



MAKING PLACE

Transit-Oriented Development for Largo, MD



Arch700 - Urban Design Studio
Professor Matthew Bell
Fall 2019



Aerial View Looking North

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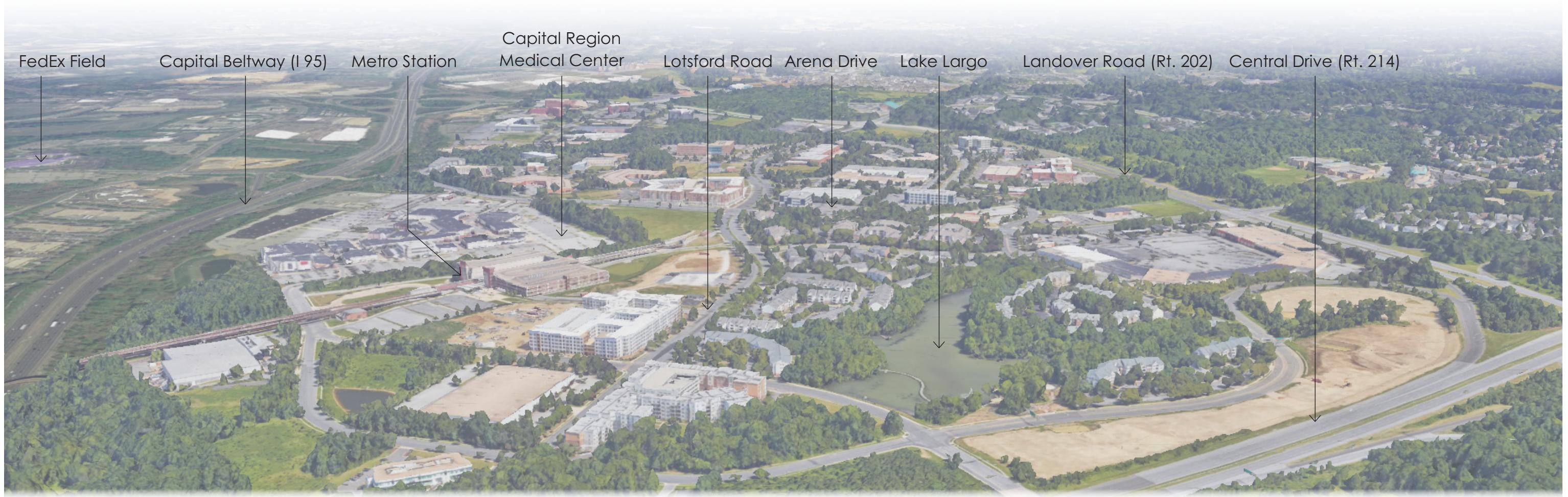
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Table of Contents

Introduction	2
Site Photos	4
Problem Definition: Lack of Place	6
Edge Cities	7
Sprawl	8
Problem Solution: Transit Oriented Design	11
Multi-Modal Streets	12
Existing Assets	14
Conceptual Master Plan	16
Proposal: Metro Village	18
Proposal: Largo Gateway	22
Proposal: Northeast District	24

LARGO, MARYLAND



Aerial View of Largo, MD

Largo is a typical sprawl development with large highways dividing the site into small sections.

Google Images

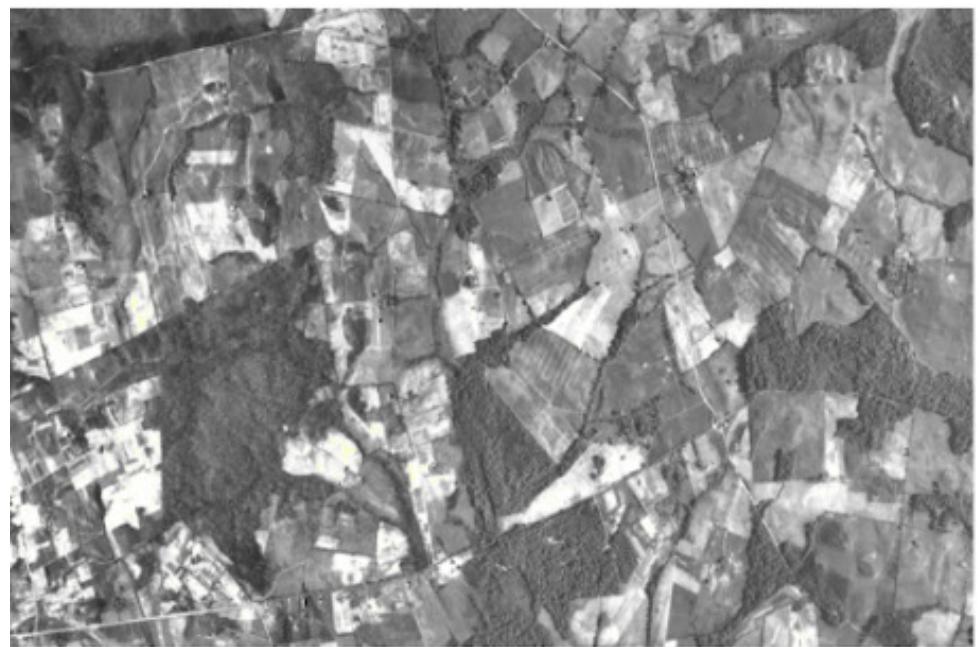
Largo, MD is a city of 12,000 people at the intersection of the Beltway and the Metropolitan DC Blue Line. It is currently being planned as the future center of the Prince George's County Government and the home of the new University of Maryland Capital Region Medical Center. The overall site has exceptional access to transit and offers myriad ways to travel but in itself lacks appeal as a "place". It has developed as a suburban "Edge City" on the outskirts of the District of Columbia, a simple automobile-oriented pit stop in-between the jobs and sights of the national capital and the dwellings of those who work and visit.

As part of the Partnership for Action Learning in Sustainability (PALS), The Prince George's County Department of

Planning approached the University of Maryland's Program in Architecture with a request to investigate the Largo metro site as a more fully realized transit-oriented development hosting a full mix of uses, from the new seat of the county's government to the new hospital and residential development.

The studio focused on questions of place, development, and identity while grappling with the fragmented pattern of development that currently defines Largo. The studio proposals demonstrate the potential of a new identity for the area using transit oriented design principles, restoration of the natural environment, and making Largo a "green jewel of a town" at the heart of Prince George's County.

