhere in the United States. There are a number of federal HUD-sponsored programs such as CDBG, HOPE, and HOME grants/programs that communities can utilize in order to bring resources to affordable housing developments. CDBG and HOME aid takes the form of rental assistance, ownership assistance, neighborhood improvement, and acquisition, rehabilitation or construction of new affordable units. Both are federally sponsored programs administered by local jurisdictions. There are other federal, state, and local funding sources available for the provision of affordable housing (e.g. inclusionary zoning, foundation and church grants, agreements with lending institutions perhaps based on the provisions of the Community Reinvestment Act, Arlington Affordable Housing Investment Trust Fund, Arlington Housing Reserve Fund, “intermediate” organizations such as the Enterprise Foundation and the Local Initiatives Support Corporation, favorable lending agreements by FANNIE MAE, and so on).

The chart below shows the required income levels for renters if they spend 30% of their total income on housing. It also indicates the average monthly cost of rental units in Arlington County. For example, in order to afford a one-bedroom apartment, only spending 30% of household income, one's annual household income should be at least \$46,200 in Arlington, Virginia.

Income Required for Arlington Countywide Average Rents, 2002		
Size of Unit	Average Rent, 2002	Required Annual Income If Rent Equals 30% of Household Income
One Bedroom	\$1,155	\$46,200
Two Bedroom	\$1,416	\$56,640
Three Bedroom	\$1,765	\$70,600

Source: Arlington County Community Planning, Housing and Development. Housing Data, Income by Household Size, 2002 Median Family Incomes.

The chart below shows the income required, compared with the median income of the Washington Metro area, in order to be qualified for CDBG, HOME, Section 8, and Lower Income housing programs. For example, if a household of 3 receives a combined annual income of \$50,000, that is less than 59% of the median income in the Washington Metro area. (The annual median income for a household of 3 is \$76,300.) The household of 3 paid \$50,000/year qualifies for a CDBG, HOME, Section 8, and Lower Income aid in Arlington County.

Income Level	% of Median	Household Size					
		1	2	3	4	5	6
Median Income	100%	\$59,350	\$67,850	\$76,300	\$84,800	\$91,600	\$98,350
Moderate Income	80%	\$51,250	\$58,550	\$65,900	\$73,200	\$79,050	\$84,900
CDBG and HOME	59%	\$39,550	\$45,200	\$50,850	\$56,500	\$61,000	\$65,550
Low – Section 8	47.50%	\$30,450	\$34,800	\$39,150	\$43,500	\$47,000	\$50,450
Lower Income	40%	\$23,740	\$27,140	\$30,520	\$33,920	\$36,640	\$39,340

Source: Arlington County Community Planning, Housing and Development. Housing Data, Income by Household Size, 2002 Median Family Incomes.

Arlington County

Between 2000 and 2002, Arlington County lost approximately 4,800 affordable, market-rate housing units (Appendix, DRAFT Affordable Housing Guidelines for Site Plan Projects, 2004). This represents 24% of all affordable market-rate housing units in the County, defined conservatively as affordable at 60% of area median income. As the Washington Metropolitan area continues to develop and prosper, housing prices are likely to rise. The Metropolitan Washington Council of Governments and the U.S. Bureau of Labor Statistics estimates 33,800 new jobs will be created in the County by 2010. The County estimates that 4,375 affordable units will be needed to support these new employees (Appendix, Housing Market Indicators, 2004). In a number of related policy documents, Arlington states that it strives to support a diverse, mixed income, population and encourages high quality mixed use development and Smart Growth. Arlington County has set Affordable Housing Goals and Targets to address the policies and alleviate rising housing costs. Additionally, the County Board approved a set of affordable housing guidelines on April 24, 2004 that are in-line with the Goals and Targets developed in December 2003.

The following list is taken from the December 2003 Goals and Targets:

- In residential or mixed-use development, 10% of the gross floor area (GFA) shall be devoted to affordable housing units committed to remain at affordability levels no greater than 60% of the Washington area median family income;
- In commercial development, a monetary contribution of \$4.00/sq. ft. of the total above-ground gross floor area shall be made to create or preserve committed affordable housing;

- The affordable units shall generally be of the same sizes and mix of unit types and numbers of bedrooms as the market units in the development. Alternative configurations may be negotiated to achieve other affordable housing goals (such as more multiple-bedroom units or deeper affordability levels);
- Housing targets may be modified by the County Board in order to make substantial contributions towards meeting other articulated policy objectives, including such benefits as a conference center, park, black-box theater, etc.;
- If housing objectives can not be reasonably met, it shall be the County Board's discretion to accept a cash "contribution in lieu", for deposit in the Affordable Housing Investment Trust Fund and/or Housing Reserve Fund;
- The County Board may consider the use of bonus density as provided in the Zoning Ordinance to increase the affordable housing beyond the 10% GFA or to secure replacement housing as set forth above;
- Add 400 affordable units to Arlington's affordable housing stock per year;
- Expand the County's housing supply 13,000 units by 2010.

Affordable Housing and Density

The principal cause of the absence of affordable units in new housing developments in Arlington County is high land costs. (High land costs results from the strong demand for housing in relation to a relatively fixed amount of supply.) Based on recent market data from EFC Metro study area, the following average land costs per unit of housing demonstrate the relationship between housing density and affordability: for townhouses - \$190,000 land cost per unit; for medium density condominiums - \$40,000 per unit; and for apartments - \$20,000 to \$30,000 per unit. The regulatory allowance of higher density by the County creates the "capital" to secure affordable housing.

Preferred Alternative Affordable Housing Recommendations

The Preferred Alternative mixed-use design for the proposed EFC Metro Plan Area provides 20% of the total residential gross leaseable area (GLA) to be affordable units, a higher percentage than the Arlington County target. (The 20% GLA target is equivalent to 16% of GFA in this analysis.) Due to the special market conditions afforded by proximity to the EFC Metrorail station, a special affordability standard is proposed for the East Falls Church Plan Area. The Preferred Alternative calls for 218 affordable units. The affordable units include townhouses (7), condominiums and apartments (157), and assisted living units (54). Each affordable apartment and condominium unit averages 1,400 square feet, which is larger than the average size of the market-rate unit (1,000 square feet) in order to provide families additional bedrooms. In the assisted living building, which has 274 units, 20% will be affordable, totaling 54.

