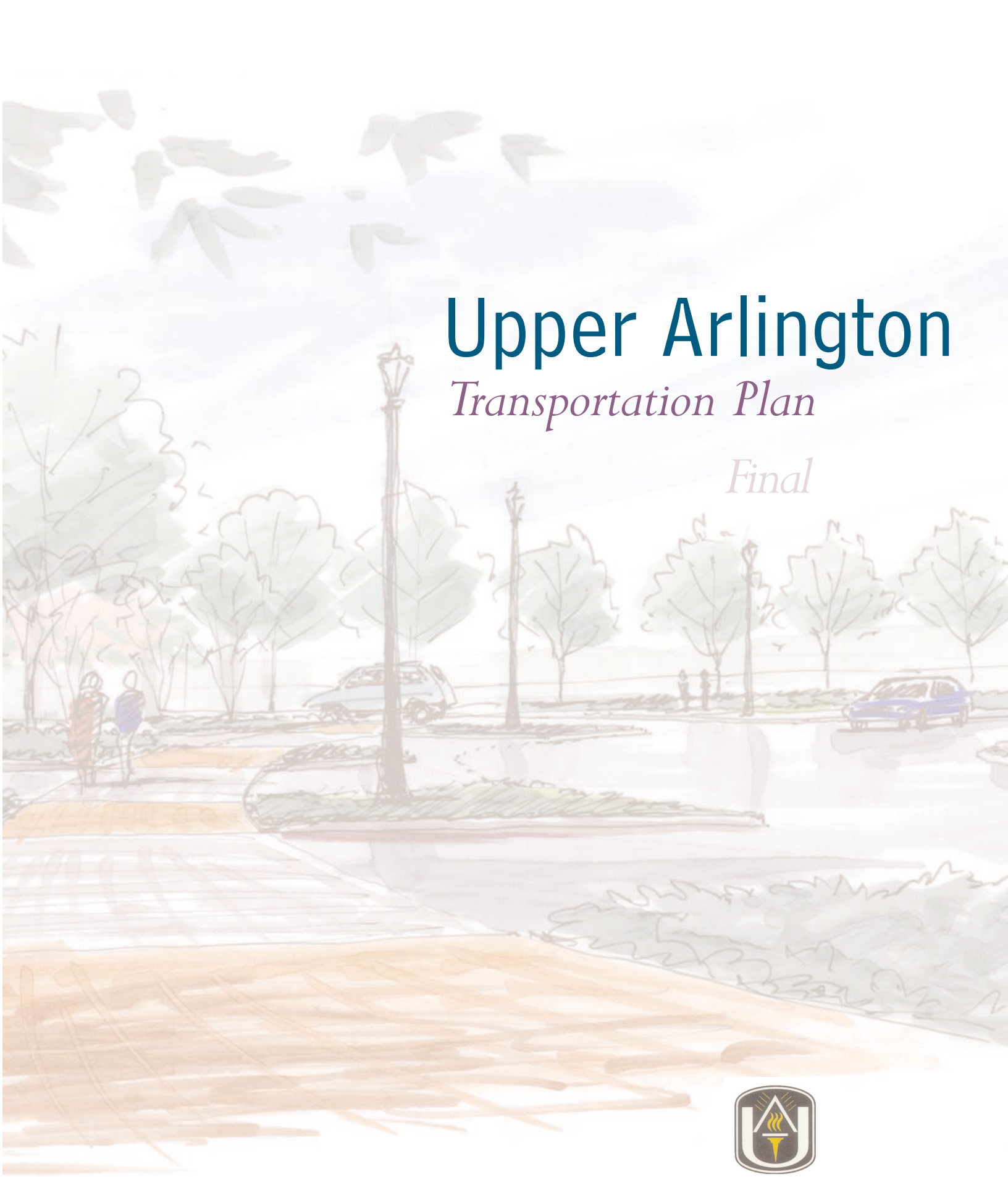

Upper Arlington

Transportation Plan

Final

The City of Upper Arlington, Ohio

Kimley-Horn
and Associates, Inc.

June 2002

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Table of Contents

APPENDICES

FIGURES

Chapter 1

Introduction and Vision

THE PAST

The last time the thoroughfare plan for Upper Arlington was updated and adopted was 1978, over 23 years ago! Building on a previous plan completed in 1962, the 1978 *Major Thoroughfare Plan for the City of Upper Arlington* focused on roads, with a small consolation given to the development of a bikeway system.

Unhealthy Trends

People today drive more often, make longer trips, and own more vehicles than ever before. In 1969, households made an average of 3.83 trips per day, in 1995 that number rose to 6.36 trips per day, an increase of 2½ trips per household or 66%[1]. This is despite the fact that average household size has decreased from 3.16 to 2.63 persons per household since 1969. More car trips being made by fewer people, not an encouraging trend. It is time for a change!

[1] Source: *1995 Nationwide Personal Transportation Survey*, Office of Policy Information, United States Department of Transportation (USDOT), Federal Highway Administration (FHWA)

Street Planning and Transportation Vision Charrette

Community Involvement

Transportation planning has become a more inclusive process that builds on strong citizen involvement. Historically, transportation planners did not think that the public would either be interested in or understand long-term planning studies and issues.

Community involvement has an integral part of the Upper Arlington Transportation Plan. A visioning and design charrette was held from August 28–30, 2001. Over 200 citizens, elected officials, and City staff participated in the charrette. Public comment was recorded and preliminary objectives for the two studied corridors, Lane Avenue and Tremont Road, were drafted.

The success of the visioning and design charrette is evidence of the fact that citizens are interested, knowledgeable, and of great value in long-range planning. Citizens have an intimate

knowledge of the places where they live and travel and the problems they encounter along the way.

The events of the charrette were focused on Lane Avenue and Tremont Road; however, the Transportation Plan encompasses the City's transportation system as a whole.

VISION AND OBJECTIVES

A vision statement that guided overall development of the plan was developed during the charrette:

> "Traffic in the corridors will be calmed to foster a relaxed, accessible, pedestrian-friendly, outdoor-oriented City."

The following are objectives that were developed by citizens during the charrette.

- Slow the traffic
- Divert cut-through traffic to perimeter streets
- Build safe crosswalks
- Build sidewalks and bikeways
- Plant more street trees
- Encourage redevelopment
- Think in terms of a 100-year vision for Upper Arlington's transportation system

A Transportation Paradox
(by Ian Lockwood)

Upper Arlington is an established community that is home to good schools, numerous parks, and quiet residential neighborhoods; but with limited shopping opportunities.

> "Businesses thrive in most communities, but renovations seem to hold a key in Arlington. It is nice to live and shop and work in a community where people have pride in the place where they do business."
>
> — Lynne Brown, History of Upper Arlington, 2nd Edition, 1988

With the desire to increase the City's tax base while also providing the community with development to be proud of, Upper Arlington underwent an extensive master planning process to "Renew the Vision" for community growth and development in the City. The Transportation Plan recommends enhancements that will be assets to the community in much the same way that the Master Plan recommends development to achieve that end.

STRATEGIC APPROACH

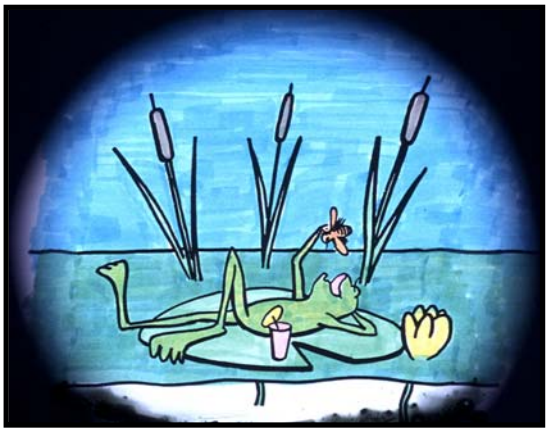
> "The poetry of engineering, which required both imagination to conceive and skill to execute, was nowhere more in evidence than in America, where it was the most needed. In England and Europe, after George Stephenson launched the first locomotive in 1829, little of significance in design change took place for the next thirty years. In America nearly everything did, because of the contempt for authority among American engineers who invented new ways to deal with old problems regardless of precedent."
>
> — Stephen Ambrose, 2000, "Nothing Like it in the World," *A History of the Men Who Built the Transcontinental Railway*

Applied to Upper Arlington in the 21st Century, our "old problem" is how to deal with traffic. The "new way to deal with [the] old problem" is the theme of this plan.

The philosophical basis for our "new way to deal with [the] old problem" is in the choice of indicator species. It is common for environmental scientists to rely on the study of what are termed indicator species to determine the health of the natural environment. For years, transportation engineers and planners also have studied indicator species, but tragically, the wrong species. Planners and engineers have been using the car as their indicator species, when they should have been studying the pedestrian. The Upper Arlington Transportation Plan presents a renewed vision for the City's transportation system that is stated in terms of the movement of people instead of the movement of vehicles.

With scarce public funds it is critical to maximize the utility of our existing transportation system. Part of this maximization is providing space for people who choose to walk and bicycle instead of drive.

The study area for the Plan is the city limits for Upper Arlington that reach from Henderson Road on the north to Fifth Avenue on the south, and from Riverside Drive on the west to North Star Road and Kenny Road on the east.



Healthy Indicator Species in Environmental Science
(by Ian Lockwood)

The Plan represents an intense one-year process that involved citizens from throughout the community working with a team of transportation professionals. It begins with the basis of understanding existing conditions and progresses to make recommendations and plans for implementation. Not to be forgotten however, is the role that strong public involvement played throughout the development of this Plan. Monthly meetings and a visioning and design

charrette were held as a part of the planning process to involve community stakeholders.

With an understanding of past and present planning efforts, *The Upper Arlington Transportation Plan* is presented.

Transportation Plan Study Area

Chapter 2

Existing Conditions

SR 315 Near Henderson Road

INTRODUCTION

The City of Upper Arlington (the City) is located inside the I-270 beltway of metropolitan Columbus, Ohio. Among the City's many positive attributes are attractive residential neighborhoods, tree-lined streets, and great schools and parks. The City has little traffic congestion attributable to a good framework of interconnected streets that distribute the burden of traffic over multiple streets within its 10 square miles.

As a community that is primarily built-out, increases in traffic may come from realization of the Master Plan goals for revitalizing commercial centers in Upper Arlington, as well as increased levels of development in neighboring communities that may generate traffic passing through Upper Arlington on its way to Ohio State University and downtown Columbus.

The purpose of evaluating the existing transportation system is to understand what must be fixed today. Community profile data described in this chapter include the following:

- Demographics
- Employment
- Corridors and Activity Centers
- Regional Access
- Minor Arterials and Collector Streets
- Congested Locations
- Intersections experiencing the Most Crashes

Population

Between 1990 and 1999, according to the United States Census Bureau, Upper Arlington's population decreased 1.7 percent from 34,292 to 33,686, a difference of about 600 people. During this same period, population in the Columbus Metropolitan Area increased by 10.7 percent from 1,345,460 to 1,489,487, a difference of about 144,000 people.

Employment

According to the U.S. Bureau of Labor Statistics and Real Estate Center at Texas A&M University, between 1990 and 2000, total employment in Upper Arlington increased 14.4 percent from 17,629 to 20,179, an increase of more than 2,500 jobs. Throughout the decade of the 1990's, Upper Arlington's unemployment rate remained well below the national average, never rising above two percent of the population.

During this same period, employment in the Columbus Metropolitan Area increased 14.4 percent from 337,243 to 386,107, an increase of more than 48,000 jobs.

The City has a stated desire to attract more jobs to the community. By creating a larger employment base in Upper Arlington, local job opportunities as well as tax revenue will increase. This will have a stabilizing affect on property tax rates.

Transportation Corridors and Activity Centers

Transportation is primarily focused on corridors and within activity centers. As it relates to a community's development (land use) plan, centers and corridors are the links between home, school, job, shopping, social, and recreational destinations. The extent to which these origins and destinations are blended into multi-purpose activity centers will have dramatic effects not only on the ability for people to choose whether to walk, stroll, bike, drive or ride a bus, but more importantly on how they perceive their community to be "livable."

For example in cul-de-sac neighborhoods without transportation options other than driving, residents often feel trapped into functioning as chauffeurs for basic family travel. On the other hand, residents of neighborhoods with sidewalks, bikeways and interconnected streets leading to nearby activity centers are often satisfied with their community.

Pedestrian on Lane Avenue

The City on Foot

Pedestrian, defined as *"undistinguished, ordinary,"* relates to the more common definition that travel by foot should be routine or ordinary. The fact that travel by foot in Upper Arlington is routinely possible underscores the livability of the community. However, much needs to be done to fulfill the City's Master Plan for completing an interconnected network of sidewalks to serve *all* ordinary travel between home, school, job, etc.

Expansion of the sidewalk plan is envisioned as a catalyst for revitalizing the City's commercial and town centers. Travel by foot is possible when five feet of concrete slab is poured, one end upon another, until you reach a destination. Travel by foot en masse is achieved when walkways snuggle up next to

interesting building facades, provide shade and weather protection, minimize inconveniences, and maximize safety from traffic. Imagine the possibilities if every school child in Upper Arlington could walk home from the store with an ice cream cone for their younger sibling before it melts.

Cyclist on a Multi-Use Path in UA

THE CITY ON BIKE

Grade school youth can pedal a fair distance at 10 mph on a bike. Destinations within a five-mile radius are achievable for normal citizens. **Figure 2.1** illustrates the MORPC plan for bikeways in Upper Arlington.

Existing bikeways include the top-rated bike path along the east side of the Olentangy River, the bike path through the field between North Star Road and Kenny Road, and a designated bike route along McCoy Road between Riverside Drive and the Olentangy River path. Implementation of the MORPC bike plan must be accelerated along with creative space-adaptations of collector streets and some minor arterials to augment the sparse bikeway plan.

TAKE THE BUS

Transit riders are defined in two groups—captive and choice. "Transit-captive" riders use transit because they must, due to lack of access to a personal vehicle or because of a physical challenge. "Transit-choice" riders, on the other hand, leave their vehicle at home to use their travel time more wisely, and perhaps to spare themselves operational and parking costs.

One fallacy in civic debate is to think that public transportation is a solution to traffic congestion. It's contribution is to offer travelers a reasonable alternative to driving, to offer a choice! Another fallacy is that transit should "pay for itself" through fare box collections. Only one transit system in the world pays for itself yet public transportation has a vital role in serving the transit-captive if not the transit-choice rider.

The Central Ohio Transit Authority (COTA) is a six-county public agency. Upper Arlington is represented on the Board of Trustees in 2001 by Bernard Scanlon. COTA provides 18 million rides a year with an annual budget of $72.8 million. Bus service and budget increases are envisioned by COTA to streamline routes throughout its service area and expand service to outlying areas such as Tuttle, Dublin, Polaris and Easton.

Strategic choices face the City of Upper Arlington relative to public transportation: whether to realize and capitalize on the asset that COTA provides in the community, or stand-by as service and assets are re-deployed to the suburbs.


Upper Arlington Transportation Plan
Existing Bicycle Plan
Figure 2.1
HENDERSON RD
SAWMILL RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
CHARTWELL RD
LANE RD
COACH RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
KIOKA AV
MOUNTVIEW RD
REED RD
FISHINGER RD
REDDING RD
TREMONT RD
NOTTINGHAM RD
RIDGECLIFF RD
ZOLLINGER RD
LEEDS RD
ASBURY DR
NORTHWEST BLVD
NORTH STAR RD
RIDGEVIEW RD
NORTHAM RD
COVENTRY RD
ANDOVER RD
LANE AV
CHARING RD
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV
315
Legend
Bikeways
Existing
MORPC Planned
City Limits
N
0
0.25
0.5
0.75
1 Miles
Approximate Scale

A Transportation Paradox
(by Ian Lockwood)

TRANSPORTATION AND SCHOOLS

The cartoon illustrates an all too common occurrence. Parents, fearful of letting their children walk to school because of traffic, add more traffic to streets by driving their children to school (thus, furthering the problem). Upper Arlington has neighborhood schools and does not bus children to school. The result of neighborhood schools and parents unwilling to let their children walk to school has led to traffic issues on streets adjacent to schools in both morning and afternoon hours. The most apparent problem is caused when parents line-up to drop-off or pick-up (often well before dismissal) their children at the front door, at times blocking traffic on the adjacent street.

In reality, very few children should need to be driven to school since the majority live within a 10-minute walk or a short bike ride (if facilities existed) of their neighborhood school.

The one public school in Upper Arlington that has a legitimate reason for having significant drop-off and pick-up traffic is the Upper Arlington High School. As UA's only high school, not every student is within easy walking or bicycling distance, resulting in the need for some kind of transportation to and from school. While COTA has transit service that runs adjacent to the school, it is not well utilized by students and teachers. The majority of students ride in a personal vehicle to and from school. What results is an inadequate number of parking spaces and significant drop-off and pick-up traffic.

SENIOR TRANSPORTATION

In 1998, the Upper Arlington Commission on Aging prepared a report entitled "Getting Around—A Transportation Guide to Your Community for Older Adults and Their Families." The report presents a directory of 31 transportation service providers for general-purpose needs as well as medical purposes. With about 25 percent of Upper Arlington's population considered "senior," these supplemental transportation services provide important links for older adults in the community.

REGIONAL ACCESS

Regional access to Upper Arlington is provided by four important freeways and principal arterial roadways, as shown in **Figure 2.2**. These are SR 315, I-70, I-270 (Beltway) and US 33 (Riverside Drive).

SR 315, located just east of the City, serves north-south travel with local interchanges at Kinnear Road, Lane Avenue, Ackerman Road, West North Broadway, and Henderson Road. Travel lanes were recently added on SR 315, easing commuter traffic somewhat.

I-270 is the metropolitan area beltway, located to the west and north of Upper Arlington. Primary points of access for Upper Arlington on this facility are located at Roberts Road and Cemetery Road to the west and on Sawmill Road to the north.

I-70 serves east-west travel and is located south of Upper Arlington. Interchanges that serve the City are located at Hague Avenue and Wilson Road. All three are multi-lane with controlled access limited to interchanges.

US 33 (Riverside Drive) together with the Scioto River form the western edge of Upper Arlington. With much less traffic than SR 315, I-70 or I-270, the width and cross-section of US 33 varies as it winds along the edge of the community. This roadway serves conflicting objectives of north-south commuter traffic while at the same time providing direct access to adjacent businesses, residences, and parks. While posted for a 45-mph maximum speed, actual travel speeds range from excess of the speed limit during off-peak times to a slow crawl during commute hours. The Ohio Department of Transportation (ODOT) owns, operates, and maintains US 33, except for a section north of Cambridge Boulevard south to the railroad bridge.

Streets that are owned, operated, and maintained by the City of Upper Arlington are designated as minor arterials, collectors, or local streets, as shown in **Figure 2.2**. The street designations indicate a hierarchy, to distinguish between those that function primarily as links between different parts of Upper Arlington (minor arterials) and those that function primarily for access to individual properties (local streets). Collector streets serve mobility and access functions.

MINOR ARTERIALS

Minor arterial streets are characterized by multiple travel lanes, 35-mph speed limits, traffic signals at major intersections, and adjacent commercial development. Streets that are currently designated as minor arterials in Upper Arlington include:

- Henderson Road
- Reed Road
- Kenny Road
- North Broadway
- Northwest Boulevard
- Fishinger Road
- Lane Avenue
- Fifth Avenue
- Tremont Road (Kenny to Fishinger)

Some of these streets provide well-traveled connections to neighboring communities. For example, Fishinger

Road crosses the Scioto River. Henderson Road, Reed Road, Kenny Road, Northwest Boulevard, and Fifth Avenue lead into Columbus, while Lane Avenue is a direct route to The Ohio State University campus.

COLLECTOR STREETS

The City of Upper Arlington and the Mid-Ohio Regional Planning Commission (MORPC) have each adopted a system of designated collector streets in Upper Arlington, as shown in **Figure 2.2**. The City recognizes all of the MORPC-designated collector streets and has supplemented them with additional streets, primarily for the purpose of identifying emergency snow removal routes. MORPC designated collector streets in Upper Arlington include:

- Arlington Avenue
- Cambridge Boulevard
- King Avenue
- Lane Road
- McCoy Road
- North Star Road
- Redding Road
- Tremont Road
- Zollinger Road

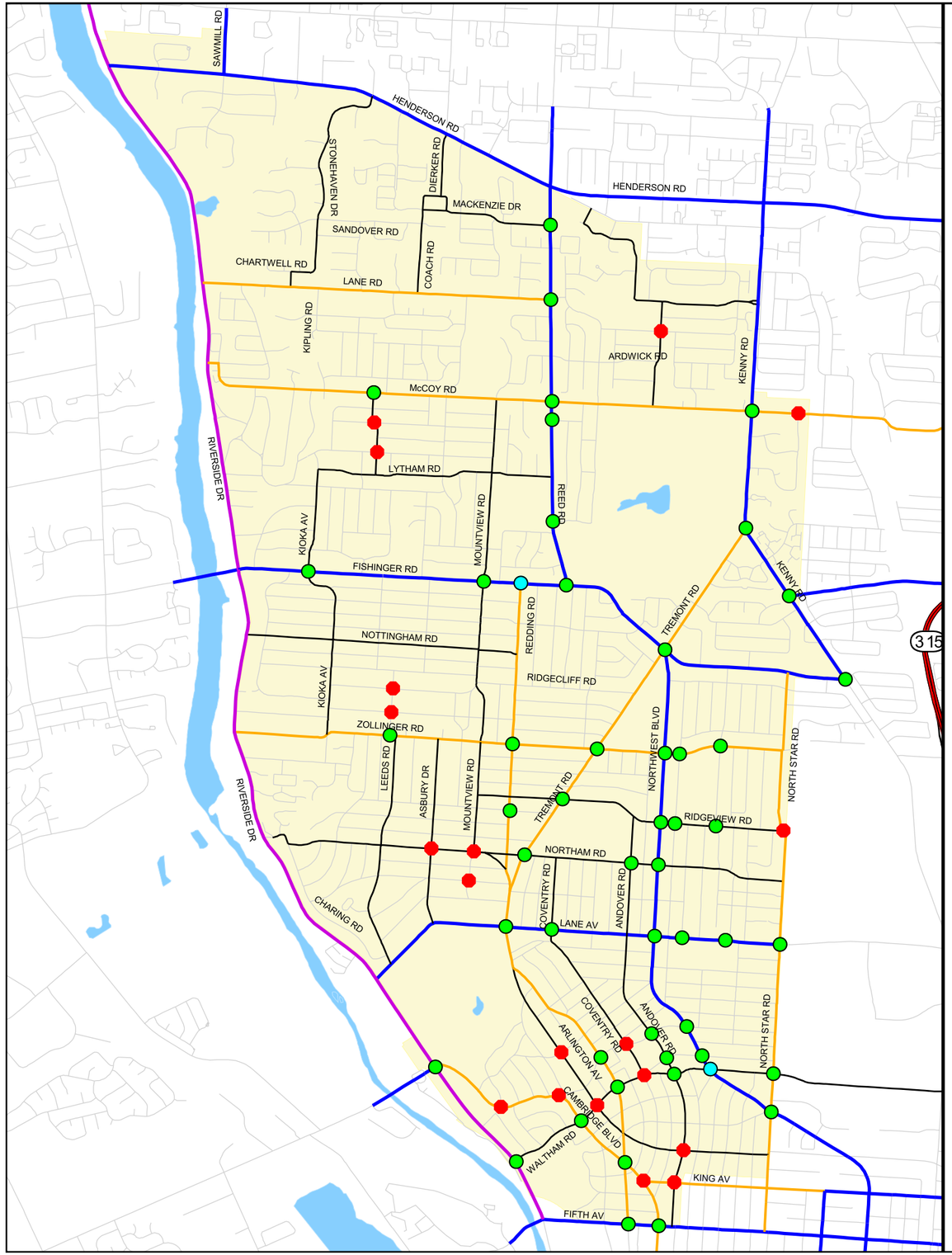
Collector streets serve local travel and connections between different parts of the City. In general, collector streets have one travel lane in each direction with separate left-turn lanes at major intersections. The posted speed limit ranges from 25 to 35 mph. Many have sidewalks and some have signalized intersections. Collector streets tend to have a wide range of physical characteristics and neighborhood appeal, but they all share one characteristic—providing connections between neighborhoods throughout the City.

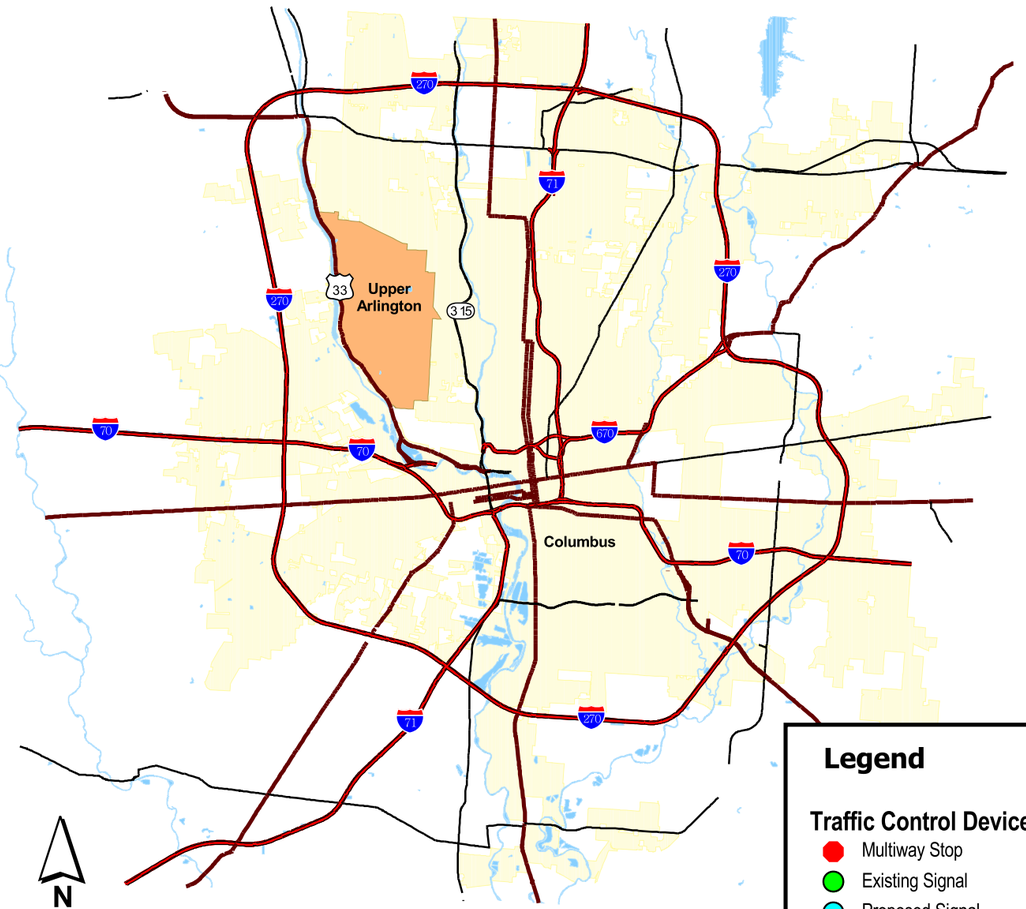
A profile of each corridor is presented in **Appendix A**. Included for each corridor is a photograph, information on traffic volumes, and relevant roadway characteristics.

Upper Arlington Transportation Plan

Existing Thoroughfare Plan

Figure 2.2





Legend

Traffic Control Devices

- Multiway Stop
- Existing Signal
- Proposed Signal

Streets

- Access-Controlled Roadways
- Primary Arterials
- Minor Arterials
- MORPC Designated Collectors
- City Designated Collectors

City Limits

N

0 0.25 0.5 0.75 1 Miles

Approximate Scale

CORRIDOR OPERATIONS

The combination of moderate growth and an interconnected framework of streets has saved Upper Arlington from the frustration of suburban traffic congestion. While every community defines congestion to fit local tolerances, the national standard is averaging under 40 mph on a freeway or principal arterial (e.g. SR 33). Corridor travel speed is of less concern on collector streets.

Average travel speeds along corridors in Upper Arlington were measured in 2001 by study team members driving and recording speed and delay during morning and afternoon commute hours. Results do not indicate a consistent difference in speed between the peak and non-peak direction of travel. Results of travel speed studies conducted are presented in **Table 2.1**.

Table 2.1 – Corridor Speed Summary

Corridor	Average Speed Range
Cambridge Boulevard	15 – 20 mph
Lane Avenue Fishinger Road King Avenue Fifth Avenue	20 – 25 mph
Zollinger Road McCoy Road Lane Road Henderson Road	25 – 30 mph

These results do not reflect the top speeds that some motorists choose, rather an average of three trips in each direction within the city limits travelling with the prevailing speed of other vehicles, using all lanes.

Delays occurred primarily at signalized intersections. Often the same intersections created delays on all three trips, suggesting that traffic signals are not synchronized.

Figure 2.3 illustrates average daily traffic (ADT) volumes through Upper Arlington and its immediate surroundings. Corridors that displayed noticeably higher ADT's were sections of the following:

- Riverside Drive
- Lane Avenue
- Fishinger Road
- Fifth Avenue
- Henderson Road

INTERSECTION LEVELS OF SERVICE

Traffic safety and congestion concerns are often most acute at intersections. For this reason, the *Upper Arlington Transportation Plan* includes a discussion of key intersections.

Studied intersections, listed in **Table 2.2,** include a level of service (LOS) rating that is used to describe operating conditions for motorists. As with school grades, LOS A denotes good performance with little or no delay. Failing intersections where the average delay getting through the intersection exceeds 85 seconds per vehicle are rated LOS F. Upper Arlington roadways operating at LOS D or better are considered acceptable from a motorist's perspective.

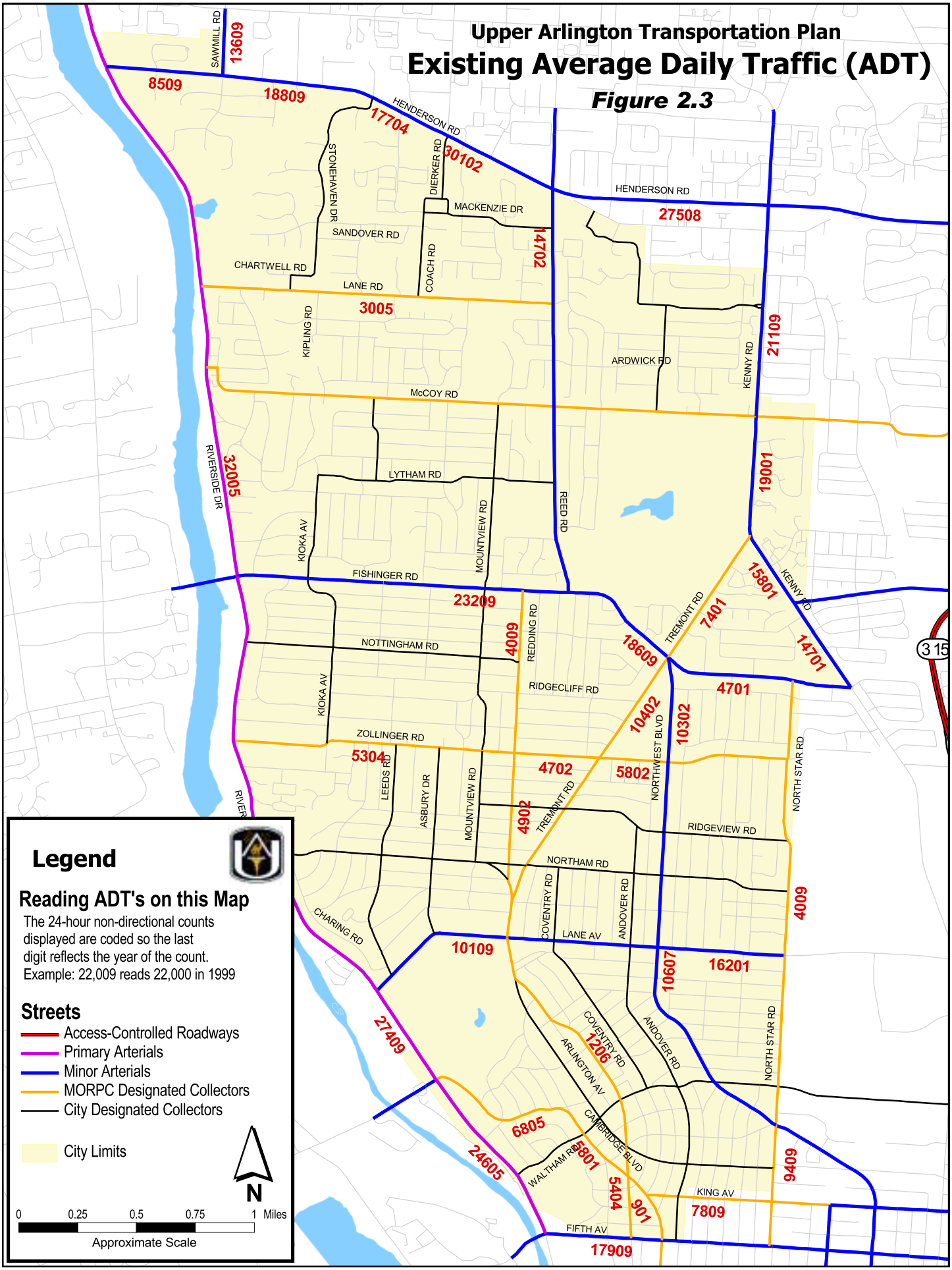

Upper Arlington Transportation Plan
Existing Average Daily Traffic (ADT)
Figure 2.3
SAWMILL RD
13909
8509
18809
HENDERSON RD
17704
30102
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
HENDERSON RD
27508
SANDOVER RD
14702
CHARTWELL RD
COACH RD
LANE RD
3005
KIPLING RD
ARDWICK RD
KENNY RD
21109
McCOY RD
RIVERSIDE DR
32005
LYTHAM RD
REED RD
19001
KIOKA AV
MOUNTVIEW RD
FISHINGER RD
15801
KENNY RD
23209
TREMONT RD
7401
REDDING RD
4009
18609
14701
NOTTINGHAM RD
RIDGECLIFF RD
4701
KIOKA AV
10402
10302
ZOLLINGER RD
5304
4702
5802
NORTHWEST BLVD
NORTH STAR RD
LEEDS RD
ASBURY DR
MOUNTVIEW RD
4902
TREMONT RD
RIDGEVIEW RD
NORTHAM RD
COVENTRY RD
ANDOVER RD
4009
CHARING RD
LANE AV
10109
16201
10607
27409
COVENTRY RD
ANDOVER RD
1206
ARLINGTON AV
NORTH STAR RD
6805
CAMBRIDGE BLVD
24605
WALTHAM RD
5801
5404
9409
KING AV
901
7809
FIFTH AV
17909
Legend
Reading ADT's on this Map
The 24-hour non-directional counts displayed are coded so the last digit reflects the year of the count.
Example: 22,009 reads 22,000 in 1999
Streets
Access-Controlled Roadways
Primary Arterials
Minor Arterials
MORPC Designated Collectors
City Designated Collectors
City Limits
N
0 0.25 0.5 0.75 1 Miles
Approximate Scale

Table 2.2 – Study Intersection Levels of Service (LOS)

Intersection	PM Peak Hour Level of Service
Henderson Road/Riverside Drive	F(1)
Henderson Road/Sawmill Road	C
Henderson Road/Reed Road	F(2)
Tremont Road/Fishinger Road/Northwest Boulevard (Five Points)	D
Tremont Road/Zollinger Road	B
Tremont Road/Ridgeview Road	B
Northwest Boulevard/Zollinger Road	C
Lane Avenue/Northwest Boulevard	C
Lane Avenue/North Star Road	B

1. Counts taken in May 1998
2. Counts taken in November 1997

All other counts taken in August 2000.