Historical Development of Largo



1938



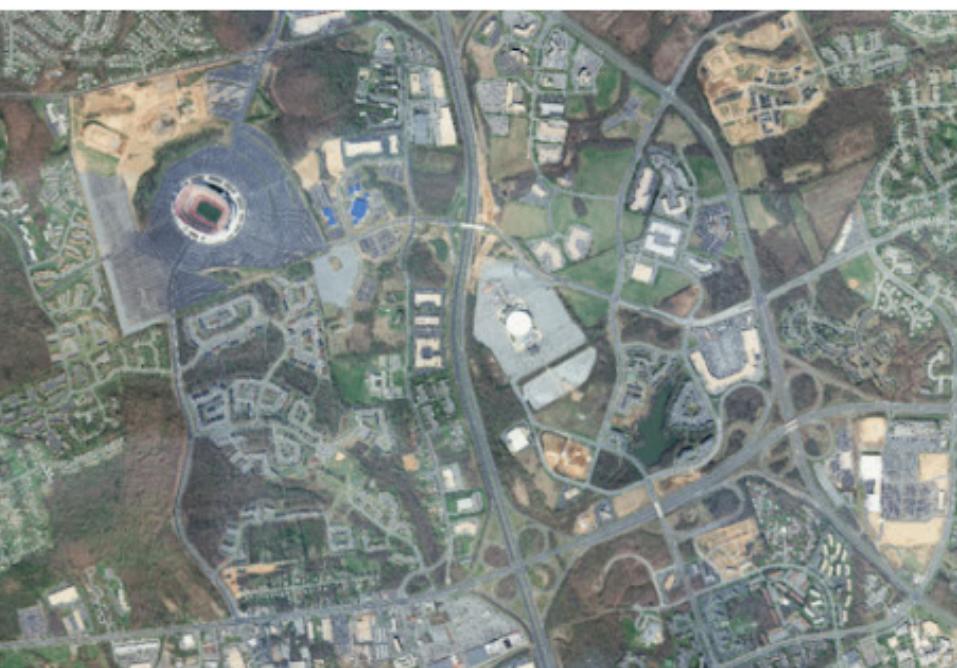
1965



1977



1993

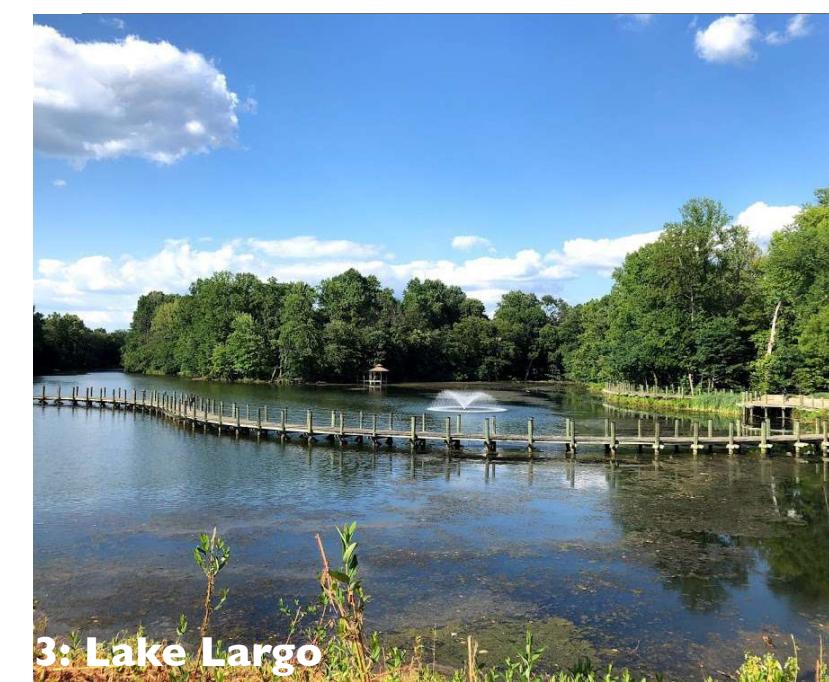


1998



2017

Site Photos: Landmarks

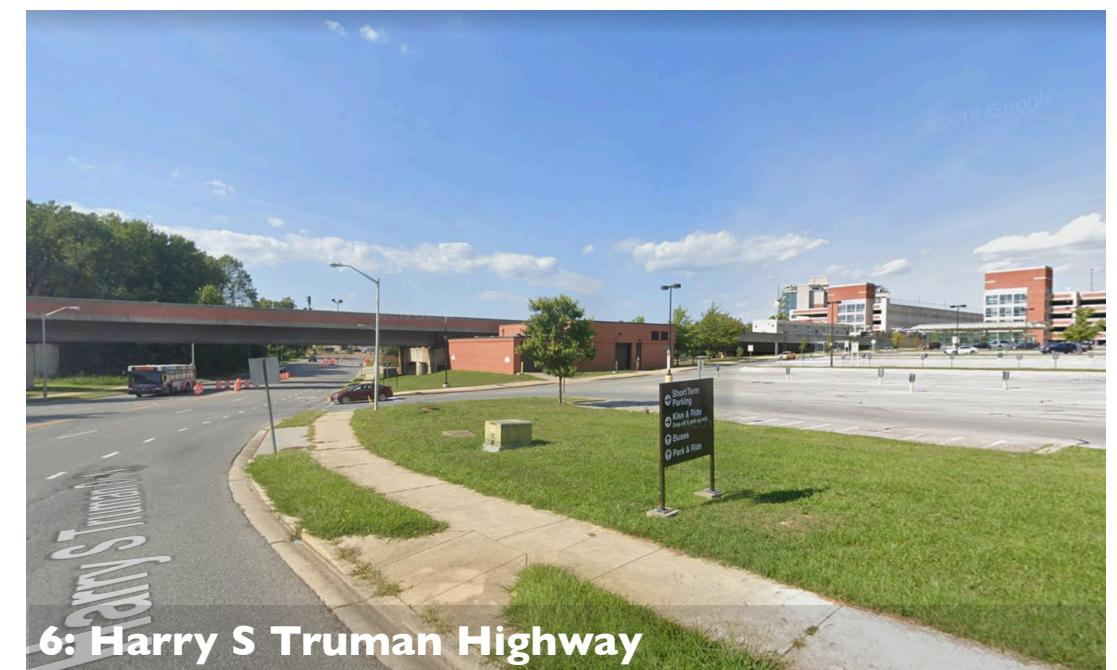




Aerial View Looking North



5: Lotsford Road



6: Harry S Truman Highway

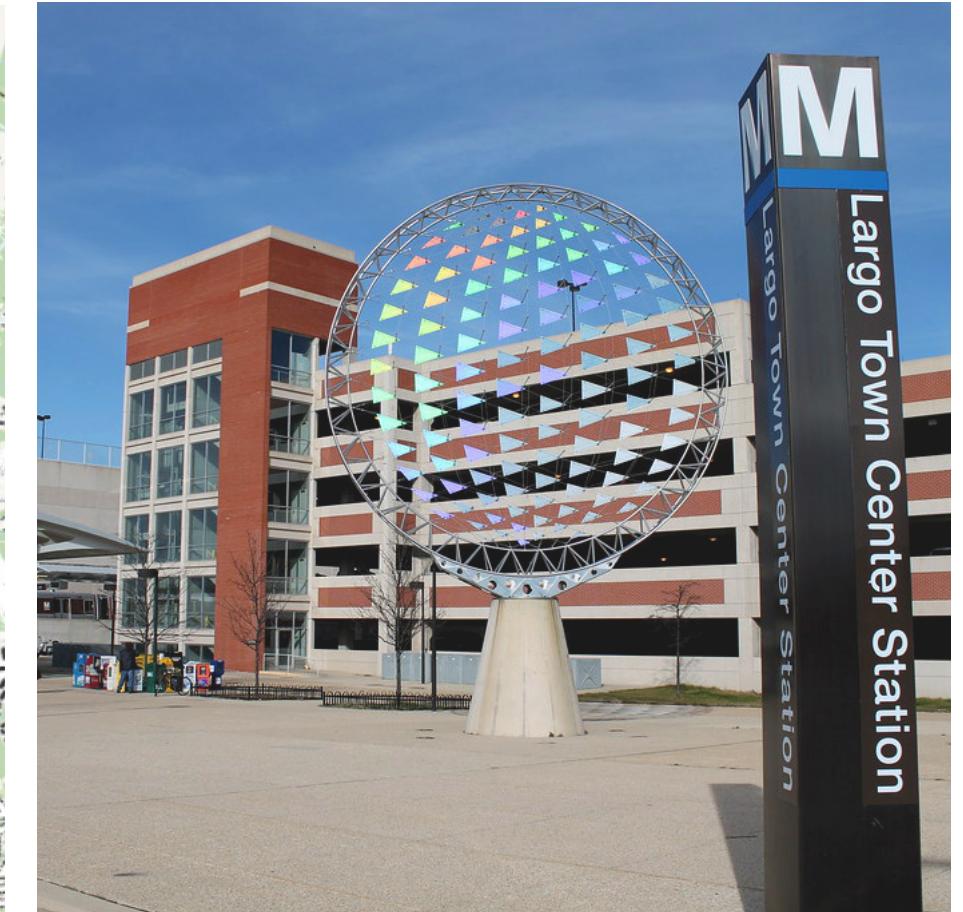
Largo and “Placemaking”



Site Plan of Largo, MD

The urban fabric of Largo is alphabet soup; large disconnected buildings inhabit separate parcels on stringy roads

The overall figure-ground of the Largo context is revealing. Typical of low density suburban sprawl patterns, the area developed as separate land accumulations linked (or, more accurately, separated) by highways designed to carry heavy traffic loads and commuters to jobs in the urban centers of the region. Stream valleys and large green spaces wind their way through the rear portions of developments and are only minimally connected, limiting their value to public place-making. Single-use development patterns exist throughout, isolating office buildings and office parks from residential and retail areas and requiring, in most cases, an automobile for even the shortest of trips. Individual developments are minimally connected, forcing traffic onto bloated arterial roads which reach capacity, if they do, only during limited hours of the week.



Largo Town Center Metro Station

Easily Largo's most identifiable landmark, this globe sculpture is alone in a sea of concrete and fails to define Largo as anything other than little more than a pit stop.

Photo credit to Elbert Barnes

Transforming the Edge City



Rockville Town Square (above)

Rockville redeveloped from an auto-focused suburb to an urban village with an active city center.

Photo credit to Michelle Queen

Edge Cities like Largo are defined by oversized roads, extreme reliance on automobile traffic, “monocultures” of housing, disperse building densities, and a general absence of the pedestrian realm. In the “Golden Age” of the automobile after World War II, they typically began as isolated areas of office parks and single-family subdivisions that employees drove between with retail interspersed along highway locations. Largo has become unique as an Edge City with the arrival of the Blue Line Metro station in 2004. This asset offers the potential to transform the greater station area into a vision for the future of mixed-use retail, office, hotel, and residential development. However, simple program adjacency will not suffice; Largo requires a holistic reworking of its hierarchy, shifting its cur-

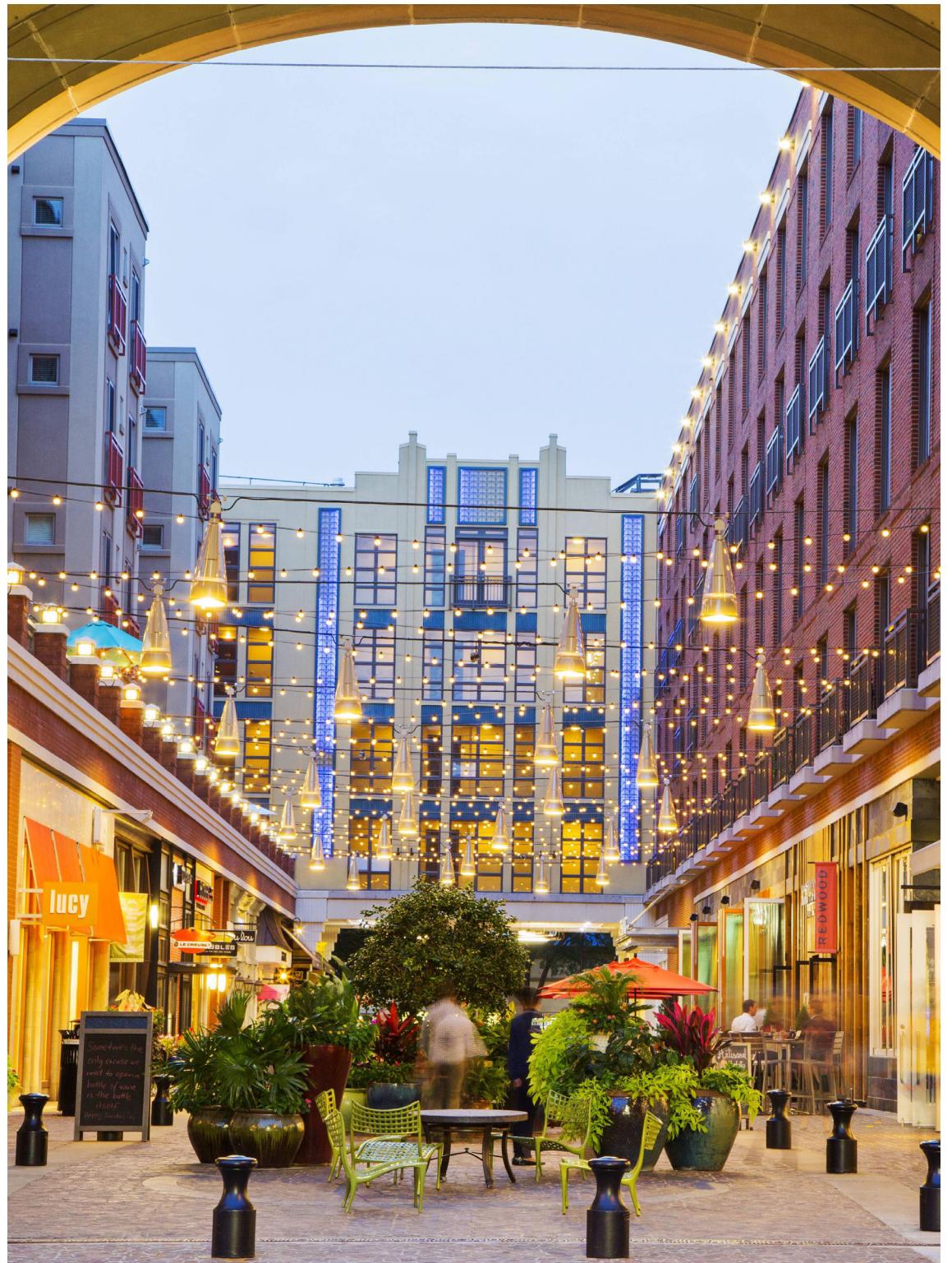
Bethesda Row (right)

Bethesda redeveloped with a focus on pedestrian experience and intimacy with nature

Photo credit to Dan Scheme

rent obsession with the automobile towards a more human scale.

The greater Washington, DC region has seen other successful redevelopments from suburban sprawl to town centers. Bethesda Row and associated developments have been wildly successful in densifying from a suburb into the premier medical office and high-end residential market. Silver Spring, Wheaton, and Rockville are finding identities beyond their suburban history and are transforming into walkable places with a rich mix of uses. All have shifted their focus away from the automobile and back towards public transit, nature, mixed use, and the human scale.



The Image of Suburban Sprawl



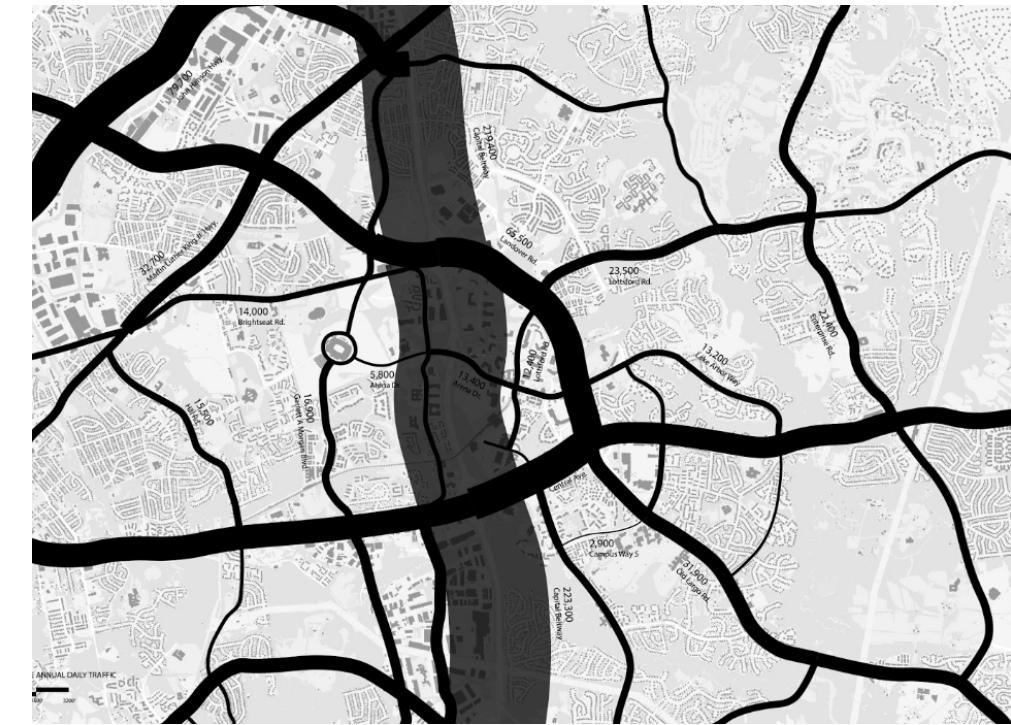
Street Network on Largo, MD.

Largo is an island of dead-ends and loops surrounded by major arterial roads and culdesacs.



Hardscape in Largo, MD

Largo is mostly hardscape even though it is deceptively green.