The units are to be incorporated into the same buildings (groups of townhouses) as the market-rate residential units, i.e. the requirement should not be satisfied by payments into the County’s affordable housing funds. A mix of affordability is recommended. It is recommended that this policy be incorporated into a Housing Overlay Zone for the East Falls Church Metro Plan Area.

The approximately 1,800 households within the East Falls Church Metro study area are well-educated and have higher incomes as compared to the rest of Arlington County. Fifty percent (50%) of the households in the study area have incomes above \$97,600 (the median income). Incorporating affordable units into the redevelopment will bring elderly, singles, students, and new families into the area, making Arlington-East Falls Church a balanced, diverse community. It will allow many people who work in the area, like teachers, fire fighters, and police officers, to live in the community.

The chart below shows the income of the existing residents surrounding the East Falls Church Metro study area is generally higher than the incomes in the entire County. The information in the chart was taken from the U.S. Census Bureau.

Household Income				
	EFC Total	EFC Percentage	Arlington Co Total	Arlington Co Percentage
Less than \$10,000	22	1.30%	4,485	5.20%
\$10,000 to \$14,999	16	1.00%	2,306	2.70%
\$15,000 to \$19,999	15	0.90%	2,608	3.00%
\$20,000 to \$24,999	18	1.10%	2,851	3.30%
\$25,000 to \$29,999	22	1.30%	3,574	4.10%
\$30,000 to \$34,999	14	0.80%	4,340	5.00%
\$35,000 to \$39,999	50	3.00%	4,215	4.90%
\$40,000 to \$44,999	56	3.40%	4,222	4.90%
\$45,000 to \$49,999	55	3.30%	3,863	4.50%
\$50,000 to \$59,999	184	11.10%	8,012	9.30%
\$60,000 to \$74,999	160	9.70%	10,592	12.20%
\$75,000 to \$99,999	243	14.70%	12,292	14.20%
\$100,000 to \$124,999	243	14.70%	7,948	9.20%
\$125,000 to \$149,999	201	12.10%	5,379	6.20%
\$150,000 to \$199,999	137	8.30%	5,062	5.90%
\$200,000 or more	221	13.30%	4,725	5.50%
Total:	1,657	100.00%	86,474	100.00%

* Based on identified Block Groups only, therefore somewhat lower total household count

In order to develop the affordable units, it is recommended the Arlington-East Falls Church Civic Association begin a dialogue with Arlington County about the programs and funding available. The programs could include federal programs such as CDBG, HOME, and HOPWA, through which the County receives aid. Additionally, an arrangement can be made with private developers and experienced non-profit developers, like AHC Inc., in order to create a profitable mix of units.

In the East Falls Church Metro study area, the affordable units are part of the proposed market-rate housing. The units should be well designed and attractive. The Boston and Oakland examples below depict attractive affordable units. Both these projects have comparable elements to the East Falls Church Metro study area. Both examples, as well as many other mixed-use developments that include affordable units, can be found at www.designadvisor.com, a website developed under a HUD contract and maintained by the Local Initiatives Support Corporation.

Bibliography

Arlington County Community Planning, Housing and Development. *Arlington's Goals and Targets for Affordable Housing*. Accessed April 28, 2004.
<http://www.co.arlington.va.us/cphd/housing/targets/targets.htm>.

Arlington County Community Planning, Housing and Development. *Housing Data, Income by Household Size, 2002 Median Family Incomes*, Washington D.C. Accessed April 28, 2004.

Arlington County Community Planning, Housing and Development. *Housing Market Indicators, Appendix*. Accessed April 28, 2004.
<http://www.co.arlington.va.us/cphd/housing/pdf/APPENDIX.pdf>

County Board, Arlington, VA. 24 April 2004. *Affordable Housing Guidelines for Site Plan Projects*. <http://www.co.arlington.va.us/cbo/meetings/2004/apr/0424/45.pdf>
Accessed May 6, 2004.

DRAFT Affordable Housing Guidelines for Site Plan Projects Based on the Ad Hoc Proposal. Accessed April 28, 2004.
<http://www.co.arlington.va.us/cphd/housing/pdf/principals.pdf>

Local Initiatives Support Corp. *Affordable Housing Design Advisor*.
Accessed April 25, 2004. <http://www.designadvisor.org/>

U.S. Department of Housing and Urban Development. *Community Planning and Development. "Affordable Housing: Who Needs Affordable Housing?"*
Accessed April 25, 2004.
<http://www.hud.gov/offices/cpd/affordablehousing/index.cfm>

Preliminary Retail Market Analysis

Introduction

Prior to the construction of Interstate 66, the area occupied by the East Falls Church Metro Station contained numerous retail uses and services that served the needs of the local community. These retail uses are documented in the article “Almost Gone” highlighting the construction of the Interstate and the destruction of neighborhood businesses in its path. These establishments included a hardware store, lumber yard, five and dime, beauty shop, post office, pharmacy, savings and loan, theater, café, and shoe repair shop. (Collection of Local History Department, Mary Riley Styles Public Library, Falls Church Public Library)

The commercial core of the EFC area was razed to make way for the highway and transit right-of-way as well as sufficient commuter parking at the station site. As a result, nearby neighborhoods lost a convenient location to serve their everyday shopping needs, forcing residents to drive to more distant centers.

Recognizing the potential value to the community, members of the Arlington / East Falls Church Civic Association expressed the desire for a new project proposal on the EFC site to include community-serving retail similar to that which existed prior to the highway’s construction. The viability of retail uses at this location, however, must be analyzed to determine the likelihood of the additional retail space. To accomplish this task, this retail analysis will provide a preliminary estimate of the potential retail market demand in the EFC study area.

The analysis defines the boundaries of the study area and describes the relevant population demographics as well as a basic review of the existing infrastructure providing access to the site. Although a brief discussion of nearby competing commercial centers will be included, the leakage of retail demand there is not specified with precision as such an analysis is beyond the scope of this preliminary market assessment. With the market area defined, the analysis proceeds with two basic approaches to market demand analysis. The first approach estimates the total retail demand by applying an industry standard benchmark of retail demand to the number of residential units and the total office square footage within the study area, both existing and proposed. The second approach estimates the market demand by calculating the total annual retail expenditures of households within the study area and applying an assumed level of capture for new retail development on the EFC site. The analysis concludes with a summary of the results and recommendations to the Arlington / East Falls Church Civic Association.