Kimley-Horn and Associates, 2001

Level of Service Key

- A, B, C = Minimal Delay
- D = Maximum Acceptable Delay
- E = Approaching Capacity (unstable)
- F = Demand Exceeds Capacity, stop-and-go conditions

Several factors are considered in determining LOS at the listed intersections—the number of vehicles traveling through or turning, the number of lanes for each turning movement, traffic signal phases, signal "green time" allocation, and factors related to bus stops and pedestrian crossings.

CONGESTED INTERSECTIONS

The intersections of Henderson Road/Riverside Drive, Henderson Road/Reed Road, and Five Points experience unacceptable vehicle delays on one or more approaches during the PM peak hour.

Henderson Road/Riverside Drive—This intersection was shown to operate at LOS F during the weekday PM peak hour. Henderson Road has numerous cross sections from where it enters Upper Arlington on the east to where it terminates at Riverside Drive on the west. In the vicinity of Riverside Drive, Henderson Road has a two-lane undivided cross section with no provision for exclusive turn lanes at Riverside Drive. Riverside Drive is also a two-lane undivided roadway in the vicinity of Henderson Road, however its cross section varies between single and multiple travel lanes as well as a divided and undivided cross section north and south of Henderson Road.

Ultimately, this intersection would be best served by closing gaps in the multi-lane cross section of Riverside Drive, which would create a multi-lane divided roadway throughout the study area and also improve Henderson Road by providing sufficient length left-and right-turn lanes. However, it is important to understand the time and cost implications of such a widening. In the shorter term, providing adequate exclusive left-and right-turn lanes on westbound Henderson Road, and providing an exclusive northbound right-turn lane on Riverside Drive would be sufficient to improve PM peak hour intersection operations to acceptable levels of service.

Henderson Road/Reed Road—This intersection was shown to operate at LOS F during the weekday PM peak hour. Henderson Road has a four-lane median divided cross section east of Reed Road and a five-lane cross section west of Reed Road. Reed Road has a

four-lane undivided cross section south of Henderson Road and a three-lane cross section for a short distance north of Henderson Road.

The majority of the delay at this intersection is incurred on Reed Road. Henderson Road is emphasized as the primary street at the existing traffic signal, and thus receives a larger share of the signal's "green time" to serve consistently higher traffic volumes. To minimize the effects of this and improve overall operations at this intersection, it will be necessary to provide an additional exclusive left-turn lane in the northbound and southbound directions on Reed Road as well as exclusive right-turn lanes eastbound and westbound on Henderson Road.

Five Points (Tremont Road/Fishinger Road/Northwest Boulevard)—Currently functioning at LOS D in the PM peak hour, it is nearing its practical capacity. With revitalization at Kingsdale, traffic is likely to increase and intersection operations to worsen as a result.

CRASH HISTORY

Statistics provided by the Upper Arlington Police Department and the Ohio Department of Highway Safety show that between 1997 and 1999, the Upper Arlington intersection with the highest accident frequency (calculated by dividing the number of accidents by the number of years studied) was Riverside Drive/Trabue Road where the average was 15 per year for the three years studied. In 3 years, there were 44 accidents involving 20 injured persons.

A listing of the top 10 Upper Arlington intersections ranked by accident frequency is shown in **Table 2.3**. The table ranks intersections by accident frequency between 1997 and 1999. In general, intersections with higher accident rates also had a greater degree of congestion and higher traffic volumes because there is a direct relationship between traffic congestion and accident rates. This relationship provides impetus to the pursuit of adequate funding for transportation projects that minimize traffic congestion.

Table 2.3
Intersections Ranked by Crash Frequency

Rank	Location	Accident Frequency (Acc/Year)
1	Riverside Drive/Trabue Road	15
2	Fishinger Road/Tremont Road/Northwest Boulevard	12
3	McCoy Road/Reed Road	11
4	Lane Avenue/Northwest Boulevard	11
5	Fishinger Road/Mountview Road	10
6	Fishinger Road/Reed Road	9
7	Lane Avenue/North Star Road	6
8	Fishinger Road/Kenny Road	6
9	Fishinger Road/Kioka Avenue	6
10	Northam Road/Northwest Boulevard	6

Source: Ohio Department of Highway Safety

While ranking intersections by accident frequency is one method of identifying high accident locations, it is also important to consider accident rates. By applying an exposure which takes into account the volume of vehicles in the time surveyed, a rate (number of accidents per 100 million entering vehicles) can be calculated. Using these rates, new locations can be identified as

high accident locations. **Table 2.4** indicates the highest accident rate intersections in Upper Arlington.

Table 2.4
Intersections Ranked by Crash Rate

Rank	Location	Accident Rate (Acc/100 MEV)
1	Lane Avenue/Northwest Boulevard	284
2	McCoy Road/Reed Road	205
3	Fishinger Road/Tremont Road/Northwest Boulevard	176
4	Riverside Drive/Trabue Road	146
5	Fishinger Road/Reed Road	137
6	Fishinger Road/Mountview Road	127
7	Fishinger Road/Kenny Road	104
8	Lane Avenue/North Star Road	78
9	Fishinger Road/Kioka Avenue	69

100 MEV = 100 Million Entering Vehicles (the intersection)

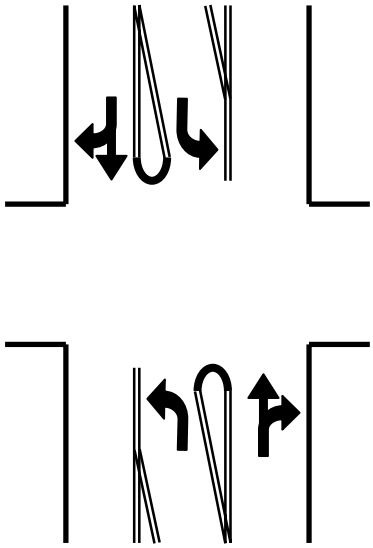
Comparing **Table 2.3** with **Table 2.4**, the top four high frequency intersections are also the top four crash rate intersections, which is a good indication of locations where appropriate countermeasures to mitigate accident trends need to be considered.

Riverside Drive/Trabue Road—This signalized intersection exhibited the highest accident frequency and also had the fourth highest accident rate of intersections surveyed. This major intersection is one of the many important crossings over the Scioto River and serves high volumes of traffic on Riverside Drive and Trabue Road. The most common crash type at this intersection was found to be the angle-type collision, followed by the rear-end collision. Angle crashes accounted for 23 of the 44 crashes (52%), while there were 13 rear-end crashes (30%) in the three years studied.

Angle crashes often the result from drivers not judging oncoming traffic speed and distance appropriately and turning in front of or into an oncoming vehicle. The are often prevalent at intersections that have non-standard geometry or protected-permitted left-turn phasing. Protected-permitted left-turn phasing allocates a portion of an approach's "green-time" for the exclusive movement of left-turning vehicles and that traffic to run concurrently with through traffic, where left-turn traffic yields to oncoming through vehicles. Rear-end crashes tend to occur frequently at locations that experience periods of congestion. They are often the result of sudden stops and inadequate following distance, two common occurrences during periods of traffic congestion.

In general, this intersection has good geometry (right angles), however, it also has protected-permitted left-turn phasing on multiple approaches. Given the high through volumes on Riverside Drive and high volumes travelling to and from Trabue Road, drivers who experience a delay while waiting for an opening to make a left turn are likely to become impatient and turn into or in front of oncoming vehicles. The simplest countermeasure to mitigate this crash type would be to limit left-turn phases to protected only, however, this would reduce overall intersection capacity by requiring a larger portion of signal cycle

time to be devoted to serving left-turn phases. Another, less conventional countermeasure could be to reconstruct the Riverside Drive left-turn bays to provide an offset to increase sight distance for left-turning vehicles.



Intersection with Offset Left Turn Lanes

Fishinger Road/Tremont Road/ Northwest Boulevard—This busy signalized intersection has numerous operational challenges because of its geometric configuration, complex signal phasing, and high traffic volumes. With five legs, the number of points of conflict increases dramatically, thereby increasing the chances for a crash to occur. Accommodating every traffic movement, signal phasing, lane striping, and individual movement paths is complex and often confusing. The most common crash type at this intersection was the angle-type collision, (52% of all crashes) followed by the rear-end collision (33% of all crashes). Of the represented 19 angle collisions, 16 crashes were defined as property damage only (PDO) and three crashes involved injuries or fatalities. Rear end collisions contributed 12 crashes with eight classified as PDO and four as injury/fatality.

At this location there is no single countermeasure that will mitigate the two prevalent accident types. While restricting left-turn phases to protected only would certainly reduce the chances for angle collisions, it would also reduce overall intersection capacity and increase left-turn queues and delay. With existing levels of congestion and efficient signal phasing and timing, no conventional countermeasures are applicable to decrease the frequency of rear-end crashes.

As a potential solution to mitigating both existing congestion and accidents, consideration should be given to the installation of a modern roundabout. As reported by the Insurance Institute of Highway Safety, roundabouts installed throughout the United States have proven capable of handling significant traffic volumes while drastically reducing accident frequency and severity.

McCoy Road/Reed Road—This signalized intersection of two, four-lane undivided roadways experienced 33 crashes in the studied time period. The most common crash type reported was the angle crash, which accounted for 24 of the 33 crashes (73% of all crashes) experienced. The rear-end crash was reported as the second most common crash, accounting for eight crashes (24% of all crashes). With permitted left-turn phasing and no exclusive left-turn lanes on any approaches to this intersection, the frequency of these two crash types is not surprising.

Between drivers crossing the path of oncoming traffic to make left-turns and drivers stopping in the left-hand travel lane to wait and make left-turns, both crash types are expected. To mitigate them, appropriate countermeasures may include restriping Reed Road and McCoy Road to three-lane sections and providing protected left-turn phasing.

Lane Avenue/Northwest Boulevard— This intersection displayed the highest crash rate and the fourth highest frequency for the three years it was studied. As with other intersections already discussed, the most common crash types experienced were angle-and rear-end crashes. Angle crashes accounted for 76% of all crashes (25 crashes) while rear-end crashes accounted for 18% of total crashes (six crashes). On both Northwest Boulevard approaches there are exclusive left-turn lanes (northbound and southbound) and the signal is currently phased to provide protected-permitted left-turn phasing for the approaches. On Lane Avenue, however, there are neither exclusive left-turn lanes nor protected left-turn phasing. With the majority of crashes occurring on Lane Avenue approaches (70%), appropriate countermeasures to mitigate the prevalent crash types would include providing exclusive left-turn lanes and protected-permitted left-turn phasing.

Chapter 3

Future Conditions

A Gateway in Upper Arlington
(Photo by Doug Godard)

MASTER PLAN

In early 2001, the Upper Arlington City Council adopted a Master Plan that embraces bold changes to the primary commercial centers including Kingsdale Shopping Center and vicinity, Tremont Shopping Center, Lane Avenue Shopping Center and the Henderson Road corridor retail areas. The primary reason for the revitalization is to achieve financial objectives for the City's fiscal status. However, revitalization also offers opportunities to create "activity" centers that are uniquely Upper Arlington. Without a location adjacent to a freeway, Upper Arlington is not competitive with newer suburban locations in attracting office spaces. To attract office as a strategy to bolster the City's financial well being, Upper Arlington must create unique pedestrian-oriented, mixed-use centers. Regardless of the form that the new centers take, an increase in traffic generation to the sites will be perceived as a negative impact by adjacent residents. Therefore, the study team crafted a set of characteristics that would encourage a unique kind of revitalization effort, one that brought shops, offices, and homes that will cater to Upper Arlington rather than to out-of-towners—activity centers that draw neighbors by building pleasant walks, safe bike rides, and convenient bus rides. It is hoped that these efforts will create a more community-friendly activity center with less of an increase in vehicular traffic than would a center built by conventional developers. These factors are considered in the following view of what the future may hold for Upper Arlington.

ALTERNATIVES

The future can be influenced by strategic choices that are made now. Three alternatives are described as:

A. "Business As Usual"
B. Conventional Suburban
C. "Traditional" Community

Since congestion is most often apparent and acute at signalized intersections, nine intersections were studied for each alternative. Additionally, mid-block sections were evaluated to determine the adequacy of roadway capacity to serve forecasted travel demand[1]. The nine studied intersections included (**Figure 3.1**):

1. Henderson Road/Riverside Drive
2. Henderson Road/Sawmill Road
3. Henderson Road/Reed Road
4. Fishinger Road/Tremont Road/Northwest Boulevard ("Five Points")
5. Tremont Road/Zollinger Road
6. Tremont Road/Ridgeview Road
7. Northwest Boulevard/Zollinger Road
8. Lane Avenue/North Star Road
9. Lane Avenue/Northwest Boulevard

MODELING AND FORECASTS

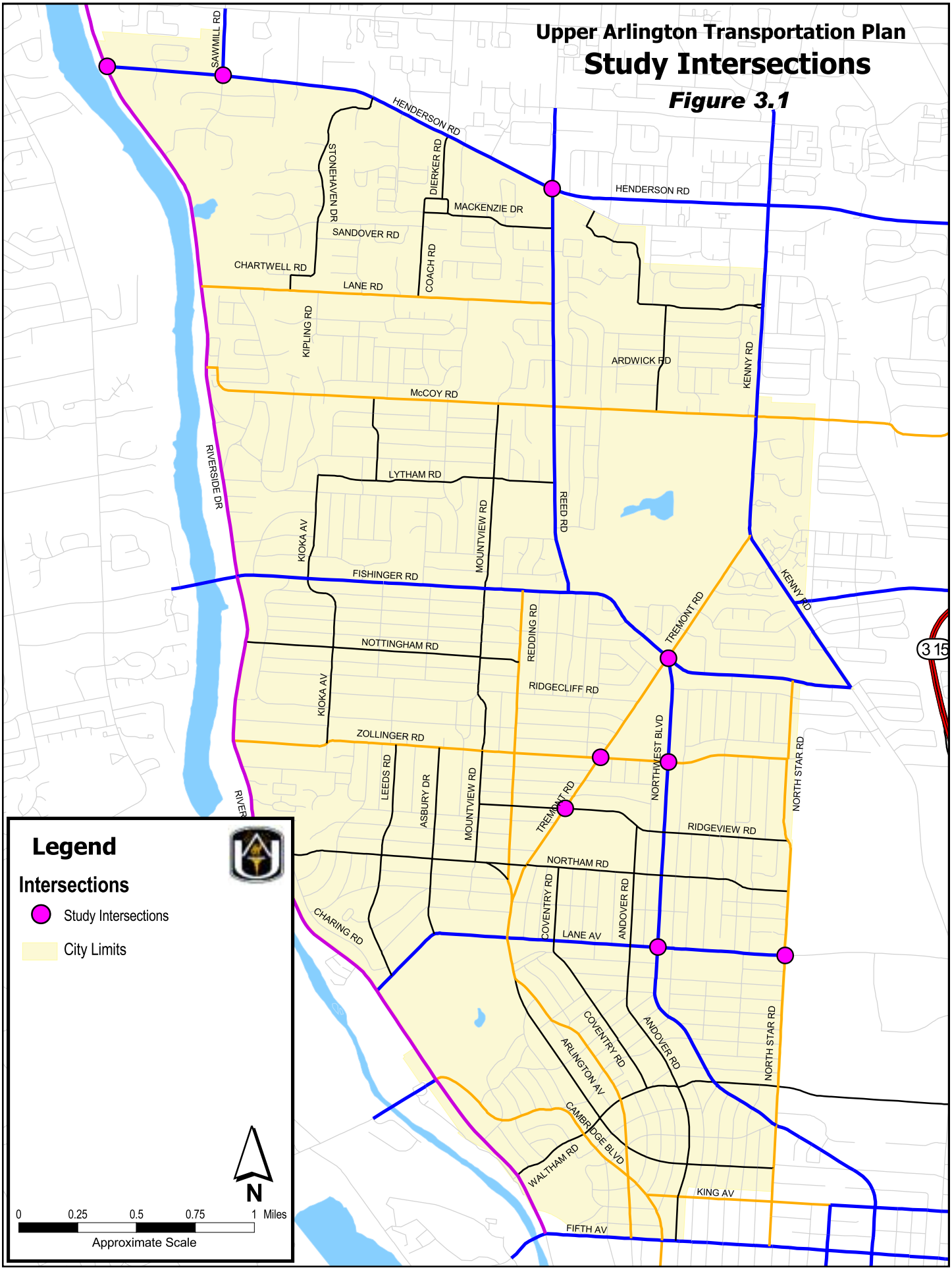
To understand future traffic growth and the underlying factors affecting that growth, MORPC was involved in a specific modeling task to generate future (2025) traffic for Upper Arlington. MORPC completed two model runs for this project—the first using the base network and the second using the base network with changes to reflect the extension of Ackerman Road.

Baseline assumptions that were used assume that population, number of dwelling units, and employment remain stable. Base 2025 traffic forecasts generated using the funded 2025 transportation network for the MORPC planning area reflected minimal traffic growth on Upper Arlington's streets.

As an alternative to the base network, an extension to Ackerman Road was modeled to study the effects that an extension would have on Upper Arlington's traffic. The extension of Ackerman Road, from Kenny Road to North Star Road, was modeled as a new link connecting to the existing terminus of Zollinger Road. The addition of this link would form of a continuous link between Riverside Drive and Kenny Road. Forecasts showed that this extension would reduce traffic volumes on Fishinger Road, helping to more evenly spread the load of east/west traffic in Upper Arlington.

Traffic volumes produced were found to be within acceptable error ranges for long range planning purposes.

[1] Source: MORPC (Mid Ohio Regional Planning Commission)


Upper Arlington Transportation Plan
Study Intersections
Figure 3.1
HENDERSON RD
SAWMILL RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
CHARTWELL RD
COACH RD
LANE RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
KIOKA AV
MOUNTVIEW RD
REED RD
FISHINGER RD
TREMONT RD
NOTTINGHAM RD
REDDING RD
RIDGECLIFF RD
ZOLLINGER RD
LEEDS RD
ASBURY DR
NORTHWEST BLVD
NORTH STAR RD
RIDGEVIEW RD
NORTHAM RD
COVENTRY RD
ANDOVER RD
LANE AV
CHARING RD
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV
315
Legend
Intersections
Study Intersections
City Limits
N
0
0.25
0.5
0.75
1 Miles
Approximate Scale

Tremont Road – Typical Upper Arlington Four-Lane Undivided Corridor with 10-to 11-foot Lanes

ALTERNATIVE A: "BUSINESS AS USUAL"

The primary focus of this alternative is to optimize existing streets without widening corridors or intersections. Recommendations for transportation network improvements are based on existing counts and MORPC forecasted future (2025) traffic volumes, reflective of traffic increases resulting from planned commercial redevelopment in key areas (Henderson Road, Kingsdale, Tremont Center, and Lane Avenue Shopping Center).

While many of the studied intersections function at acceptable levels of service during studied peak hours, several will have failing levels of service. Widening and signal phasing/timing improvements will improve operations. **Table 3.1** shows that the intersections of Henderson Road/Reed Road and Five Points would operate at unacceptable levels of service during the PM peak hour for existing and future traffic conditions for this alternative.

Mid-blocks were evaluated for this alternative using MORPC 2025 forecasts. **Figure 3.2** illustrates the results of that evaluation, showing volume-to-capacity (v/c) ratios for studied roadways in Upper Arlington. **Figure 3.2** shows graduated v/c ratios ranging from less than 0.80 (in green) to greater than 1.0 (in red). In general, v/c's of less than 0.90 indicate acceptable corridor operations (indicating that there is sufficient capacity on a roadway). However, as v/c ratios increase from this point, congestion increases. At a v/c ratio of 1.0 theoretical capacity has been reached, resulting in stop-and-go traffic and travel delays, particularly at intersections.

In this alternative the following corridors were found to be near or over-capacity.

- Fishinger Road (Reed Road to Tremont Road)
- Henderson Road (Sawmill Road to Arlington Centre Drive)
- Riverside Drive (Lane Avenue to Fifth Avenue, Lane Road to Henderson to Fishinger Road)

Wide Suburban Intersection at Five Points

ALTERNATIVE B: CONVENTIONAL SUBURBAN STRATEGY

The primary focus of this alternative is to improve the operation of Upper Arlington's transportation system by providing additional vehicle capacity at intersections and within corridors. Whereas the "Business as Usual" alternative avoided street widening, this alternative attempts to mitigate traffic by widening corridors, re-designing traffic signals (additional phases, revised times), and widening intersections. Transportation system improvements in this alternative are based on MORPC forecasted future (2025) traffic volumes, and interim year traffic volumes reflective of traffic increases resulting from planned commercial redevelopment in key areas (Henderson Road, Kingsdale, Tremont Center, and Lane Avenue).

Because of the premise on which this alternative works, "widen until there is enough roadway capacity (to serve demand)," every intersection and corridor studied can be mitigated to an acceptable level of service. A more appropriate measure to gauge this alternative would be to assess the impact that potential improvements would have on the community.

Wider streets and intersections often require the acquisition of right-of-way (above and beyond what is already owned), directly impacting citizens and businesses. More complex intersections complicate and reduce safety for pedestrians and cyclists (longer crossing distances result in increased exposure) and have the potential to confuse drivers, leading to increases in vehicle crashes and transportation costs as a whole.

The most notable roadway changes that would result from recommendations based on this alternative include:

- Widening Henderson Road to three-lanes from Riverside Drive to Arlington Centre Drive
- Widening Riverside Drive to four-lanes with medians (where appropriate) and/or left-turn lanes north of Fishinger Road
- Widening Tremont Road from Fishinger Road to Kenny Road to three northbound through lanes and two southbound through lanes
- Widening the Five Points intersection on all five approaches to have one or two additional lanes (exclusive right-turn lanes on all approaches, an additional exclusive left-turn lane on northbound Tremont Road, Fishinger Road, and Northwest Boulevard, and possibly the addition of a northbound through lane on Tremont Road)
- Widening the Henderson Road/Reed Road intersection to have exclusive right-turn lanes on Henderson Road,

dual left-turn lanes on northbound Reed Road, and an additional exclusive through lane on southbound Reed Road

- Widening the Lane Avenue/Tremont Road intersection to have an exclusive left-turn lane, an exclusive through lane, and a shared through right-turn lane on eastbound and westbound Lane Avenue

Of the notable projects listed, those that have the potential to have the most impact to their surroundings are the Tremont Road widening, the Five Points intersection widening, the widening of the Lane Avenue/Tremont Road intersection, and the widening of the Henderson Road/Reed Road intersection. Each of these projects requires the acquisition of private property and brings streets and traffic closer to homes and businesses.

ALTERNATIVE C: "TRADITIONAL" COMMUNITY

The previous two alternatives focus on efficient vehicle movement and the development of transportation systems to support vehicles. Alternative C focuses instead on efficient *people movement* and the development of a transportation system that supports a healthy community. To accomplish the goal of moving people effectively, this alternative involves re-thinking how the City's streets operate. Implementing this plan will narrow many of the City's four-lane undivided corridors to three-lane hybrid cross sections. In addition, modern roundabouts, special pedestrian crossings, and raised intersections would be constructed at selected locations.

As in the previous two alternatives, congestion is often most acute at intersections. Modern roundabouts have been found to be effective traffic control features, handling levels of traffic similar to, and in some cases higher than, equivalent signalized intersections. Furthermore, well-designed modern roundabouts have dramatically reduced the frequency and severity of vehicle crashes. Roundabouts considered in this plan should be designed to fit within available right-of-way with minimal property acquisition.

Table 3.1 shows the results of the level of service analysis for the nine studied intersections. The table shows that the narrowing of corridors, in conjunction with the installation of roundabouts and other intersection treatments, will not cause intersections that function acceptably under the other two scenarios to function worse under this scenario.

In addition to intersection analysis, mid-block sections of corridors were evaluated using MORPC projected traffic volumes for the year 2025. Much like operational trends illustrated in **Table 3.1**, **Figure 3.3** indicates that corridors, even with narrowing, will continue to function acceptably. With the exception of southern sections of Riverside Drive, all other corridors in the City will have sufficient capacity to accommodate future forecasted traffic volumes.

Illustrating the advantages of three-lane cross sections, **Figures 3.4** and **3.5** indicate advantages that three-lane cross sections have over those with four-lanes (undivided). In terms of Upper

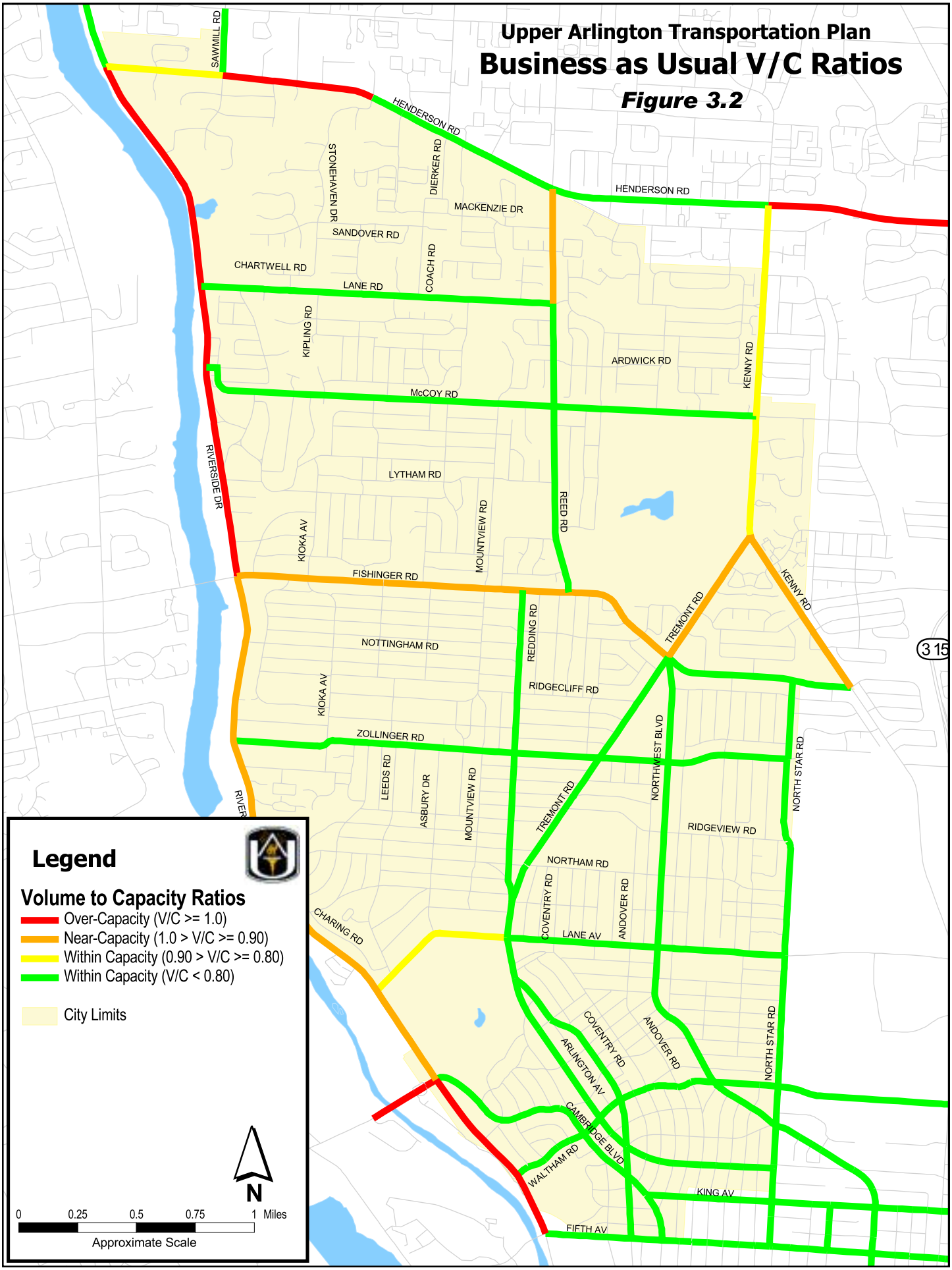
Arlington, the intersection of Northwest Boulevard/Zollinger Road operated better with two intersecting three-lane cross sections than with the existing four-lane undivided section.

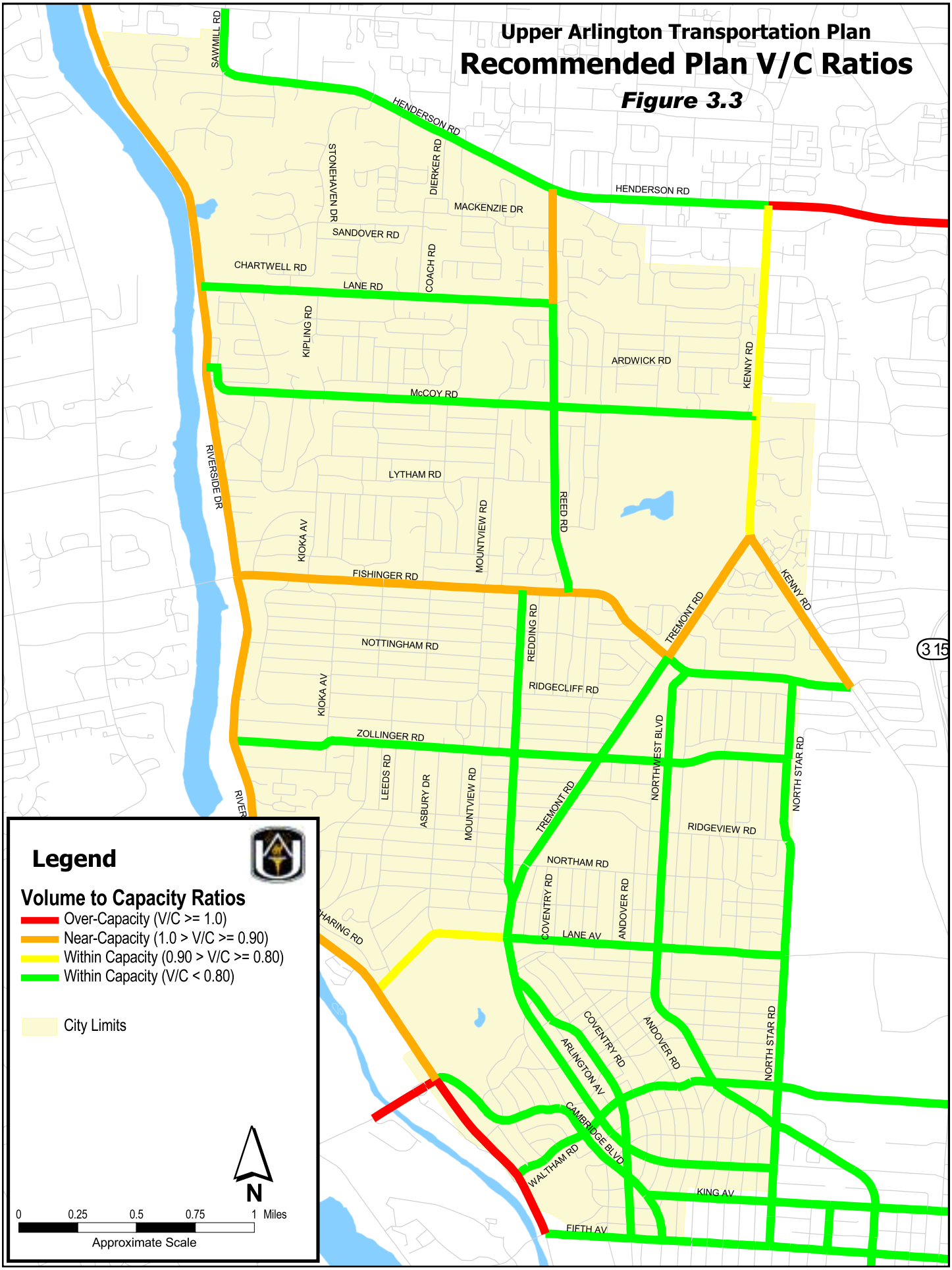
Recommendations accompanying the Traditional Community may give drivers the impression that corridors and intersections have less capacity. When drivers have this perception, it leads them to divert from normal travel routes to alternative routes, including neighborhood streets. To address this potential issue before it becomes a problem, the transportation plan that accompanies this alternative discusses specific traffic calming "starter ideas."