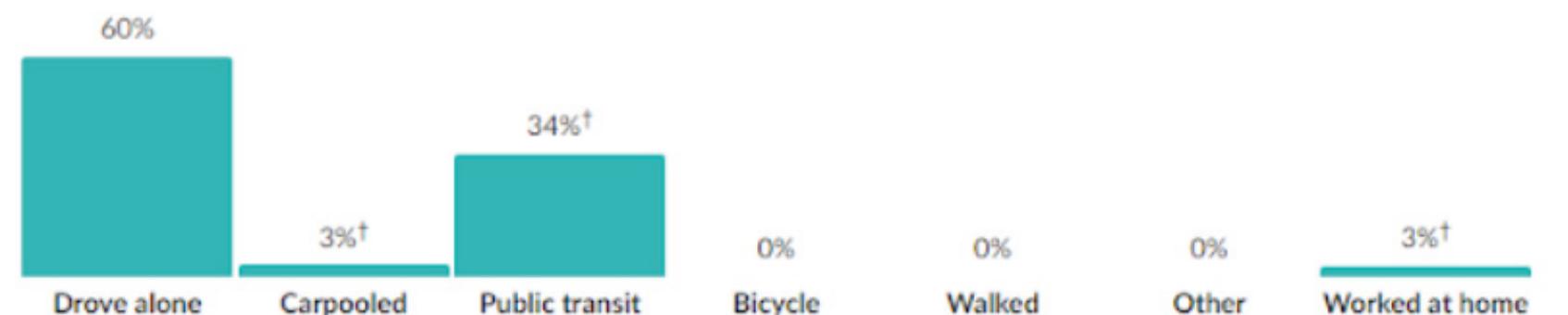
Street Widths Adjusted for Average Daily Trips.

Largo is surrounded on all sides by hugely busy roads, but its internal roads carry almost no traffic in comparison.

Largo is extremely reliant on vehicular traffic and is the prototypical model for suburban sprawl. The organic network of street routes lead often to dead-end, isolated neighborhoods. Complex, sprawling intersections interrupt roads constantly and are a significant impediment to supporting pedestrian activity. The amount of impervious surface in Largo is also prodigious with more than 70% of the site's total area covered in pavement, parking, sidewalk, or building.

This large amount of pavement do not translate, however, to reduced commute times; workers choose primarily to drive to work and commute for 38.7 minutes on average, higher than the rest of the county or Maryland average by over 5 minutes. A significant portion of workers drive from suburbs further out to the Largo Metro station, working at jobs in DC. The road network serving Largo currently is over-designed for the automobile and underutilized for multi-modal activities like transit, walking or riding a bicycle.

Means of transportation to work



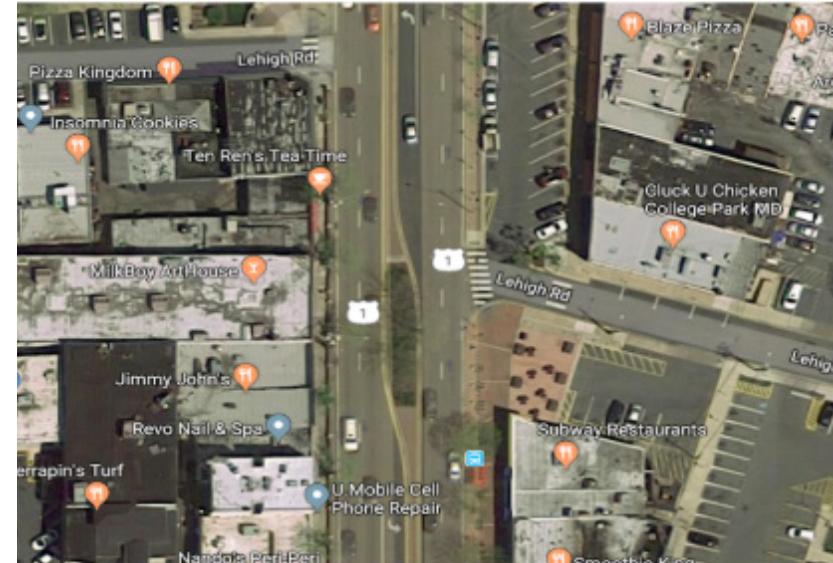
* Universe: Workers 16 years and over

Show data / Embed

Street Precedents with High Traffic Volumes



Lotsford Rd. Largo
12,400 AADT
150'+ Building-building, 96' Curb-curb



Baltimore Ave. College Park
23,400 AADT
100' Building-building, 62' Curb-curb



Connecticut Ave. D.C.
40,200 AADT
130' Building-building, 60' Curb-curb



King St. Alexandria
12,000 AADT
65' Building-building, 35' Curb-curb

Like many suburban areas, Largo's streets are over-engineered for the amount of traffic they carry.

For example, Lotsford Road, Largo's central 6 lane road with turn lanes, carries a mere 12,400 vehicles per day, less than what a 2 lane road with turn lanes can handle. However, Lotsford is designed for traffic loads much greater. The discrepancy is not unique to Lotsford Road, as Arena Drive, Harry S. Truman Highway, and all other major roads in Largo are designed with 4 lanes of traffic but in reality have the daily trips of a 2 lane road.

For comparison, Connecticut Avenue in DC is handling approximately 40,200 trips daily using non-peak parallel parking (from 4 lanes at non-peak to 6 at peak, 4 in one direction at peak hours). Different strategies to increase capacity prove that clever lane usage and rush-hour priority lanes can accomplish in just 60' curb-curb what Lotsford Road fails to do in 96' curb-curb.

Across the region, roads a fraction of the width of Lotsford Road carry many more vehicles per day. There is a massive surplus of space on-site, and one of the largest challenges the studio faced was how to fill in the space to promote walkability, placemaking, and healthy design. A simple fix might be to allow non-peak parallel parking on most streets throughout the district.

Comparison of Street Widths and Daily Trips.
Streets from Largo, DC, Alexandria, and College Park highlight just how large and over-specified the streets in Largo are.

Images from Google Maps. Data from MDOT.

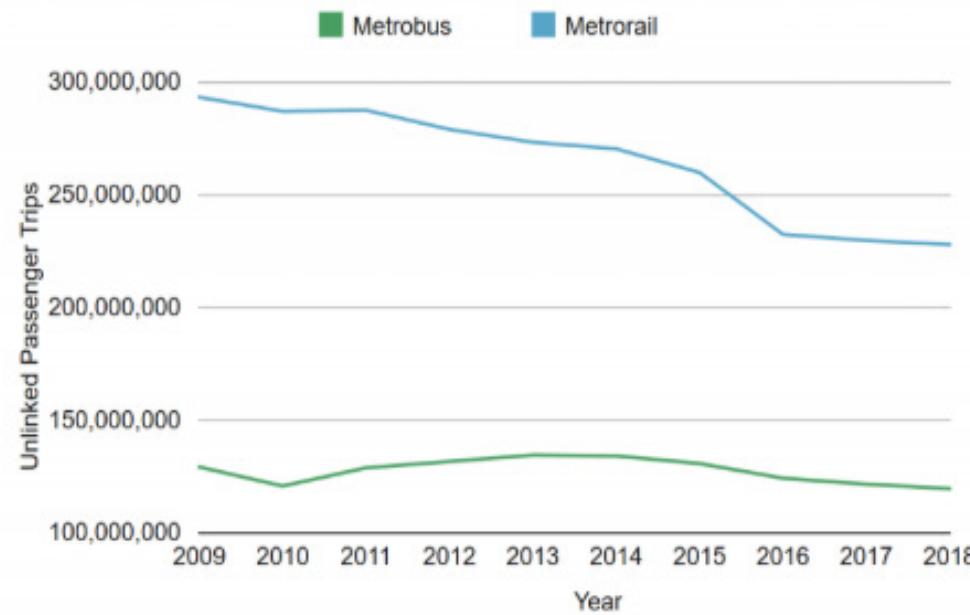
A Snapshot of Ridership at Largo Station

Metrorail Average Weekday Boardings for Largo

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
4,294	4,826	5,015	5,195	5,112	5,283	5,111	5,159	4,874	4,912	4,754	4,276	4,668	4,181	4,147

In 2016, Largo ranked 56th out of 91 stations for ridership at 4,435 riders/day with the 1st being Rosslyn at 13,666 riders/day

WMATA Ridership by Mode



Source: FTA National Transit Database Dec. 2018 Adjusted Release

Monthly Metrorail Ridership

Unlinked Passenger Trips by Year



Source: FTA National Transit Database Dec. 2018 Adjusted Release

The Blue Line at Largo is underutilized. As the last stop on that line, Largo is an important transfer point for commuters coming from further suburbs to park and take the metro into DC. However, ridership remains low as Largo is only 56th out of the 91 metro stations to date in terms of usage. Ridership has been steadily decreasing since the peak in 2010, losing more than 1,000 daily trips and has slid back to a 2005 level. This decline is likely due to the lack of pedestrian or other transport access to the metro station as well as a lack of employment, entertainment, and retail draws to Largo.

Additionally, while Largo boasts an internal bus route, ridership is extremely low and could benefit from more stations, destinations, and riders to be at its full potential.

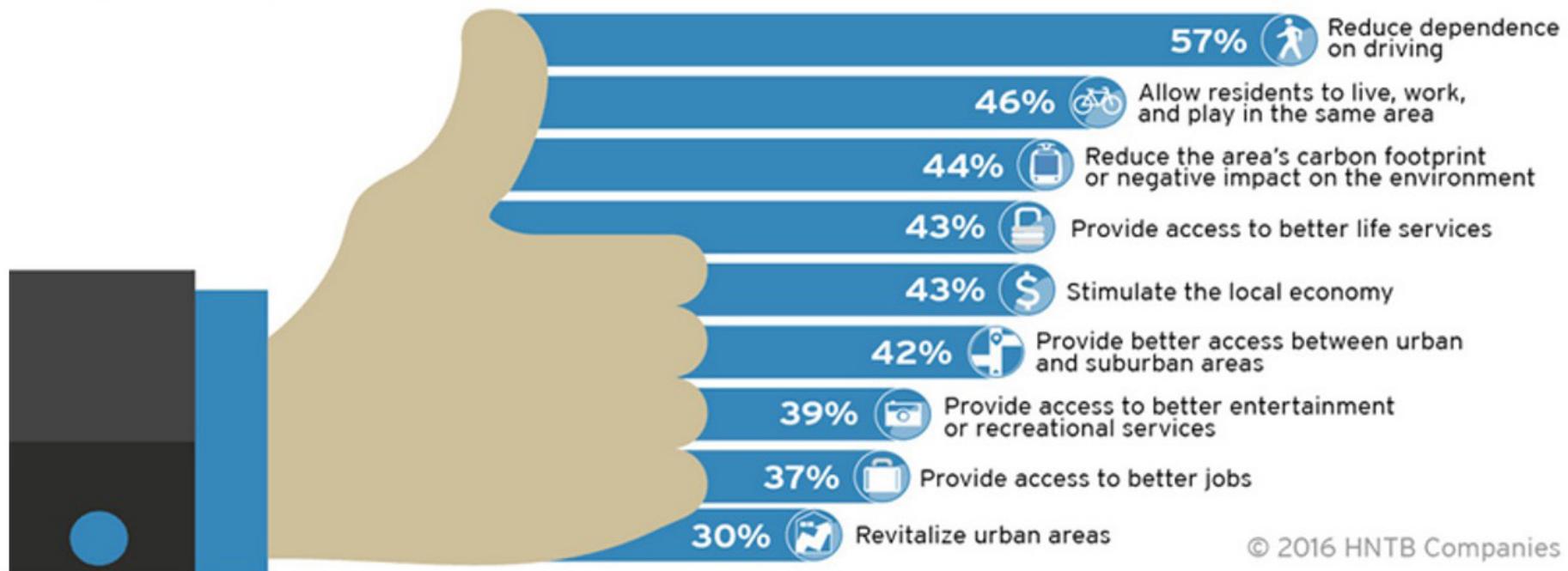
Metro Ridership Statistics

Ridership has been decreasing for almost a decade, and new development is needed to make the most out of this incredible asset.

Source: WMATA

Transit Oriented Development Advantages

Americans believe transit oriented development provides an array of benefits ranging from lifestyle to environmental to economic.



Transit Oriented Development (TOD) provides answers for how Largo can develop its under-utilized transit infrastructure and reduce the surplus of right-of-way space that is undermining its sense of place. TOD is a development strategy that concentrates density and a mix of uses, housing options, and places around multi-modal transit nodes. Within a 400m (1300') radius of the station, TOD recommends that there be a commercial district adjacent to the station, offices and public spaces radiating around the station, and a residential area to fill in the outskirts of the TOD sphere. This ensures that working options, entertainment and shopping, public space, and residential areas are all within a five to ten minute walk to the station.

The benefits of TOD are numerous, but perhaps most useful to Largo is the potential 57% reduction on driving dependency and a considerable boost to its existing Metro station. Developing Largo with TOD will allow it to densify sustainably around its greatest asset, the Metro, and connect the rest of the city with pedestrian corridors, bike lanes, bus routes, or other forms of secondary transportation.

Above: Statistics on TOD Benefits

TOD benefits areas in numerous ways, offering avenues for revitalization, healthier living for both people and the planet, and more equitable access to employment and services.