Study Area

The study area for the EFC Metro Area Plan consists of an area approximately a half-mile around the Metrorail station. For the purpose of collecting demographic information the study area consists of Arlington County Census Tract 1011 (Block Groups 2, 4, and 5) and City of Falls Church Census Tract 5003 (Block Group 1). The total number of existing households in the study area was established by using additional Census Blocks as described in Section Two, Background.

Although the EFC study area is well served by the highway, arterials, and public transportation, the analysis assumes that any project proposal for the site will include retail at a scale consistent with the desires of the AEFCCA members, namely a Main Street and a Neighborhood Center providing locally-serving businesses and services.

Neighborhood Centers typically sell goods, such as food and drugs, and provide the personal services, such as dry-cleaning, finance, and personal hygiene establishments, that meet the basic everyday needs of the residents in the immediate area. (Bohl, Place Making, 81). Potential tenants to such a locally-serving Neighborhood Center might include a bank, dry-cleaners, beauty salons, specialty grocery, pharmacy, and other establishments offering necessary products and services. Restaurants also are proposed for the Rail Center.

Along Lee Highway, the Preferred Alternative proposes to construct a “Main Street” shopping and entertainment area with retail establishments that might begin to act as destination locations, particularly given the proximity to various transportation networks, automotive and mass transit. Such attractions might be a grocery store, restaurants, bars, or other specialty shops. Despite the possibility of a larger market area, the analysis assumes that the proposed development would remain predominantly locally-serving given the presence of several shopping centers in the vicinity of the development.

Although customers at the proposed development principally will reside in the primary market area, relevant literature states that approximately 20 percent of sales for locally-serving neighborhood centers are attributed to customers that originate outside of the primary market area. (Schmitz and Brett, Real Estate Market Analysis, 144; Robert Charles Lesser & Co., Preliminary Retail Market Analysis, Exhibit 9A & 9B)

Given the mass transit focus of the Metrorail station, the high volume of commuter traffic utilizing the station, and the small size of the study area, this analysis assumes a significantly higher percentage of sales originates outside the study area. This revised statistic is included in the detailed market analysis discussed below.

The following exhibit provides a summary of the total number of residential units and the square footages of office and hotel facilities upon build out of the Preferred Alternative. The table also includes total square footage of retail space (including grocery and restaurant) in the EFC Plan Area under the Preferred Alternative.

Exhibit 1: Summary of Existing and Proposed Construction	Existing: Study Area (.5 mile radius)*	Proposed: Metro Center Area	Proposed: Gateway Area	Total: Proposed Build-Out
Total Number of Residential Units (Not Incl. Assisted Living)	1,800	488	587	2,875
Total Office Square Footage	150,000	108,145	229,865	488,010
Total Hotel Square Footage	0	97,209	166,454	263,663
Total Retail (Incl. Restaurant & Grocery)	20,000	51,413	142,361	213,774

*NOTE: Existing study area data represents only that which would not be demolished and replaced by new development under the proposed development scenario

Initial Analysis

This market analysis begins with a rather rudimentary estimation of retail demand within the study area. Exhibit 2 contains a summary of basic industry benchmarks used to generate “back of the envelope” estimates of the anticipated market demand for a particular area.

Exhibit 2: Simple Analysis Market Assessment Benchmarks		
Description	Parameter	Value
Retail Demand per Residential Unit	RES _{Demand}	100 sq. ft.
Retail Demand per 1000 Square feet of Office	OFF _{Demand}	50 sq. ft.
Retail Demanded per 1000 Square feet of Hotel	HOT _{Demand}	150 sq. ft.
Estimated market capture rate	PER _{Capture}	Low: 40% High: 60%

By applying these industry benchmarks, a very general conceptualization of the market demand can be generated through the sum of the following equations:

- The estimated market demand from residential units can be calculated as follows:

$$\text{RESIDENTIAL} \times \text{RES}_{\text{Demand}} \times \text{PER}_{\text{Capture}}$$

$$\text{Low: } 2,875 \text{ Residential Units} \times 100 \text{ sq.ft.} \times 40\% = 115,000 \text{ sq.ft.}$$

$$\text{High } 2,875 \text{ Residential Units} \times 100 \text{ sq.ft.} \times 60\% = 172,500 \text{ sq.ft.}$$

- The estimated market demand from office units can be calculated as follows:

$$(\text{OFFICE} / 1000 \text{ sq.ft.}) \times \text{OFF}_{\text{Demand}} \times \text{PER}_{\text{Capture}}$$

$$\text{Low: } (488,010 \text{ sq.ft.} / 1000 \text{ sq.ft.}) \times 50 \text{ sq.ft.} \times 40\% = 9,760 \text{ sq.ft.}$$

$$\text{High: } (488,010 \text{ sq.ft.} / 1000 \text{ sq.ft.}) \times 50 \text{ sq.ft.} \times 60\% = 14,640 \text{ sq.ft.}$$

- The estimated market demand from hotel units can be calculated as follows:

$$(\text{HOTEL} / 1000 \text{ sq.ft.}) \times \text{HOT}_{\text{Demand}} \times \text{PER}_{\text{Capture}}$$

$$\text{Low: } (263,663 \text{ sq.ft.} / 1000 \text{ sq.ft.}) \times 150 \text{ sq.ft.} \times 40\% = 15,820 \text{ sq.ft.}$$

$$\text{High: } (263,663 \text{ sq.ft.} / 1000 \text{ sq.ft.}) \times 150 \text{ sq.ft.} \times 60\% = 23,730 \text{ sq.ft.}$$

$$\underline{\text{Low: } 115,000 \text{ sq.ft.} + 9,760 \text{ sq.ft.} + 15,820 \text{ sq.ft.} = 140,580 \text{ sq.ft.}}$$

$$\underline{\text{High: } 175,500 \text{ sq.ft.} + 14,640 \text{ sq.ft.} + 23,730 \text{ sq.ft.} = 210,870 \text{ sq.ft.}}$$

Using this basic market analysis approach, the existing development within the study area as well as the proposed development in the Rail Center and the Gateway Area can support between approximately 140,580 and 210,870 square feet of retail space.