Table 3.1 – Intersection Levels of Service

Intersection Name	Existing Traffic Volumes			Future (2010) Traffic Volumes		
	Signalized Intersection		Signalized or Roundabout	Signalized Intersection		Signalized or Roundabout
	Business as Usual	Conventional Suburban	Traditional	Business as Usual	Conventional Suburban	Traditional
Henderson Road/Riverside Drive	B, (**1**)	B, (**1**)	C, (**2**)	C, (**1**)	C, (**1**)	C, (**2**)
Henderson Road/Sawmill Road	C	B	C, (**3**)	D	C	C, (**3**)
Henderson Road/Reed Road	F	D	D	F	D	D
Tremont Road/Fishinger Road/Northwest Boulevard	D	D	C/B, (**4**)	F	D	C/B, (**4**)
Tremont Road/Zollinger Road	B	B	A, **R**	B	B	A, **R**
Tremont Road/Ridgeview Road	A	A	A, **R**	A	A	A, **R**
Northwest Boulevard/Zollinger Road	C	B	B	C	B	B
Lane Avenue/North Star Road	B	B	D**	B	B	D**
Lane Avenue/Northwest Boulevard	C	C	B, **R**	C	C	B, **R**

(**1**) Assumes Riverside Drive as a four-lane median divided highway
(**2**) Assumes no outbound left-turn movement from Henderson Road (Riverside Drive as a four-lane median divided facility)
(**3**) Assumes that Sawmill Road is realigned at Henderson Road to promote Sawmill Road as the through street.
(**4**) Assumes two adjacent roundabouts
R = Assumes roundabout analysis at this location
** = Assumes a roadway narrowing gateway treatment at this location


Upper Arlington Transportation Plan
Business as Usual V/C Ratios
Figure 3.2
SAWMILL RD
HENDERSON RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
CHARTWELL RD
COACH RD
LANE RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
KIOKA AV
MOUNTVIEW RD
REED RD
FISHINGER RD
TREMONT RD
NOTTINGHAM RD
REDDING RD
RIDGECLIFF RD
ZOLLINGER RD
LEEDS RD
ASBURY DR
NORTHWEST BLVD
NORTH STAR RD
RIDGEVIEW RD
NORTHAM RD
COVENTRY RD
ANDOVER RD
LANE AV
CHARING RD
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV
315
Legend
Volume to Capacity Ratios
Over-Capacity (V/C >= 1.0)
Near-Capacity (1.0 > V/C >= 0.90)
Within Capacity (0.90 > V/C >= 0.80)
Within Capacity (V/C < 0.80)
City Limits
N
0 0.25 0.5 0.75 1 Miles
Approximate Scale


Upper Arlington Transportation Plan
Recommended Plan V/C Ratios
Figure 3.3
SAWMILL RD
HENDERSON RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
CHARTWELL RD
LANE RD
COACH RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
KIOKA AV
MOUNTVIEW RD
REED RD
FISHINGER RD
TREMONT RD
NOTTINGHAM RD
REDDING RD
RIDGECLIFF RD
ZOLLINGER RD
LEEDS RD
ASBURY DR
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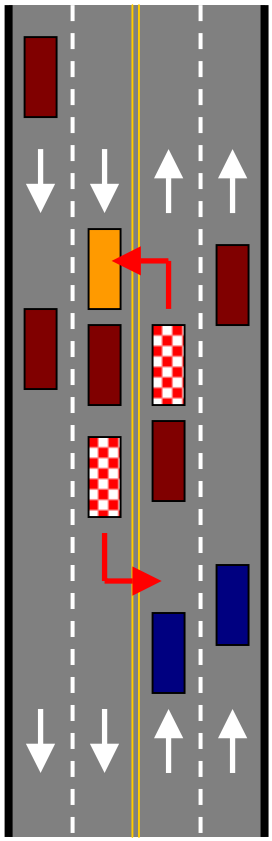
RIDGEVIEW RD
NORTHAM RD
COVENTRY RD
ANDOVER RD
LANE AV
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV
315
Legend
Volume to Capacity Ratios
Over-Capacity (V/C >= 1.0)
Near-Capacity (1.0 > V/C >= 0.90)
Within Capacity (0.90 > V/C >= 0.80)
Within Capacity (V/C < 0.80)
City Limits
N
0 0.25 0.5 0.75 1 Miles
Approximate Scale

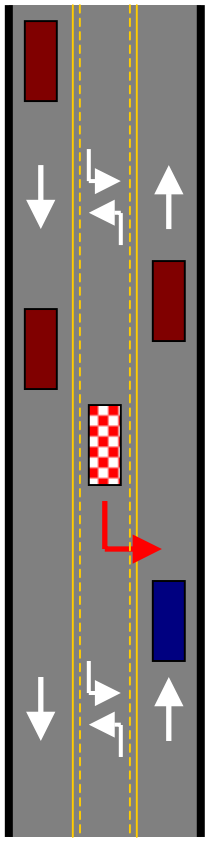
FIGURE 3.4 MID-BLOCK

In both situations, the marked (checkered) cars are trying to turn left in the middle of a block.



Four-Lanes

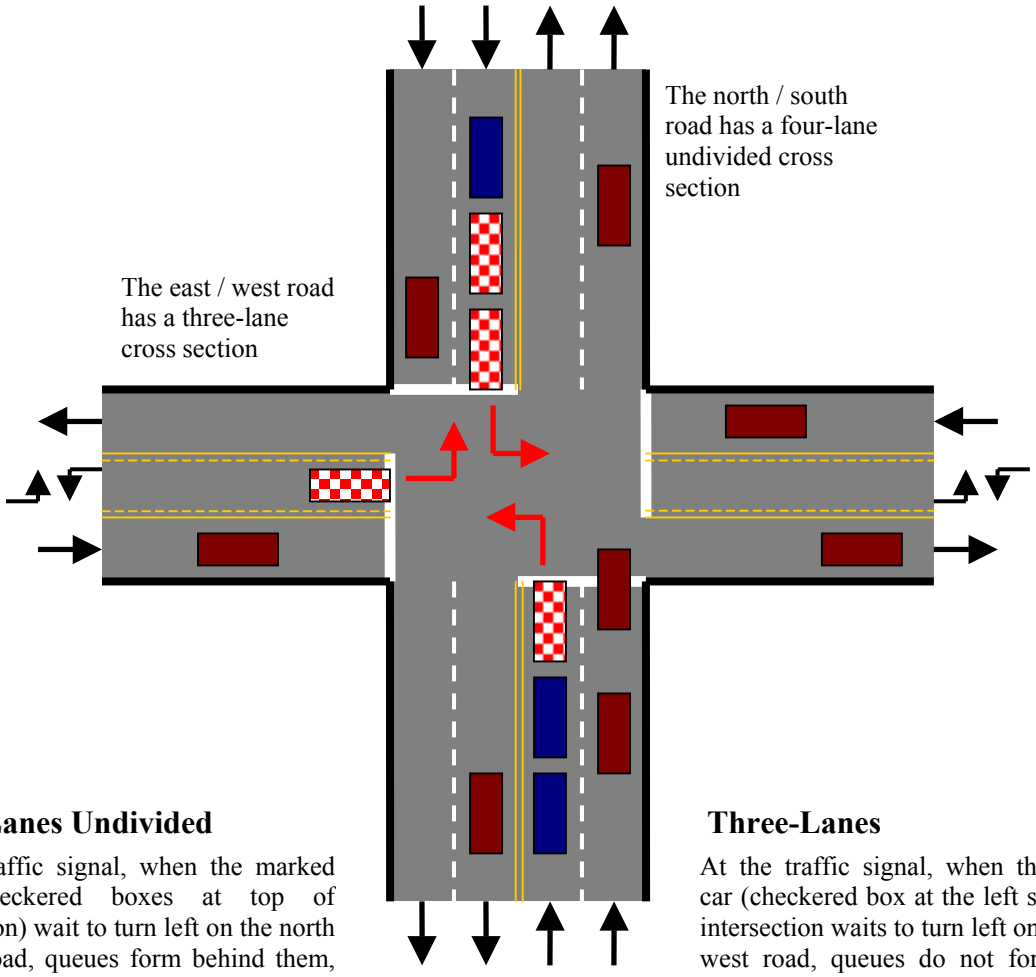
In the four-lane undivided section, the driver of the checkered car travelling southbound (toward bottom of page) has to wait for two lanes of northbound (toward top of page) traffic to clear before making the left-turn. While waiting to turn left, a queue forms behind that car, blocking one of the two southbound travel lanes while simultaneously blocking a northbound checkered vehicle that is also trying to turn left across two lanes of southbound traffic.



Three-Lanes

In the three-lane section, the driver of the checkered car travelling southbound (toward bottom of page) has to wait for only one lane of northbound (toward top of page) traffic to clear before making the left-turn. While waiting to turn left, no queue forms behind that car, and the southbound through lane continues to flow.

FIGURE 3.5 INTERSECTIONS



Four-Lanes Undivided

At the traffic signal, when the marked cars (checkered boxes at top of intersection) wait to turn left on the north / south road, queues form behind them, blocking the left lane. The queues that form contain left turning vehicles and through vehicles that were travelling in the left lane of the roadway approaching the intersection. In this example, where there are two cars (opposite) waiting to turn left on the north / south roadway, they block each other's line of sight, impairing the needed sight distance for making a safe turn. With high volumes of through traffic, it is likely that only one or two cars will be able to turn left during a single signal cycle, further adding to intersection delay. As left-turn volumes increase, it is often necessary to split the traffic signal phases (northbound followed by southbound), thus decreasing the overall efficiency of the intersection.

Three-Lanes

At the traffic signal, when the marked car (checkered box at the left side of the intersection waits to turn left on the east / west road, queues do not form in the through lane and through vehicles are not blocked. The vehicles waiting to turn left only have to negotiate one lane of through traffic to make a safe turning movement and have normal sight distances. With the exclusive left-turn lane, as left-turn volumes increase, protected phasing can be incorporated into the signal phasing to better accommodate left turns.

Chapter 4

Recommendations

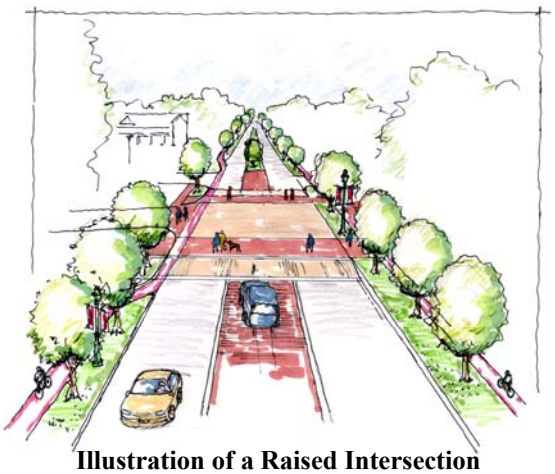


Illustration of a Raised Intersection

Based on the goals and objectives developed for this study, the Traditional Community Strategy alternative is recommended. This alternative most closely serves the goals and objectives established for the study. The plan is also practical in considering financial constraints. Money for roadway widening is largely unavailable, and three-lane sections, which have lower maintenance costs, are more financially feasible. The following summaries present recommendations for corridors and intersections throughout Upper Arlington, based on the Traditional Community Strategy. **Figure 4.1** illustrates the recommended thoroughfare plan for the City's primary travel routes.

In a typical thoroughfare plan, streets are given hierarchical designations that can be misleading to both the public and to planners and engineers. The *Upper Arlington Transportation Plan* suggests an alternate approach in classifying Upper Arlington's streets:

- **Primary Streets**—The network of streets that provide access to the regional roadway system, and also support adjacent land uses, provide connections to framework and non-framework streets, and carry a measurable amount of non-local traffic. The desired design speed for Primary Streets ranges from 45 to 55 mph with typical posted speed limits of between 35 mph and 45 mph. Riverside Drive would be an example of a primary street.

Speed Kills

Speed	Probability of Killing a Pedestrian if Hit by a Car
20 mph	5%
30 mph	40%
40 mph	80%
50 mph	100%

Source: Insurance Institute of Highway Safety, May 2000

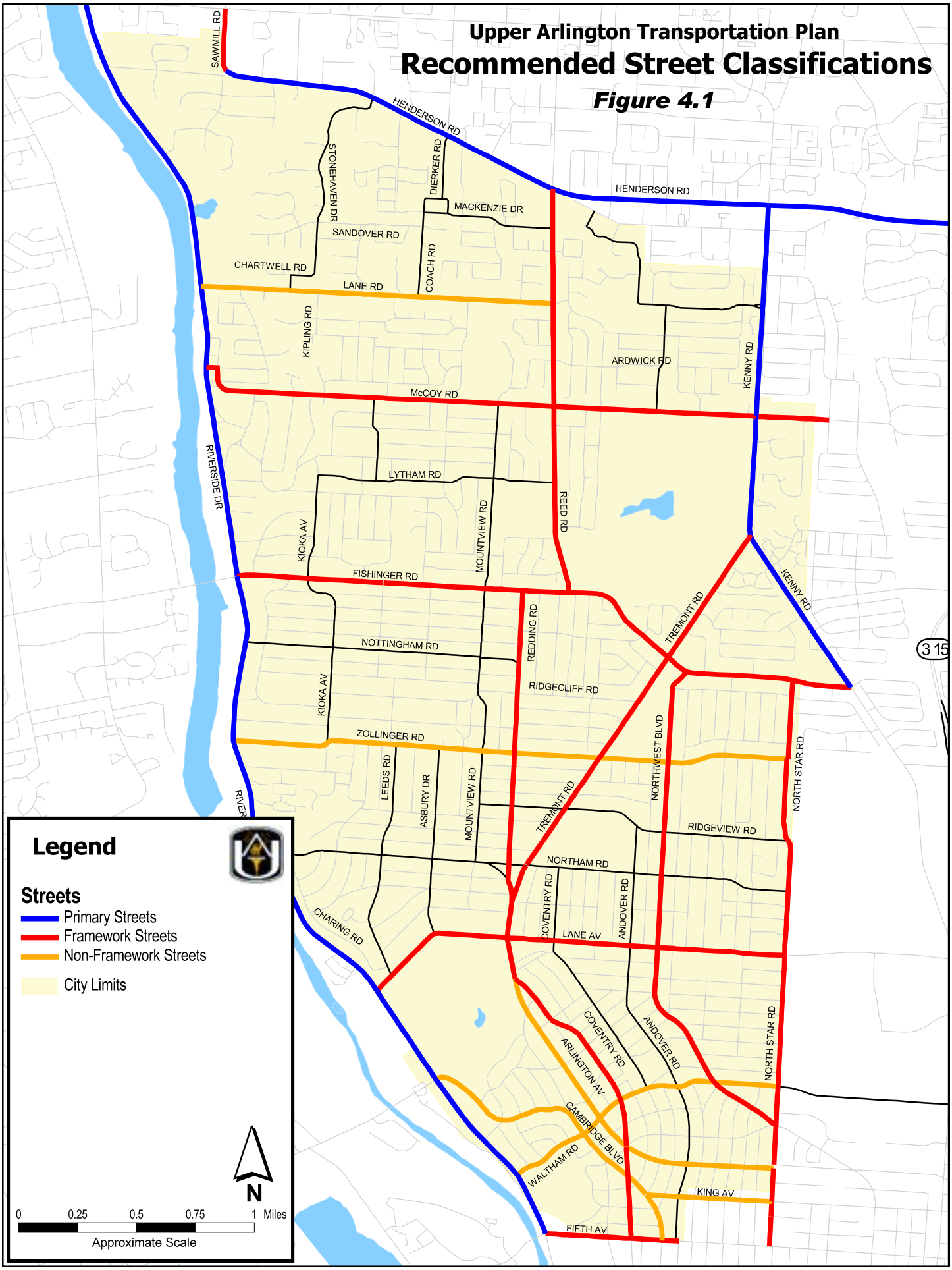
- **"Framework Streets"**—The network of streets that rely on cross-section designs to do the following: calm the street, influence the street environment, support adjacent land uses and provide connections to other framework streets and non-framework streets. The desired design speed for framework streets typically ranges from 25 to 30 mph. Although not typically found throughout corridors, periodic measures (traffic calming devices)

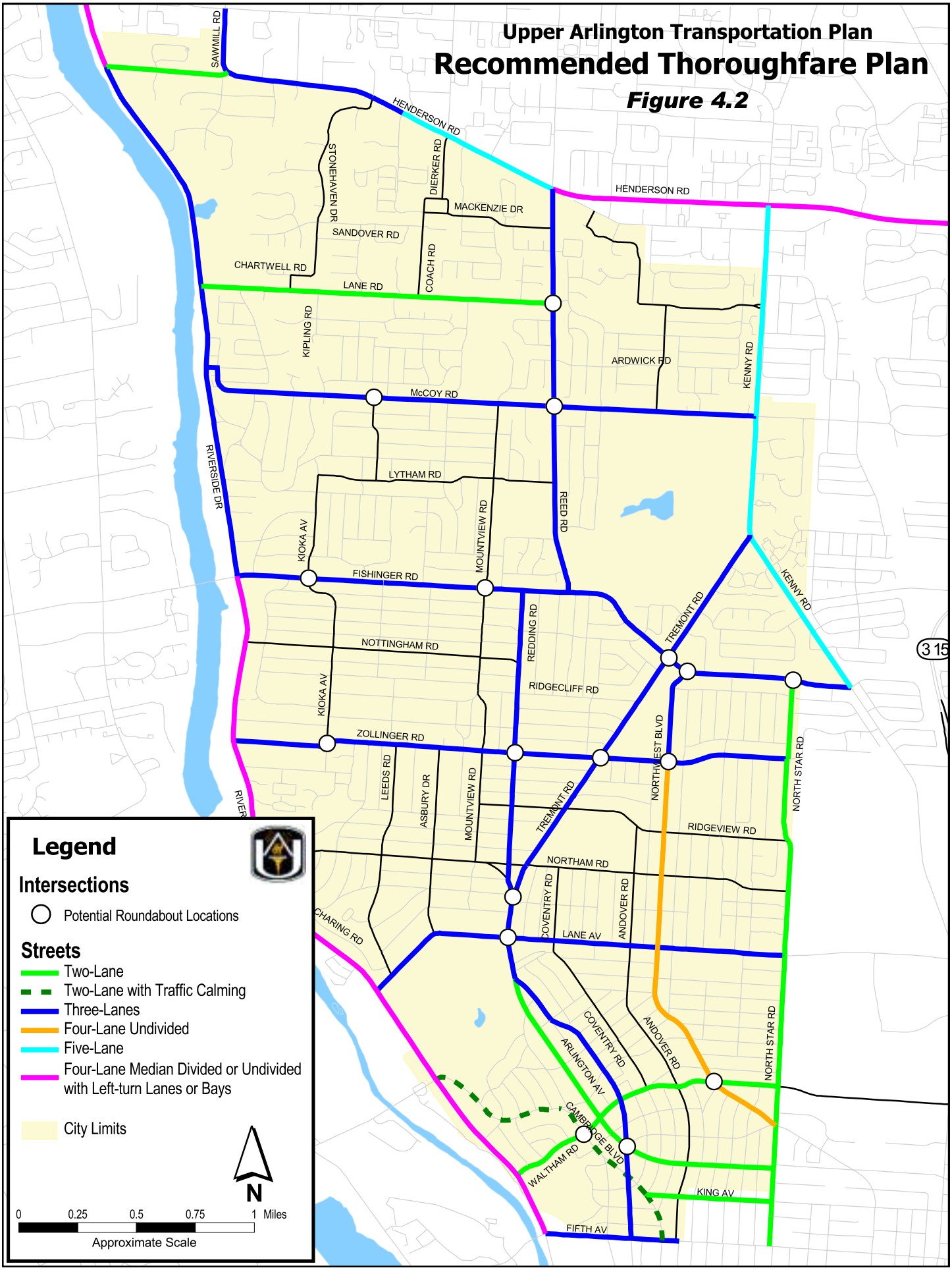
are acceptable on framework streets near high pedestrian generators such as schools, parks, and shopping/businesses.

- **"Non-Framework Streets"**—The network of streets that rely on both periodic measures and cross-section designs to do the following: calm the street, influence the street environment, support adjacent land uses, and provide connections to non-framework streets. The desired design speed for this group of streets ranges from 25 mph to 6 mph, and is typically 20 mph. The guideline for periodic measures (traffic calming devices) is not to exceed 8 to 12 measures at a spacing of between 30 to 160 yards. More typical spacing of measures is one measure every 75 to 125 yards.

Figure 4.1 illustrates the network of Primary, Framework, and Non-Framework Streets in Upper Arlington; **Figure 4.2** shows corridors by cross section; and **Figure 4.3** shows 2025 traffic projections from MORPC.

Narrowing many of the streets in Upper Arlington will maintain or increase the utility of the streets. For example, today when garbage and leaf collection trucks block travel lanes on multi-lane roads, vehicles change lanes and go around. With a three-lane street it will be no different, except that passing vehicles will utilize the raised two-way left-turn lane to bypass stopped vehicles instead of the adjacent through lane, thereby allowing traffic to flow continuously.


Upper Arlington Transportation Plan
Recommended Street Classifications
Figure 4.1
SAWMILL RD
HENDERSON RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
COACH RD
CHARTWELL RD
LANE RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
KIOKA AV
MOUNTVIEW RD
REED RD
FISHINGER RD
TREMONT RD
NOTTINGHAM RD
REDDING RD
RIDGECLIFF RD
ZOLLINGER RD
LEEDS RD
ASBURY DR
NORTHWEST BLVD
NORTH STAR RD
RIDGEVIEW RD
NORTHAM RD
COVENTRY RD
ANDOVER RD
LANE AV
CHARING RD
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV
315
Legend
Streets
Primary Streets
Framework Streets
Non-Framework Streets
City Limits
N
0
0.25
0.5
0.75
1 Miles
Approximate Scale


Upper Arlington Transportation Plan
Recommended Thoroughfare Plan
Figure 4.2
SAWMILL RD
HENDERSON RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
COACH RD
CHARTWELL RD
LANE RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
KIOKA AV
MOUNTVIEW RD
REED RD
FISHINGER RD
TREMONT RD
NOTTINGHAM RD
REDDING RD
RIDGECLIFF RD
ZOLLINGER RD
LEEDS RD
ASBURY DR
NORTHWEST BLVD
NORTH STAR RD
RIDGEVIEW RD
NORTHAM RD
COVENTRY RD
ANDOVER RD
LANE AV
CHARING RD
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV
Legend
Intersections
Potential Roundabout Locations
Streets
Two-Lane
Two-Lane with Traffic Calming
Three-Lanes
Four-Lane Undivided
Five-Lane
Four-Lane Median Divided or Undivided with Left-turn Lanes or Bays
City Limits
N
0 0.25 0.5 0.75 1 Miles
Approximate Scale


Upper Arlington Transportation Plan
2025 Traffic Volumes
Figure 4.3
HENDERSON RD
SAWMILL RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
CHARTWELL RD
COACH RD
LANE RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
KIOKA AV
MOUNTVIEW RD
REED RD
FISHINGER RD
REDDING RD
TREMONT RD
NOTTINGHAM RD
RIDGECLIFF RD
ZOLLINGER RD
LEEDS RD
ASBURY DR
NORTHWEST BLVD
NORTH STAR RD
RIDGEVIEW RD
NORTHAM RD
CHARING RD
COVENTRY RD
ANDOVER RD
LANE AV
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV
14800
18900
24000
9100
32000
22000
24600
10600
13300
17700
28000
26000
23200
18900
22600
14700
16300
5300
4700
7900
12200
2600
4400
10500
19100
9000
9100
12700
4300
9100
26900
15400
6600
17000
13100
6300
2000
11000
5400
10600
7000
5400
5800
9400
7800
3300
17900
Legend
Streets
Primary Streets
Framework Streets
Non-Framework Streets
City Limits
The volumes shown on the map are 2025 traffic forecasts prepared by MORPC.
N
0
0.25
0.5
0.75
1 Miles
Approximate Scale

Five-Lane Section of Henderson Road West of Reed Road

PRIMARY STREETS (see Figure 4.2)

Henderson Road—Running in the east/west direction along Upper Arlington's north side, Henderson Road varies in both roadway section and roadside character. Between Reed Road and Arlington Centre Drive, Henderson Road is a five-lane roadway, serving adjacent retail and other commercial activities along the roadside, as well as through traffic. Between Arlington Centre Drive and Riverside Drive, Henderson Road takes on a different character, that of a rural road, with two lanes, serving residences and neighborhoods, and through traffic.

In sections of Henderson Road where a five-lane cross section has already been constructed pedestrian enhancements are recommended, but no widening. With sections of sidewalks abutted by parking or by a travel lane, there is increased exposure to vehicles. Sidewalks that are constructed in either manner should be reconstructed to provide separation between vehicles and pedestrians as adjacent properties are redeveloped.

Between Sawmill Road and Arlington Centre Drive existing traffic volumes indicate that 18,800 vehicles per day (vpd) are travelling on Henderson Road, greater than the capacity of the existing roadway section. With numerous driveways and cross streets throughout this section of the corridor widening the road to a three-lane cross section with a sidewalk on one side and a 10-foot multi-use path on the other side is recommended.

Studying traffic counts for the intersection of Henderson Road/Sawmill Road indicated a clear trend of vehicles diverting from Henderson Road to Sawmill Road. To better accommodate this demand and to divert traffic from the section of Henderson Road between Riverside Drive and Sawmill Road, it is recommended to realign both Sawmill Road and Henderson Road to create a new through movement, leading vehicles away from Riverside Drive. To support this realignment and reduce traffic at Riverside Drive/Henderson Road, it is recommended that outbound left-turns

Realigned Sawmill and Henderson Roads

from Henderson Road at Riverside Drive be prohibited and the traffic signal removed. Between the realignment and the prohibition on left-turns, through traffic will be minimized, allowing the street to function as a collector/local circulation street rather than a thoroughfare. As an additional recommendation, sidewalks should be installed on both sides of the street to provide for overall walking and bicycling system connectivity.

Kenny Road South of McCoy Road

Kenny Road—The eastern border roadway for Upper Arlington, Kenny Road, is a major north/south traffic route. Kenny Road functions as a bypass route for traffic, avoiding the core of Upper Arlington and congestion on SR 315. The corridor is primarily a five-lane cross section, which becomes a four-lane undivided street north of McCoy Road.

Today, Kenny Road carries 15,000–17,000 vpd in sections south of Tremont Road and 19,000–21,600 vpd in sections north of Tremont Road. Twenty-five year forecasts indicate that this corridor will experience traffic growth south of Tremont Road where traffic volumes are expected to be near 26,000 vpd and little growth north of Tremont Road, resulting in 22,000 vpd. With the focused effort on decreasing through traffic, Kenny Road could experience some level of diverted traffic, leading to the recommendation of retaining the existing cross section and making intersection improvements as needed.

To provide for a well-connected pedestrian and bicycle system between Tremont Road and McCoy Road, constructing a 10-foot multi-use path along the eastern side of the street is recommended. North of McCoy Road, where right of way is already available, the path would continue along the eastern side of the street.

Pavement has a finite lifecycle and streets must often be rebuilt. When Kenny Road is reconstructed, the roadway should be built with 14-foot outside lanes (11-foot inside lanes) to accommodate a wide outside lane to be shared by bicyclists and vehicles. If the multi-use path is installed prior to this reconstruction project, it should be installed so that when the overall roadway width is increased, neither the planted verge, nor the multi-use path will have to be modified.

Riverside Drive—This busy perimeter corridor, running along the Scioto River, varies in cross-section having two-lane undivided, four-lane undivided, and five-lane cross sections within the study area. According to daily traffic count data maintained by MORPC, volumes in this corridor were noted to exceed 28,000 vpd in two-lane sections of the corridor.

Busy Traffic on Riverside Drive

Volumes of this level on a two-lane undivided section of roadway would normally result in massive gridlock at the worst. At the very least, they cause excessive intersection delays. Fortunately, most locations where volumes of this level occur have few driveways and only one signalized intersection, at Henderson Road. At the intersection of Henderson Road/Riverside Drive the existing signal is timed such that Riverside Drive receives a disproportionately larger share of signal "green time" in order to minimize travel delays on Riverside Drive.

Today, although the corridor functions reasonably well, traffic forecasts indicate that up to 35,000 vpd will use Riverside Drive in the next 25 years. To accommodate this level of demand, the roadway should be widened to three-lanes north of Fishinger Road.

Riverside Drive runs along the east bank of the Scioto River. Griggs Reservoir Park lies between Canterbury Road and McCoy Road. Between the natural diversions of the park and the scenic quality of the river, there is potential for walking and bicycling demand along and across the corridor. To accommodate pedestrians and bicyclists, sidewalks along both sides of the street and a parallel off-street multi-use path are recommended. Additionally, at river crossings and park entrances, accommodation should be made for pedestrians crossing by including features such as striped crosswalks, pedestrian refuge islands, appropriate pedestrian signal indicators, and push-button actuators.

Two-Lane Arlington Avenue with Parking on One Side

FRAMEWORK STREETS (see Figure 4.2)

Arlington Avenue—South of the intersection of Tremont Road, Arlington Avenue becomes the emphasized through street for "Old Arlington" neighborhoods. Existing traffic volumes suggest there is minimal through traffic travelling in the corridor. Future forecasts echo existing traffic conditions, showing little if any growth in traffic over the next 25 years.

While from a pure vehicle capacity standpoint the corridor's cross section is adequate, from the bicyclist's point of view, the corridor needs enhancement. Arlington Avenue is a critical walking and bicycling link connecting Tremont Road to Fifth Avenue. Neglecting to provide good bicycle and pedestrian accommodations would hurt overall system connectivity. Striping Arlington Avenue with two 10-foot travel lanes, an 8-foot parking lane on one side, and a 4-foot and 5-foot striped bike lane (adjacent to parking lane) is recommended.

Fifth Avenue—This south Arlington, east/west corridor currently varies between a two-lane undivided cross section with parking on both sides to a series of random cross sections, changing from block to block. Between Riverside Drive and North Star Road, Fifth Avenue has an attractive cross section incorporating street furniture, parking on both sides of the street, and an appropriately scaled adjacent development, easily accessible from the street. Further east, as Fifth Avenue transitions into the City of Columbus, the street quickly changes to a confusing mix of a single-and multiple-lane roadway. This same section of Fifth Avenue, between North Star Road and the SR 315, has curblines that are almost continuously broken by business and residential driveways, making for poor access control.

Existing traffic counts in the corridor indicate between 13,000 vpd near Riverside Drive and 17,900 vpd east of North Star Road. With traffic forecasts showing minimal traffic growth in this corridor, it is recommended to retain the existing cross section between Riverside Drive and North Star Road, continuing

Fifth Avenue Near the Marble Cliff Town Hall with Two-Lanes and Parking on Both Sides

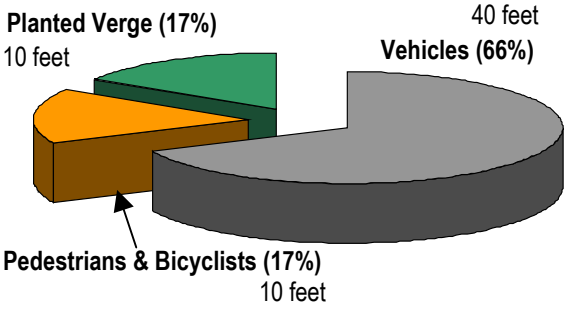
to provide left-turn storage space at major intersections and driveways. In the future, a more detailed corridor study of Fifth Avenue will be required. Any study should actively involve area business owners, residents, and other stakeholders in association with both the City of Upper Arlington and the City of Columbus to develop a well-rounded land use and transportation plan that can be implemented for the corridor.

Fishinger Road—"What can be done on Fishinger Road?" "I am concerned about Fishinger Road?" Such were questions often asked at the charrette.

Fishinger Road is a four-lane undivided roadway with disconnected sidewalks, busy, fast-moving traffic, and narrow travel lanes. The corridor connects to one of two Scioto River crossings directly serving Upper Arlington and carries nearly 24,000 vpd in its busiest sections as a result. Fishinger Road, a river crossing, terminates at busy Kenny Road, making it an attractive cross-town route for regional traffic. Geographically, Fishinger Road nearly equally divides Upper Arlington into two halves. The level of traffic in the corridor has the same effect, creating a barrier between people and their destinations.

Given the objectives developed for the Transportation Plan, it is recommended that Fishinger Road be narrowed from its existing four-lane undivided cross section to a three-lane cross section. The recommended three-lane cross section should incorporate 5-foot, one-way off-street bike paths and 6-foot sidewalks along both sides of the street. Overall street width (paved) on Fishinger Road would be reduced from more than 40 feet (plus curb-and-gutter) to 33 feet, with an additional two feet on each side for curb and gutter. To prevent drivers from using the two-way left-turn lane (TWTL) as a normal travel lane, planted areas should be interspersed throughout the TWTL in the corridor. Additionally, the TWTL should be constructed so that it is distinctive (stamped and colored asphalt or pavers) and a few inches higher than the adjacent travel lanes. Implementation of this cross section would result in a better balance of allocated space between planed verge, bicycles and pedestrians, and vehicles. **Figures 4.4** and **4.5** show the contrast of space distribution between the existing and recommended cross sections.