Source: HNTB

Top Right: Anatomy of a TOD

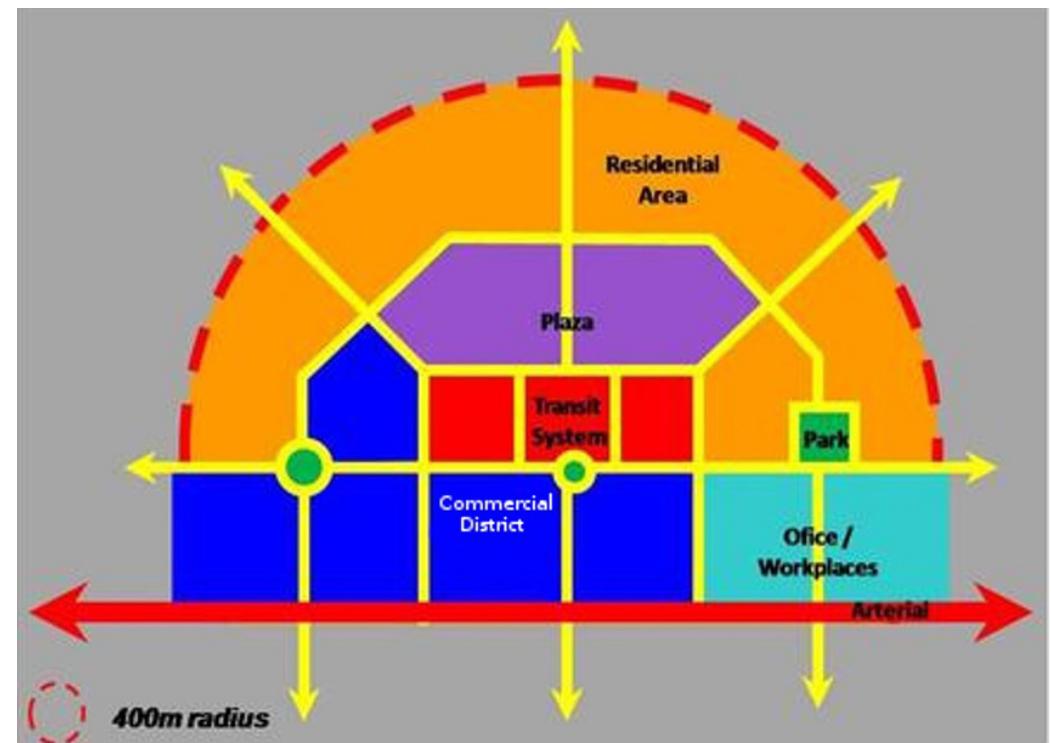
Within 400m of a transit station, dense residential areas, commercial areas, and offices form a mixed-use urban village that inspires people to walk and engage with the built environment.

Source: Transportation Policy Blog

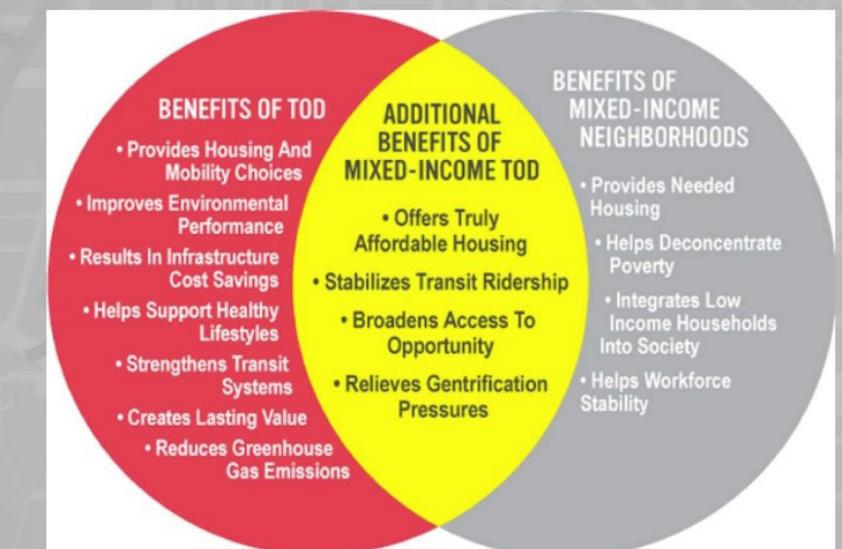
Right: Mixed-Income TOD Benefits

TOD offers a more equitable approach to development by improving access to employment, shopping, housing, and services.

Source: Center for Transit-Oriented Development



Mixed Income Transit-Oriented Development



| Source: Center for Transit-Oriented Development

CTOD CENTER FOR TRANSIT-ORIENTED DEVELOPMENT



The Advantage of Multi-Modal Streets



Representative Street Section of an Ideal Multi-Modal Street.

This conversion of a four-lane road into a pedestrian-friendly, mixed-transit street exhibits some of the strategies that could be applied to Largo.

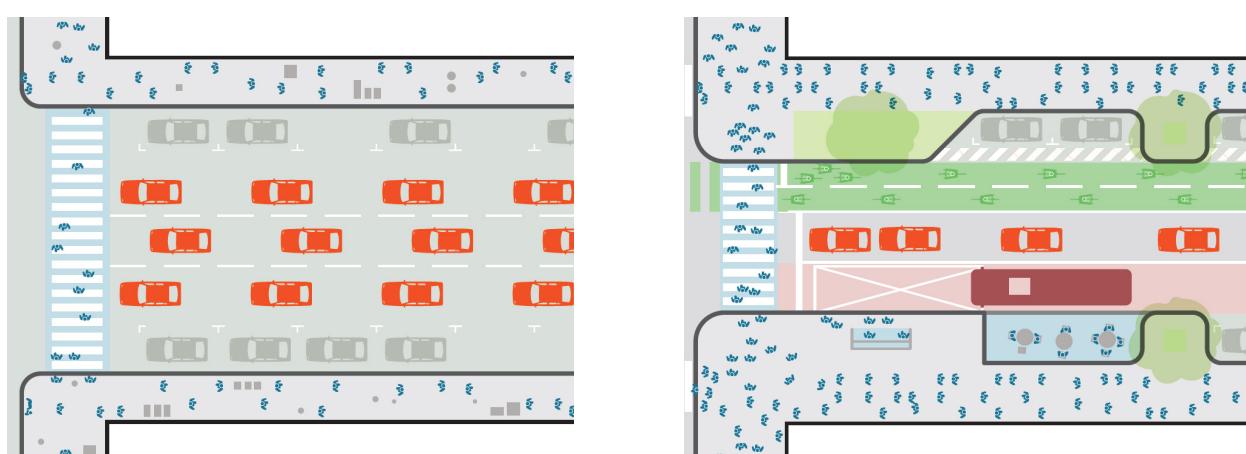
Source: Global Designing Cities Initiative

Transforming suburban-style arterial highways to multi-modal streets is a strategy that can connect the urban fabric around a transit station to the greater station area. Currently, the Metro station in Largo is accessible only by bus and car, and as a result a negligible amount of people currently walk to the station. The lack of pedestrian access is due to unsafe and unpleasant sidewalks, lack of street activation, and dangerous crosswalks across fast-moving traffic. Multi-modal streets improve the pedestrian experience greatly by reducing travel lanes, reducing speed of traffic, activating the street with seating and tables, and providing more options for bus stops and bike lanes. These strategies can make people feel safe to use the streets in modes other than private vehicles.

Before and After Plans of a Multi-Modal Street.

Even though the street goes from three travel lanes to one, more people can travel through the multi-modal street due to pedestrian, bike, and bus travel.

Source: Global Designing Cities Initiative





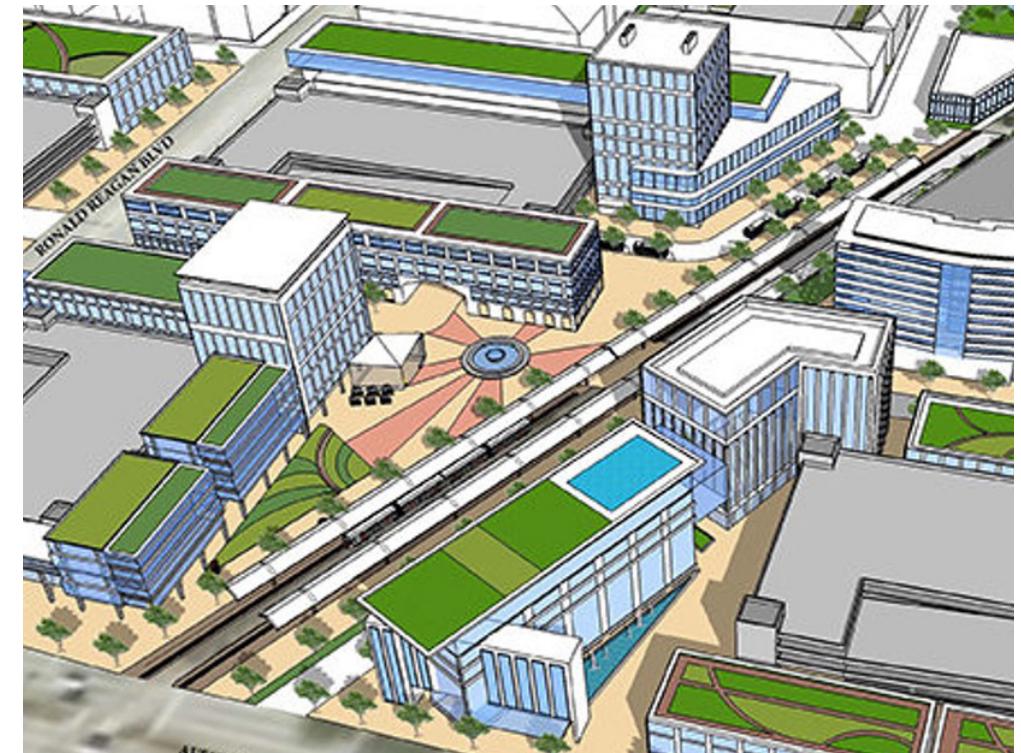
Mixed-Income TOD on a Light-Rail Street.
A multi-family building with affordable housing looks onto the tracks for a light rail system.

Source: TOD Resources



Aerial Perspective of TOD Square.
The richly decorated heavy rail transit station looks onto a mixed-use, multifamily development and is connected directly to the heart of the community - the public square - by a pedestrian focused boulevard.

Source: Goody Clancy



Aerial Perspective of Public, Office, Retail, and Residential Uses Around Transit Stop.
A mixed-use community directly encompasses the station in a public square, celebrating this connection and asset with public art and public uses fronting the transit.

Source: Forward Florida

TOD always densifies around transit stations. It seeks to provide a variety of housing types - condos, efficiency through three bed apartments, townhomes, etc. - at a variety of income levels to get people living and engaged with the transit. It also puts public space front and center, using parks and squares as gathering or event venues that could be a strong draw for transit users. Finally, placing complementary uses around a station allows for activation through all hours of the day or night, creating a lively and safe environment for everyone.

New Existing Asset Diagram



The existing conditions of Largo hold a few key components worth saving and building upon. First and foremost is the Metro station, as it is Largo's main connection to DC. Second is the Carillon Development, a brand-new mixed-use development planned for construction over the previous shopping center. Third is the new UM Capital Region Medical Center. Fourth is Largo Lake.

The studio left unchanged the existing main road and streets to avoid costly infrastructure rerouting. The general locations of the southern, northern, and eastern gateways were accentuated and, in many cases, became the basis for placemaking in the final proposal.

Existing Assets

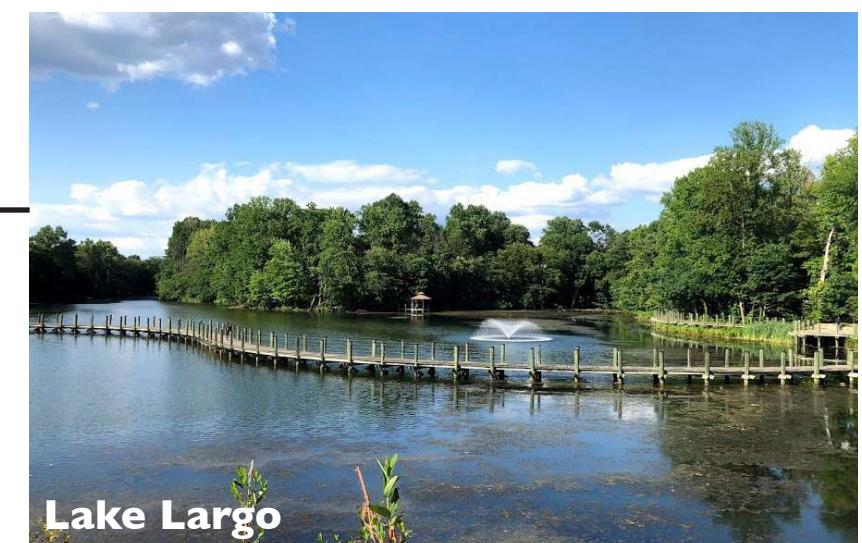
The studio tried to emphasize as many existing assets in Largo as possible, focusing on landmarks or natural features as boons.