This initial analysis suggests that the market demand may be somewhat low to fill all of the retail square footage (about 214,000 square feet) that has been proposed in the Preferred Alternative for the EFC Plan Area. This analysis, however, has limitations in that it does not consider potential sales from customers originating outside of the study area. As a result, a further analysis is warranted that considers this outside influence.

More Detailed Expenditure Analysis

In order to provide a more complete assessment of the retail for market at the EFC site, a more detailed analysis that takes into consideration household expenditures is made. Household expenditure habits were taken from the 2002 Consumer Expenditures Survey for those goods and services anticipated to be included in Neighborhood Center and Main Street type developments (see exhibit 3).

Exhibit 3: Percentage of Household Income Spent on Selected Goods and Services	
Retail Service	Percentage of HH Expenditure
Groceries	7.6%
Restaurants/Bars	5.6%
Apparel/Accessories	4.3%
Gasoline and motor oil	3.0%
Entertainment	5.1%
Pharmacies/Health	5.8%
Misc Retail	10.3%

The analysis then applied these household expenditure habits to the census income data collected from existing residential units within the study area. The analysis assumes that 20 percent of the residential units would be provided as affordable (i.e., annual household income of less than \$40,000). Lacking data on the condominium and rental customer market in the East Falls Church area, the analysis assumed that after the initial 20 percent affordable housing set-aside, the remainder of the condominiums and apartments would be occupied by an equal number of individuals across all income categories.

Given the presence of other larger commercial centers in the area, the analysis assumes that there will occur an amount of demand leakage. In other words, households will continue to spend a significant percent of income outside of the study area for goods that would be available at the Neighborhood Center and on Main Street in the EFC Plan Area. The analysis utilized the average market capture rates for Neighborhood Center and Main Street from a retail analysis conducted by Robert Charles Lesser and Company for the City of Alexandria, approximately 46%. (See Section 6, Appendix A-2 for the utilized market capture rates).

According to the expenditure analysis, total household expenditures for the goods and services that would be available to accommodate the Preferred Alternatives retail space would be about \$38 million per year (see exhibit 4) assuming a 50% capture rate. The capture rate may be conservative because the retail / service developments in the Main Street and the Neighborhood Center virtually will be new. Consequently, it will have additional market attractiveness and may be planned with careful attention to the needs of EFC area residents.

Exhibit 4: Cumulative Household Expenditure		
Retail / Service	Percentage of HH Expenditure	Cumulative Household Expenditure
Grocery	8%	7,610,187
Restaurants/Bars	6%	4,906,568
Apparel/Accessories	4%	1,345,551
Gasoline and motor oil	3%	3,379,524
Entertainment	5%	3,830,127
Pharmacies/Health	6%	5,807,774
Misc Retail	10%	11,603,032
Total household retail expenditure within study area		38,482,764

As discussed above, the existing literature states that approximately 20 percent of the sales generated within a retail center located within a primary market are generated by consumers outside of the primary trade area. In the case of the Preferred Alternative, these outside customers might include Metro commuters, capture of commuters along heavily traveled arterials, occupants of the offices, hotel occupants, as well as a portion of destination shoppers taking advantage of the convenient location.

In addition, the EFC study area is one-half the physical size of the Primary Market Area used by Lesser in Alexandria and contains, after build-out of the Preferred Alternative, only 40% of the number of households. Consequently the percent of sales generated by consumers outside the EFC study area was increased to 50%. As a result, the analysis assumes that local and non-local consumers combined generate a total of approximately \$57.7 million per year.

With the annual household expenditure calculated, the analysis can estimate the retail sq. ft. demand based on expected sales characteristics. Exhibit 5 summarizes the potential range of retail demand based on three levels of sales expectation: low, medium, and high.

Exhibit 5: Estimated Retail Demand by Sales Expectations	Low	Medium	High
Revenue per Square Foot	\$300	\$350	\$400
Anticipated Sq. Ft. Demand	192,414	164,926	144,310

According to the more detailed expenditure market analysis, the amount of retail space in the Preferred Alternative (214,000 sq. ft.) exceeds the anticipated retail demand at between \$300 and \$400 per square foot. Most retail establishments would aim to achieve the higher end of sales. Despite this assessment, most retail developments intend to provide retail that exceeds the current demand to facilitate accommodation of population growth or increases in the potential capture rate of individuals inside and outside the trade area. In addition, much of the retail square footage for the Preferred Alternative would consist of flexible retail space, which would be adaptable to other uses if the market commanded. This would allow easy conversion to retail in the event that the future market demand for retail at the site increases.

Summary and Recommendations

Although the retail market analyses utilized in this market assessment indicate that the Preferred Alternative may contain too much retail space, the advantage in providing flexibility in designed use as well as the ability to accommodate future increases in retail demand must be taken into account. The excess retail space that results at the higher sales expectations may provide an opportunity for the retail presence to expand and grow as the market directs.

Given the limitations of the retail market assessment techniques utilized for the purpose of this analysis, the AEFCCA should consider soliciting a more detailed retail market analysis that can more comprehensively address those factors not specified exactly in this preliminary assessment. A more advanced analysis can improve on the results contained here by addressing the interaction of other regional and neighborhood shopping centers (Westover, downtown Falls Church, Seven Corners, etc.) whose preliminary and secondary market areas may overlap.

The proximity of these facilities as well as their range of sizes may warrant an assessment that considers a gravity model for estimating retail market demand. The preliminary analysis also applied a number of assumptions to the EFC site that should be verified. For example, the market capture rates for the EFC site may differ from those used.

Any retail market study must also be cognizant of the time sensitivity inherent in a static analysis. The changing nature of the retail as well as real estate markets require frequent updating of retail assessments in order to identify changing trends that might affect location decisions or store size requirements.

To attract businesses to the area, the AEFCCA should consider the formation of a non-profit community development group. This group, potentially acting as an extension of the existing civic association, would be responsible for providing services and resources to WMATA and the County of Arlington to help facilitate the attraction of business to the new development. As a new development, the EFC site could include many high quality components, such as new and safe parking facilities and quality streetscape features, that traditional community development groups spend a great deal of energy acquiring. Instead, the group can focus on other areas proven to be successful at attracting businesses to an area such as the establishment of a revolving loan fund to assist in financing start-up businesses, marketing spaces that have not yet been leased, and rebranding the development as a whole as a broader marketing strategy.