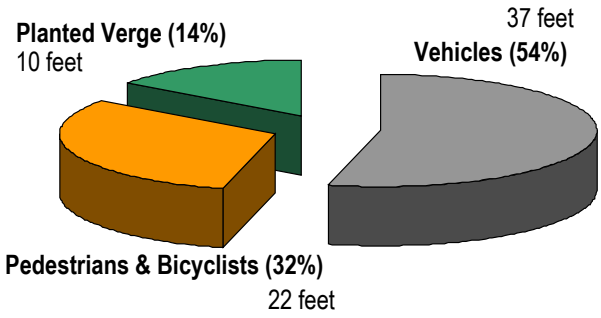
Figure 4.4 – Existing Cross Section



With future traffic forecasts indicating little traffic growth in the corridor, the recommended three-lane cross section will be adequate to serve future travel demand.

To discourage through traffic on Fishinger Road, a gateway treatment constricting roadway capacity immediately east of Riverside Drive is recommended.

Figure 4.5 – Recommended Cross Section



Lane Avenue—This corridor was one of two studied in the charrette. Lane Avenue is a busy east/west route between Riverside Drive and the Ohio State University (OSU), carrying as many as 19,000 vpd. At its western end near Riverside Drive, development along Lane Avenue consists of large single family homes along the north side and the Scioto Country Club along the south side. Travelling east are isolated pockets of commercial development interspersed with single-family homes. These increase in frequency as Lane Avenue approaches North Star Road.

Future forecasts include revitalization of the Lane Avenue Shopping Center. Although the four-lane undivided cross section that exists today has the capacity to accommodate existing and future travel demand, a more pedestrian-and bicycle-friendly three-lane cross section is recommended. The three-lane section (with mountable left-turn lane) should include 6-foot sidewalks, 5-foot one-way bikeways, and a 5-foot planted verge on both sides of the street. This cross section would provide much needed (currently incomplete) sidewalks and bikeways on this important travelway.

As an added benefit, the perception of three-lanes has the potential to reduce the amount of cut-through traffic that currently travels on Lane Avenue. Further reinforcing the point that Upper Arlington streets are not cut-through routes, it is recommended to construct a gateway on Lane Avenue at Riverside Drive. The gateway should be designed to complement nearby architecture and natural features along Lane Avenue. The gateway should give drivers the impression that the corridor is a local route as opposed to a cut-through route.

Existing Lane Avenue at the Lane Avenue Shopping Center

McCoy Road—This four-lane undivided corridor currently carries between 3,000 vpd and 4,000 vpd. Along the north and south side of McCoy Road there are numerous single-family homes as well as The Ohio State University Golf Course on the south side, between Reed Road and Kenny Road. McCoy Road runs east/west between Kenny Road and Riverside Drive. By not connecting to either an interchange at SR 315 on the east or a Scioto River crossing on the west, McCoy Road is an ideal candidate to be re-striped to a three-lane cross section. The section recommended would mark the roadway for three 11-foot travel lanes and two 4-foot bike lanes within the existing 41 feet of pavement.

Illustration of Proposed Three-Lane Cross Section for Lane Avenue

Future forecasts support the three-lane recommendation, indicating an increase in daily traffic up to 17,000 vpd by the year 2025. Today there is a minimum of 60 feet of right-of-way available for McCoy Road.

North Star Road—This north/south corridor currently forms the eastern border of Upper Arlington, running between Fifth Avenue and Fishinger Road. North Star Road carries approximately 9,000 vpd to 10,000 vpd in its two-lane undivided cross section. Future traffic forecasts indicate little traffic growth, showing approximately 10,300 vehicles per day in the busiest sections of the corridor by the year 2025. With primarily residential land uses along the corridor, it is recommended to retain the existing cross section (minimizing property impacts) and "fill-in" gaps in the sidewalk network throughout the corridor. The current wide travel lanes are sufficient to accommodate advanced cyclists and more experienced basic bicyclists; however, the length of this corridor should be designated as a bike route by using signage and pavement markings as appropriate.

Northwest Boulevard—This important north/south travel route through Upper Arlington is also the City's parade route—closed on holidays to make way for parade festivities. Northwest Boulevard is a four-lane undivided corridor with a mix of signalized and unsignalized intersections throughout its length. For the most part residential land uses dominate development along the corridor. However, at Lane Avenue and North Star Road there are several small businesses as well as the Kingsdale Center, north of Zollinger Road.

Traffic on Northwest Boulevard ranges from approximately 8,100 vpd at North Star Road to just over 10,100 vpd near Zollinger Road. The ambitious redevelopment plans proposed for the Kingsdale Center have the potential to attract large numbers of people and vehicles to the street, travelling to the revitalized center. Northwest Boulevard is one of four important corridors along with Tremont Road, Zollinger Road, and Fishinger Road. Because it serves Kingsdale, it will have added importance as a connection between people and their destinations. Future traffic forecasts indicate that up to 13,000 vpd will travel in the corridor daily in 25 years. While

Four-Lane Undivided Section of Northwest Boulevard

the existing roadway section can certainly accommodate this level of vehicular travel demand, the street currently does not adequately address non-vehicular travel modes that will accompany the redeveloped Kingsdale Center.

Because of the anticipated level of activity along Northwest Boulevard between Zollinger Road and Fishinger Road, it is recommended to reconstruct the roadway to a three-lane cross section. The recommended would incorporate 6-foot sidewalks along both sides of the street, 5-foot one-way bike paths, and a 5-foot planted verge on both sides of the street. Existing right of way in the corridor is 100 feet, easily accommodating the 70 feet required for the cross section. Retaining the existing roadway section between Zollinger Road and North Star Road is recommended.

In conjunction with other suggested improvements, Northwest Boulevard is recommended to be realigned approximately 500 feet to the east at its northern terminus. Northwest Boulevard is the fifth leg of the Fishinger Road/Tremont Road/Northwest Boulevard intersection. This intersection is the most congested in the city, has the highest accident rate, and is the least friendly to pedestrians and bicyclists. By realigning Northwest Boulevard's northern end and physically removing the fifth leg of the intersection, operations on each intersecting corridor will have the potential to improve. The resulting realignment would vastly reduce the complexity of the Five Points intersection, improve pedestrian and vehicle safety, and reduce overall roadway congestion.

To every upside, there is almost always a downside. In this case, the would be relocating one business that currently borders Northwest Boulevard and Fishinger Road. When considering whether or not to realign Northwest Boulevard, the relocation of this business will be an important issue.

Realigned Northwest Boulevard with Two Roundabouts on Fishinger Road

Redding Road—Another one of Upper Arlington's four-lane undivided corridors, Redding Road, carries between 4,000 and 5,000 vpd. Redding Road runs north/south between Fishinger Road and Tremont Road, providing a continuous travel route for the numerous residential developments along the corridor.

Future forecasts indicate that there will be little traffic growth in the corridor, making Redding Road a good candidate for the "road diet" otherwise know as street narrowing. It is recommended to narrow the street from its current four-lane undivided cross section to a three-lane section incorporating 6-foot sidewalks, 5-foot one-way bikeways, and a 5-foot planted verge on both sides

of the street. The recommended roadway section will require 70 feet of right-of-way, which is more than provided for in the existing 80-feet.

As an added benefit, the narrowing of the street will provide more cover to the waterline in the right-of-way that experiences frozen pipes during cold weather months.

4-Lane Undivided Section of Redding Road

Reed Road—This four-lane undivided corridor connects commercial areas along Henderson Road with residential neighborhoods to the south. Running in a north/south direction, Reed Road carries up to 14,700 vpd. Much like other four-lane undivided corridors throughout Upper Arlington, Reed Road's cross section does little to encourage or accommodate non-vehicular travel modes. In the interest of providing a transportation system that encourages travel by walking and bicycling, it is recommended to construct a three-lane cross section incorporating 6-foot sidewalks, 5-foot one-way bikeways, and 5-foot planted verges on both sides of the street. The right-of-way required for the recommended cross section would be 70 feet, which will fit into the existing 80-foot right-of-way.

City staff has made it clear that Reed Road is a near-term candidate for reconstruction due to regular maintenance issues. Instead of reconstructing the existing four-lane undivided cross section, the City should construct the recommended three-lane cross section and replace traffic signals with roundabouts. Preliminary cost estimates indicate that there will be a marginally higher cost associated with the recommended cross section; however the added benefits of implementing this type of street have the potential to far outweigh the marginal monetary cost difference. Benefits would include:

- Slower vehicle speeds through school zones
- Improved quality of traffic flow from "stop-and-go" to "slow-and-go"
- Enhanced pedestrian safety
- Enhanced bicyclist safety
- Lower maintenance and operating costs resulting from signal removal

Example of a Three-Lane Cross Section
(Photo by Ian Lockwood)

Sawmill Road—This corridor provides a connection between Bethel Road and Henderson Road. The existing roadway is essentially a three-lane section and has a long southbound left-turn lane approaching Henderson Road.

Current traffic volumes indicate a trend of drivers turning off of westbound Henderson Road onto northbound Sawmill Road. The tendency for drivers to make this interchange between Sawmill Road and Henderson Road is true in the reverse direction as well, from southbound Sawmill Road to eastbound Henderson Road. In light of this traffic pattern and the recommended restriction on turning movements at the intersection of Henderson Road and Riverside Drive (prohibited outbound Henderson Road left-turn), it is recommended to realign both Sawmill Road and Henderson Road. This realignment would make present right-turn and left-turn movements through movements and has the potential to substantially improve traffic operations at the intersection. It would emphasize Sawmill Road as the through street, allowing the section of Henderson Road between Sawmill Road and Riverside Drive to experience considerably less traffic—long a concern of residents living along this section. To complete the roadway realignment, it may require the acquisition of additional right-of-way in one quadrant of the intersection.

Also recommended, the existing cross section of Sawmill Road should be retained within Upper Arlington, enhancing it with sidewalks along both sides of the street to tie into recommended sidewalks along Henderson Road.

Illustration of Proposed Three-Lane Cross Section for Tremont Road

Tremont Road—This corridor was the second of two corridors studied as a part of the charrette. Tremont Road is an important City street since it provides access to many of the City's favorite destinations—the library, one of the City pools, Tremont Center, Kingsdale Center, and parks and schools. Public comment resulting from the three-day charrette made it clear that Tremont Road was due for a change.

Existing traffic volumes on Tremont Road are between 7,000 vpd and 11,000 vpd. Future forecasts indicated little growth from existing volumes. Understanding that Tremont Road would continue to be an important main street for Upper Arlington, such a concept was created. The concept included narrowing Tremont Road in some sections and widening it in others to provide a uniform three-lane cross section between Kenny Road and Lane Avenue. Included with the three-lane cross section would be 6-foot sidewalks, 5-foot one-way bikeways, and a 5-foot planted verge on both sides of the street.

The proposed cross section would fit within the existing right-of-way, but more importantly accomplish all of the roadway objectives outlined as a part of the Transportation Plan. In addition, roundabouts, specially designed pedestrian crossings, raised intersections, and realigned streets accompany the three-lane concept to create a traffic-calmed, people-friendly travel corridor, connecting both sides of the street.

Traffic Calming Measure
(Photo by Ian Lockwood)

NON-FRAMEWORK STREETS (see Figure 4.2)

Cambridge Boulevard—This corridor, connecting to a major Scioto River crossing and Trabue Road, is primarily intended to serve as a local circulation street. However, it experiences significant unwanted cut-through traffic.

An estimated 40% of PM peak hour traffic traveling westbound on Cambridge Boulevard at King Avenue continues through to Riverside Drive. Likewise an estimated 57% of AM peak hour traffic traveling eastbound on Cambridge Boulevard at Riverside Drive continues through to Cambridge Boulevard at King Avenue. These relatively high percentages of through traffic indicate that Cambridge Boulevard functions more as a through street than the residential street that it was designed to be. Residents of neighborhoods bordering Cambridge Boulevard continually support studying and implementing traffic calming measures to deter cut-through traffic. To induce driver behavior that is consistent with the residential character of the street, a scheme of "starter" ideas for traffic calming devices is recommended and shown in **Figure 4.6**. Illustrations on the following pages are examples of traffic calming devices.

King Avenue—Running between Cambridge Boulevard and North Star Road, this two-lane undivided corridor provides for a local circulation need. Residents have voiced concern relating to traffic speed and volume due to significant numbers of vehicles that divert from Cambridge Boulevard to King Avenue in an attempt to avoid congested sections of Fifth Avenue. With parked cars, children playing, and general neighborhood life occurring at the roadside, weaving, speeding traffic is a concern for residents. A traffic calming plan should be considered following implementation of the Cambridge Boulevard traffic calming plan. This will allow time for traffic conditions to readjust.

King Avenue with Two-Lanes and Parking on One Side

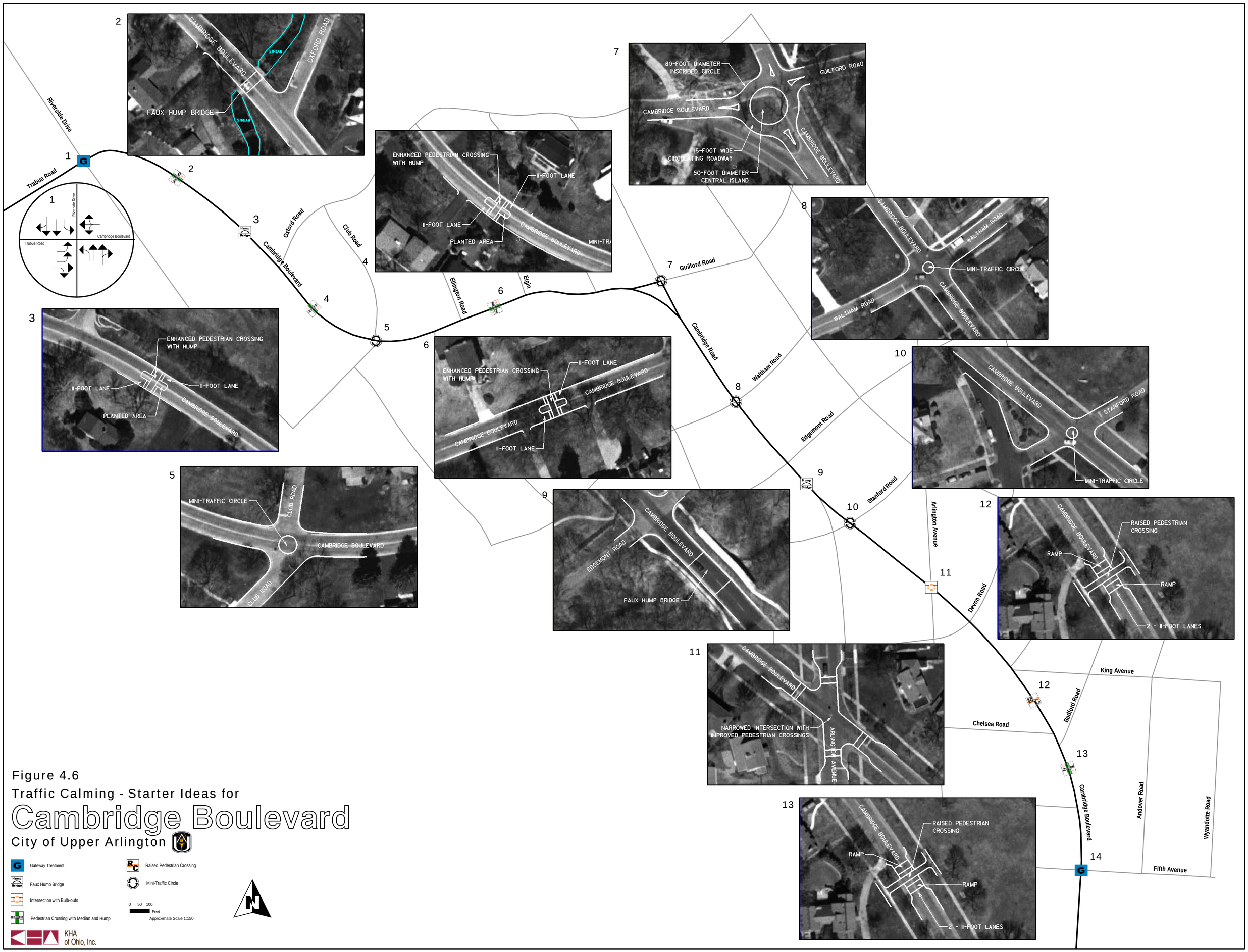


Figure 4.6

Traffic Calming - Starter Ideas for

Cambridge Boulevard

City of Upper Arlington

Example of a Neighborhood Traffic Circle
(Photo by Ian Lockwood)

Lane Road—Is a two-lane undivided road running between Riverside Drive and Reed Road in northern Upper Arlington. The corridor is primarily bordered by residential land uses and carries approximately 3,000 vpd to 4,000 vpd. As some development has occurred, sidewalks have been segmentally installed along both sides of the street.

Future forecasts indicate that this corridor will experience traffic growth, possibly to 10,000 vpd by the year 2025. While the existing cross section is adequate to serve such demand, operations streamlining improvements and bicycle and pedestrian enhancements are recommended. Corridor recommendations include providing left-turn lanes at major intersections as well as "filling-in" gaps in the existing sidewalk network on both sides of the street. To accommodate bicyclists, on-street parking should be prohibited to provide space for 4-foot striped bike lanes throughout the corridor. To successfully implement these improvements where existing right-of-way is limited, it will be necessary to work with property owners along the corridor to obtain necessary sidewalk easements and in some cases to purchase right-of-way for minor roadway widening attributed to the need for exclusive left-turn lanes at intersections.

Tremont Road—The section of this corridor, south of Lane Avenue, serves as a minor through street and a local access and neighborhood circulation street. The street is two lanes undivided and has on-street parking varying from one side to the other. Existing traffic volumes are less than 5,000 vpd in the busiest sections and 2025 forecasts indicate little if any traffic growth in the corridor. It is recommended to retain the existing width of the street, 37 feet, and stripe two 10-foot travel lanes, one 4-foot striped bicycle lane, one 5-foot striped bicycle lane (adjacent to parking lane), and one 8-foot parking lane.

Waltham Road—This corridor is designated by the City as a collector street (primarily as a snow removal route) and serves a local circulation need for "Old Arlington" neighborhoods. Waltham Road runs between Riverside Drive and North Star Road, where it transitions to Kinnear Road, in Columbus. Existing traffic volumes indicate that less than 3,000 vpd currently use Waltham Road. Future forecasts indicate minimal growth on this street, resulting in little need for capacity improvements.

Residents living along Waltham Road have voiced significant support for the implementation of traffic calming measures throughout the corridor to help manage traffic speed and volume. A traffic calming plan for Waltham Road

should be considered after implementation of the Cambridge Boulevard plan.

Back-In Parking on a Business Street
(Photo by Ian Lockwood)

Zollinger Road—Is a four-lane undivided corridor, running between established residential areas, schools, parks, and along the south side of the Kingsdale Center. Existing traffic volumes in this corridor range from 4,000–5,000 vpd and future traffic forecasts indicate that traffic will experience growth up to 6,000 vpd. As the Kingsdale Center is redeveloped, Zollinger Road will be an increasingly important travel route, connecting people in surrounding neighborhoods to the revitalized retail center. It is recommended to reconstruct the existing roadway to a three-lane cross section, incorporating 6-foot sidewalks, 5-foot one-way bike paths, and a 5-foot planted verge along both sides of the street. Between Riverside Drive and Mountview Road, the City will need to obtain easements or purchase up to 10 feet of right-of-way from property owners for the recommended roadway section. Between Mountview Road and North Star Road, the existing 80 feet of right-of-way will be adequate for the recommended cross section.

Zollinger / Ackerman Road Connection—The adopted transportation plan currently shows a planned connection of these roads. Based on recent traffic forecasts prepared by MORPC, if built the new connection may carry 11,300 vehicles per day by the year 2025. However there may be limited benefits to parallel roads, such as Fishinger Road, and impacts to residents of Zollinger Road and North Star Road. Some benefit may be derived by businesses and customers of the Kingsdale Shopping Center and its environs from the addition of this connector.

Example of a Speed Hump

(Photo by Ian Lockwood)

INTERSECTIONS

Traffic and safety issues are most acute at intersections. Because of this the Upper Arlington Transportation Plan pays special attention to the operation of critical intersections throughout the City. This applies to the operation of vehicles, pedestrians, and bicyclists alike.

Typically large and confusing intersections pose the most conflicts between vehicles and vehicles and pedestrians. Reducing the size, complexity, number of potential points of conflict, and speed of entering vehicle traffic is considered in this plan.

Analysis

As a part of the Transportation Plan, nine individual intersections were evaluated for level of service during the PM peak hour for both existing and future traffic, under a number of geometric conditions. **Table 4.1** presents results of this analysis. The nine intersections that were analyzed are the following:

1. Henderson Road/Riverside Drive
2. Henderson Road/Sawmill Road
3. Henderson Road/Reed Road
4. Fishinger Road/Tremont Road/Northwest Boulevard
5. Tremont Road/Zollinger Road
6. Tremont Road/Ridgeview Road
7. Northwest Boulevard/Zollinger Road
8. Lane Avenue/North Star Road
9. Lane Avenue/Northwest Boulevard

These nine intersections were analyzed under the following scenarios as appropriate.

- Existing traffic/existing geometry
- Existing traffic/narrowed road or other modified (non-roundabout) geometric condition
- Existing traffic/unsignalized intersection
- Existing traffic/roundabout
- Future traffic/existing geometry
- Future traffic/narrowed road or other modified (non-roundabout) geometric condition
- Future traffic/unsignalized intersection
- Future traffic/roundabout

Table 4.1 presents a summary of results for this analysis.

Henderson Road/Riverside Drive— Today this intersection functions poorly, having a LOS F during the PM peak hour. With the addition of future traffic related to the redevelopment and revitalization of retail centers along Henderson Road, this intersection will only worsen. Residents continue to voice concern about traffic conditions on Henderson Road near this intersection, in fact, many residents want to close the intersection all together. Being that one of the basic ideas of the plan is promote mobility, it would be counterproductive to close an existing street. Instead, through signage and geometric modification to the intersection, it is recommended to prohibit all outbound (Henderson Road) left-turn movements. With this prohibition implemented, the existing traffic signal would no longer be needed and could be removed. In this modified condition the intersection would function acceptably for both existing and future traffic volumes after the completion of Riverside Drive roadway widenings.

Realigned Sawmill and Henderson Roads

Henderson Road/Sawmill Road—This signalized intersection functions at acceptable levels of service during the PM peak hour, operating at LOS C. There appears to be a clear trend of vehicles diverting from westbound Henderson Road to northbound Sawmill Road and vice versa. It is recommended to realign Henderson Road and Sawmill Road, changing current right-and left-turn movements to through movements. With this modification the intersection will continue to function at LOS C.

Henderson Road/Reed Road—This busy intersection has an existing LOS F. Recommended improvements include:

- Providing an exclusive right-turn lane southbound (Reed Road)
- Providing an additional exclusive left-turn lane northbound (Reed Road)
- Revising signal timing and phasing

While these lane additions do not improve the overall intersection LOS, they do reduce delay on the minor street and also allow additional "green time" to be given to Henderson Road because of greater minor street capacity that is provided.

Tremont Road / Fishinger Road/ Northwest Boulevard—Better known as Five Points, this intersection functions at a strained LOS D during the PM peak hour. With the planned redevelopment of the Kingsdale Center, additional peak hour traffic is expected at this intersection. Implementing conventional improvements to mitigate additional traffic does little to improve level of service. Another, less conventional solution would involve removing the fifth leg of the intersection—Northwest Boulevard—and realigning that roadway to intersect Fishinger Road in a "T" several hundred feet to the east of Tremont Road. Intersection conditions were analyzed for this scenario with roundabouts and with traffic signals. With traffic signals and narrowing of Fishinger Road, Northwest Boulevard, and Tremont Road to three-lanes, LOS was F at the Tremont Road/Fishinger Road intersection and LOS was C at Fishinger Road/Northwest Boulevard. As another potential solution, single-lane roundabouts were analyzed at each intersection. At both intersections LOS was found to be C or better with roundabouts. Alternatively, a two-lane roundabout would serve traffic at Five Points during all but the busiest hours of the day.

Tremont Road/Zollinger Road—This minor intersection has an existing PM peak hour LOS B. This is another intersection that is expected to experience traffic increases due to redevelopment at the Kingsdale Center. Analyzing it using the additional traffic from the revitalized center indicated that

Realigned Northwest Boulevard with Two Roundabouts on Fishinger Road

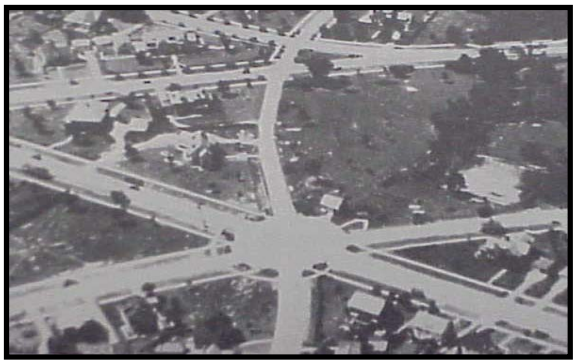
it would continue to function at acceptable LOS, having a B or better rating under existing traffic control and lane conditions. Applying the Tremont Road concept (three-lane traffic calmed street), the narrowing of Zollinger Road to three lanes, and removing the traffic signal also resulted in an acceptable LOS C. Additionally, the operation of a roundabout was evaluated for this location. With both existing and future traffic volumes, a single-lane roundabout was found to function at LOS A during the PM peak hour.

Tremont Road/Ridgeview Road—This intersection was analyzed for both existing and future (Master Plan) traffic conditions. For both traffic volume scenarios, PM peak hour LOS was found to be LOS A. As an additional step, a single-lane roundabout was evaluated for this location. The roundabout was found to function at LOS A for existing and future traffic as well.

Northwest Boulevard/Zollinger Road—Much like the intersection of Tremont Road/Zollinger Road, this intersection functions at acceptable levels of service, having a LOS C or better during the PM peak hour. Consistent with corridor recommendations, this intersection was also analyzed under the condition of future traffic (Master Plan) and with Zollinger Road and Northwest Boulevard as three-lane cross sections. LOS was found to improve to A under these conditions of geometry and traffic. Additionally a single-lane roundabout was analyzed for this location and was found to function at LOS A for both existing and future traffic volumes.

Lane Avenue/North Star Road—This intersection, on the border of Upper Arlington and the City of Columbus, operates well, having a PM peak hour LOS B or better. It is likely that this intersection will see increases in traffic due to redevelopment of Lane Avenue Shopping Center. With the additional increment of this traffic at this intersection, operations are expected to remain relatively similar at a LOS B. Analyzing the intersection under future traffic conditions and future Lane Avenue geometric conditions (three-lane cross section) this intersection was found to function at LOS D during the PM peak hour. Although a roundabout was evaluated at this location, queues, unreflective of the reported levels of service were found to exist, making the decision to install a roundabout at this location questionable.

Lane Avenue/Northwest Boulevard—This intersection functions at acceptable levels of service today, having an LOS C or better during the PM peak hour. With the additional increment of future traffic added by the Lane Avenue Shopping Center redevelopment, operations were found to remain similar at LOS C.



Historic "Circle" at Miller Park *(Robert McKnight Collection, Upper Arlington Historical Society)*

Roundabouts

Roundabouts have been referenced throughout this chapter. Modern roundabouts have proven to be viable intersection designs and traffic control devices in recent history in the United States, building on decades of research and proven results in Europe and Australia. Roundabouts have proven to be effective measures for controlling traffic speeds, reducing the number and severity of crashes, and adding to the aesthetic quality of urban intersections. Based on a thorough study by the US Insurance Institute for Highway Safety, at locations where modern roundabouts replaced signals the rate of accidents dropped by an average of 70%.

Upper Arlington's well connected street system, reasonably narrow corridors (numbers of lanes) and overall recommendations for thoroughfares and collector streets in the Transportation Plan set the stage for the opportunity to replace traffic signals with roundabouts at locations throughout the City.

Looking at the overall street system for the City, taking into consideration existing and projected traffic volumes, street connectivity, adjacent land uses, and intersecting street sections, the following are intersections where roundabouts have the potential to be successful if installed.

- Reed Road/Lane Road
- Reed Road/McCoy Road
- McCoy Road/Windermere Road
- Fishinger Road/Kioka Avenue
- Fishinger Road/Mountview Road
- Fishinger Road/Tremont Road (with Northwest Boulevard leg realigned)
- Fishinger Road/Northwest Boulevard (realigned to "T" with Fishinger)
- Fishinger Road/North Star Road
- Tremont Road/Zollinger Road
- Tremont Road/Canterbury Road
- Tremont Road/Lane Avenue
- Tremont Road/Arlington Avenue/Stanford Road
- Waltham Road/Cambridge Road
- Waltham Road/Northwest Boulevard
- Zollinger Road/Kioka Avenue
- Zollinger Road/Redding Road
- Zollinger Road/Northwest Boulevard

In addition **Figure 4.7** illustrates each of these locations.

Before any roundabout is installed at any location, detailed operational and site consideration analysis should be conducted to determine design and operational details of the potential roundabout. Because roundabouts will be new additions to streets in Upper Arlington, they should first be installed in locations where they will be well received and ensured success such as at the intersection of Tremont Road/Arlington Avenue/Stanford Road at Miller Park.

Modern Roundabout at Miller Park

Table 4.1

Capacity Analysis - 4 Lanes Undivided vs. 3-Lanes (Signals, Unsignalized, Roundabouts, Gateways)

4-Lanes Undivided vs. 3-Lanes

Level of Service

		Signalized				*Unsignalized*				*Roundabout*		*Gateways*	
		Existing		Future (2010)		Existing		Future (2010)					
	Intersection Name	4-Lanes	3-Lanes	4-Lanes	3-Lanes	4-Lanes	3-Lanes	4-Lanes	3-Lanes	Existing	Future	Existing	Future
1	Henderson Road / Riverside Drive	F (84.3)	n/a	C (26.6), (**1**)	n/a	F (650.5)	C, (**2**)	F	C, (**2**)	n/a	n/a	D, (**2**)	E, (**2**)
2	Henderson Road / Sawmill Road	C (21.9)	C, (**3**)	D (41.7)	C (27.6), (**3**)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3	Henderson Road / Reed Road	F (139.0)	n/a	F (141.0)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4	Tremont Road / Fishinger Road / Northwest Boulevard	D (43.0)	n/a	D (43.0)	F/C	n/a	n/a	n/a	n/a	C	C/B, (5)	n/a	n/a
5	Tremont Road / Zollinger Road	B (13.9)	B (14.0)	B (13.9)	B (14.0)	C	C	C	C	A	A	n/a	n/a
6	Tremont Road / Ridgeview Road	A (9.9)	A (9.7)	A (9.9)	A (9.8)	D	C	D	C	A	A	n/a	n/a
7	Northwest Boulevard / Zollinger Road	C (29.1)	B (11.0)	C (29.4)	B (11.2)	D	C	D	C	B	B	n/a	n/a
8	Lane Avenue / North Star Road	B (16.9)	D (39.2)	B (17.5)	D (49.5)	n/a	n/a	n/a	n/a	B	B	D (39.2)	D (49.5)
9	Lane Avenue / Northwest Boulevard	C (23.9)	E (77.4), (**4**)	C (24.8)	F (86.4), (**4**)	F	F	F	F	B	B	n/a	n/a

(1) Assumes Riverside Drive as a 4-lane median divided highway
(2) Assumes no outbound left-turn from Henderson Road (Riverside 4-lanes median divided)
(3) Assumes that Sawmill Road is realigned at Henderson Road to promote Sawmill Road as the through street.
(4) By adding exclusive right turn lanes on both the eastbound and westbound approaches, LOS improves to D of better for all periods.
(5) Assumes a double roundabout at this location due to the realignment of Northwest Boulevard at Fishinger Road


Upper Arlington Transportation Plan
Potential Roundabout Locations
Figure 4.7
SAWMILL RD
HENDERSON RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
CHARTWELL RD
COACH RD
LANE RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
REED RD
KIOKA AV
MOUNTVIEW RD
FISHINGER RD
NOTTINGHAM RD
REDDING RD
TREMONT RD
RIDGECLIFF RD
ZOLLINGER RD
LEEDS RD
ASBURY DR
NORTHWEST BLVD
NORTH STAR RD
RIDGEVIEW RD
NORTHAM RD
COVENTRY RD
ANDOVER RD
LANE AV
CHARING RD
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV
315
Legend
Intersections
Potential Roundabout Locations
City Limits
N
0
0.25
0.5
0.75
1 Miles
Approximate Scale

Chapter 5

Pedestrian and Bicycle Element

INTRODUCTION

A successful pedestrian and bicycle plan does more than just plan facilities in a vacuum. It plans facilities with an understanding of how and where people want to walk and bicycle for both recreation and transportation.

Upper Arlington already has an extensive sidewalk network, however the City has a long way to go before it will have a complete bicycle network. The majority of Upper Arlington's primary streets have four-lane undivided cross sections with narrow lanes (10 to 11 foot lanes) that are not wide enough for a cyclist and a vehicle side-by-side.