Existing Asset Photos



Existing Assets Photos

Placemaking is starting to happen with the Carillon and Hospital developments. However, the area still needs a cohesive plan to link together all of the assets Largo has to offer.



Concept Master Plan



The studio proposes a plan to densify Largo significantly, filling in numerous parking lots and open spaces with sustainable, mixed-use development in order to give Largo the identity it needs. The studio's vision for Largo is an emerald city, one unified form that is bound together by a rich and varied network of public parks, squares, boulevards, and multi-modal streets. It is a city where residents can enjoy an enriching walk or bike ride anywhere, whether it is to the station to travel to DC, the northeast or northwest districts to work or learn, the Metro village for their famous restaurants and entertainment, or even to the Lake to enjoy a sunset by the Bell Tower.

The studio used TOD to concentrate as much development around the metro station as possible and expanded out the network of streets and parks from that initial point. The studio divided up the entire site into four quadrants, naturally split by Arena Drive and Lotsford Road. Each team worked in tandem with the others to coordinate the studio's response and present a unified vision for what Largo could be. What follows is an in-depth breakdown of each team's solutions to the unique challenges presented by Largo, MD.

Concept Master Plan



The proposal seeks to replenish Largo's "hidden" greenery by creating an interconnected network of parks, public spaces, and complete streets. This green "network" knits together Largo's fragmented fabric by connecting the Metro station, the residences around Lake Largo, the capital region medical center, and the proposed Carillon development in one contiguous and green path.

Metro Village



Metro Village Site Plan

Metro village builds on and fills in the network of streets close to the metro station and connects Carillon to the rest of the city.

Offices, retail, and public parks are clustered next to the metro station. The Harry S. Truman highway, transformed into a complete street, connects the high-density multifamily buildings along Metro Village's squares and parks with the townhomes and quadrants further away from the station.

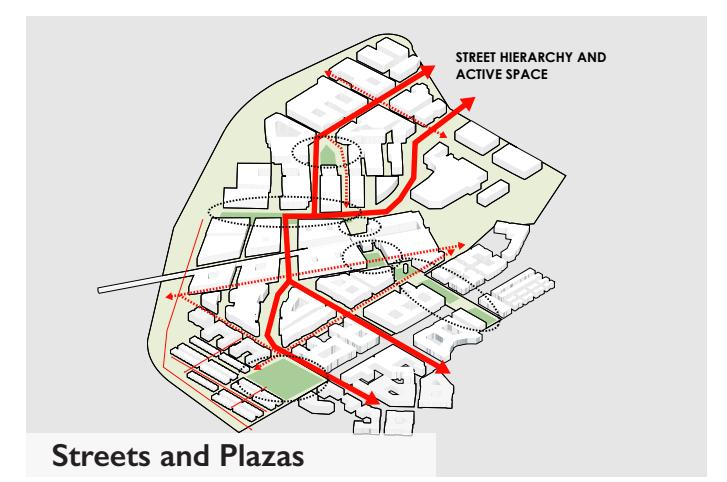
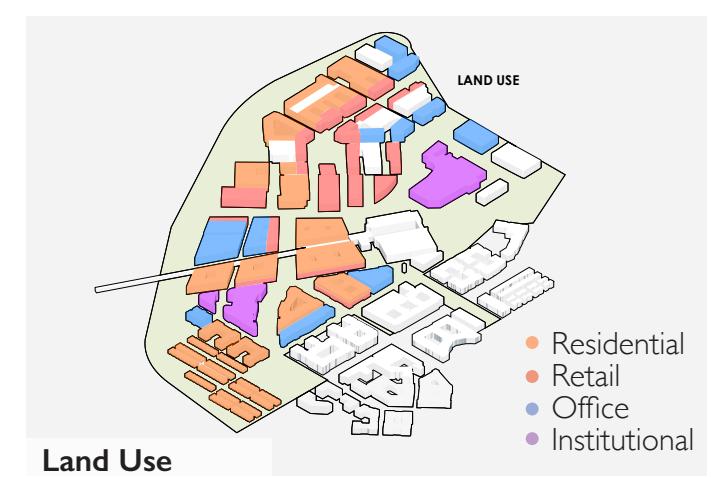
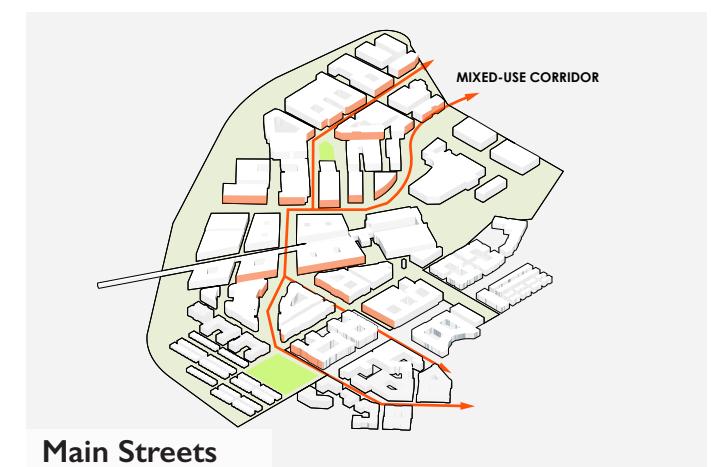
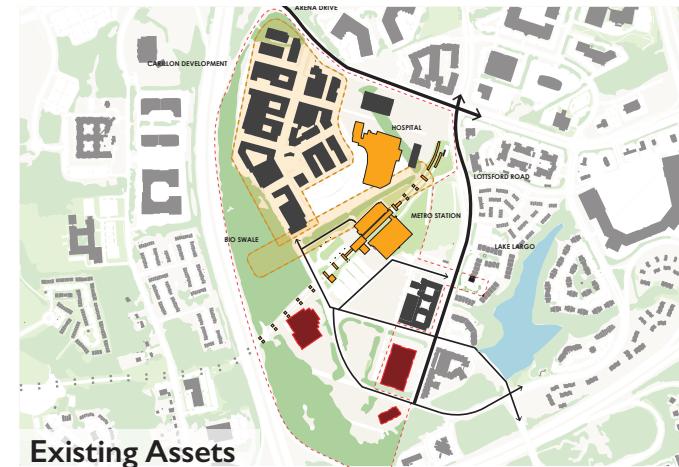
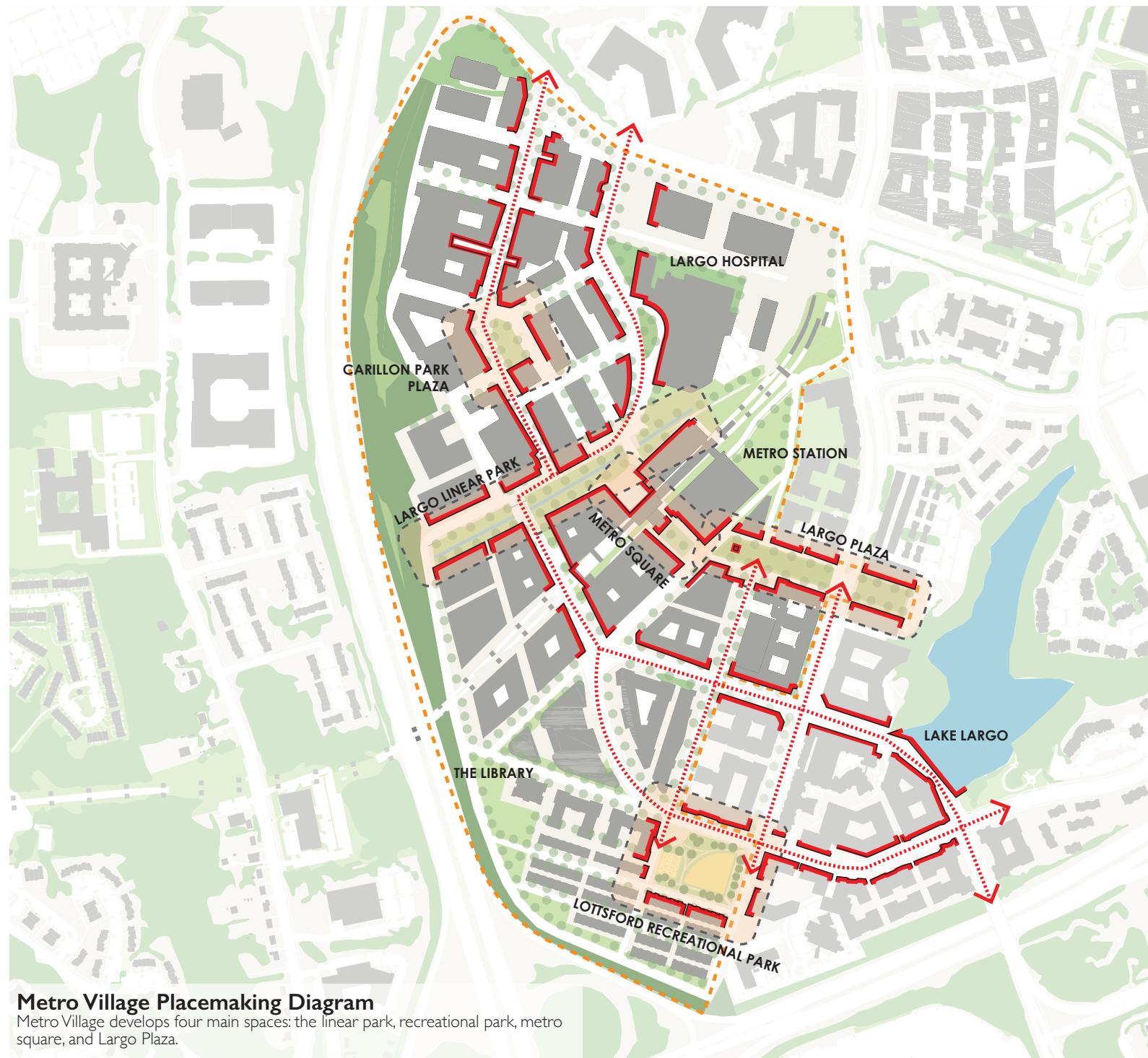
Metro Village Travel Poster (far right)

The most identifiable landmark seen in the most popular way, Metro Village will increase ridership to Largo by defining enjoyable public spaces and dense mixed uses along the metro route.