The size of the market share for the new stores in the proposed Main Street and Neighborhood Center will vary according to the tenant mix. The EFC Metro Area Plan provides the community with the opportunity to build a new commercial center. This holds the potential of creating very attractive physical places and a mix of businesses for residents, which will increase market share. The AEFCCA can help facilitate the success of rebuilding the small business core of the community.

Appendix

Appendix A-1: Station Square Condominium Buyer's Income Range*		
Income Range	Number	Percentage
Under \$40,000	2	1%
\$41,000 to 50,000	7	5%
\$50,001 to 60,000	7	5%
\$60,001 to 70,000	10	7%
\$70,001 to 80,000	8	5%
\$80,001 to 100,000	22	15%
\$100,001 to 149,000	63	43%
Over \$149,001	29	20%

*Data provided by Andy Viola

Appendix A-2: Market Capture Rates of Neighborhood and Main Street Centers	
Retail Service	Estimated Market Capture of Proposed Development
Grocery	40%
Restaurants/Bars	35%
Apparel/Accessories	13%
Gasoline and motor oil	45%
Entertainment	30%
Pharmacies/Health	40%
Misc Retail	45%

Adapted from the Preliminary Retail Market
Analysis for Mt. Vernon Avenue Corridor;
Alexandria, Virginia; Robert Charles Lesser & Co.

Bibliography

Almost Gone, Collection of Local History Department, Mary Riley Styles Public Library, Falls Church Public Library, n.d.

Wim Wiewal and Robert Mier, *Analyzing Neighborhood Retail Opportunities: A Guide for Carrying Out a Preliminary Market Study*, American Planning Association, PAS #358, 1981.

Adrienne Schmitz and Deborah Brett, Real Estate Market Analysis.

Mihailo Temali, The Community Economic Development Handbook, Strategies and Tools to Revitalize Your Neighborhood, St. Paul: Amherst H. Wilder Foundation, 2002.

Robert Charles Lesser & Company, LLC, *Preliminary Retail Market Analysis for Mt. Vernon Avenue Corridor*, Alexandria, Virginia, October 10, 2002.

Charles C. Bohl, Place Making: Developing Town Centers, Main Streets, and Urban Villages, Washington, DC: Urban Land Institute, 2002.

conclusion
the challenge ahead 7



Creating Place / Fostering Community

SECTION SEVEN: CONCLUSION-THE CHALLENGE AHEAD

The East Fall Church Metro Area Plan began with a discussion of the importance of social capital to the local community. Social capital, ultimately, is the neighborhood's ability to take effective action in relation to its deficiencies. The Arlington / East Falls Church Civic Association displayed social capital in causing this plan to be written. The Virginia Tech Department of Urban Affairs and Planning is happy to be part of this effort.

There are many roles that the AEFCCA can play in the implementation of this plan. Perhaps this suggests going beyond the more conventional roles of civic associations. However, this more active engagement in implementation has many precedents across the county.

Here are some concepts and challenges inherent in realizing this plan:

- Provide a welcoming presence to new residents of the community consistent with a long-term vision of community diversity. The Civic Association can actively partner with the County of Arlington, non-profit affordable housing providers, and churches to achieve the affordable housing objectives. Association members might volunteer to assist and simply visit residents of the proposed Assisted Living facility.
- Foster the commercial revitalization of the area through a number of activities perhaps best carried out through the formation of a community development corporation. These may include the establishment of a revolving loan fund to assist in financing start-up businesses, marketing spaces that have not been leased, rebranding the development as a whole with a marketing strategy, assisting retail and service businesses to obtain financing and locate in the area, establishing design standards for the retail / service building facades and the streetscape, and so on.
- Help organize and carry out community events at the many public green spaces and on Main Street.
- Form an arts incubator, perhaps in partnership with the County of Arlington, for visual and performing arts organizations and small businesses who might wish to locate and perform in the proposed Civic Building.
- Encourage Arlington County and the City of Falls Church to expand use of ART and George shuttle bus service to reduce automobile traffic at the site.
- Require businesses located at the site to have aggressive Transportation Demand Management Plans to reduce automobile traffic.
- Encourage the County to place a Commuter Connections Facility at the site.
- Lastly, it will require the active engagement of the AEFCCA to secure from the County and State the many physical improvements proposed here such as the creation of the Main Street streetscape along Lee Highway, narrowing the traffic lanes and introducing curb-side parking, widening sidewalks and medians, redesigning the I-66 flyover to Washington Blvd., building the platform linking the sides of the East Fall Church community over the Interstate, and others.

Like all plans, this one is just the start of the real work. The studio participants have every confidence that the Civic Association, in partnership with the County, State, non-profit organizations, and businesses, can realize each and every recommendation in the East Fall Church Metro Area Plan that it finds acceptable.

Appendix

App.

APPENDIX

Socio-Economic Data Tables

The follow tables contain detailed information concerning the East Falls Church Metro study area. All data are from the U.S. Census. As noted in Section Two, Background, the detailed socio-economic information is available only by Census Tract Blocks Groups, hence the total population and housing count information contained in the tables below are somewhat smaller than for the entire study area. All tables contain a comparison of the EFC study area with the County of Arlington as a whole.

Table 1
East Falls Church Study Area: Population, Gender, Race, Latino Origin

	EFC Study Area Total	EFC Study Area Percent	Arlington Total	Arlington Percent
Total Population	3,993 (4,332) *	100	189,453	100
Gender:				
Male	1,956	49	95,443	50.4
Female	2,037	51	94,010	49.6
Race:				
White	3,507	87.8	130,601	68.9
Black	132	3.3	17,705	9.3
Asian	237	5.9	16,327	8.6
American Indian/Alaskan	6	0.1	662	0.3
Pacific Islander	4	0.1	143	0.1
Some other race	39	1	15,786	8.3
Two or more races	68	1.7	8,229	4.3
Ethnicity:				
Latino	167	4.2	35,268	18.6

* The population in parentheses includes the additional census blocks in the study area.