Completing the sidewalk network will involve constructing sidewalks along streets where there are none today, taking into consideration right-of-way and adjacent development. Completing the bikeway network will be more involved and will rely more heavily on future reconstruction/reconfiguration of many of the City's primary streets.

The Essential E's of Bicycle and Pedestrian Planning

Beyond planning and engineering, for a non-vehicular transportation system to enjoy success there are four important components.

1. Engineering
2. Education
3. Encouragement
4. Enforcement

Engineering—Before there can be facilities for walking and riding bicycles, a network of pathways must be planned and designed. Good design and route choices are essential parts of a successful pathway network.

Education—Once pathway systems are developed and in-place, new and experienced cyclists need to be made aware of where these systems are and what destinations can be accessed. Motorists, pedestrians, and cyclists need to understand the "rules of the road" to keep themselves safe while operating on and adjacent to these facilities.

Interesting Sidewalk Feature: Dance Steps in a Sidewalk in Seattle
(Photo by Ian Lockwood)

Sidewalk Cafe

Encouragement—The most nebulous of the four components; people need to be encouraged to walk and bicycle. The more desirable Upper Arlington becomes for pedestrians and cyclists (by providing more destinations oriented for them) the more successful these modes will become. Setting a community goal to be widely recognized as bicycle friendly is a worthy idea.

Enforcement—Ensuring that laws pertaining to the interaction between motorists and pedestrians/cyclists are heeded by all to ensure safety.

Over 200 people attended the charrette, the majority of whom were interested in enhancing opportunities to walk and bicycle in Upper Arlington

Enhanced Crosswalk

DEFINITIONS

Basic Cyclists—are casual or new adult and teenage riders less secure in their ability to ride in traffic without special accommodations. This cyclist typically prefers bike paths and bike lanes on collector or arterial streets with less exposure to fast-moving and heavy traffic. Surveys of the cycling public indicate that 80 percent of cyclists can be categorized as basic cyclist.

Advanced Cyclists—are typically experienced cyclists who have the ability to safely ride under more typical thoroughfare conditions of traffic volume and speed. This group of cyclists generally prefers shared roadways as opposed to striped bike lanes and paths. Although surveys show that this group represents only about 20 percent of all cyclists, they also show that they ride about 80 percent of the bicycle miles traveled yearly.

Photo by Doug Godard

Child Cyclists—include children (aged 12 and under) on bicycles who do not fit into either classification. This group generally keeps to neighborhood streets, sidewalks, and greenways. When children venture out onto busier roadways, they typically stay on sidewalks or bicycle facilities that keep them safely away from traffic. Upper Arlington should allow children and other cyclists who are uncomfortable riding in traffic to ride on sidewalks with the requirement that they yield to pedestrians.

Cyclist on Zollinger Road

In general, cyclists, not unlike drivers, become more experienced over time and miles of riding. As cyclists ride and gain more experience operating in traffic, they eventually graduate from the classification of a basic cyclist to an advanced cyclist more capable of operating under typical roadway conditions.

Shared Lane Facility

FACILITIES

Shared Lane—This type of facility is often referred to as a "wide outside lane," a "shared lane," or a "wide curb lane." These facilities involve providing extra width in the outermost travel lane on either single-or multi-lane roadways to accommodate cyclists. Typically shared lane facilities have an outer lane width of 14 feet on multi-lane roadways and 15 feet on single-lane roadways. It is important to note that the lane width that is measured on this facility type does not include any curb-and-gutter adjacent to the travel lane. This facility is most appropriate on travel routes with moderate traffic volumes and is suitable for cyclists who are comfortable riding with the flow of regular traffic. These routes can be ridden by basic cyclists, but are most often preferred by advanced cyclists.

Striped Lanes—This type of facility consists of an exclusive-use area adjacent to the outermost travel lane. The area delineated for cyclists is a minimum of 4 feet wide and is marked by a solid white line on the left side and frequent signs and stenciled pavement markings indicating either "Bike Only" or another such message so as to deter vehicles other than bicycles from using the lane for travel. In situations where a striped lane encounters on-street parking, extra lane is required, most often a minimum of one additional foot (5-foot total lane width). As with the shared lane facility, delineated bike lane minimum widths do not include any curb-and-gutter that may exist, as these areas are unsuitable for bicycle travel. Striped bike lanes are one of the facilities of choice for basic and child cyclists because they offer a measure of security (separation from vehicles) not found in all other facilities.

Striped Lane Facility

Shared Parallel Multi-Use Paths (one side of street)—This type of facility is typically a 10-foot-wide asphalt path that runs parallel to the street and is shared by pedestrians and cyclists. These paths are set back from the curb by a planted verge area that is a minimum width of 5 feet. It is generally unacceptable to construct this type of facility where there are frequent driveway cuts and intersections because the chance for conflicts between pedestrians, cyclists, and vehicles is dramatically increased. This facility type is generally suitable for all levels of cyclists, but is most often preferred by basic and child cyclists.

Street with Parallel Off-Street Paths

Parallel Off-Street Paths (both sides of street)—This type of facility consists of a 5-foot, one-way off-street path on both sides of the street. These paths are separated from the street by a planted verge that is a minimum of 5 feet in width. Since this facility type runs adjacent to the sidewalk, it is necessary for it to be constructed and marked uniquely to prevent unwanted interaction between pedestrians and cyclists. A unique feature of this facility is that when approaching an intersection or major driveway, the path re-joins the street just prior to the driveway or intersection, allowing the cyclist to become more visible to turning or intersecting traffic. This type of facility is suitable for cyclists of all levels.

Signed Bike Route

Signed Route—This type of route is created in cases where there is no room or need to create additional space for cyclists. Often, signed routes lead cyclists through the "quieter" streets of a city, using neighborhood streets where traffic speeds and volumes are low. This type of route is good for cyclists of any level, provided that it is planned on streets that have low traffic volume and speed.

Neighborhood Connector—This important "gap filling" facility is often crucial in finishing a pathway system. Typical suburban planning has created neighborhoods of cul-de-sacs and dead end streets, limiting non-vehicular connections between adjacent developments. The neighborhood connector is a means of linking cul-de-sacs and dead ends without constructing roads. Typically these connections are 10-foot-wide asphalt paths and are routed along property lines in between cul-de-sacs and dead ends. This facility is beneficial to and used by cyclists of all levels, and pedestrians as well.

Pedestrian Bridge over SR 315

THE PLAN

Sidewalks

All streets in Upper Arlington should eventually have sidewalks, but there may be exceptions for unusual situations. In general this means that a standard width sidewalk of 5 feet should be constructed, set back from the back of the curb by a minimum of 5 feet by either a planted verge or hardscaped area. In areas where pedestrians are expected in greater numbers, it is likely that existing sidewalks will need to be widened and new sidewalks constructed at wider widths. Throughout planned re-development areas identified in the master planning process, (Kingsdale, Tremont Center, Lane Avenue, and Henderson Road) the need for wide sidewalks should be evaluated on an individual basis, based on the anticipated street-level activities that are expected to occur (sidewalk cafés, street vendors, street festivals, and the like). The update of Upper Arlington's Unified Development Ordinance should identify sidewalks wider than 5 feet within revitalized activity centers.

Curb ramps are necessary to satisfy the Americans with Disabilities Act of 1991. A program of curb ramp installation has been adopted by the City.

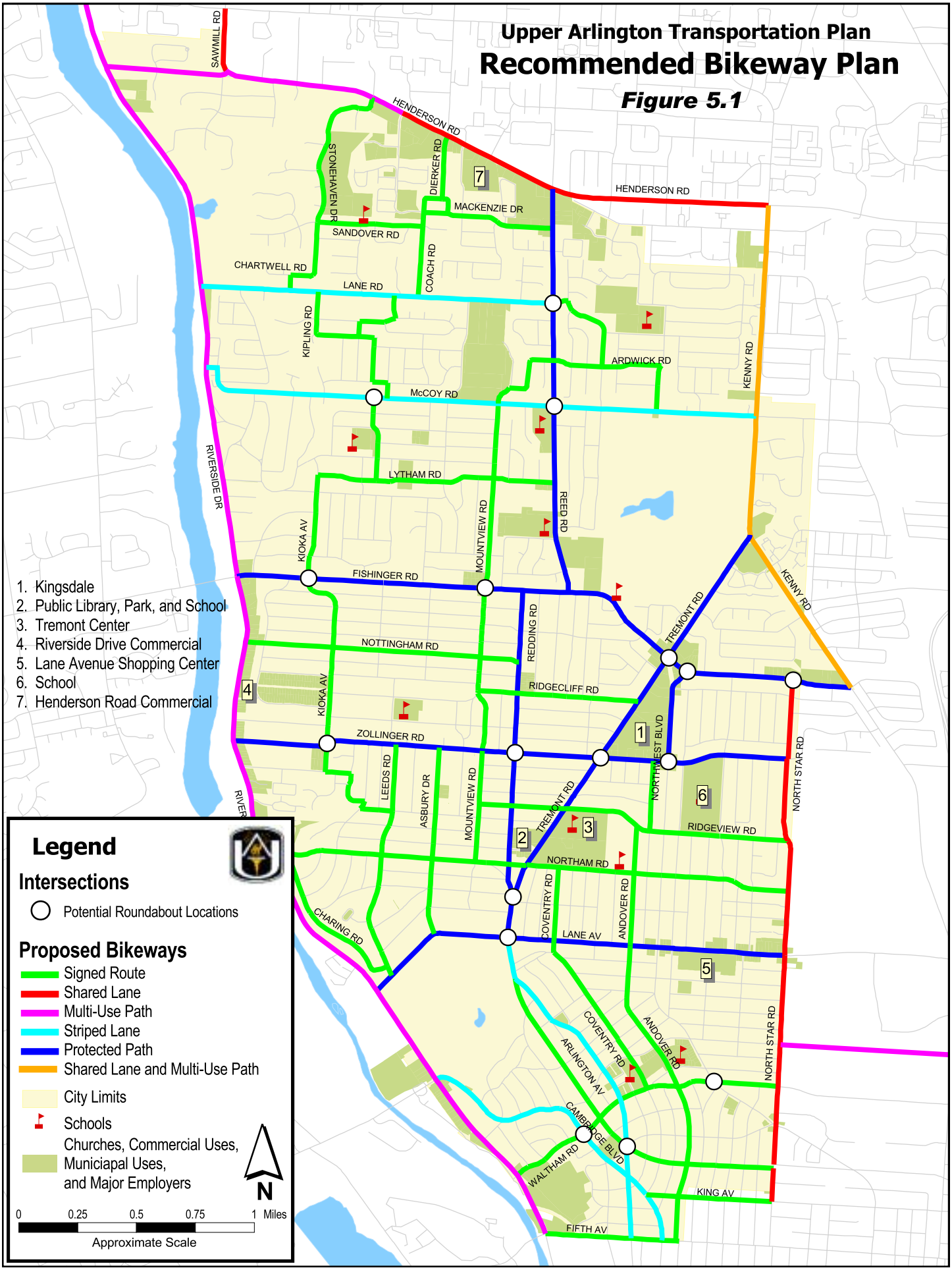
Bikeways

Today, bikeways in Upper Arlington are limited to the few multi-use paths that are already constructed along the Olentangy River, through The Ohio State University (OSU) and near Griggs Reservoir Park. The bikeway system that exists does not serve the residents of Upper Arlington well for either recreation or transportation. When implemented, recommendations in this plan will provide a network of bikeways that cater to advanced, basic, and child cyclists for both recreation and transportation. The recommended bikeway plan for Upper Arlington is shown in **Figure 5.1** and individual roadway section recommendations are indicated in **Table 5.1**. The table and figure show bikeways, by type throughout the study area.

Child Cyclist on Kioka Avenue at Fishinger Road

Table 5.1- Planned Bicycle Facilities

Corridor	End Points		Facility Type	Minimum Skill Level Needed	Destinations Served
Arlington Avenue	Tremont Road	Fifth Avenue	5-Foot Striped Bike Lane	All Levels	Commercial, Parks, Residential Connector
Cambridge Boulevard	Riverside Drive	Fifth Avenue	4-Foot Striped Bike Lane	All Levels	Park, Residential Connector
Fishinger Road	Riverside Drive	Kenny Road	Protected Path System 5-foot parallel off-street bike paths, both sides of the street	All Levels	Commercial, Park, School, Residential Connector
Henderson Road	Riverside Drive	Sawmill Road	Two-way, off-street multi-use path (10-feet wide)	All Levels	Residential Connection
Henderson Road	Sawmill Road	Arlington Centre Drive	Two-way, off-street multi-use path (10-feet wide)	All Levels	Residential Connection, Commercial
Henderson Road	Arlington Centre Drive	Kenny Road	Shared lane (13-foot outside travel lane, 11-foot inner lane)	Advanced	Commercial
Kenny Road	Henderson Road	Fishinger Road	Two-way, off-street multi-use path (10 feet wide) and; Shared outside lane (14-foot outside travel lane, 11-foot inner lane)	All Levels (multi-use path) Advanced (shared-lane)	Municipal, Commercial, Residential Connector
Lane Avenue	Riverside Drive	North Star Road	Protected Path System 5-foot parallel off-street bike paths, both sides of the street	All Levels	Commercial, Residential Connector
Lane Road	Riverside Drive	Reed Road	4-Foot Striped Bike Lane	Basic Cyclists and Above	Park, Municipal, Residential Connector
McCoy Road	Riverside Drive	Kenny Road	Protected Path System 5-foot parallel off-street bike paths, both sides of the street	All Levels	School, Park, Residential Connector
North Star Road	Fishinger Road	Fifth Avenue	Shared lane (15-foot outside travel lane)	Advanced	Commercial, Residential
Northwest Boulevard	Fishinger Road	Zollinger Road	Protected Path System 5-foot parallel off-street bike paths, both sides of the street	All Levels	Commercial, Residential
Redding Road	Fishinger Road	Canterbury Road	Protected Path System - 5-foot parallel off-street bike paths, both sides of the street	All Levels	Park, Residential, Commercial
Reed Road	Mackenzie Drive	Fishinger Road	Protected Path System 5-foot parallel off-street bike paths, both sides of the street	All Levels	Park, School, Residential
Riverside Drive	Henderson Road	Fifth Avenue	Two-way off-street multi-use path	All Levels	Park, Commercial, Residential
Tremont Road	Kenny Road	Arlington Avenue	Protected Path System 5-foot parallel off-street bike paths, both sides of the street	All Levels	Park, Municipal, Residential, School, Commercial
Zollinger Road	Riverside Drive	North Star Road	Protected Path System 5-foot parallel off-street bike paths, both sides of the street	All Levels	Park, School, Commercial, Residential


Upper Arlington Transportation Plan
Recommended Bikeway Plan
Figure 5.1
1. Kingsdale
2. Public Library, Park, and School
3. Tremont Center
4. Riverside Drive Commercial
5. Lane Avenue Shopping Center
6. School
7. Henderson Road Commercial
Legend
Intersections
Potential Roundabout Locations
Proposed Bikeways
Signed Route
Shared Lane
Multi-Use Path
Striped Lane
Protected Path
Shared Lane and Multi-Use Path
City Limits
Schools
Churches, Commercial Uses, Municiapal Uses, and Major Employers
N
0 0.25 0.5 0.75 1 Miles
Approximate Scale
SAWMILL RD
HENDERSON RD
STONEHAVEN DR
DIERKER RD
MACKENZIE DR
SANDOVER RD
COACH RD
CHARTWELL RD
LANE RD
KIPLING RD
ARDWICK RD
KENNY RD
McCOY RD
RIVERSIDE DR
LYTHAM RD
REED RD
MOUNTVIEW RD
KIOKA AV
FISHINGER RD
TREMONT RD
NOTTINGHAM RD
REDDING RD
RIDGECLIFF RD
ZOLLINGER RD
NORTHWEST BLVD
NORTH STAR RD
LEEDS RD
ASBURY DR
RIDGEVIEW RD
NORTHAM RD
CHARING RD
COVENTRY RD
ANDOVER RD
LANE AV
ARLINGTON AV
CAMBRIDGE BLVD
WALTHAM RD
KING AV
FIFTH AV

Chapter 6

Transit Element

INTRODUCTION

A common misconception in the civic debate is that transit should "pay for itself." The purpose of transit is not to make money, but to offer a transportation choice. Transit is a viable mode of transportation in hundreds of cities worldwide.

There are two types of patrons who use transit: choice riders and captive riders. Choice riders are those people who choose to leave their personal vehicles and instead take transit, whereas captive riders are those people who do not have access to a personal vehicle and take transit out of necessity.

Presently, Upper Arlington has transit service from the Central Ohio Transit Authority (COTA) on nine fixed bus routes (**Figure 6.1**) throughout the City. COTA is a six-county public agency that provides transit service throughout the Columbus Metropolitan Area providing approximately 18 million rides a year on an annual budget of $72.8 million.

LOCAL TRANSIT PLAN

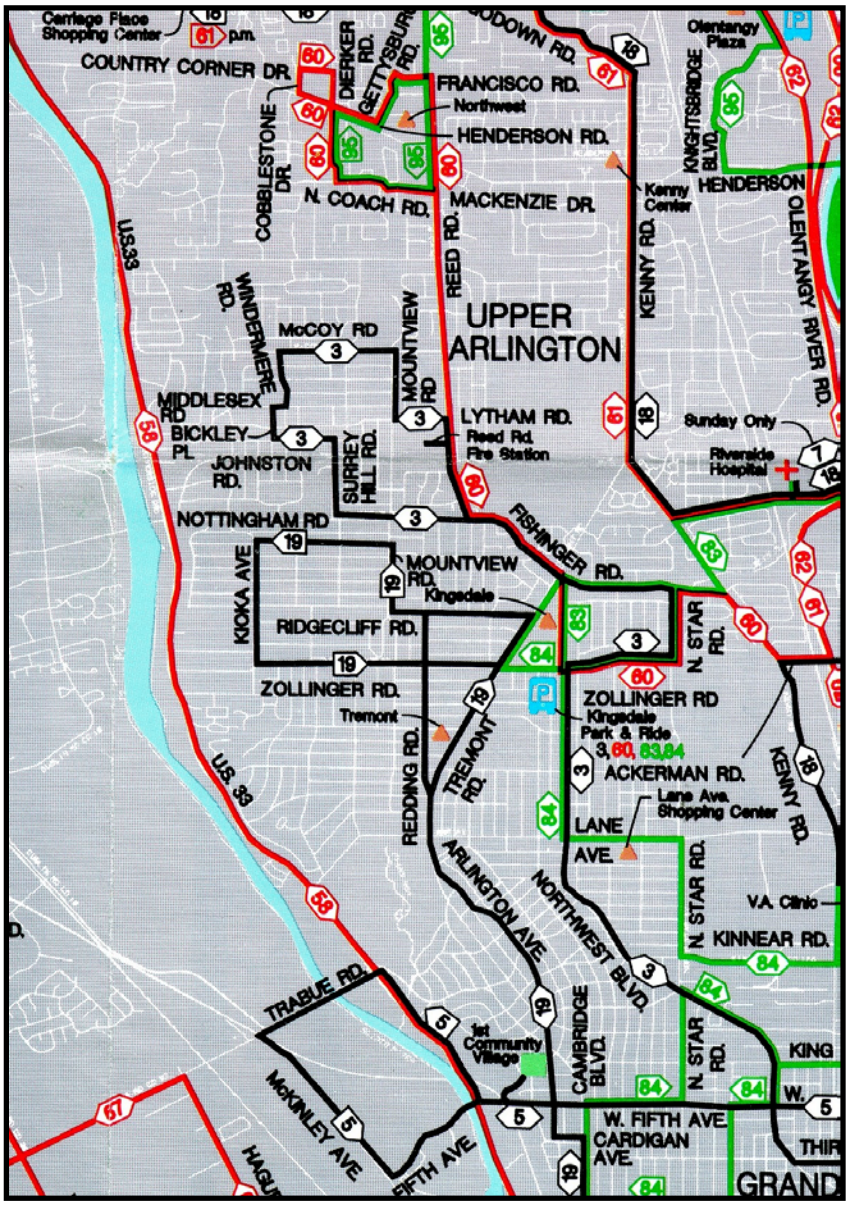
A quarter mile or four to five minutes is the generally accepted distance people are willing to walk to access transit. Over 76 percent of Upper Arlington is within a quarter mile walk of one of the nine fixed bus routes operated by COTA in the City. Although 76 percent coverage is clearly a majority of the city, during the charrette residents voiced comments that suggested that the current service does not serve their needs. Rather than a desire to travel regionally on the bus, citizens expressed a desire for have new bus routes that serve local travel within Upper Arlington.

For a local circulator to be successful it needs to serve a broad base of Upper Arlington's citizenry and provide service to desired destinations such as libraries, parks, pools, schools, shopping, and possibly a future community center. To effectively provide service coverage for the City, two local circulator routes would be needed. **Figure 6.2** illustrates conceptual routes of the local circulators. Route 1-New Arlington is approximately 11 miles long and Route 2-Old Arlington is approximately 10-1/2 miles long. For this service to be reasonably time competitive and attractive, relative to driving, the suggested frequency of service (headway) is 15 to 30 minutes. **Table 6.1** indicates the number of buses that are needed to achieve 20-minute and 40-minute headways for each route.

To begin new circulator service, COTA would likely cut-back on specific routes that currently serve Upper Arlington. This is because COTA is a cost-constrained operation and would therefore seek to maintain a consistent number of service-hours in Upper Arlington. However, as in Westerville, the City of Upper Arlington can subsidize the new circulator bus service. Suggestions from COTA to equalize its costs, if implementing this local service include:

- Running smaller buses on Upper Arlington's radial routes (routes serving downtown Columbus)
- Reducing service hours on UA's radial routes
- Local subsidization for new service

Figure 6.1 – Existing COTA Transit Service



Upper Arlington Transportation Plan

Conceptual Local Bus Routes

Figure 6.2

Legend

Streets

- Route 1 - New Arlington
- Route 2 - Old Arlington

1. Kingsdale
2. Public Library, Park, and School
3. Tremont Center
4. Riverside Drive Commercial
5. Lane Avenue Shopping Center
6. School
7. Henderson Road Commercial

City Limits

Schools

Churches, Commercial Uses, Municipal Uses, and Major Employers

N

0 0.25 0.5 0.75 1 Miles

Approximate Scale

Table 6.1 – Route Specifications

Route	Length	Number of Buses Required
1 – New Arlington	11.05 miles	
20 Minute Headway		2
40 Minute Headway		1
2 – Old Arlington	10.41 miles	
20-Minute Headway		2
40 Minute Headway		1

Number of buses required assumes that average speed along each route is a maximum of 17 mph.

To minimize the potential for long delays on routes resulting from buses waiting to make left-turns at unsignalized intersections, both routes are planned to be operated in the clockwise direction.

Beyond route planning, selection of appropriate vehicles is key to operating a successful local transit service. Presently, there are innumerable bus sizes and styles available for service. The question is what size bus, small or large? While large vehicles have more passenger capacity (60 to 65 passengers), they often have wider turning radii, are less maneuverable, consume more fuel, and are noisier than smaller vehicles. With sections of the planned local circulation routes running in neighborhoods where space is at a premium and noise could be of concern, small vehicles seem the appropriate choice.

The first vehicle shown is a cutaway bus, a standard full-size van cab attached to a passenger carrying body. These vehicles are easily maneuverable on neighborhood streets, feature paratransit lifts, are quiet (with choice of either a gas or diesel engine), and have seating capacity for approximately 20 to 25 passengers, depending on configuration.

Typical Cutaway Vehicle

The next vehicle shown is a larger, more conventional looking small bus. These buses range from 28 to 35 feet in length, with greater passenger capacities, low floors, and optional CNG (compressed natural gas) engines or other alternative and standard fuel and diesel engines. The vehicle pictured is a low floor vehicle, which means that the bus has a flat floor from entry of the vehicle to passenger seating (most buses have stairs), making the vehicle easily accessible by the elderly or those with a physical disability.

COTA Typical Small Low Floor Bus

Either vehicle shown is an appropriate choice of vehicle type for a local circulator in Upper Arlington, however there are other vehicles to choose from if so desired. Both vehicles have advantages and disadvantages ranging

from available passenger capacity to overall fleet compatibility, to required maintenance, to public perception. When vehicles are chosen, costs and benefits should be weighed before deciding on vehicles that will be used.

COTA Future Plans

COTA already provides extensive transit service throughout the Columbus Metropolitan Area. Pending decisions regarding increased funding, expansions and extensions of this service are possible, including the addition of new fixed guideway services throughout the region.

To enhance bus transit operations—pending decisions to increase funding levels for transit operations—COTA may add hours of new service as well as diversify its fleet of buses (more and smaller buses). The creation of the Capital City Flyer route and Linden Link are two examples of bus transit service expansion. In addition, COTA may improve communication and technology on its services through real time passenger information, signal prioritization, and better incident management. COTA may also build neighborhood transit centers throughout the region.

Chapter 7

Implementation Plan

Recommendations made in Chapter 4 of the Upper Arlington Transportation Plan could be implemented over a period of 10 years by completing one significant street project per year. Implementing plan recommendations would mean completing the sidewalk and bikeway networks, augmenting existing transit service with local circulator routes, and reconstructing roadways throughout the city to encourage the diversification of travel modes that the plan recommends.

All long-range plans benefit from a good implementation plan. The City of Upper Arlington has the authority to enact some, but not all, of the recommendations in this Plan. To adopt and implement the Plan, it will take a concerted effort by the City, working with the following:

- Upper Arlington's Citizens and Businesses
- The Mid Ohio Regional Planning Commission (MORPC)
- The Central Ohio Transit Authority (COTA)
- The Ohio Department of Transportation (ODOT)
- Franklin County Engineer

It is recommended that the City of Upper Arlington staff conduct an annual review of the implementation plan and present a progress report to the City's elected leadership.

FUNDING PLAN

To implement the recommendations presented in this Plan, the City must identify a stable, timely, and equitable method of funding. A variety of funding options are available to Upper Arlington, a charter city with home rule authority. The following funding options, authorized under State of Ohio legislation, were identified for the City of Upper Arlington: general fund, assessments, general obligation bonds, mortgage revenue bonds, revenue bonds, state and federal programs, and direct payments by developers and property owners. Each was considered in light of its best use for the City in terms of fairness, economy, practicality, versatility, legality, and ability to administer. It was found that a Transportation Utility, similar to the Stormwater Utility, would best meet the criteria stated above.

A Transportation Utility is a single purpose utility organized to manage and finance improvements to the roadway, sidewalk and bikeway system and possibly to augment transit services in Upper Arlington. With the "utility" method of generating funds for capital needs in transportation, the annual revenues are assigned in assured and predictable in amounts—vital to master planning and implementing both short-term and mid-term transportation improvements. The utility would assess a fee to all property owners, including

residential, commercial, industrial, public, and institutional property owners. The fee would be related to the number of trips generated by the current land use on site at the time of the assessment. The number of trips will include, but not be limited to pedestrians, bicyclists, drivers, passengers, and transit riders. Estimates of the number of trips can be determined using typical rates factored into the MORPC regional model or measured through observation. A Transportation Utility can be set up by the governing body of a city passing a transportation utility ordinance.

The estimated 10-year program would total $100 million including $43 million for calming and reconstructing ten streets, $30 million for citywide sidewalk construction, $2 million to create a bikeway system, and $5 million for a transit center with the remaining $20 million allocated for perimeter streets (**Table 7.1**). The estimated utility fee would be $27 per household per month and $1000 per gross acre of commercial land per month.

SHORT TERM ACTION PLAN (0 to 5 years)

1. Public Hearing and other public presentations of the Plan
2. Acceptance of the Upper Arlington Transportation Plan by the City Council
3. Plan review and inclusion into MORPC's Long Range Transportation Plan
4. Update the Unified Development Ordinance to incorporate the Transportation Plan recommendations
5. Develop a Transportation Utility Ordinance for consideration by the City Council

Implement Short Term Roadway Improvements

- Construct a temporary modern roundabout at the intersection of Arlington Avenue/Stanford Road/Tremont Road
- Construct a modern roundabout at the intersection of Henderson Road/Hampton Lane/Tarrington Woods
- Together with ODOT, conduct a corridor study to consider land use and transportation changes along Riverside Drive
- Resurface Reed Road and re-stripe as a three-lane cross section with striped bike lanes from Mackenzie Drive to Fishinger Road
- Re-stripe McCoy Road from Lymington Road to Longhill Road to demonstrate the feasibility of converting four-lane undivided cross sections to three-lane cross sections
- Install traffic calming devices on Cambridge Boulevard and retime traffic signal at Riverside Drive/Trabue Road to discourage through traffic on Cambridge Boulevard

Additional details relating to estimated construction cost, proposed funding source, time frame, and estimated project length can be found in **Table 7.2**.