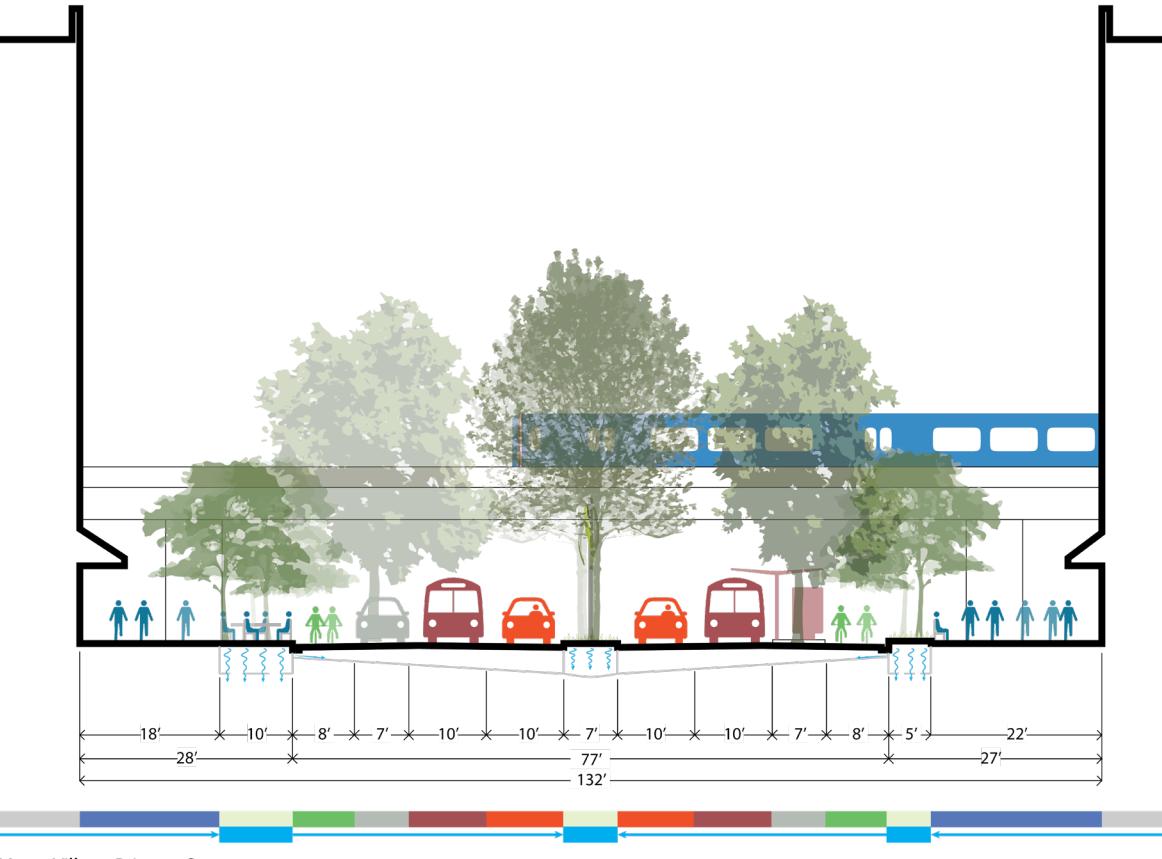
Metro Village stitches together the existing, broken fabric of Largo with green streets, parks, and boulevards. Metro Village leverages the metro by densifying development and using green space to create two experiences on either side of the elevated track. The north square spills into the linear wetland park lined with intimate streets. Commuters walk through tree-lined Largo Plaza, guided by the tower towards the south square. The recreational park completes the network of green space that unifies Metro Village and ties it to the greater Largo site.

Metro Village Diagrams



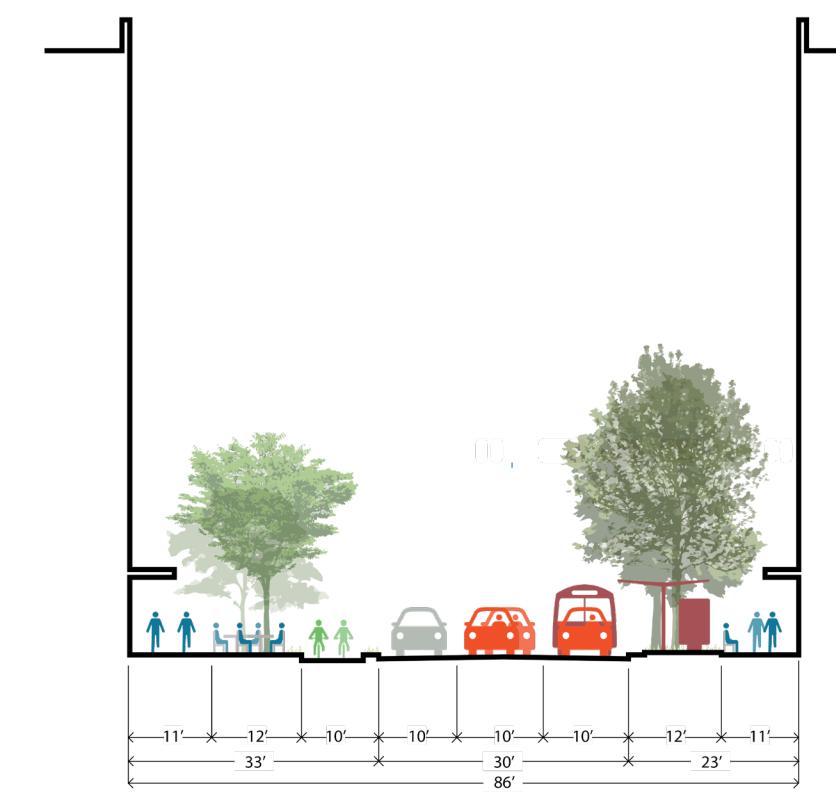
Metro Village Street Sections

Section A

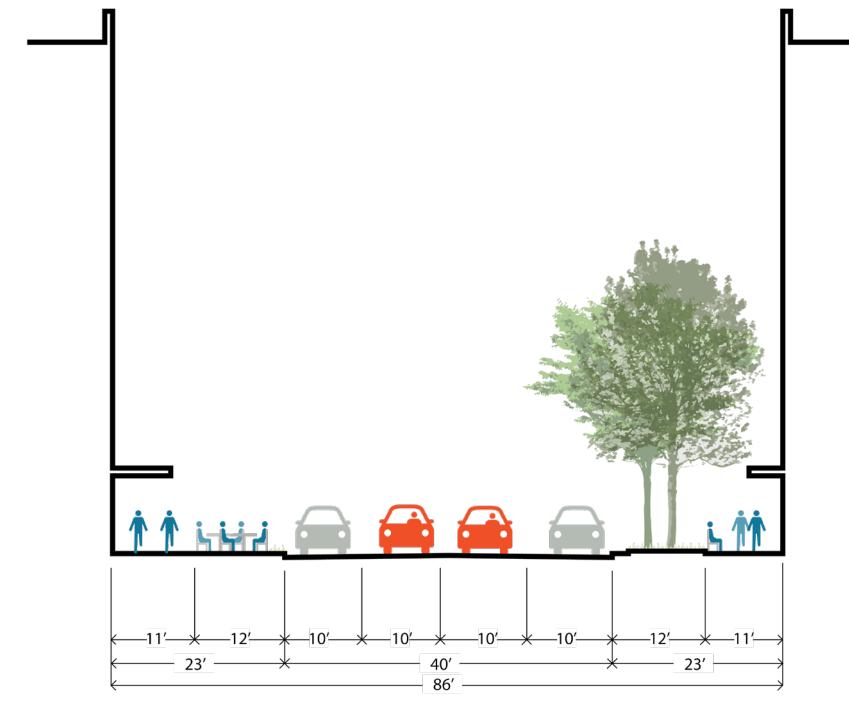


Metro Village Primary Street

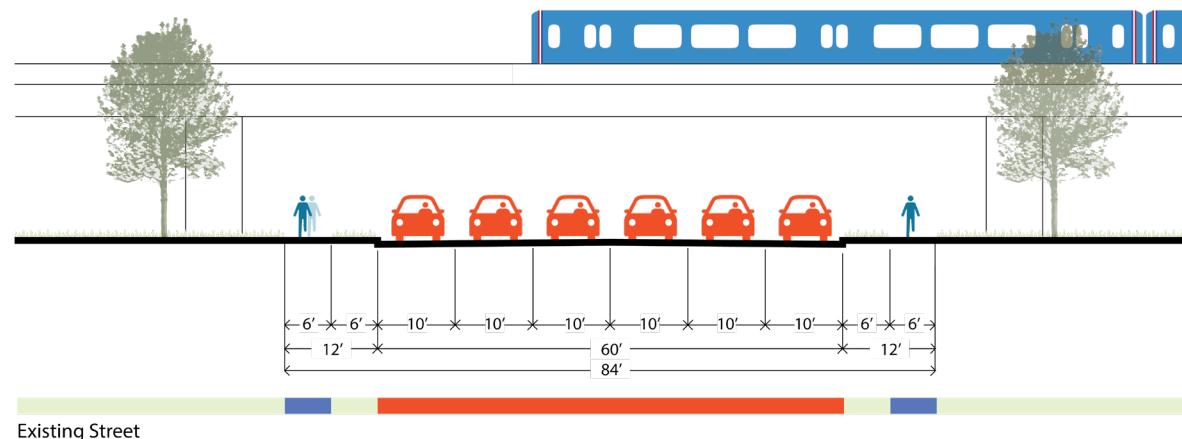
Section B



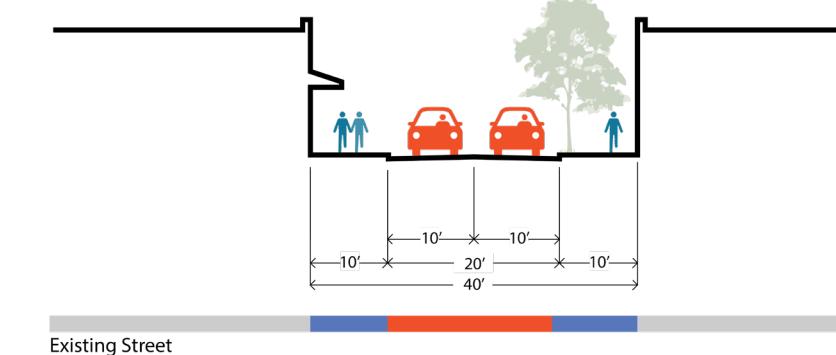
Metro Village Secondary Street



Carillon Primary Street



Existing Street



Existing Street



Locator Plan (Existing)

Metro Village Perspectives



Locator Plan (Proposed)



I: North Metro Square



2: South Metro Square

Largo Gateway



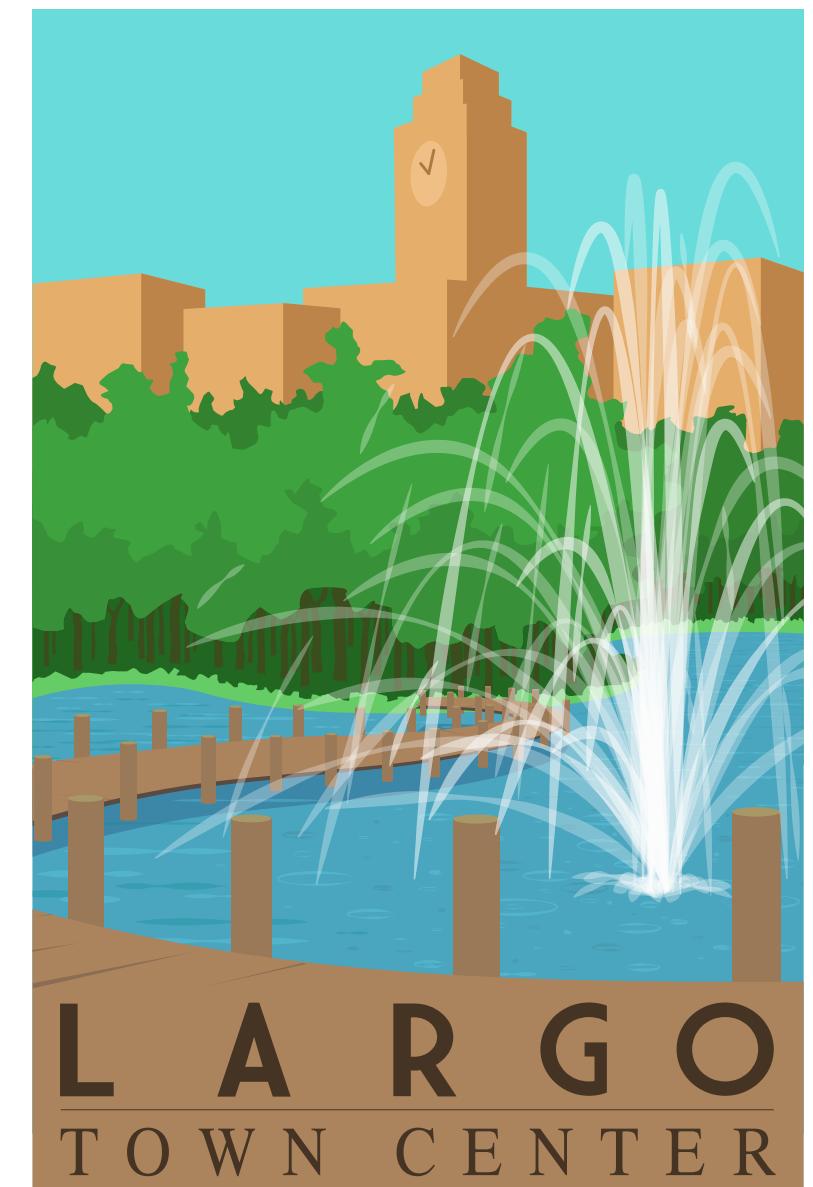
Largo Gateway Site Plan

Largo Gateway re-imagines Lake Largo as a romantic public park that connects residents along Lotsford Road and around the lake directly to the metro station.

A winding series of paths weaves the mid-rise multifamily buildings along Lotsford with the greenery of the lake and park, defining a green gateway for Largo.