Table 2
East Falls Church Study Area: Place of Birth

Native	3,412	86.8%	136,760	72.2%
Born in state of residence	807	20.5%	30,443	16.1%
Born in other state in the United States	2,502	63.7%	102,424	54.1%
Northeast	769	19.6%	32,663	17.2%
Midw est	512	13.0%	18,717	9.9%
South	945	24.1%	41,005	21.6%
West	276	7.0%	10,039	5.3%
Born outside the United States	103	2.6%	3,893	2.1%
Puerto Rico	15	0.4%	593	0.3%
U.S. Island Areas	0	0.0%	187	0.1%
Born abroad of American parent(s)	88	2.2%	3,113	1.6%
Foreign born	517	13.2%	52,693	27.8%
Naturalized citizen	215	5.5%	14,393	7.6%
Not a citizen	302	7.7%	38,300	20.2%
Total population	3,929	100.0%	189,453	100.0%
Source: Census 2000 Summary File 3, Table P21				

Table 3
East Falls Church Study Area: Age

	EFC Study Area	EFC Study Area %	Arlington Total	Arlington %
Under 5 years	199	5.0%	10,397	5.5%
5 to 9 years	196	4.9%	8,741	4.6%
10 to 14 years	218	5.5%	7,635	4.0%
15 to 19 years	170	4.3%	7,640	4.0%
20 to 24 years	180	4.5%	16,535	8.7%
25 to 29 years	387	9.7%	25,581	13.5%
30 to 34 years	377	9.4%	22,094	11.7%
35 to 39 years	354	8.9%	17,911	9.5%
40 to 44 years	325	8.1%	14,753	7.8%
45 to 49 years	378	9.5%	13,387	7.1%
50 to 54 years	354	8.9%	12,454	6.6%
55 to 59 years	246	6.2%	8,816	4.7%
60 to 64 years	144	3.6%	5,747	3.0%
65 to 69 years	113	2.8%	4,355	2.3%
70 to 74 years	88	2.2%	3,975	2.1%
75 to 79 years	84	2.1%	3,842	2.0%
80 to 84 years	90	2.3%	3,072	1.6%
85 years and over	90	2.3%	2,518	1.3%
TOTALS	3993	100.0%	189,453	100.0%

Source: Census 2000 Summary File 1, Table P12

Table 4
East Falls Church Study Area: Education

Educational Attainment	EFC Study Area		Arlington County	
	Total EFC Study Area	EFC Study Area Percentage	County Total	County Percentage
No schooling completed	27	0.90%	2,378	1.70%
Nursery to 4th grade	0	0.00%	1,401	1.00%
5th and 6th grade	4	0.10%	2,816	2.00%
7th and 8th grade	8	0.30%	2,234	1.60%
9th grade	14	0.50%	2,000	1.40%
10th grade	20	0.70%	1,490	1.10%
11th grade	5	0.20%	1,151	0.80%
12th grade, no diploma	62	2.00%	3,455	2.50%
High school graduate (includes equivalency)	338	11.00%	16,274	11.70%
Some college, less than 1 year	96	3.10%	4,588	3.30%
Some college, 1 or more years, no degree	296	9.70%	12,469	9.00%
Associate degree	61	2.00%	4,975	3.60%
Bachelor's degree	958	31.20%	41,187	29.70%
Master's degree	813	26.50%	27,041	19.50%
Professional school degree	261	8.50%	10,702	7.70%
Doctorate degree	104	3.40%	4,683	3.40%
Total	3067	100.00%	138,844	100.00%

Table 5
East Falls Church Study Area: Household Income

Household Income	EFC Study Area		Arlington County	
	Total	Percentage	Total	Arlington Percentage
Less than \$10,000	22	1.3%	4,485	5.2%
\$10,000 to \$14,999	16	1.0%	2,306	2.7%
\$15,000 to \$19,999	15	0.9%	2,608	3.0%
\$20,000 to \$24,999	18	1.1%	2,851	3.3%
\$25,000 to \$29,999	22	1.3%	3,574	4.1%
\$30,000 to \$34,999	14	0.8%	4,340	5.0%
\$35,000 to \$39,999	50	3.0%	4,215	4.9%
\$40,000 to \$44,999	56	3.4%	4,222	4.9%
\$45,000 to \$49,999	55	3.3%	3,863	4.5%
\$50,000 to \$59,999	184	11.1%	8,012	9.3%
\$60,000 to \$74,999	160	9.7%	10,592	12.2%
\$75,000 to \$99,999	243	14.7%	12,292	14.2%
\$100,000 to \$124,999	243	14.7%	7,948	9.2%
\$125,000 to \$149,999	201	12.1%	5,379	6.2%
\$150,000 to \$199,999	137	8.3%	5,062	5.9%
\$200,000 or more	221	13.3%	4,725	5.5%
Total:	1,657	100.0%	86,474	100.0%

Source: U.S. Census Bureau, Census 2000 Summary File 3, Table P52: Household Income in 1999.

Table 6
East Fall Church Study Area: Occupation

EMPLOYED CIVILIAN POPULATION 16 YEARS & OVER				
	EFC Study Area	EFC Study Area Percent	Arlington Total	Arlington Percent
<i>Total workers</i>	2,438	100.0%	114,040	100.0%
Management, professional, and related occupations	1,762	72.3%	69,912	61.3%
Service occupations	163	6.7%	12,888	11.3%
Sales and office occupations	355	14.6%	20,613	18.1%
Farming, fishing, and forestry occupations	0	0.0%	105	0.1%
Construction, extraction, and maintenance occupations	57	2.3%	6,645	5.8%
Production, transportation, and moving occupations	101	4.1%	3,877	3.4%

Table 7
East Falls Church Study Area: Industry

EMPLOYED CIVILIAN POPULATION 16 YEARS & OVER				
	EFC Study Area	EFC Study Area Percent	Arlington Total	Arlington Percent
<i>Total Workers</i>	2438	99.9%	114,040	100.2%
Agriculture, forestry, fishing and hunting, and mining	5	0.2%	188	0.2%
Construction	74	3.0%	6,299	5.5%
Manufacturing	40	1.6%	2,694	2.4%
Wholesale trade	25	1.0%	1,088	1.0%
Retail trade	202	8.3%	6,334	5.6%
Transportation and warehousing, and utilities	76	3.1%	2,807	2.5%
Information	158	6.5%	7,931	7.0%
Finance, insurance, real estate and rental and leasing	85	3.5%	8,073	7.1%
Professional, scientific, management, administrative	646	26.5%	26,769	23.5%
Educational, health and social services	332	13.6%	14,395	12.6%
Arts, entertainment, rec., accommodation and food services	80	3.3%	9,402	8.2%
Other services (except public administration)	219	9.0%	9,059	7.9%
Public administration	496	20.3%	19001	16.7%