Public Transit Improvements

- Work with COTA to implement the two proposed local circulation bus routes

Bicycle and Pedestrian Improvements

- Inventory all sidewalks in the City for location, condition, ADA compliance, and width with the data added to the City's geographic information system (GIS)
- Develop a 10-year capital improvement program to construct sidewalks where they are needed to fill-in gaps in the system
- Designate bike routes with appropriate signage
- Pursue Federal TEA-21 grants and earmarks to build bicycle improvements

Follow-Up Study

- Conduct a corridor study for Fifth Avenue from Riverside Drive to SR 315, partnering with the Village of Marble Cliff, the City of Columbus, MORPC, and citizen and business stakeholders, to establish criteria for success and an action plan to achieve success
- Conduct a follow-up study for the Ackerman Road Extension working with OSU and the City of Columbus
- Monitor travel times in corridors annually in late September/October

MID TERM ACTION PLAN (5 to 10 years)

1. Adoption by the City Council of the street classifications and Thoroughfare Plan – Figure 4.1

Roadway Improvement Preparation

2. Prepare functional plans for high priority transportation improvements
3. Environmental clearance, permit approval, and right-of-way acquisition for high priority transportation improvements
4. Implement action plan for Fifth Avenue
5. Reconstruct Tremont Road as a three-lane cross section from Lane Avenue to Kenny Road
6. Reconstruct Fishinger Road as a three-lane cross section from Riverside Drive to North Star Road
7. Develop a 10-year Capital Improvement Program to incorporate one significant street project per year implementing plan recommendations for the ten framework streets

TABLE 7.1 – FUNDING SUMMARY

Facilities	Cost Estimate (in millions)	Source of Funding
Sidewalks/Ramps	$ 30.0	Utility Fund
Streets (10) Interior	$43.0	Utility Fund
Streets (3) Perimeter	$ 20.0	State/Federal
Bike	$ 2.7	State/Federal
Transit	$ 4.3	State/Federal
Total	$ 100.0	-

Notes

Utility Fund
Residential = $ 27/month per household for 10 years = $ 45.0 million
Commercial = $ 1,000/month per gross acre for 10 years = $ 28.0 million
Total = $ 73.0 million

Sidewalks
- Existing – 88 miles, Total for Completion = 300 miles (includes existing and future) (150 miles each side of street), Amount to be Constructed = 300 – 88 = 212 miles
- Materials Cost = $ 2.80/sf (concrete only), $ 6.00/sf (brick pavers), assume $ 4.00/sf (60/40 mix concrete/brick) = $ 22.4 million
- Right-of-Way and Utility Relocation = Lump Sum $ 3.1 million
- ADA Ramps – Assume = $ 4.5 million
- **Sidewalk Total = $ 30.0 million**

Bikeways
- Assume Federal funding is available for on-street bikeways
- Assume Upper Arlington funding is reserved for reconstruction/restriping of vehicle travel ways for protected path system on nine key interior streets (5-foot bikeways on each side of the street)
- Nine key interior streets include: Reed Road, Fishinger Road, Redding Road, Tremont Road, Lane Avenue, Northwest Boulevard, Zollinger Road, Lane Road – Total Length (combined) = 16.5 miles
- Materials Cost = $ 3.00/sf (asphalt)
- **Bikeways Total = $ 2.7 million**

Interior Streets
- Cambridge Boulevard - $ 500,000 for traffic calming measures
- Key Streets - Reed Road, Fishinger Road, Redding Road, Tremont Road, Lane Avenue, Northwest Boulevard, Zollinger Road, Lane Road – 16.5 miles at $ 2.6 million per mile (rounded)
- **Interior Streets Total = $ 43.0 million**

Perimeter Streets
- Riverside Drive, Henderson Road, Kenny Road

Table 7.2 - Schedule for Project Implementation

Corridor	Recommendation	Length (linear feet)	Cost Estimate (2002 dollars)	Source of Funding	Year for Improvement
Reed Road – Henderson Road to Fishinger Road	Resurface and re-stripe to three-lanes with bikeways	9,100	$ 0.25 million	SMR	2003
McCoy Road – Lymington Road to Longhill Road	Re-stripe to three-lanes with one roundabout at Windemere Road	12,730	$ 60,000	SMR	2003
Henderson Road	Construct a modern roundabout at Hampton Lane/Tarrington Woods	1,000	$ 0.25 million	SMR	2004
Cambridge Boulevard – Riverside Drive to Fifth Avenue	14 Traffic Calming Devices	7,200 (est)	$ 0.35 million	SMR	2004
Tremont Road – Kenny Road to Lane Avenue	Reconstruct to three-lanes with four roundabouts	10,630	$ 6.6 million	Transportation Utility	2008
Fishinger Road – Riverside Drive to North Star Road	Reconstruct to three-lanes with five roundabouts	13,200	$ 8.3 million	Transportation Utility	2009

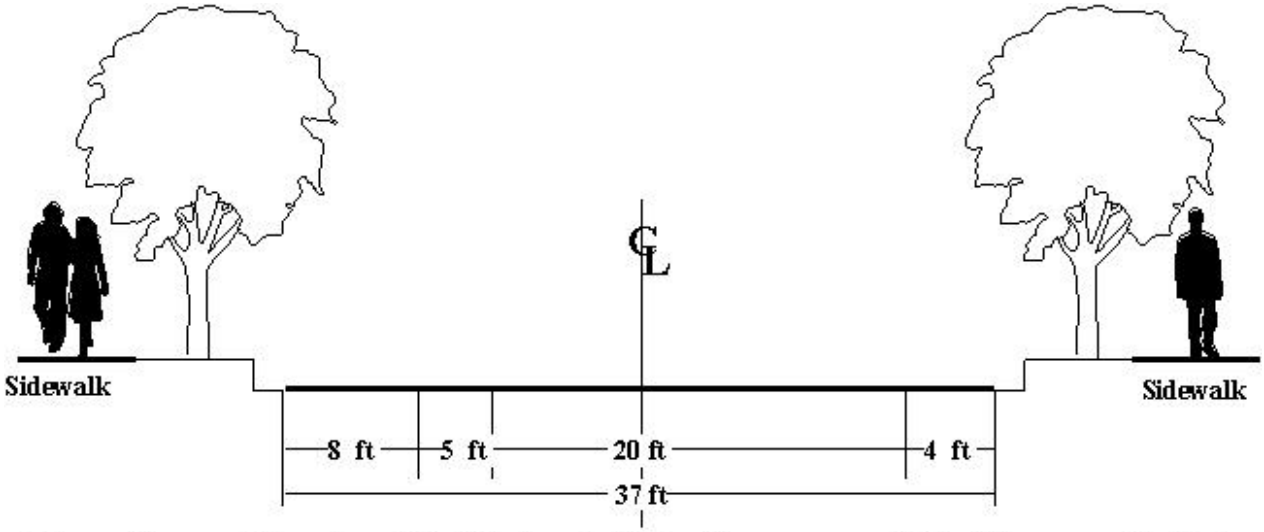
SMR = Street Maintenance and Repair Fund

Appendix A

Corridor Profiles

Corridor Profile Index

Arlington Avenue from Cambridge Boulevard to Waltham Road

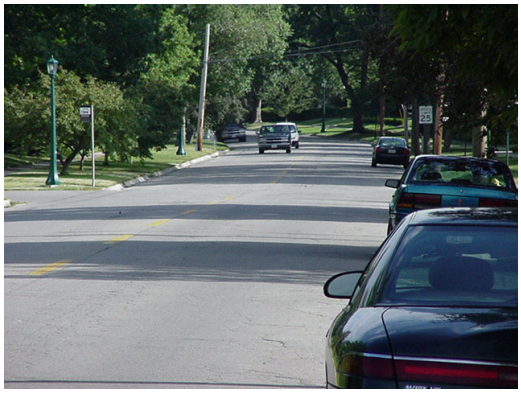


Two-Lane Street with Striped Bike Lanes and Parking on 1 Side

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	5404	2	37	80	-	None	25 *mph*	Collector
2025	5400	2	37	-	80	As Needed	25 *mph*	Framework

Planned Projects: none



Arlington Avenue Looking North from Waltham Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

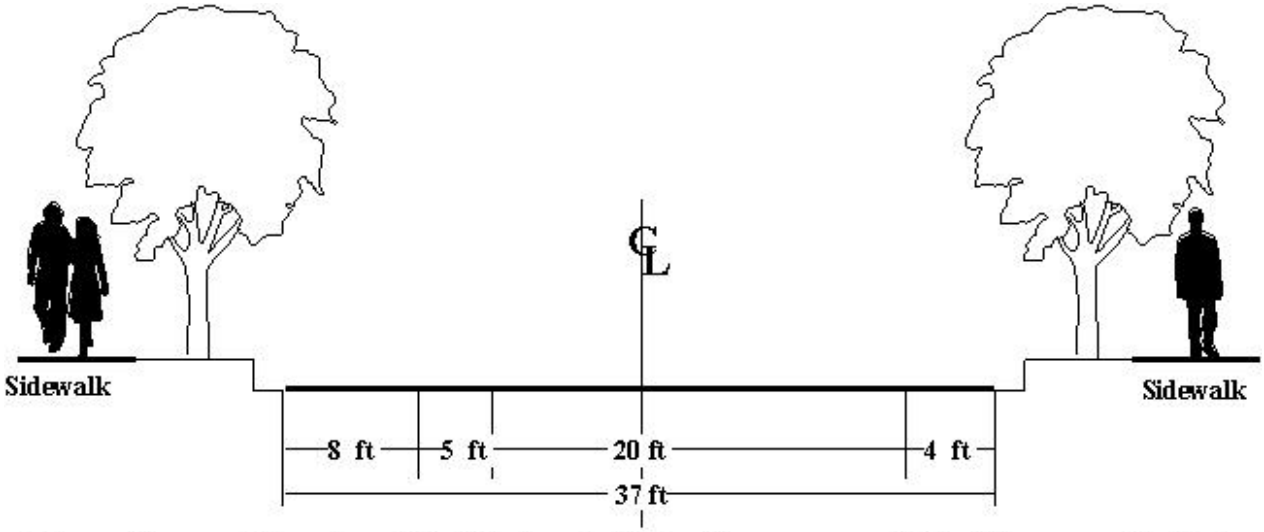
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Arlington Avenue from Waltham Road to Guilford Road



Two-Lane Street with Striped Bike Lanes and Parking on 1 Side

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	5404	2	61	80	-	None	25 *mph*	Collector
2025	5400	2	37	-	80	As Needed	25 *mph*	Framework

Planned Projects: none

Arlington Avenue Looking North Near Guilford Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

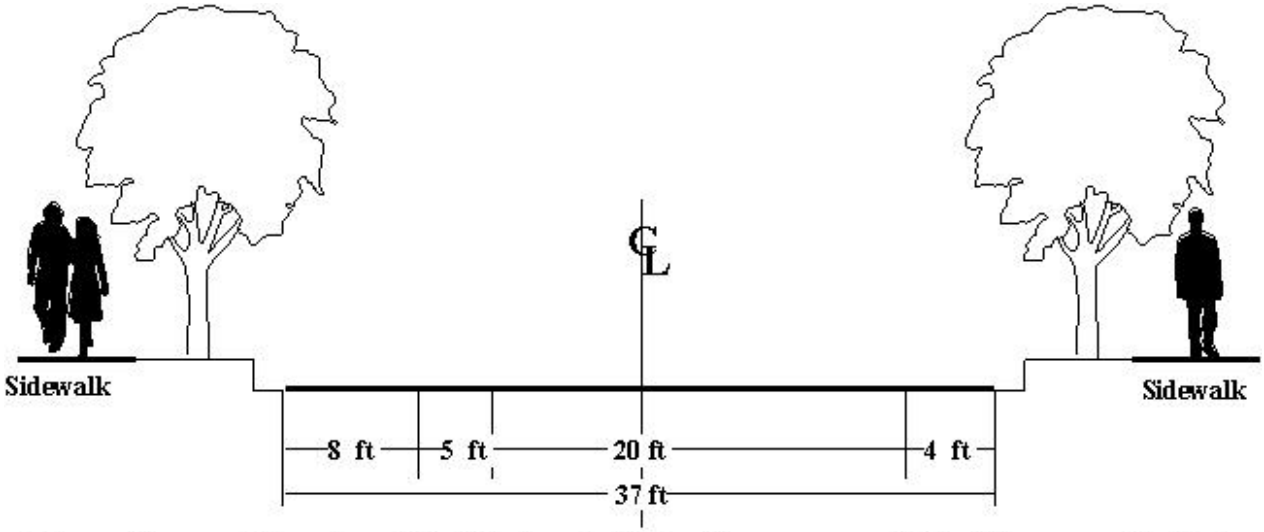
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Arlington Avenue from Guilford Road to Tremont Road



Two-Lane Street with Striped Bike Lanes and Parking on 1 Side

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	1206	2	37	80	-	None	25 *mph*	Collector
2025	2000	2	37	-	80	As Needed	25 *mph*	Framework

Planned Projects: none

Arlington Avenue Looking North Near Suffolk Drive

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

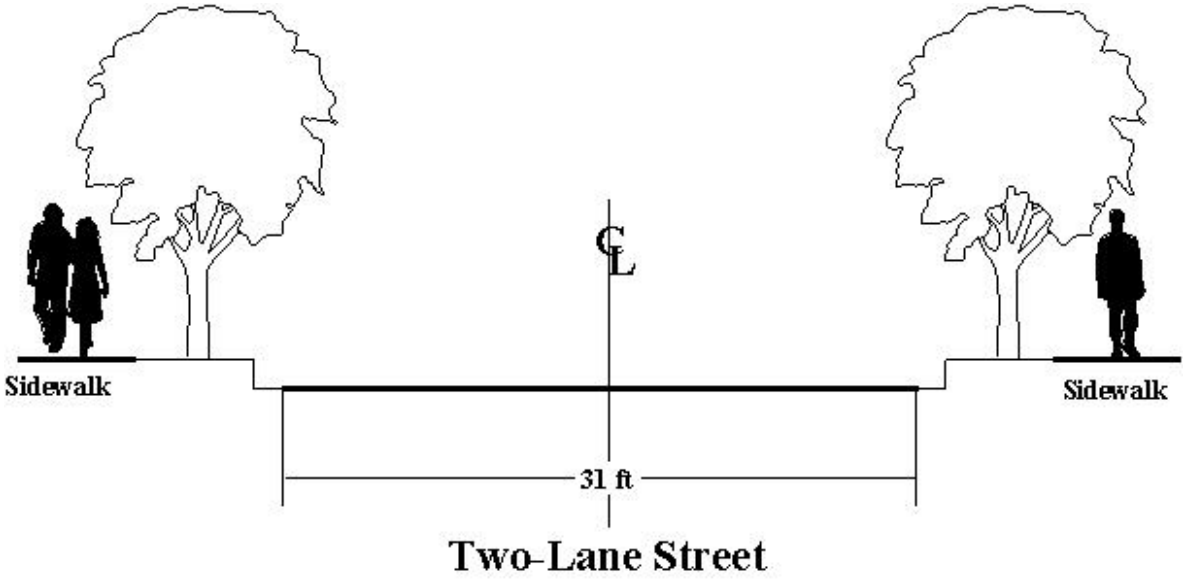
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Cambridge Boulevard from Fifth Avenue to King Avenue



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	901	2	31	80	-	None	25 *mph*	Collector
2025	3300	2	31	-	80	None	25 *mph*	Non-Framework

Planned Projects: none

Cambridge Avenue Looking North

Notes: Traffic Calming Measures to be Installed

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

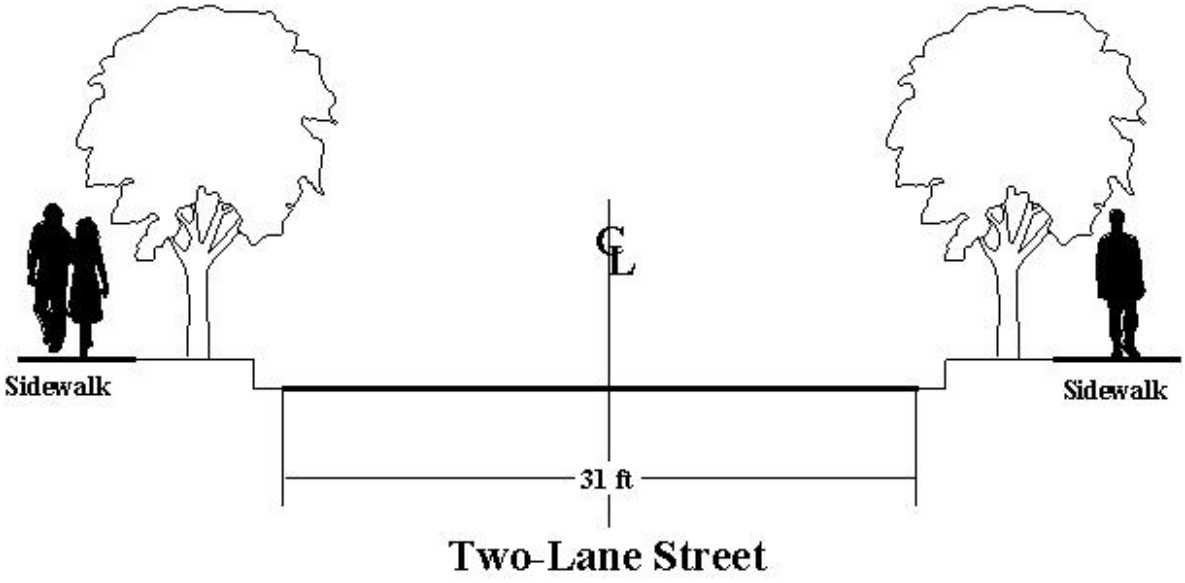
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Cambridge Boulevard from King Avenue to Guilford Road



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	5801	2	31	80	-	None	25 *mph*	Collector
2025	5800	2	31	-	80	None	25 *mph*	Non-Framework

Planned Projects: none

Cambridge Avenue Looking East Toward Gulford

Notes: Traffic Calming Measures to be Installed

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

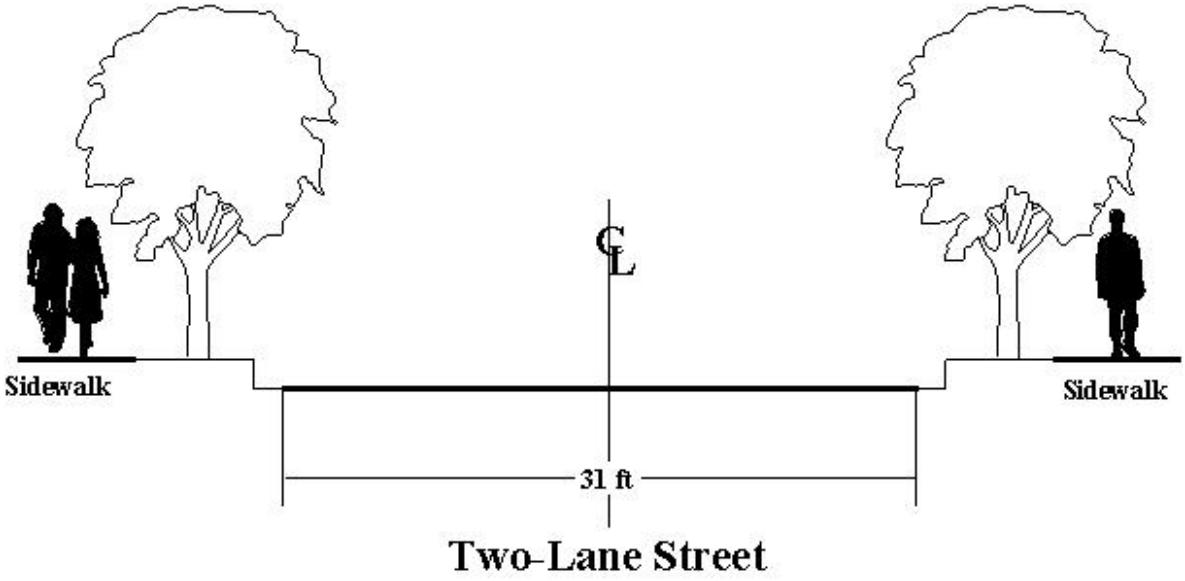
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Cambridge Boulevard from Guilford Road to Riverside Drive



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	6805	2	31	80	-	None	25 *mph*	Collector
2025	7000	2	31	-	80	None	25 *mph*	Non-Framework

Planned Projects: none

Cambridge Avenue East of Guilford

Notes: Traffic Calming Measures to be Installed

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

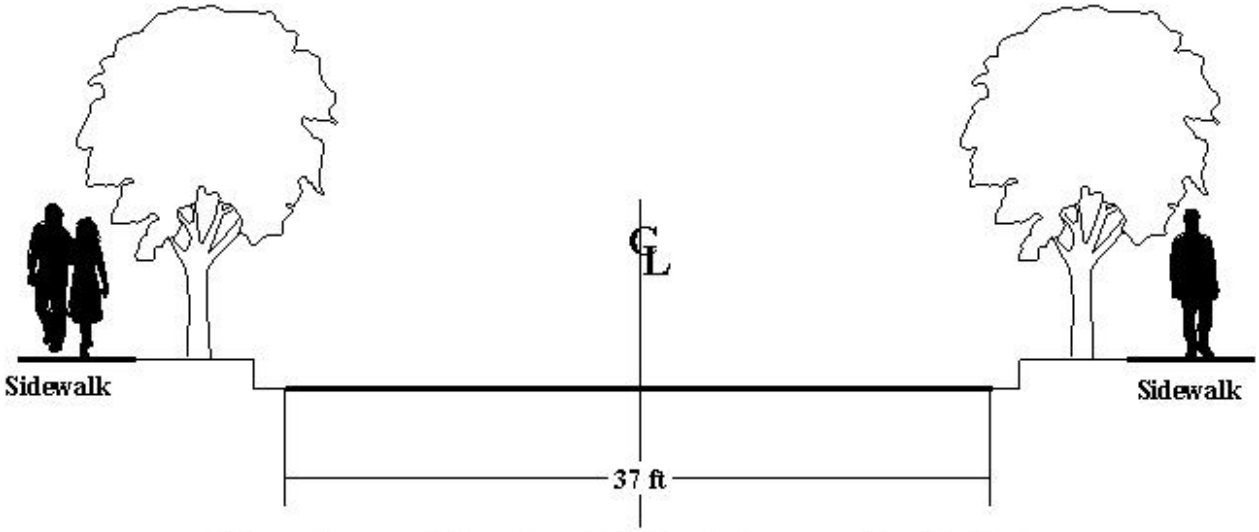
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Fifth Avenue from North Star Road to Riverside Drive



Two-Lane Street with Parking on Both Sides

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	17909	2	37	60	-	None	35 *mph*	Minor
2025	17900	2	37	-	60	As Needed	35 *mph*	Framework

Planned Projects: none

Fifth Avenue Looking West Near Fernwood Drive

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

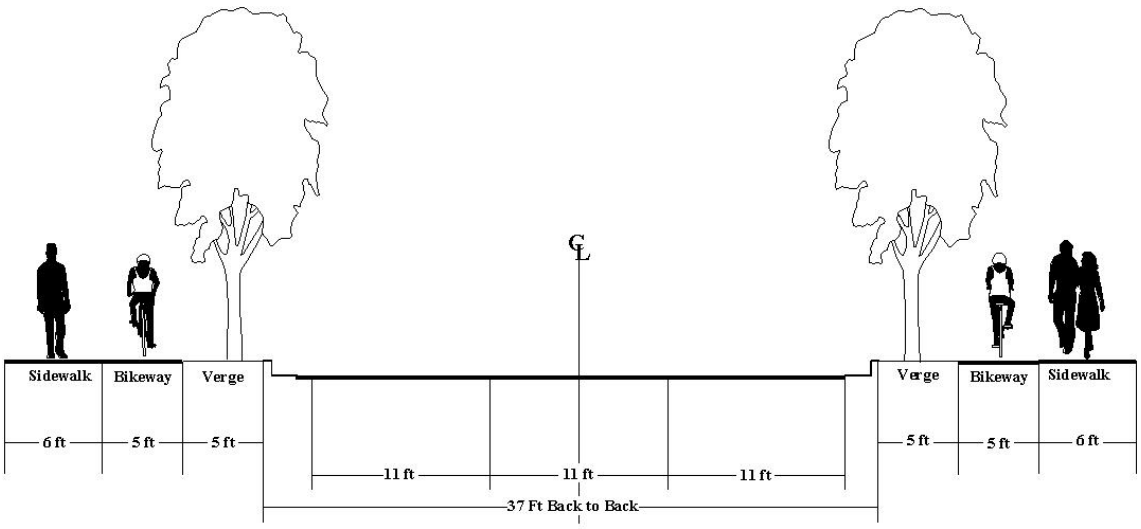
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Fishinger Road from Kenny Road to Tremont Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	4701	4	53	80	-	None	35 *mph*	Minor
2025	16300	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: none

Fishinger Road Looking East Near North Star Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

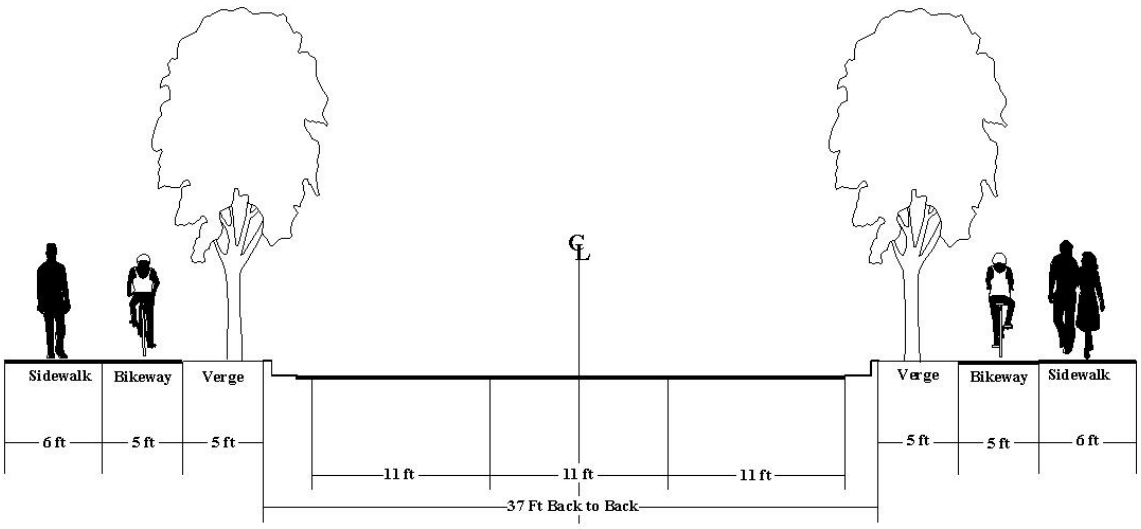
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Fishinger Road from Tremont Road to Reed Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	18609	4	41	80	-	None	35 *mph*	Minor
2025	22600	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: none

Fishinger Road Looking East at River Hill Drive

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

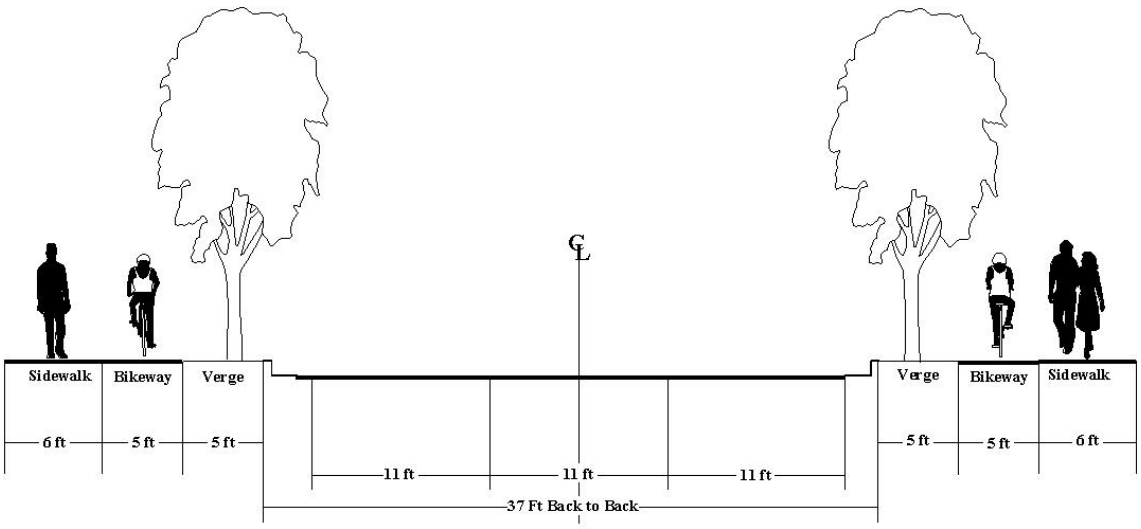
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Fishinger Road from Reed Road to Riverside Drive



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	23209	4	41-44	80	-	None	35 *mph*	Minor
2025	23200	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: none

Fishinger Road Looking East at Sunset Drive

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

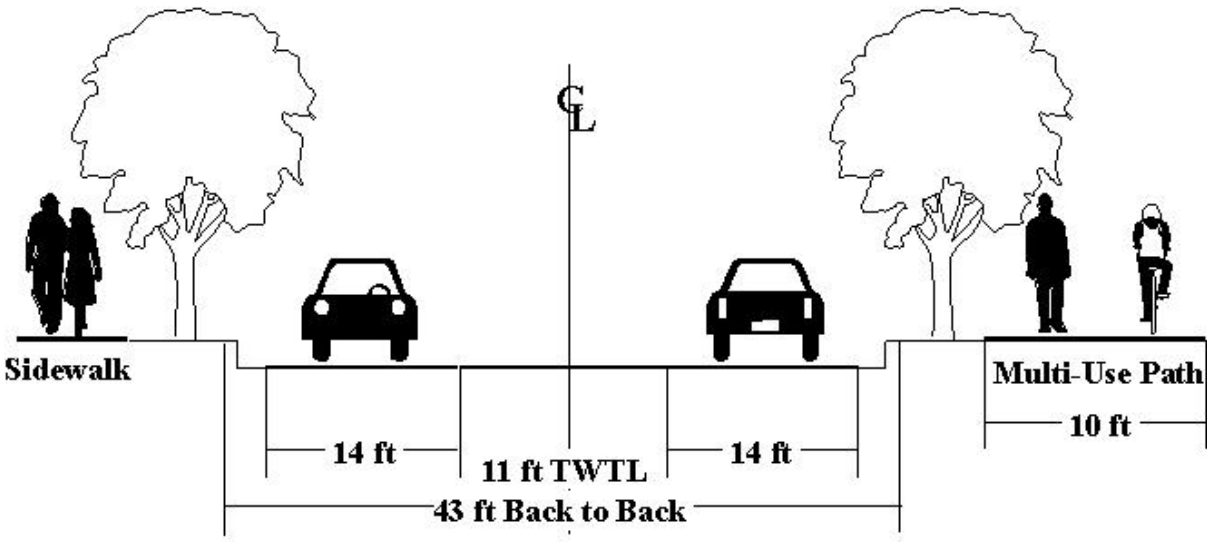
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Henderson Road from Chevy Chase Court to Sawmill Road



Three-Lanes with a Sidewalk and Multi-Use Path

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	18809	2	n/a	65	-	None	45 *mph*	Minor
2025	18900	2	39	-	65	TWTL	35 *mph*	Primary

Planned Projects: Widen 2-lane road to standard lane widths with turn lanes. ($ 1.10 Million, Part of MORPC Plan)

Henderson Road Looking West at Henderson Heights Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

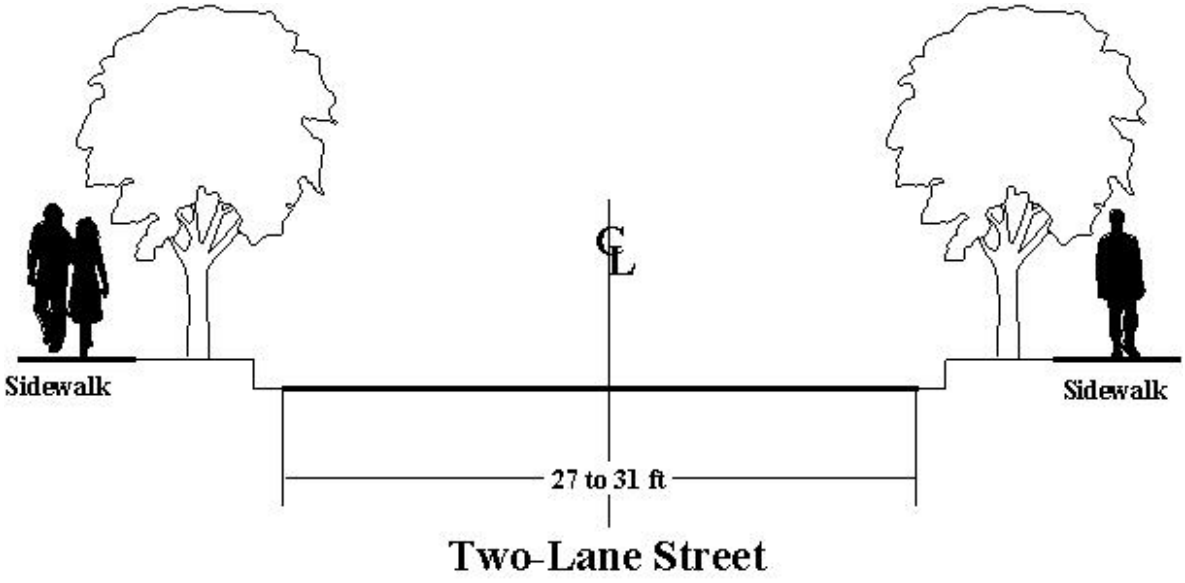
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Henderson Road from Sawmill Road to Riverside Drive



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	8509	2	n/a	60	-	None	35 *mph*	Minor
2025	14800	2	31	-	60	None	25 *mph*	Non-Framework

Planned Projects: Widen 2-lane road to standard lane widths with turn lanes ($ 0.87 Million, Part of MORPC Plan)

Henderson Road Looking West Toward Riverside

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

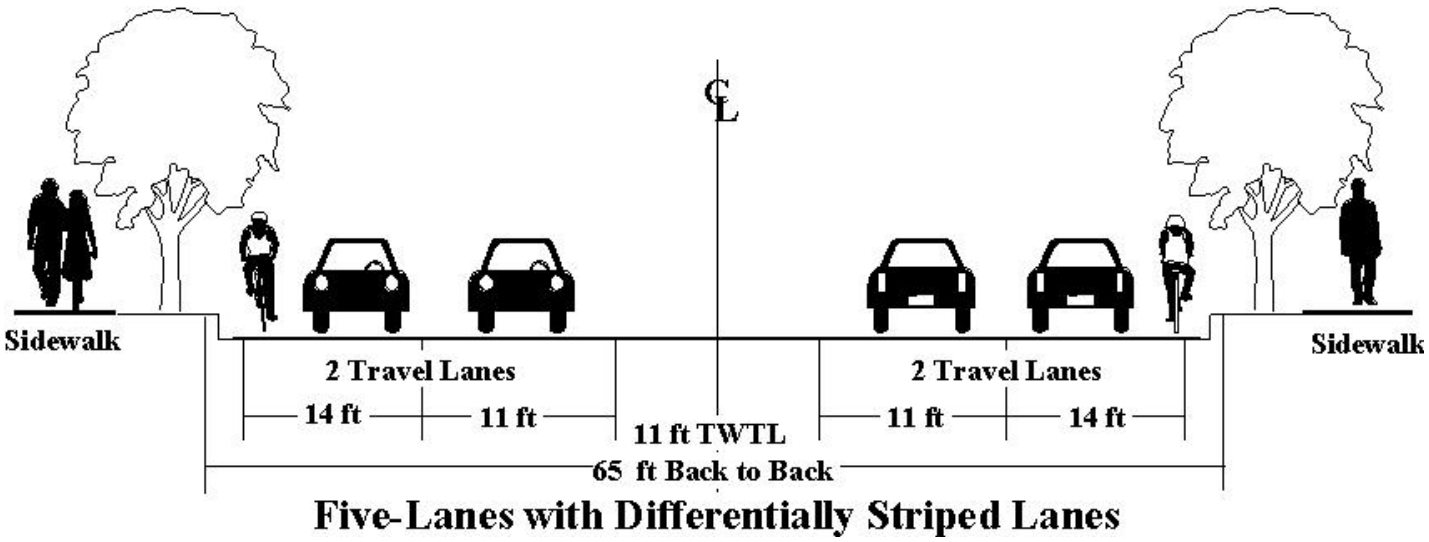
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Kenny Road from Fishinger Road to West North Broadway



Five-Lanes with Differentially Striped Lanes

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	14701	4	53	80	-	TWTL	40 *mph*	Minor
2025	14701	4	61	-	80	TWTL	35 *mph*	Primary

Planned Projects: none

Kenny Road Looking North Near Oberlin Drive

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

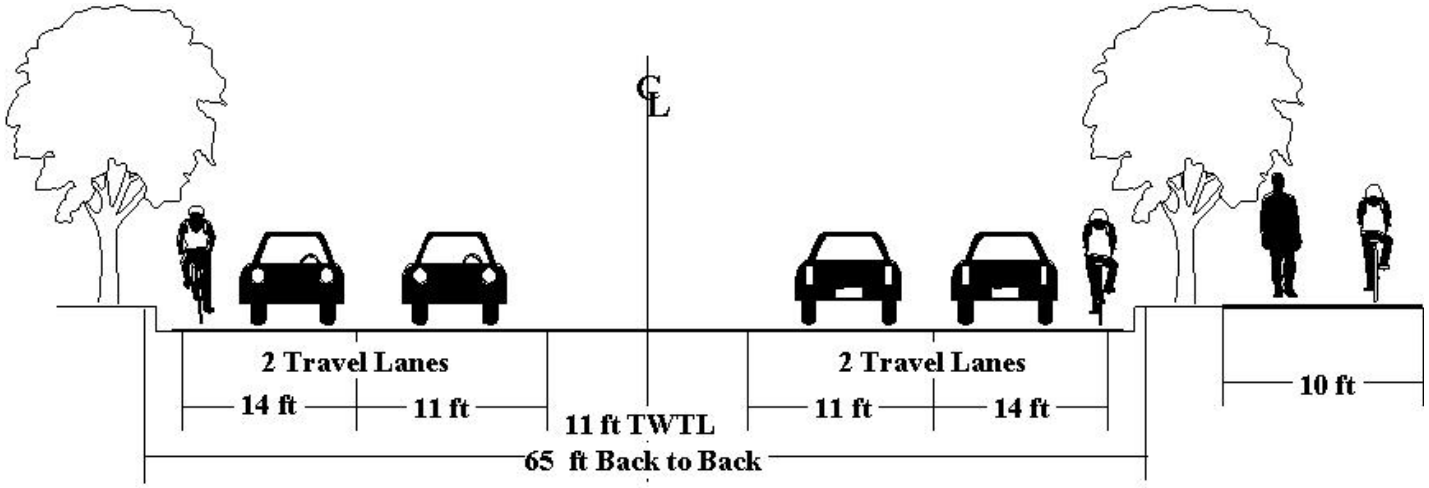
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Kenny Road from West North Broadway to Tremont Road