Largo Gateway Travel Poster (far right)

The studio's most identifiable landmark, Largo Tower, will be directly visible from the Lake Largo park.



Largo Gateway redevelops Lake Largo into a healthy, romantic landscape. The Gateway extends the boulevard from South Metro Square to the Lake itself, offering a grand vista of the bell tower and connecting the residents around the lake to the station itself. Lotsford Road is redeveloped to be greener and multi-modal, and the existing new apartment buildings, hotels, and condominiums are left unchanged.

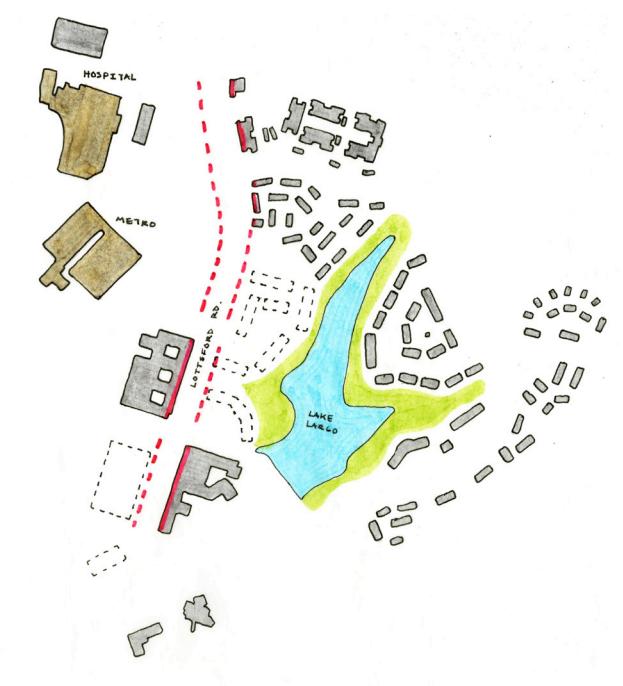
Largo Gateway Diagrams



Placemaking



Figure Ground



Existing Assets



Street Trees

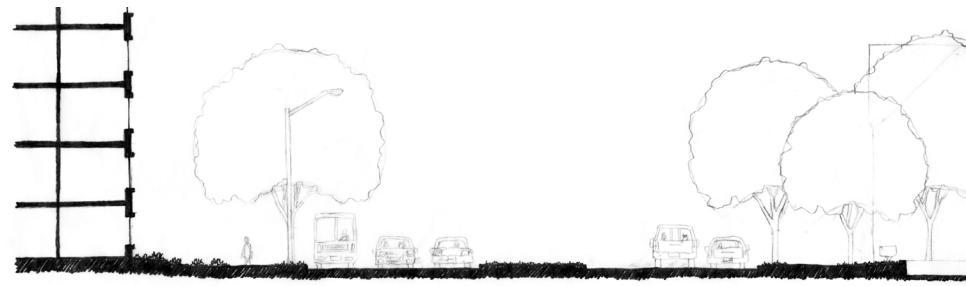


Green Network

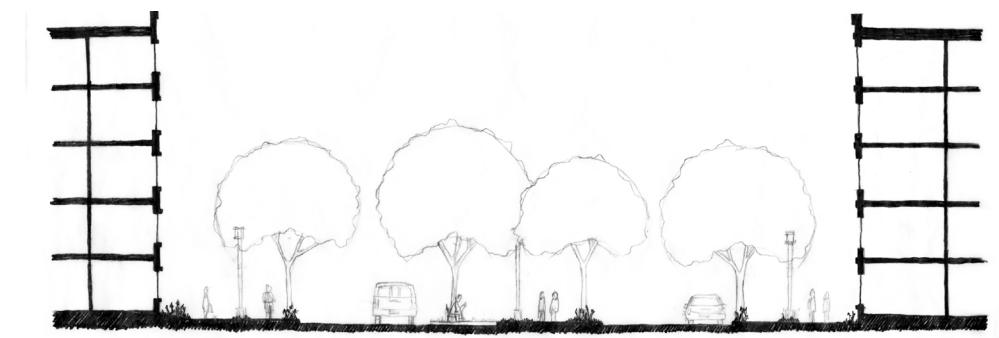
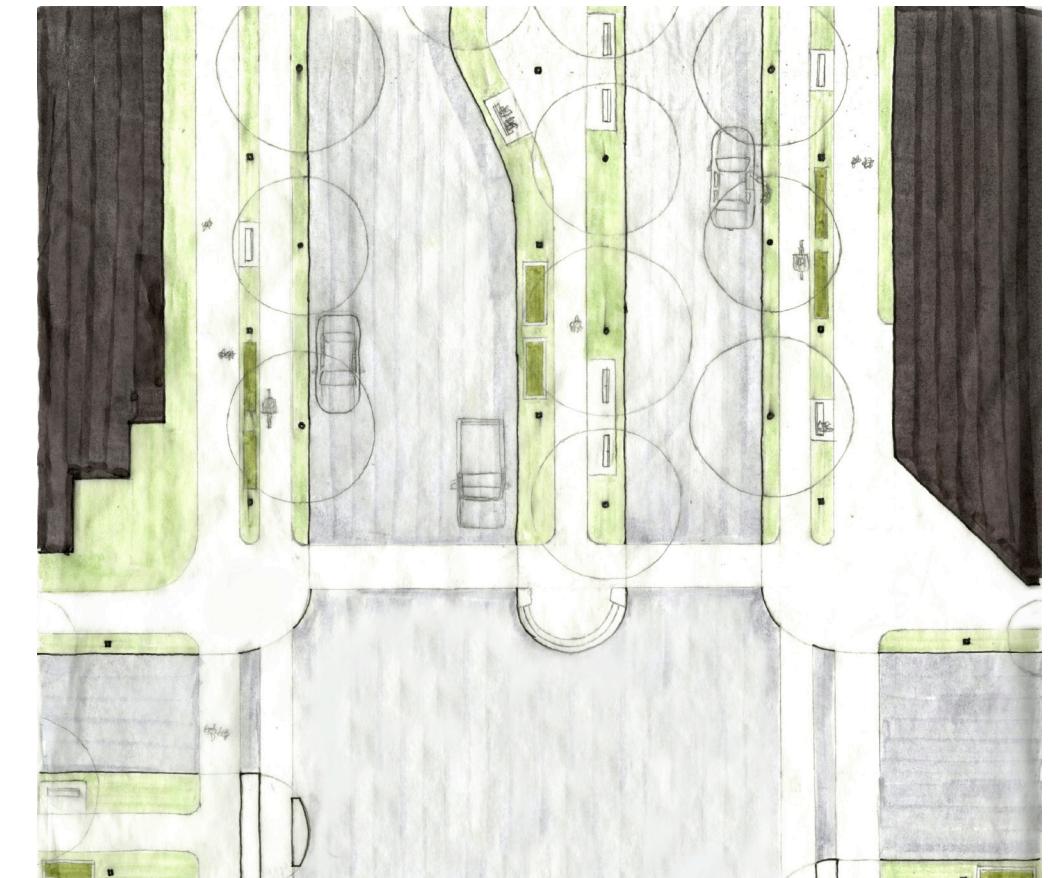
Largo Gateway Street Sections



Locator Plan



Section A: Existing Street

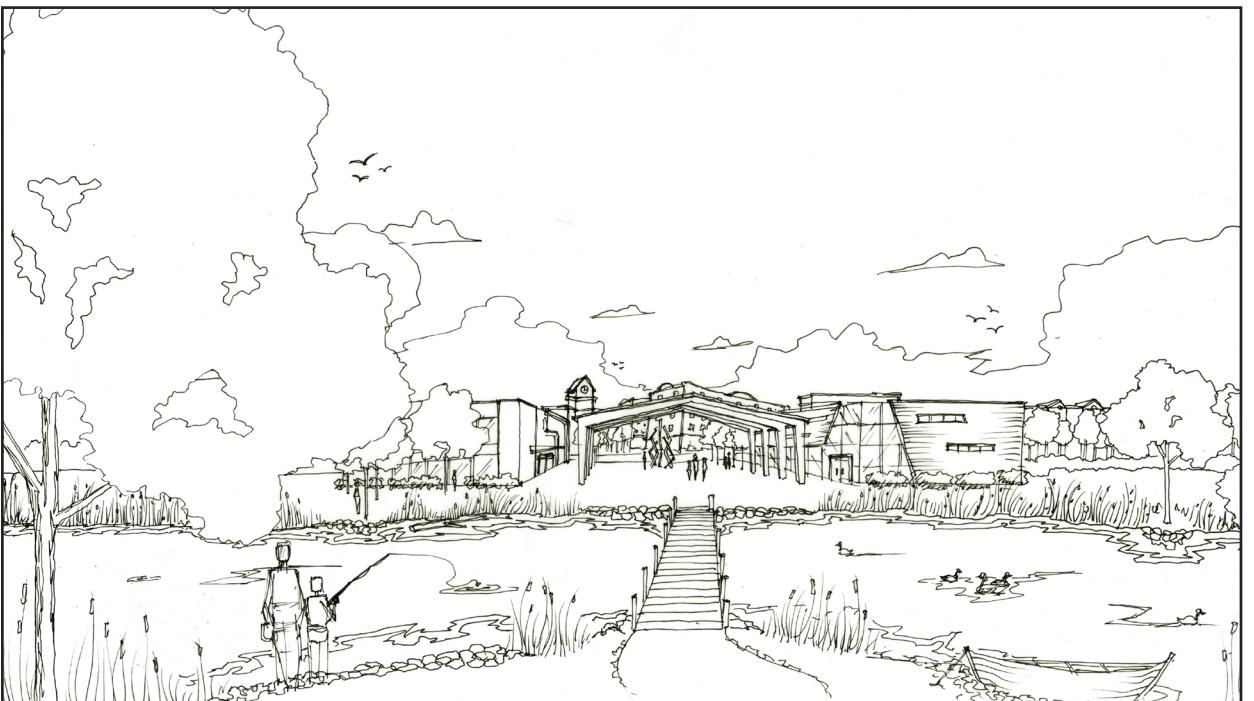


Section A: Proposed Street

Largo Gateway Perspectives



Locator Plan



Perspective 1: Looking from Lake Largo



Perspective 2: View along Lotsford Road

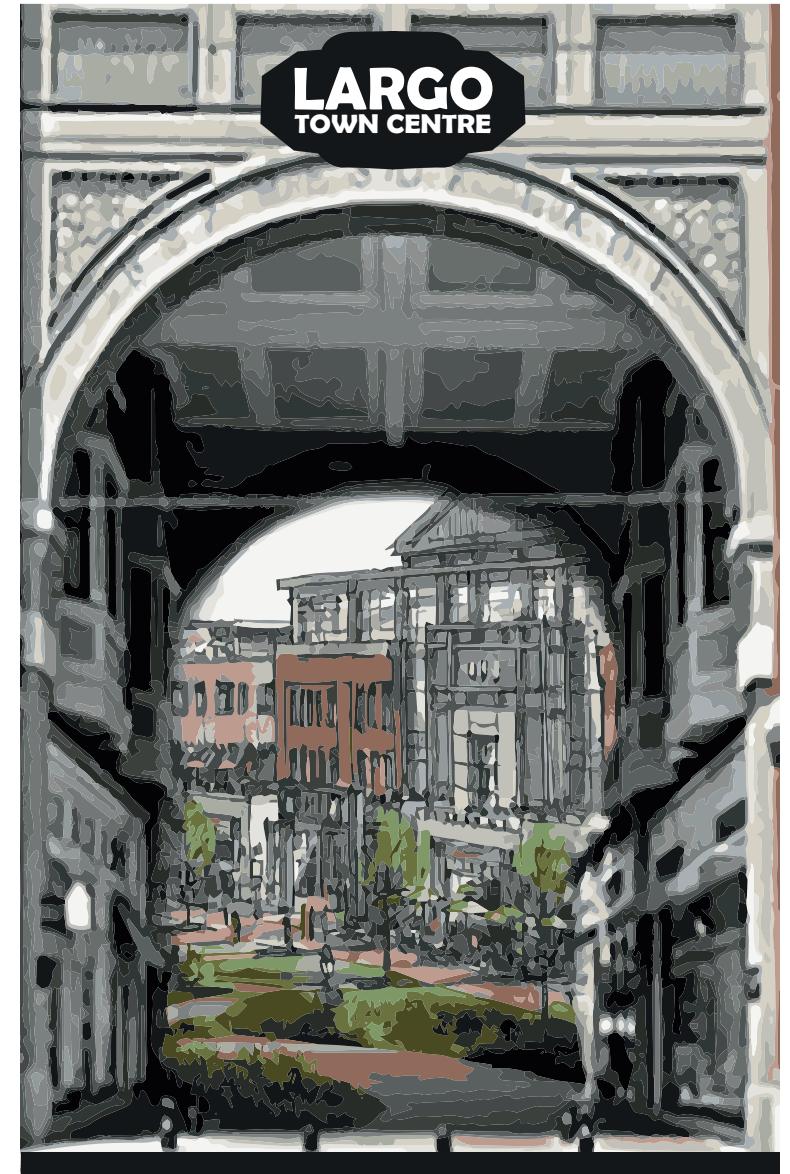
Northeast District

Northeast District Site Plan

The Northeast District completely redefines the existing disjointed mix of office and industrial buildings as a dense urban village unified by a grand linear park. This Ribbon Park stretches from Lake Largo up to Campus Green in the Northwest District, completing the continuous network of green spaces that defines this proposal.