Table 8
East Falls Church Study Area: Housing Tenure

Number of Occupied Housing Units by Tenure, 2000 Census				
Table H-4				
	EFC Number	Percent	County Number	Percent
Owner Occupied	1,170	71.3%	37,370	43.3%
Renter Occupied	470	28.7%	48,982	56.7%
Total Units	1,640	100.0%	86,352	100.0%

Table 9
East Falls Church Study Area: Housing Type

Number of Occupied Housing Units by Housing Type, 2000 Census				
Table H-30				
	EFC Study Area		Arlington County	
	Number	Percent	Number	Percent
Singe Family Detached	968	57.6%	27,668	30.6%
Townhouse	356	21.2%	9,214	10.2%
Multifamily (2-49 units)	140	8.3%	23,231	25.7%
Multifamily (50+ units)	211	12.6%	30,212	33.4%
Other	5	0.3%	101	0.1%
Total	1,680	100.0%	90,426	100.0%

East Falls Church Metro Area Master Planning Studio
Reading List
1/21/04

Required texts:

Charles C. Bohl, Place Making: Developing Town Centers, Main Streets, and Urban Villages (Washington, D.C., Urban Land Institute, 2002)

John P. Kretzmann and John L. McKnight, Building Communities from the Inside Out (Evanston: Northwestern University, 1993)

The Lexicon of the New Urbanism (Instructors will provide)

Dan Burden, Street Design Guidelines for Healthy Neighborhoods, Local Government Commission, State of California, 1999. (Instructors will provide copy)

Good Overall – Purchase depends on student interest:

Robert Steuteville and Phillip Langdon, New Urbanism: Comprehensive Report and Best Practices Guide (Ithaca, N.Y.: New Urbanism Publications, Inc., 2003, 3rd ed).

Alan Jacobs, Great Streets (Cambridge: MIT Press, ISBN 0262100487)

Thomas Wang, Plan and Section Drawing (New York: John Wiley & Sons, Inc., 1996, 2nd ed.)

Francis D. K. Ching, Architectural Graphics (New York: John Wiley & Sons, Inc., latest edition)

Overview & Introduction:

1. Garrett Hardin, "The Tragedy of the Commons", *Science*, 162 (December 1968).
2. Government of the District of Columbia, *Trans-Formation: Recreating Transit-Oriented Neighborhood Centers in Washington, D.C.* September, 2002.
3. Robert Sampson, "What "Community" Supplies", in Ferguson and Dickens eds., Urban Problems and Community Development (Washington, D.C.: Brookings Institution Press, 1999), 253-265 only.

4. Kevin Lynch, *A Theory of Good City Form* (Cambridge: The MIT Press, 1981), "Sense", pp. 131-150.
5. Kevin Lynch, *Image of the City* (Cambridge: MIT Press, 1960), Chapter I, "The Image of the Environment", pp. 1-13.
6. Marc Fried, "Grieving for a Lost Home" in Leonard Duhl, *The Urban Condition* (New York: Basic Books, 1963), pp. 151-171
7. John P. Kretzmann and John L. McKnight, *Building Communities from the Inside Out, A Path Toward Finding and Mobilizing A Community's Assets*, (Evanston: Northwestern University, 1993). "Introduction"; Chapter One, "Releasing Individual Capacities"; Chapter Two, "Releasing the Power of Local Associations and Organizations"
8. City of Albuquerque, *Strategic Management Guide*, Version 3.1, Office of Management and Operations Improvement, Mayor/CAO Department, August 2000.
9. Duany Plater-Zyberk & Co. *The Lexicon of the New Urbanism* (DPZ, 2000, Version 2.1), Transect, A4, Zone Categories, C3.2

Transit Oriented Development

10. Office of Planning, Government of the District of Columbia, *Takoma Central District Plan* (Washington, D.C., 2002), esp. pp. 25-34, 47-57
11. Santa Clara Valley Transportation Authority, *Community Design and Transportation*, San Jose, 2003 (408.321.5725)
12. Charles Bohl, *Place Making*, Chapter 3, "Timeless Design Principles for Town Centers", pp. 56-79.
13. Charles Bohl, *Place Making*, Chapter 4, "Town Centers, Main Streets, and Urban Villages", pp. 81-112,117-129
14. Read either Bohl or Schwanke. Bohl is a bit more general and Schwanke more detailed in terms of mixed-use development design.
15. Dean Schwanke, *Mixed Use Development Handbook*, 2nd edition (Washington: ULI-Urban Land Institute, 2003), Chapter 5, "Planning and Design", pp. 167-216

16. Duany Plater-Zyberk & Co. *The Lexicon of the New Urbanism* (DPZ, 2000, Version 2.1), Check categories: Apartment Building Flex-Apartment, Rowhouse, FlexHouse, Commercial, Mixed-Use, Hotel, Public Uses, Main Street, Town Center, FlexWarehouse, Center, Core. Check sections in Lexicon: Terminology (L), Building Type (J), Building Program (K), Code (M).
17. Dean Schwanke, *Mixed Use Development Handbook*, 2nd edition (Washington: ULI-Urban Land Institute, 2003), Chapter 4, "The Public Sector's Involvement in Mixed-Use Development", pp. 137-165.
18. Charles Bohl, *Place Making*, Chapter 5, "Launching a New Town Center: Feasibility and Financing", pp. 130-157
19. Adrienne Schmitz and Deborah Brett, *Real Estate Market Analysis*, Chapter 7, "Mixed-Use Developments", in Schmitz and Brett, pp. 205-212
20. Design Principles for Neighborhoods and Towns, TND III, Building plans and urban design principles for Towns Cities and Villages in South Florida, 1998
21. Adrienne Schmitz and Deborah Brett, *Real Estate Market Analysis*, Chapter 4, "Office and Industrial Development", pp. 93-107
22. Jo Allan Gause, *Office Development Handbook*, 2nd edition (Washington: ULI – Urban Land Institute, 1998), Chapter 2, "Project Feasibility", pp. 69-77.