Five-Lanes with Differentially Striped Lanes and a Multi-Use Path

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	15801	4	53	80	-	TWTL	40 *mph*	Minor
2025	26000	4	61	-	80	TWTL	35 *mph*	Primary

Planned Projects: none

Kenny Road Looking North Near City Hall

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

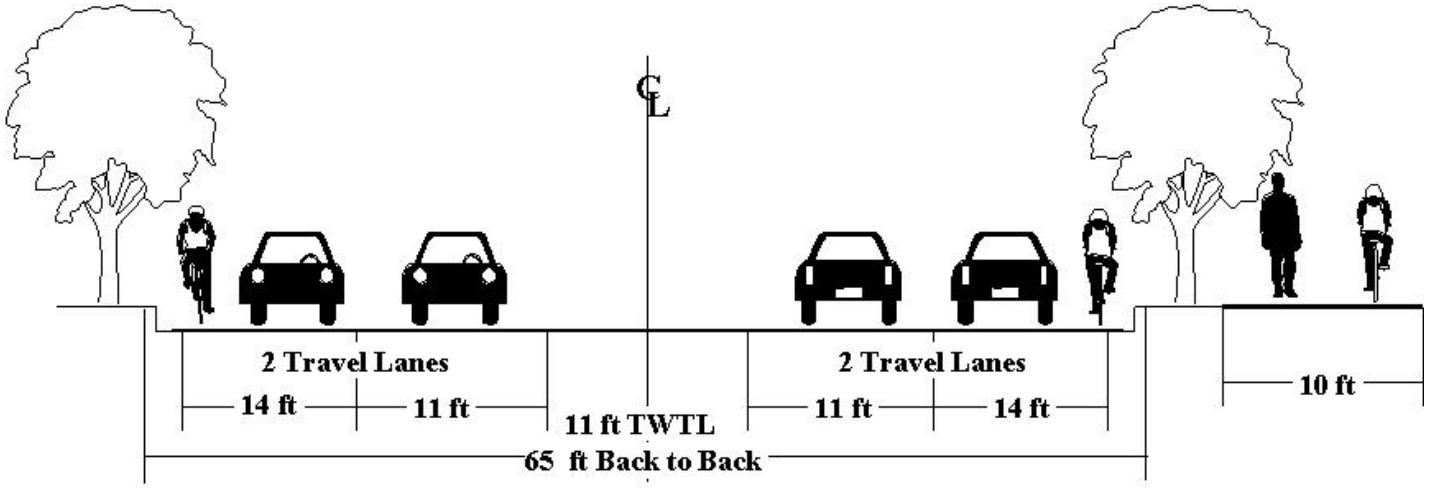
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Kenny Road from Tremont Road to McCoy Road



Five-Lanes with Differentially Striped Lanes and a Multi-Use Path

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	19001	4	53	80	-	TWTL	40 *mph*	Minor
2025	28000	4	61	-	80	TWTL	35 *mph*	Primary

Planned Projects: none

Kenny Road Looking North Near Kingsdale Terrace

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

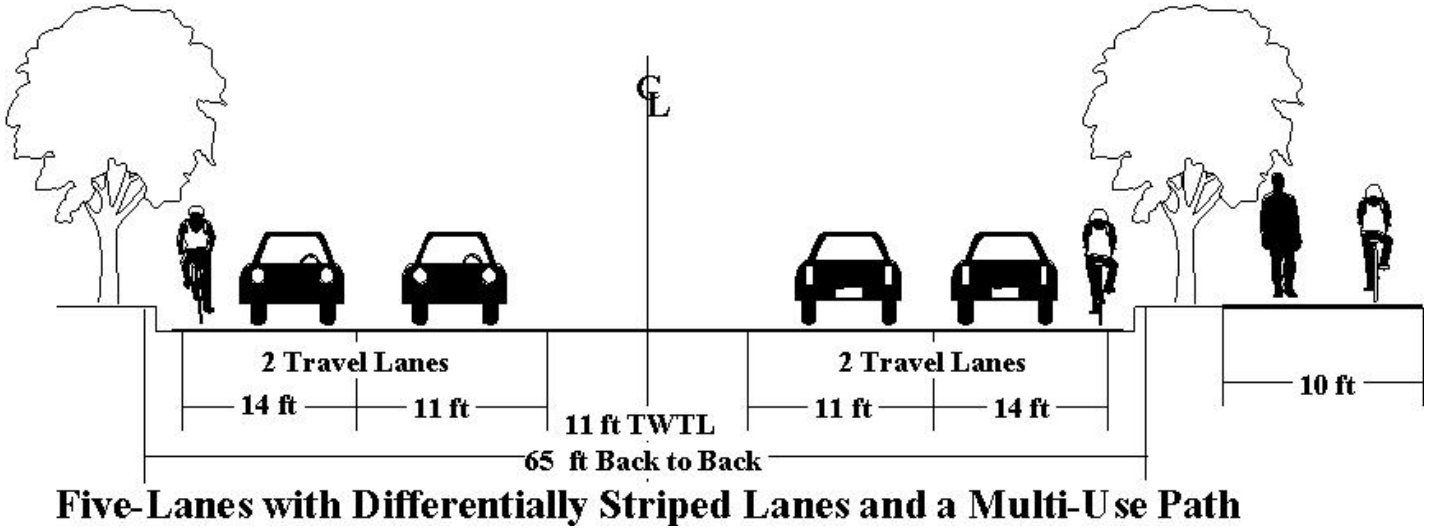
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Kenny Road from McCoy Road to Henderson Road



Five-Lanes with Differentially Striped Lanes and a Multi-Use Path

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	21109	4	53	80	-	None	40 *mph*	Minor
2025	24600	4	61	-	80	TWTL	35 *mph*	Primary

Planned Projects: none

Kenny Road Looking North at Kennington Drive

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

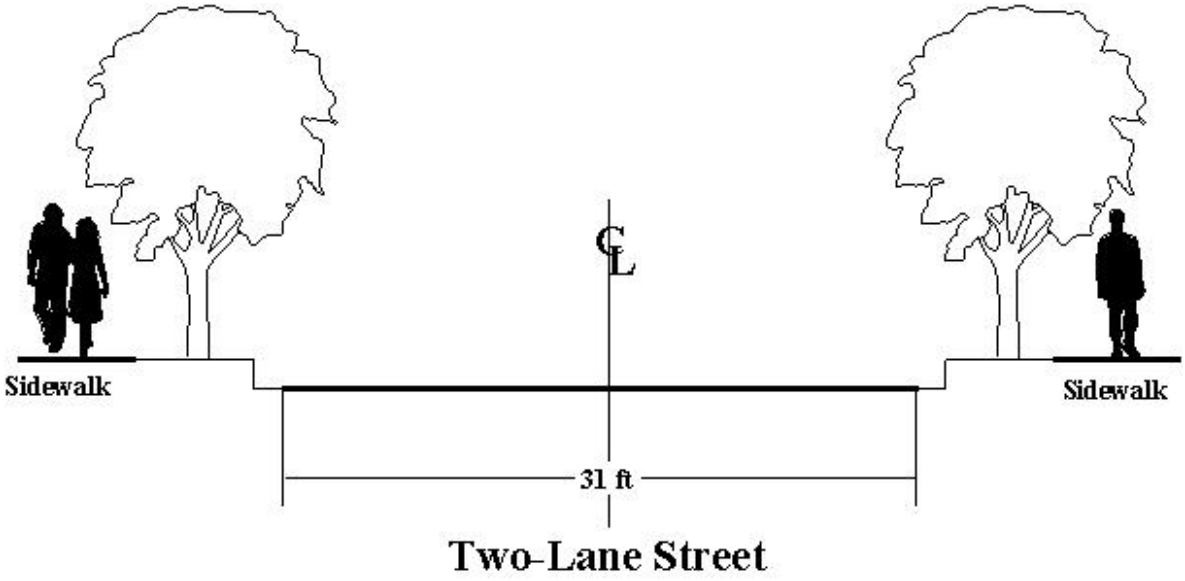
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

King Avenue from North Star Road to Cambridge Road



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	7809	2	31	60	-	None	25 *mph*	Minor
2025	7800	2	31	-	60	None	25 *mph*	Non-Framework

Planned Projects: none

King Avenue Looking East Toward North Star Road

Notes: Traffic Calming Measures to be Installed

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

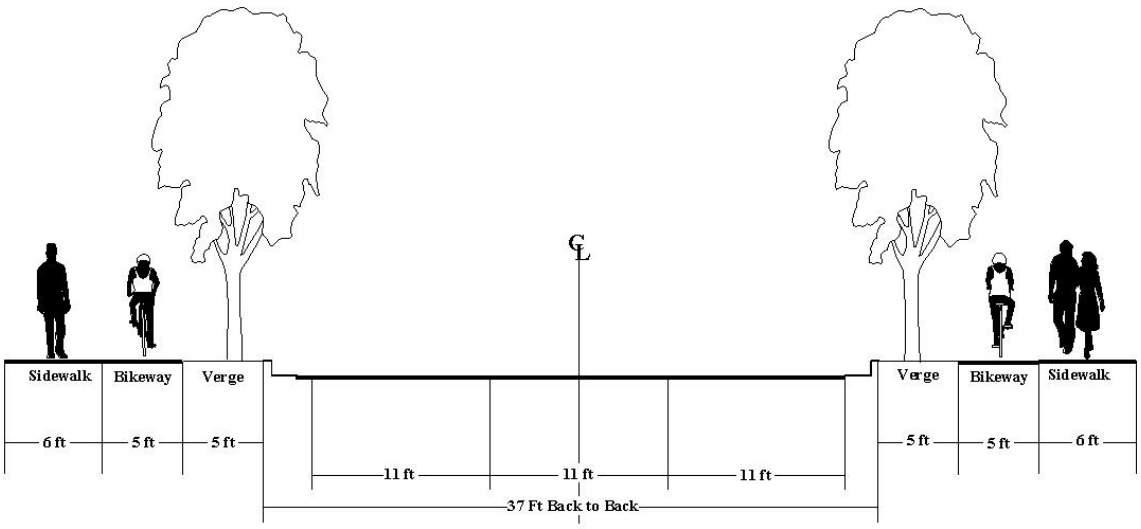
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Lane Avenue from North Star Road to Northwest Boulevard



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	16201	4	41	80	-	None	35 *mph*	Minor
2025	17000	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: none

Lane Avenue Looking East Toward North Star Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

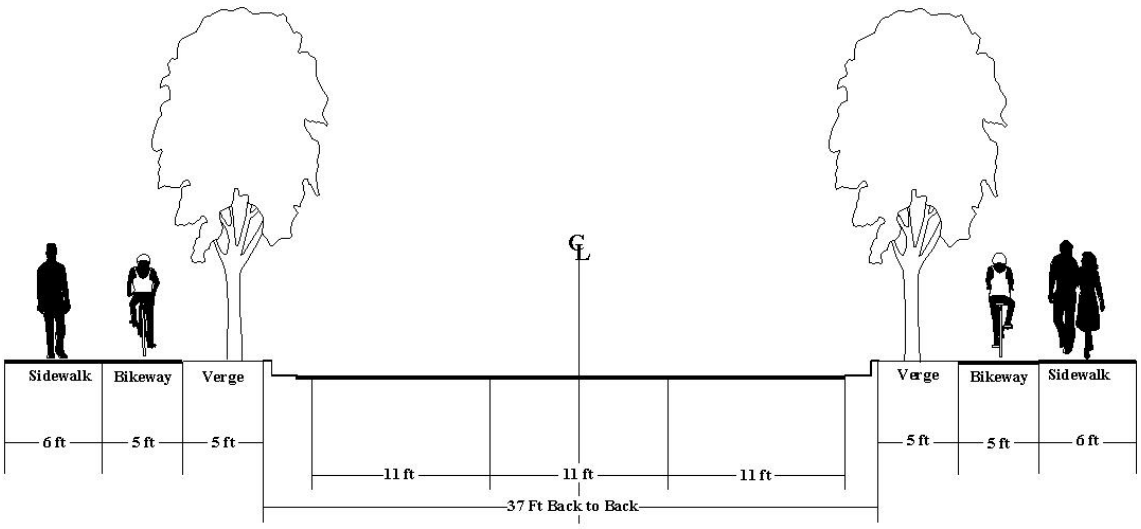
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Lane Avenue from Northwest Boulevard to Tremont Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	4	41	85	-	None	35 *mph*	Minor
2025	13100	2	33	-	85	TWTL	30 *mph*	Framework

Planned Projects: none

Lane Avenue Looking East Toward Northwest Boulevard

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

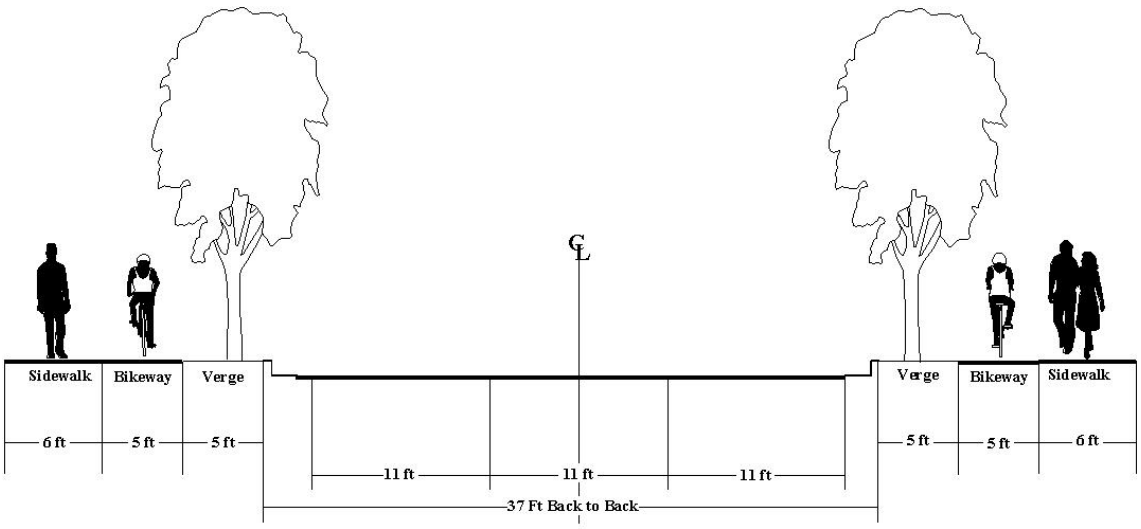
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Lane Avenue from Tremont Road to Riverside Drive



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	10109	4	41	85	-	None	35 *mph*	Minor
2025	15400	2	33	-	85	TWTL	30 *mph*	Framework

Planned Projects: none

Lane Avenue Looking East from Leeds Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

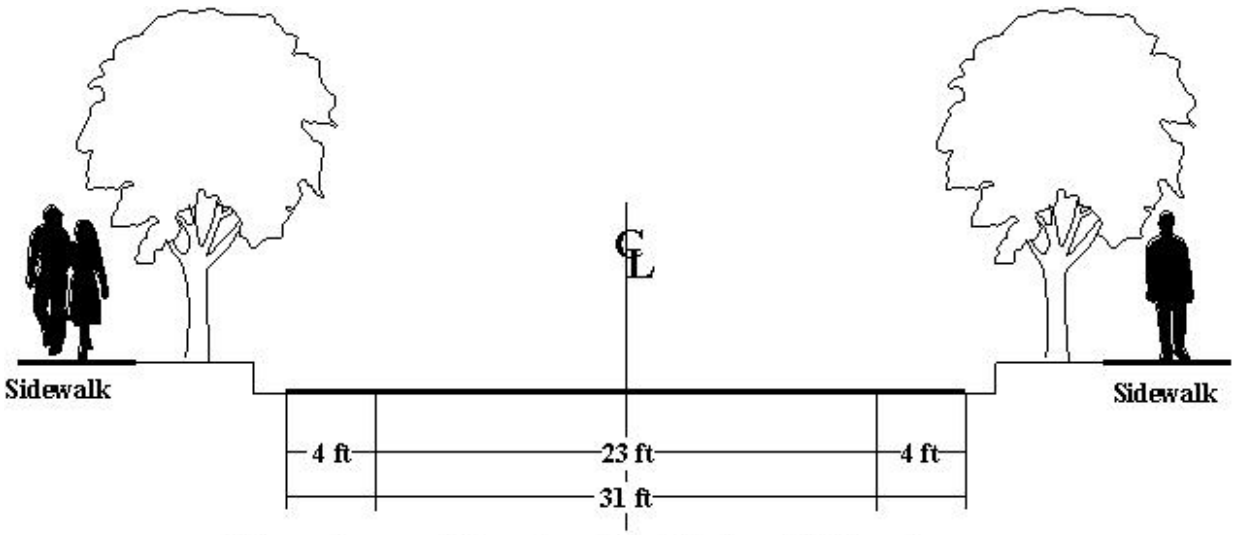
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Lane Road from Reed Road to Riverside Drive



Two-Lane Street with Striped Bike Lanes

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	3005	2	31	40	-	None	35 *mph*	Collector
2025	9100	2	31	-	50	As Needed	30 *mph*	Non-Framework

Planned Projects: none

Lane Road Looking West Toward Riverside Drive

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

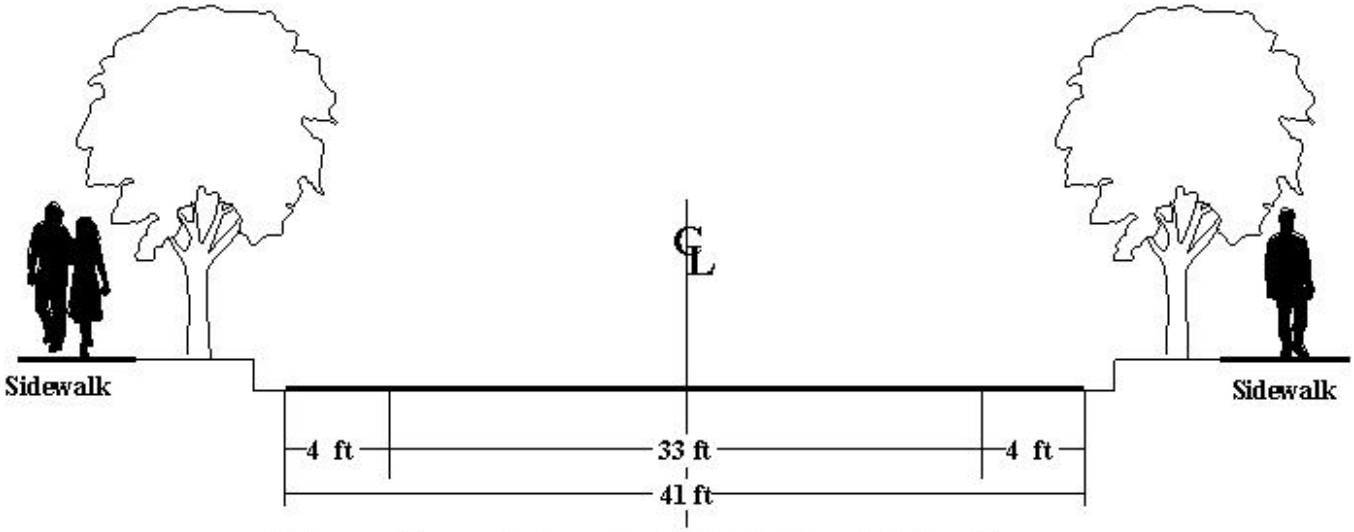
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

McCoy Road from Kenny Road to Reed Road



Three-Lane Street with Striped Bike Lanes

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	4	41	60	-	None	35 *mph*	Collector
2025	13300	2	33	-	70	TWTL	30 *mph*	Framework

Planned Projects: none

McCoy Road Looking East Near Nottinghill Gate Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

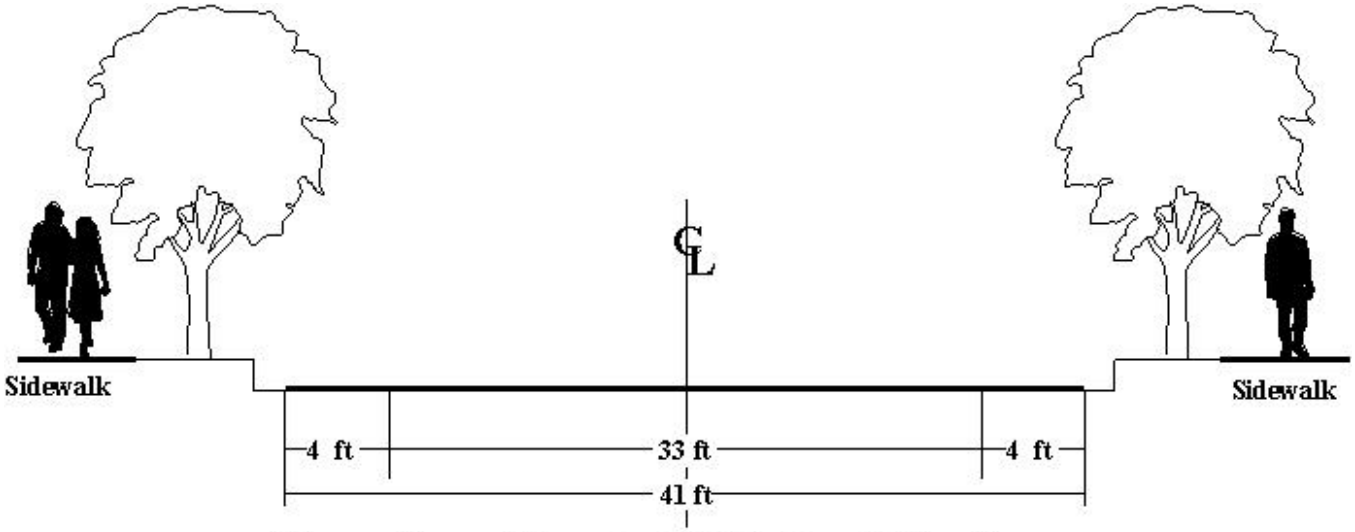
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

McCoy Road from Reed Road to Riverside Drive



Three-Lane Street with Striped Bike Lanes

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	4	41	65	-	None	35 *mph*	Collector
2025	10600	2	33	-	70	TWTL	30 *mph*	Framework

Planned Projects: none

McCoy Road Looking East Near Mountview Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

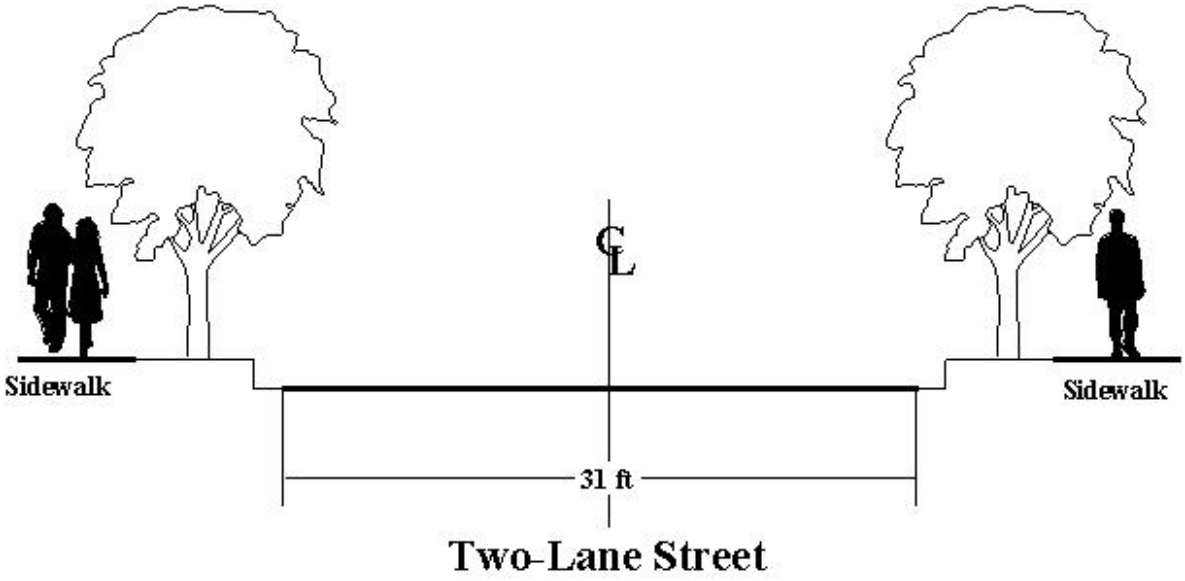
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

North Star Road from King Avenue to Northwest Boulevard



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	9409	2	31	60	-	None	35 *mph*	Collector
2025	9400	2	31	-	60	None	30 *mph*	Framework

Planned Projects: none

North Star Road Looking North Near King Avenue

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

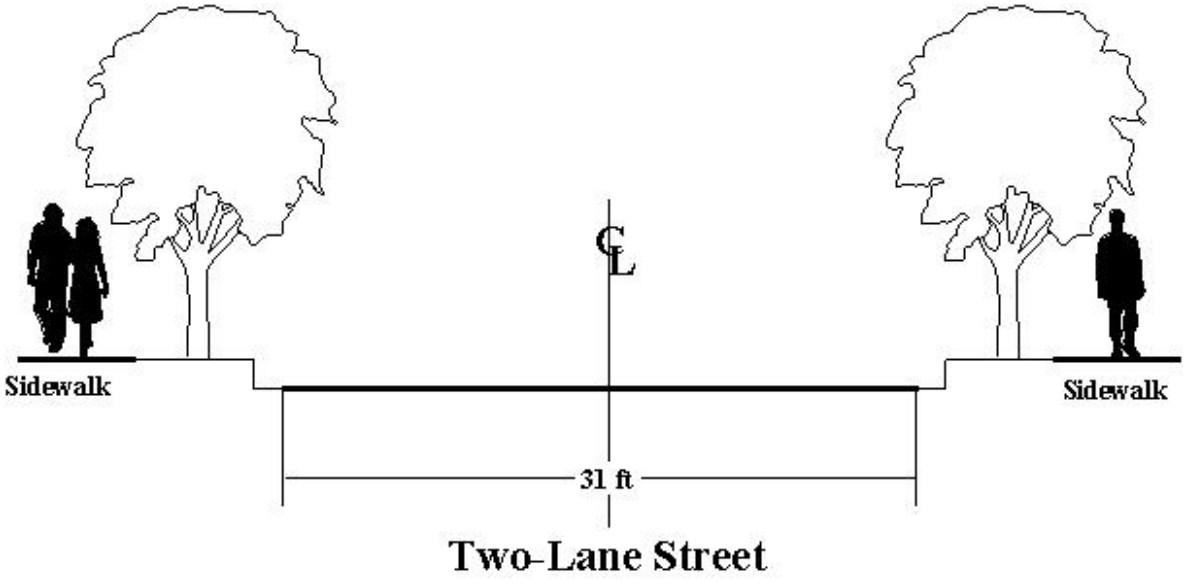
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

North Star Road from Northwest Bouleavard to Lane Avenue



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	2	31	60	-	None	35 *mph*	Collector
2025	11000	2	31	-	60	None	30 *mph*	Framework

Planned Projects: none

North Star Road Looking North Near Northwest Boulevard

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

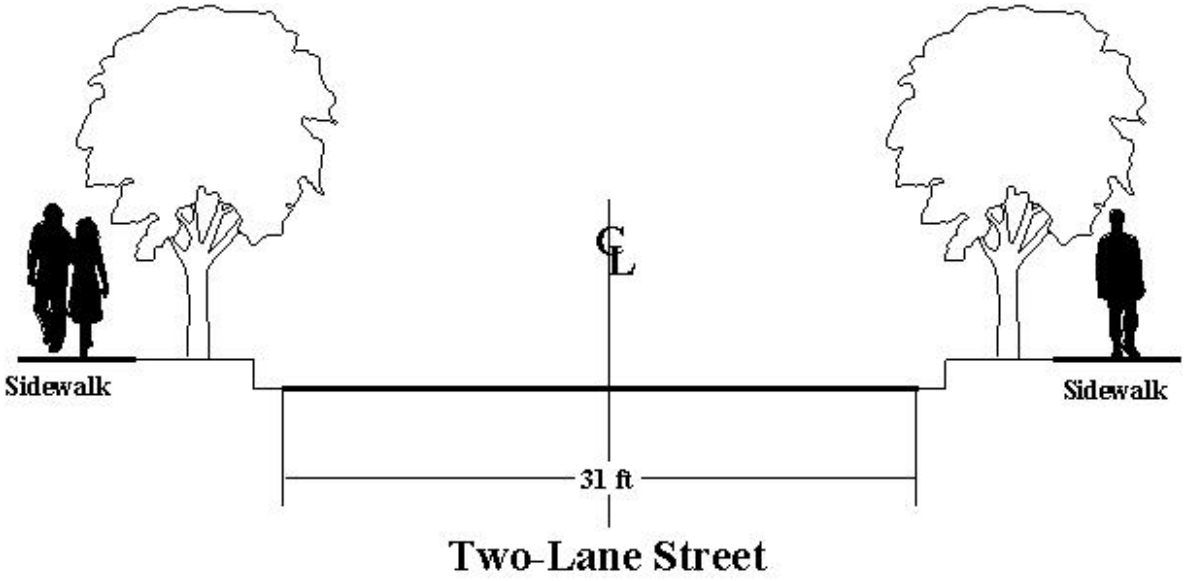
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

North Star Road from Lane Avenue to Ridgeview Road



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	4009	2	31	60	-	None	35 *mph*	Collector
2025	6600	2	31	-	60	None	30 *mph*	Framework

Planned Projects: none

North Star Road Looking North Near Northam Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

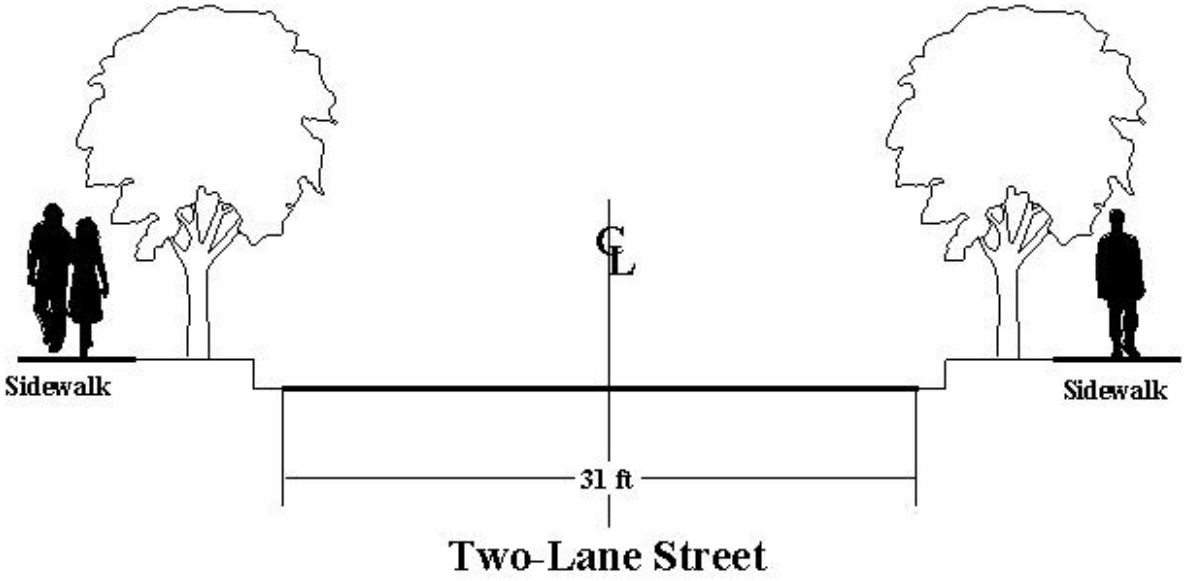
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

North Star Road from Ridgeview Road to Zollinger Road



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	4009	2	31	60	-	None	25 *mph*	Collector
2025	4300	2	31	-	60	None	30 *mph*	Framework

Planned Projects: none

North Star Road Looking North Near Ridgeview Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