Northeast District Travel Poster (far right)

The park will be a huge amenity throughout the city, and buildings will have bridges or other passthroughs to ensure that the park is viewable and enjoyable no matter where one is.



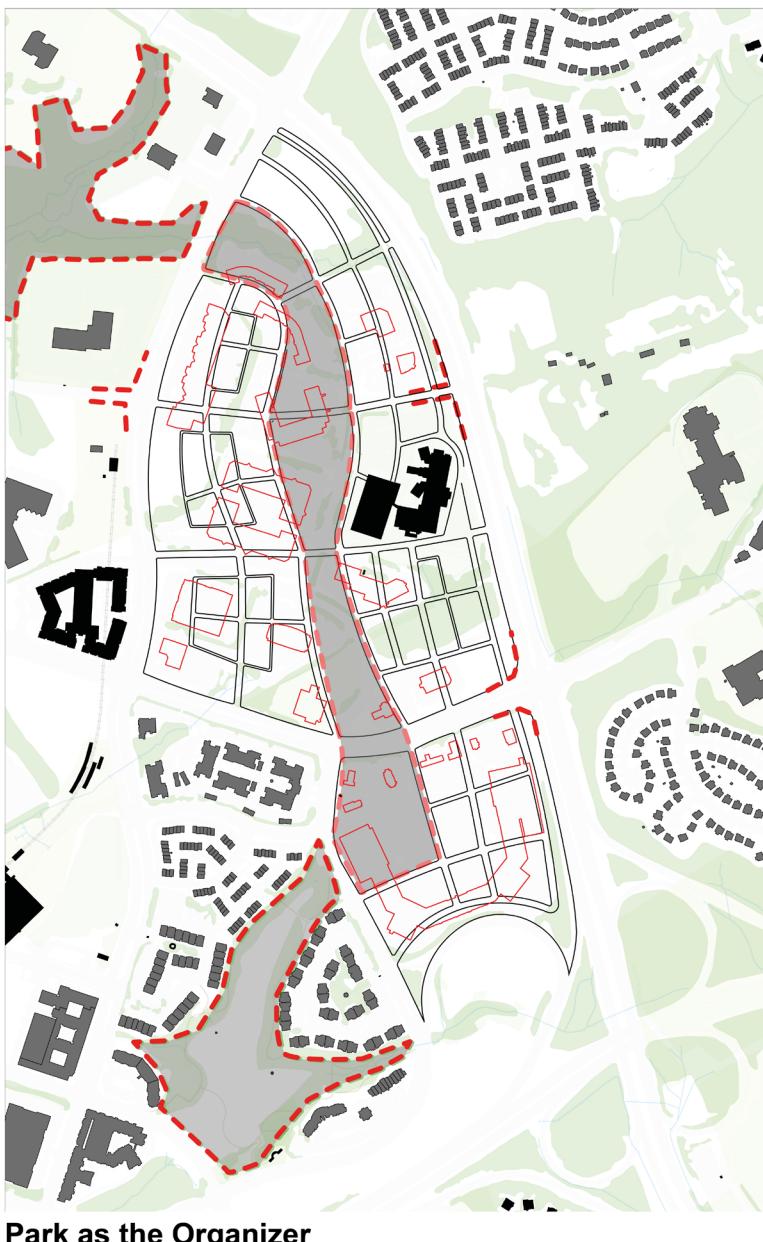
The Northeast District weaves a grand park from Lake Largo to Campus Green and the Northwest District. This wellness park has winding trails and bridges that organically form blocks of offices and residences. Arena Drive and the Eastern Gateway transform into Retail Row, a street of shops serving residents and visitors a stones-throw away from the Lake.

Northeast District Diagrams

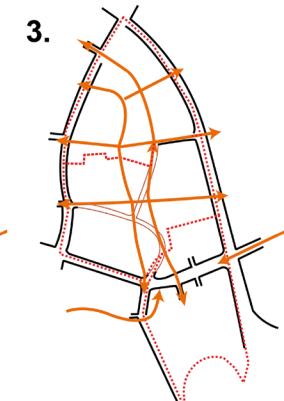
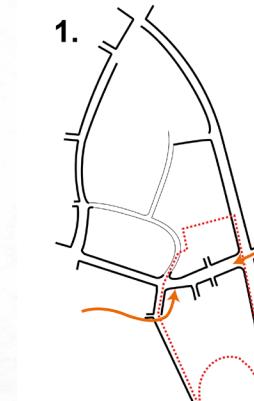
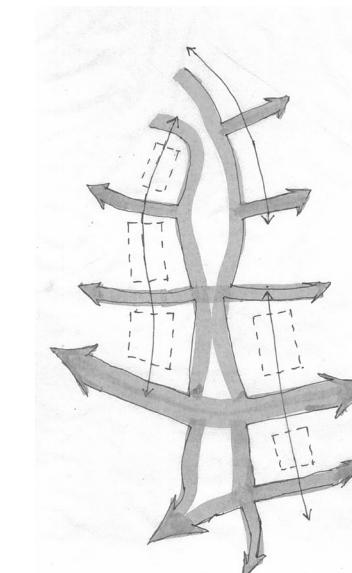


Existing Assets

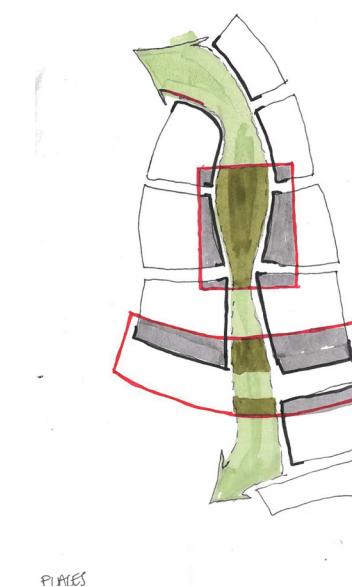
In red outline are indicated sites that are strong candidates for redevelopment



Park as the Organizer



Phasing



Water Management & Solar Power

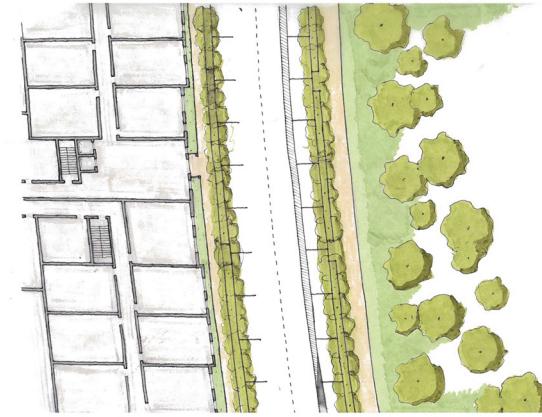
Northeast District Street Sections



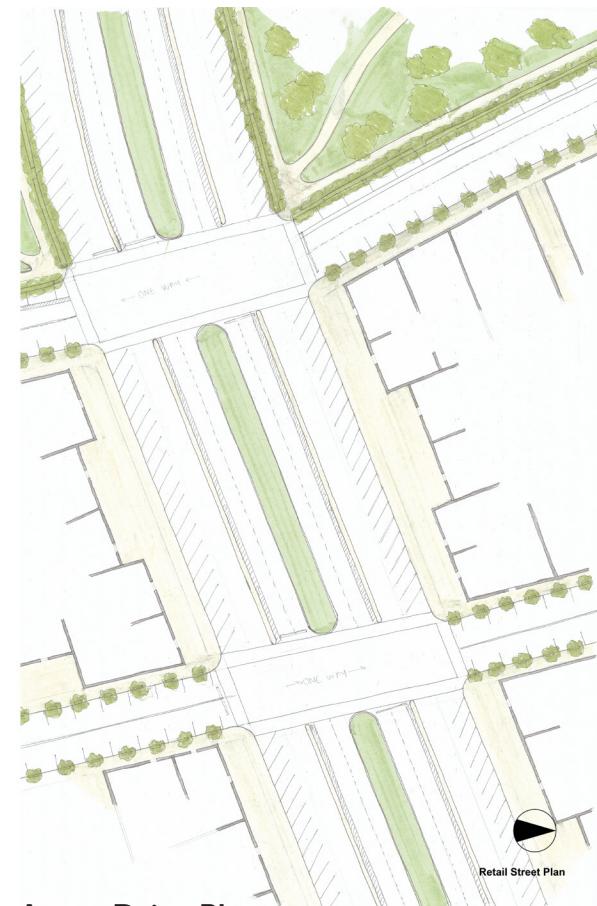
Locator Plan



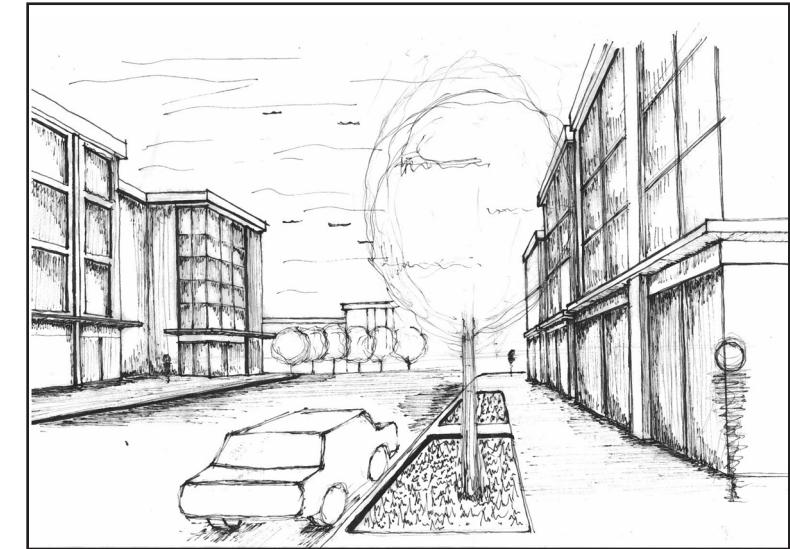
Parkway Street Section



A: Parkway Section and Plan



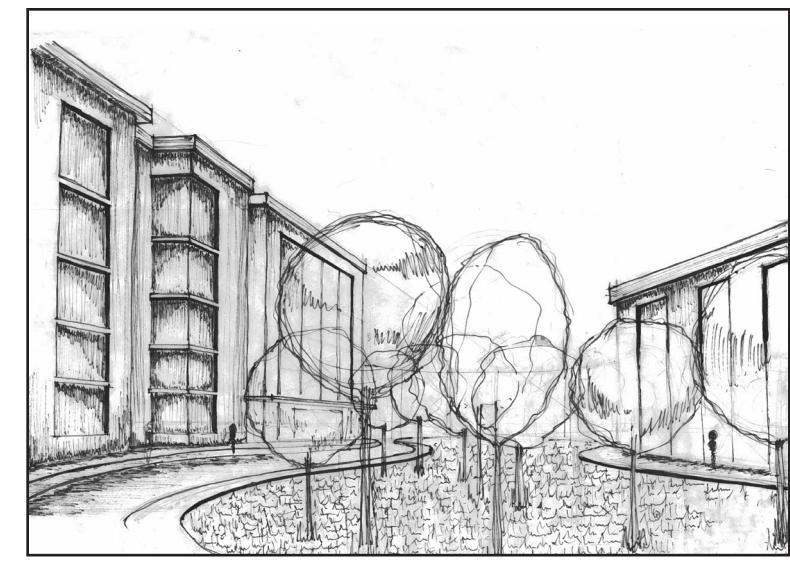
B: Arena Drive Plan



I: View along Arena Drive



2: View along Secondary Street



3: Walking in Ribbon Park



Aerial View Looking South