Housing

23. Rolf Goetze, Understanding Neighborhood Change: The Role of Expectations in Urban Revitalization (Cambridge: Ballinger Publishing Co., 1979), pp. 11-43
24. S. Mark White, *Affordable Housing: Proactive & Reactive Planning Strategies*, American Planning Association, Planning Advisory Service Report #441, December, 1992
25. Diane Suchman, "Public Sector Tools/Examples: Promoting/Preserving Workforce Housing in Urban Areas".
26. Diane Suchman, *Developing Successful Infill Housing* (Washington, Urban Land Institute, 2002)
27. Duany Plater-Zyberk & Co. *The Lexicon of the New Urbanism* (DPZ, 2000, Version 2.1), Section J, "Building Type"
28. Chapter 10, Kenneth Rosen and Ted Dienstfrey, "The Economics of Housing Services in Low-Income Neighborhoods", in Ferguson and Dickens, *Urban Problems and Community Development*, pp. 437-472

29. Kathryn Tholin, *Making CRA Work for You*, A Guide for Community Organizations (Chicago, The Woodstock Institute, 1991)
30. Chapter 5, Sara E. Stoutland, "Community Development Corporations: Missions, Strategy, and Accomplishments", in Dickens and Ferguson, *Urban Problems and Community Development*, pp. 193-240
31. Adrienne Schmitz and Deborah Brett, *Real Estate Market Analysis* (Washington: Urban Land Institute, 2001), Chapter 3, "Residential Development"
32. Adrienne Schmitz, et. al., *Multifamily Housing Development Handbook* (Washington, D.C.: ULI – the Urban Land Institute, 2000), Chapter 5, "Financial Feasibility Analysis", pp. 83-93.

Economic Development

33. Duany Plater-Zyberk & Co. *The Lexicon of the New Urbanism* (DPZ, 2000, Version 2.1), Check categories: Live-Work, Flex-House, Flex-Apartment, Incubator, Retail Stores and Centers, Commercial/Office, Warehouse / Flex-Warehouse, Mixed-Use. Check sections in Lexicon: Terminology (L), Building Type (J), Building Program (K), Code (M & C).
34. Mihailo Temali, Chapter 4, "Revitalize Your Commercial District" in *The Community Economic Development Handbook, Strategies and Tool to Revitalize Your Neighborhood* (St. Paul: Amherst H. Wilder Foundation, 2002), pp. 55-104
35. Adrienne Schmitz and Deborah Brett, *Real Estate Market Analysis*, Chapter 5, "Retail Development"

or

36. Wim Wiewal and Robert Mier, *Analyzing Neighborhood Retail Opportunities: A Guide for Carrying Out a Preliminary Market Study*, American Planning Association, PAS #358, 1981.
37. "Rebuilding the Community Economy" in John P. Kretzmann and John L. McKnight, *Building Communities from the Inside Out* (Evanston: Northwestern University, 1993), pp. 275-344.
38. Peggy Clark and Tracy Huston, "Assisting the Smallest Businesses: Assessing Microenterprise Development as a Strategy for Boosting Poor Communities, An Interim Report", The Aspen Institute, Washington, D.C., August, 1993.

39. William T. Dickens, Chapter 9, "Rebuilding Urban Labor Markets: What Community Development Can Accomplish", in Ferguson and Dickens, *Urban Problems and Community Development*, pp. 381- 436
40. Michael E. Porter, "The Competitive Advantage of the Inner City", Discussion Paper, Harvard Business School, 1994 and rejoinder Bennett Harrison and Amy Glasmeier, "Why Business Alone Won't Redevelop the Inner City: A Friendly Critique of Michael Porter's Approach to Urban Revitalization, *Economic Development Quarterly*, Feb 1997, vol 11 no 1.
41. University of Illinois - Chicago, Center for Urban Economic Development, *Community Economic Development Strategies, A Manual for Local Action*, Chicago, 1987, pp. 11-57.
42. Ross Gittel and J. Phillip Thompson, Chapter 5, "Making Social Capital Work: Social Capital and Community Economic Development", in Susan Saegert, J. Phillip Thompson, and Mark R. Warren, *Social Capital and Poor Communities* (New York: Russell Sage Foundation, 2001)
43. Richard Peiser, *Professional Real Estate Development*, 2nd Ed. (Washington: ULI – Urban Land Institute, 2003), Chapter 7, "Retail Development", pp. 318-323.

Transportation / Mobility

44. Dennis Leach, "The Arlington County Case Study, Rosslyn-Ballston Corridor". In publication galleys.
45. Dan Burden, *Street Design Guidelines for Healthy Neighborhoods*, Local Government Commission, State of California, 1999.
46. Allan Jacobs, Great Streets (Cambridge MA, MIT Press ISBN 0262100487 especially : "Roles of Streets in Urban Life" from the Introduction; Part One, Plan & Section Illustrations (drawing technique as well as the information on those particular streets); and Part Two, Chapter One (pg 270)
47. Duany Plater-Zyberk & Co. *The Lexicon of the New Urbanism* (DPZ, 2000, Version 2.1), Check categories: Bicycles, Pedestrian, Walking, Rail, Streets (different categories), Streetscape, Parking. Check sections in Lexicon: Circulation (F), Streetscape (G), Frontage (H), Building Type (J), Code (M & C).
48. Cynthia L. Hoyle, Traffic Calming, American Planning Association, PAS Report 456, Chapter 2, "What is Traffic Calming and How Does It Work?"

49. Robert D. Swartz, "Mitigating Through Traffic in Residential Areas: Issues and Perspectives", Transportation Quarterly, Vol. 39, No. 4, October, 1985, pp. 467-481.
50. Bureau of Traffic Management, City of Portland, "Appendix B: Traffic Calming Devices for Higher Volume Residential Streets as Part of the Arterial Traffic Calming Program, Preliminary Design and Guidelines." *Final Report - Arterial Traffic Calming Program*, 1993.
51. Peter Calthorpe, *The Next American Metropolis* (New York: Princeton Architectural Press, 1993), "Transit Systems", pp. 104-107; "Parking Requirements and Configurations", pp. 108-112.
52. American Association of State Highway and Transportation Officials (AASHTO), *Geometric Design Guide for Transit Facilities on Highways and Streets – Phase I, Interim Guide*, Houston: 2002
53. Kevin Lynch and Gary Hack, *Site Planning* (Cambridge: The MIT Press, 1984), Chapter 7, "Access", pp. 193-221.
54. Donald Appleyard, Livable Streets, (Berkeley, University of California Press, 1981), Chapter 1, "Three Streets in San Francisco", Chapter 2, "The Ecology of Streets"