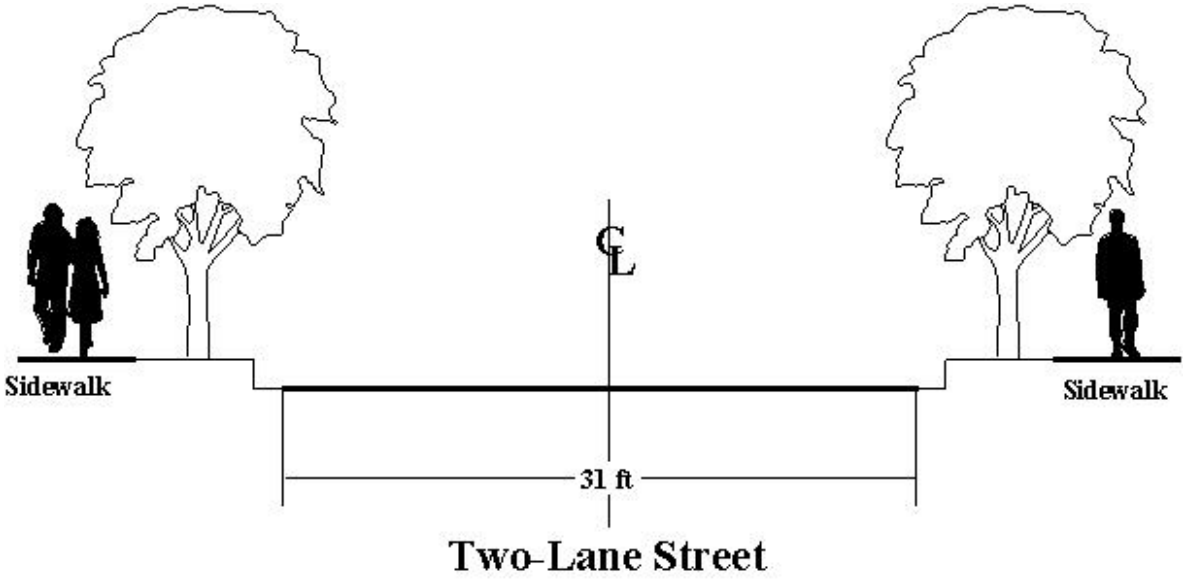
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

North Star Road from Zollinger Road to Fishinger Road



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	2	31	60	-	None	25 *mph*	Collector
2025	4400	2	31	-	60	None	30 *mph*	Framework

Planned Projects: none

North Star Road Looking North Near Zollinger Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

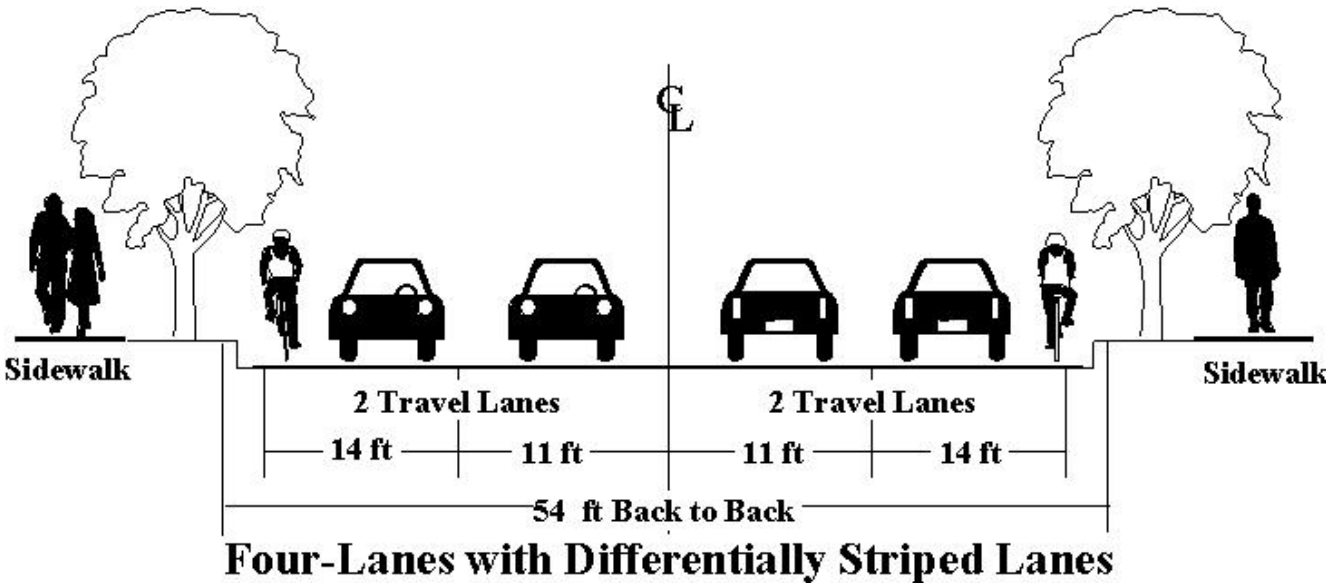
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Northwest Boulevard from North Star Road to Lane Avenue



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	10607	4	41	100	-	None	35 *mph*	Minor
2025	10600	2	41	-	100	TWTL	30 *mph*	Framework

Planned Projects: none

Northwest Boulevard Looking North Near Chatfield Lane

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

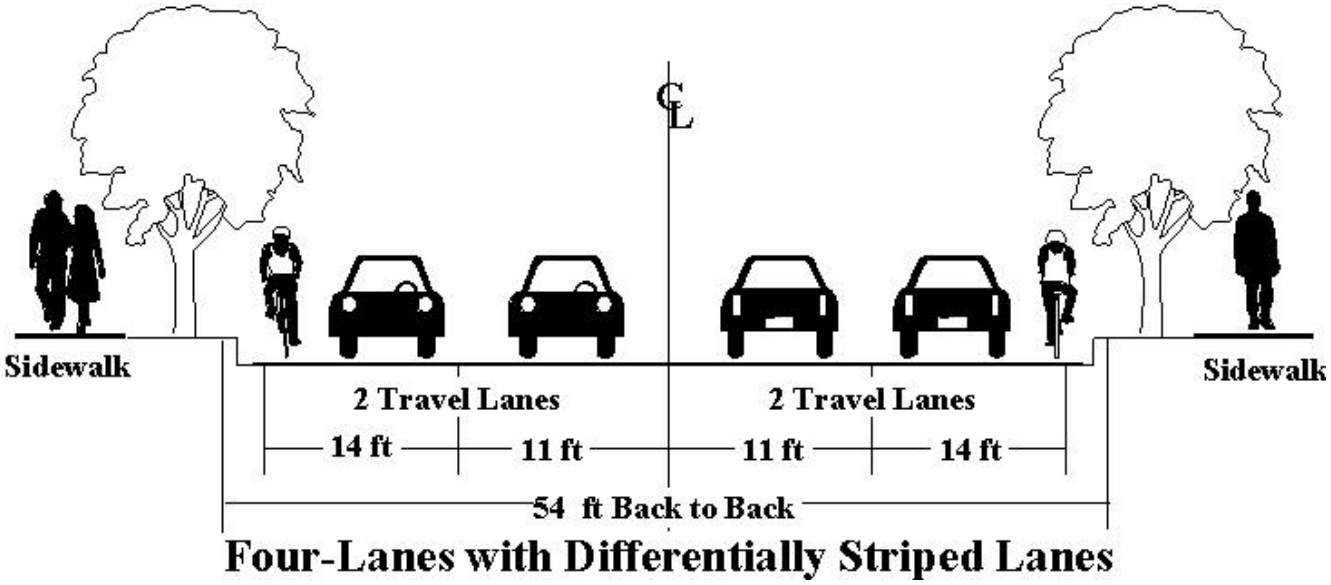
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Northwest Boulevard from Lane Avenue to Zollinger Road



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	4	41	100	-	None	35 *mph*	Minor
2025	12700	2	41	-	100	TWTL	30 *mph*	Framework

Planned Projects: none

Northwest Boulevard Looking North Near Northam Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

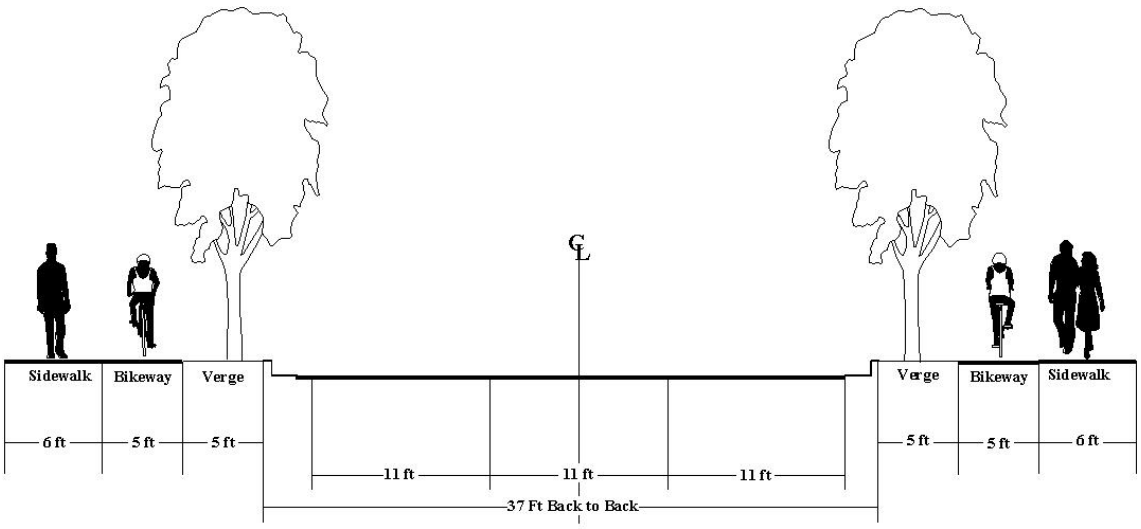
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Northwest Boulevard from Zollinger Road to Fishinger Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	10302	4	41	100	-	None	35 *mph*	Minor
2025	12200	2	33	-	100	TWTL	30 *mph*	Framework

Planned Projects: none

Northwest Boulevard Looking North Near Five Points

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

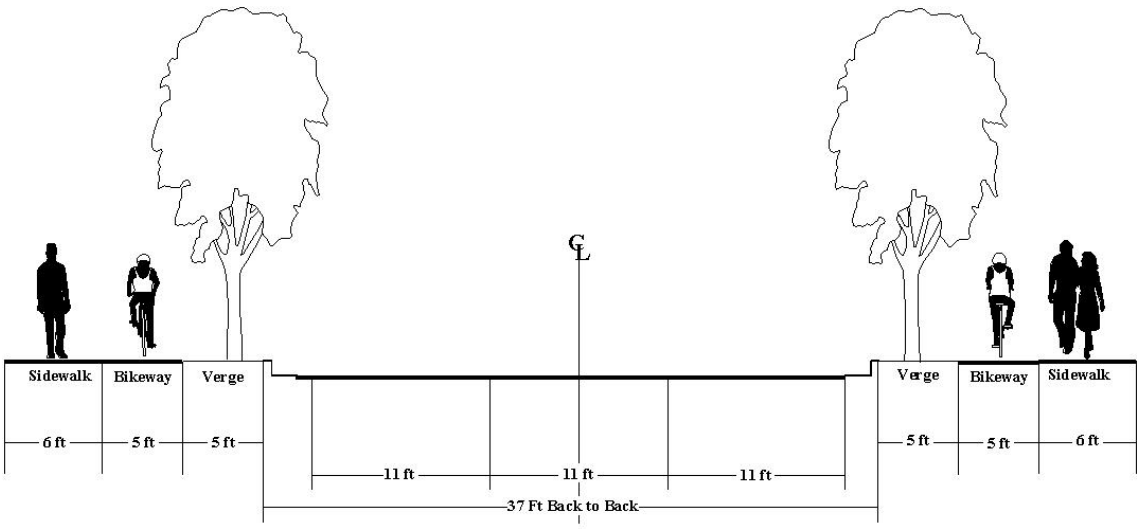
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Redding Road from Tremont Road to Zollinger Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	4902	4	41	80	-	None	35 *mph*	Collector
2025	9000	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: none

Redding Road Looking North Near Zollinger Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

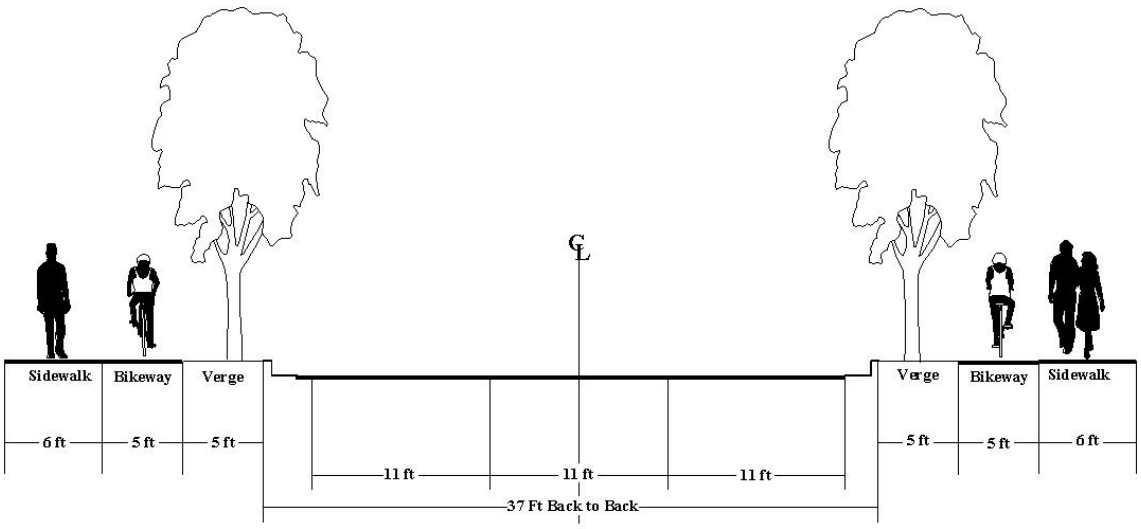
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Redding Road from Zollinger Road to Fishinger Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	4009	4	41	80	-	None	35 *mph*	Collector
2025	10500	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: none

Redding Road Looking North Near Fishinger Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

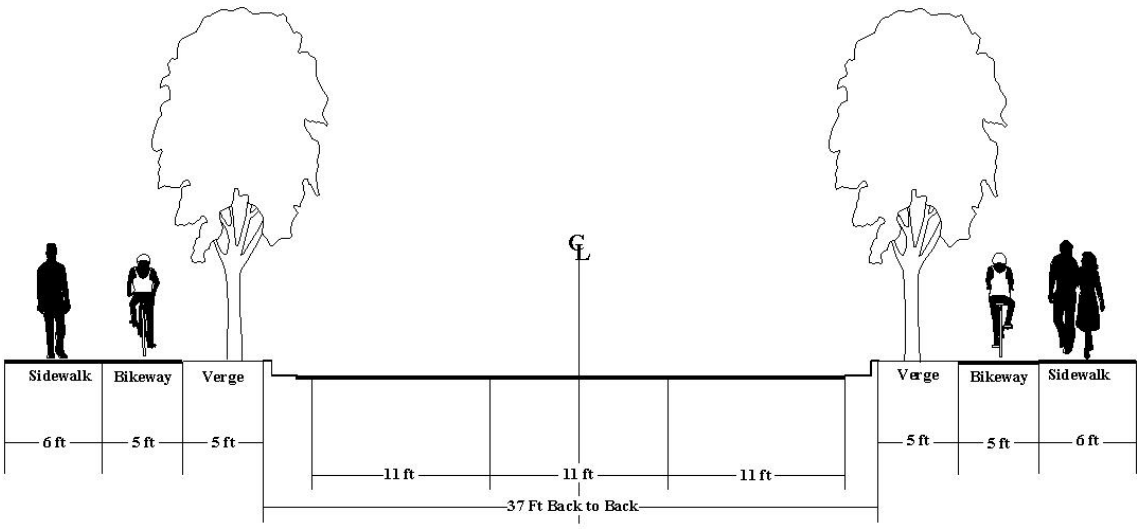
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Reed Road from Fishinger Road to McCoy Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	4	41	70	-	None	35 *mph*	Minor
2025	17700	2	33	-	70	TWTL	30 *mph*	Framework

Planned Projects: Upper Arlington rehabilitation / reconstruction project

Reed Road Looking North Near McCoy Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

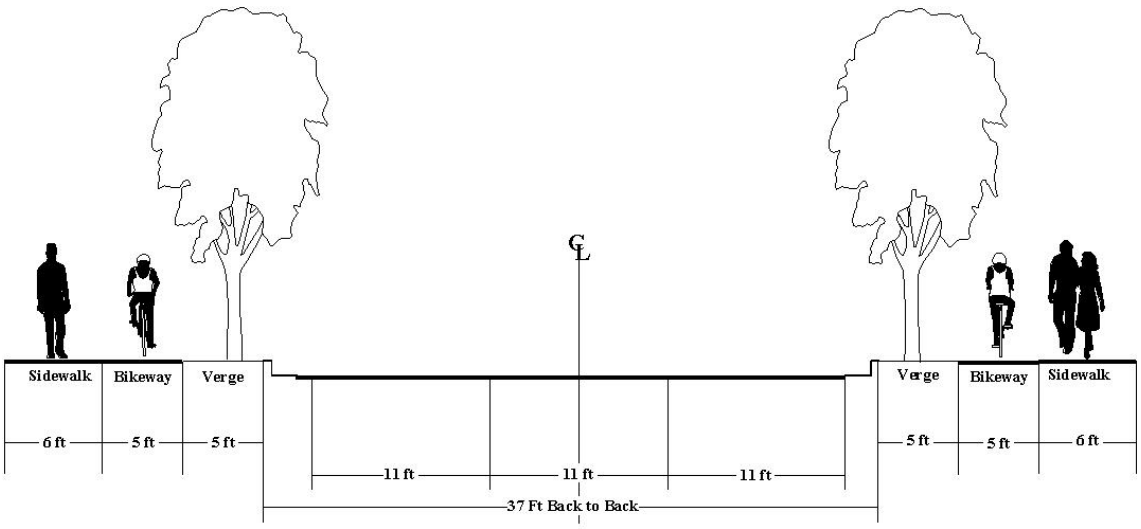
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Reed Road from McCoy Road to Lane Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	4	41	80	-	None	35 *mph*	Minor
2025	22200	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: Upper Arlington rehabilitation / reconstruction project

Reed Road Looking North Near Lane Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

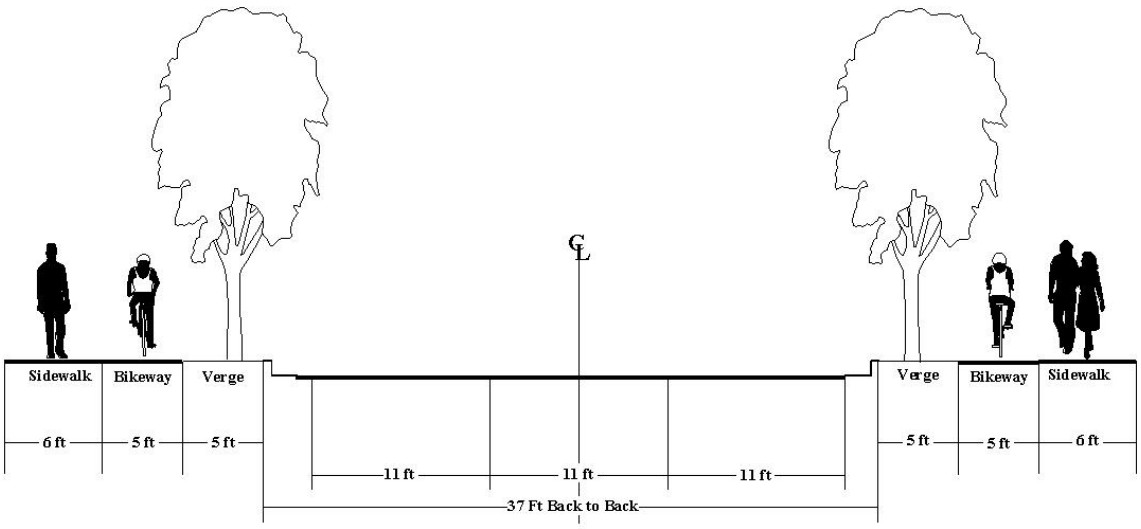
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Reed Road from Lane Road to Henderson Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	14702	4	41	80	-	None	35 *mph*	Minor
2025	24000	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: Upper Arlington rehabilitation / reconstruction project

Reed Road Looking North Near Henderson Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

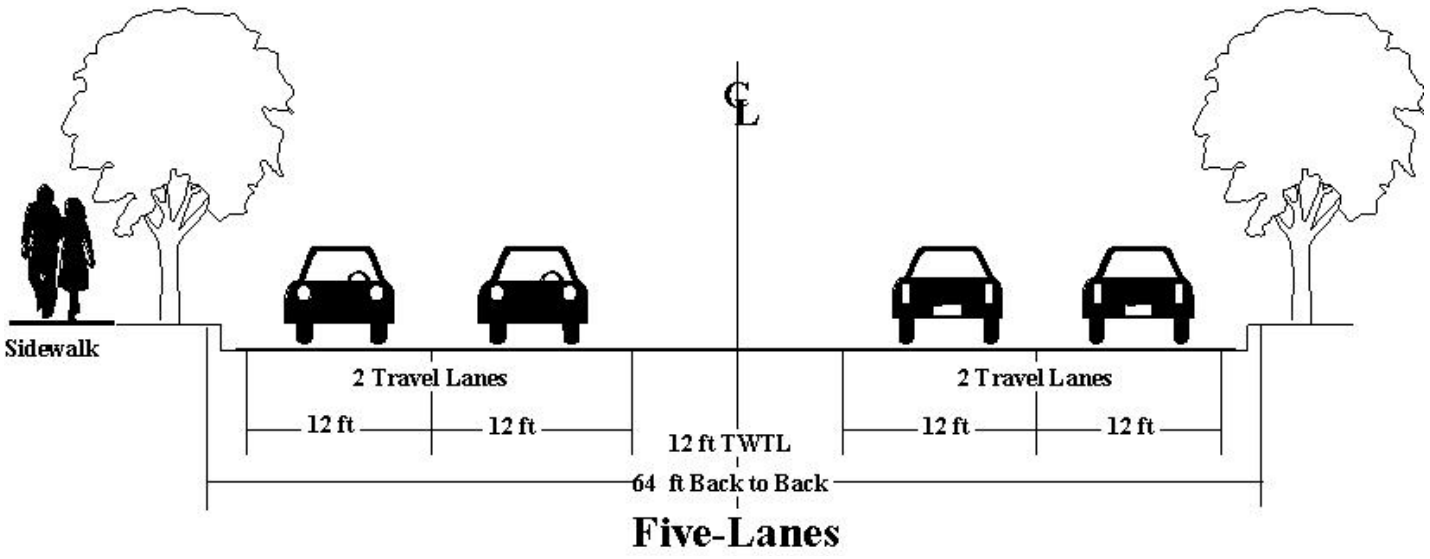
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Riverside Drive from Cambridge Boulevard / Trabue Road to Fishinger Road



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	27409	4	n/a	80	-	None	45 *mph*	Principal
2025	36900	2	n/a	-	80	TWTL	45 *mph*	Primary

Planned Projects: none

Riverside Drive Looking North Nottingham Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

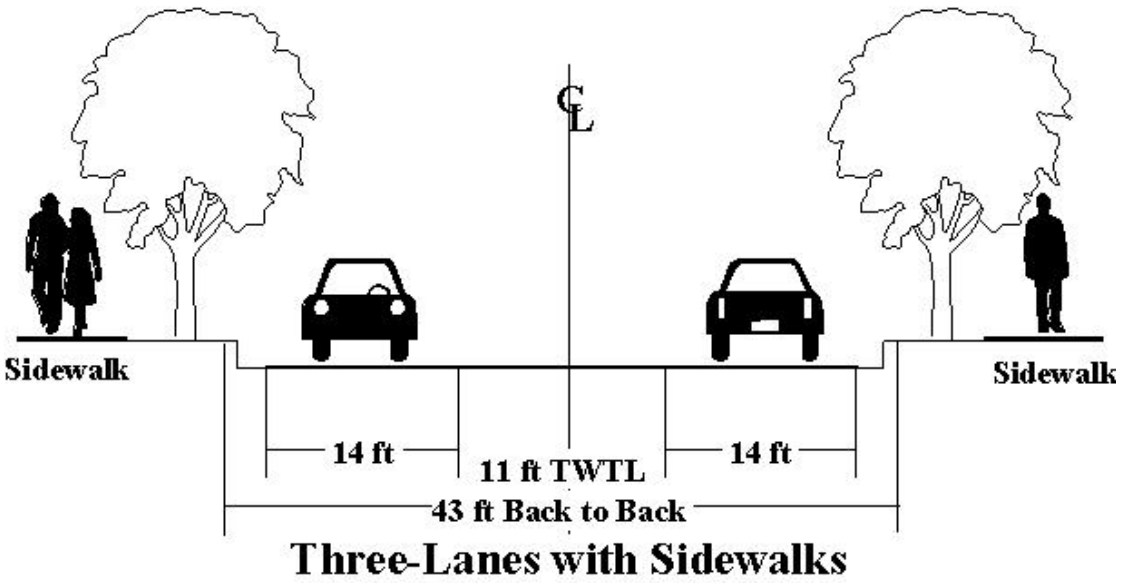
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Riverside Drive from Fishinger Road to Henderson Road



Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	32005	2	26	60	-	None	55 *mph*	Principal
2025	32000	2	39	-	65	As Needed	45 *mph*	Primary

Planned Projects: Widen roadway to add 1 additional through lane in each direction. ($ 16.46 Million, Not Part of Current MORPC Plan)

Riverside Drive Looking North Toward Henderson Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

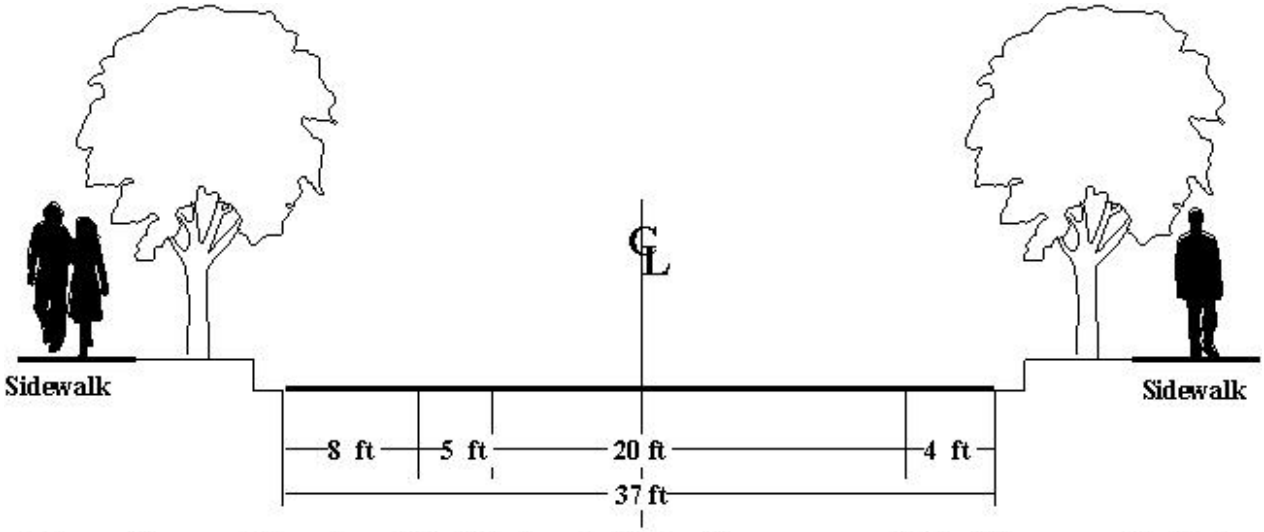
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Tremont Road from Arlington Avenue to Lane Avenue



Two-Lane Street with Striped Bike Lanes and Parking on 1 Side

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	2	37	80	-	None	25 *mph*	Collector
2025	6300	2	37	-	80	As Needed	30 *mph*	Framework

Planned Projects: none

Tremont Road Looking North Toward Lane Avenue

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

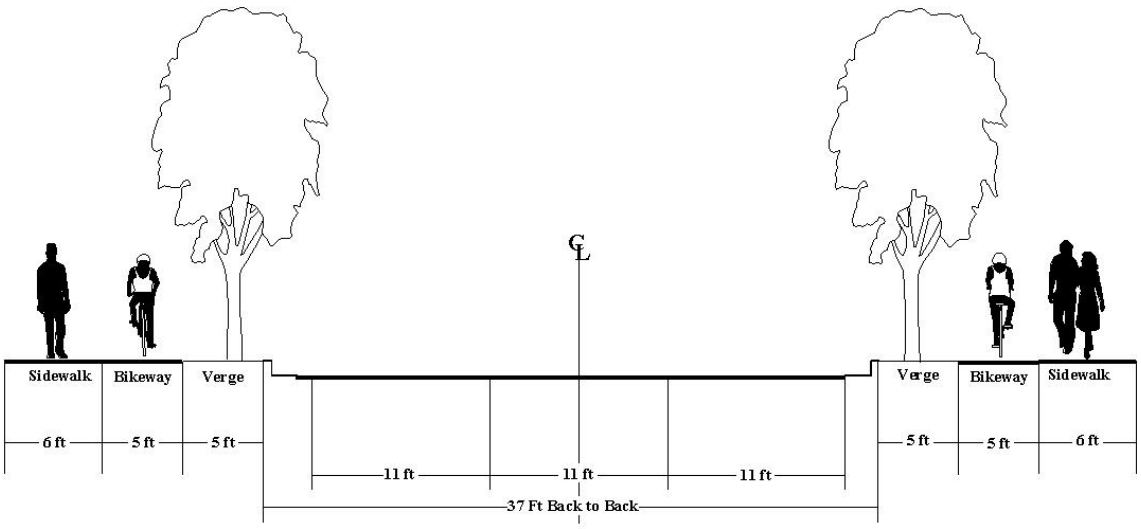
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Tremont Road from Lane Avenue to Northam Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	2	31	80	-	None	25 *mph*	Collector
2025	9100	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: none

Looking North on Tremont Road North of Lane Avenue

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

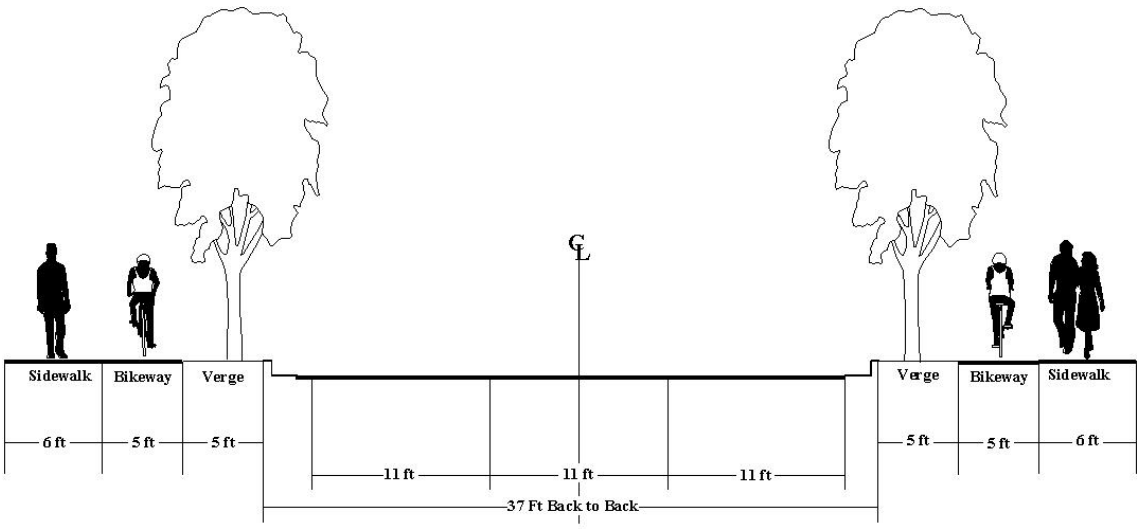
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Tremont Road from Northam Road to Ridgeview Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	2	35-41	70	-	TWTL	25 *mph*	Collector
2025	9100	2	33	-	70	TWTL	30 *mph*	Framework

Planned Projects: none

Tremont Road Looking North Near the Public Libarary

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

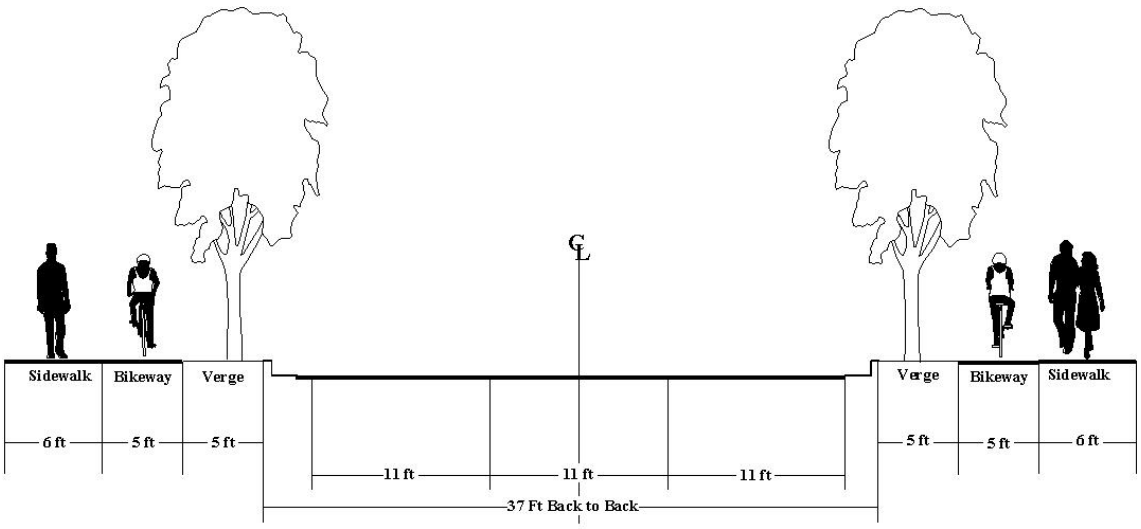
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Tremont Road from Ridgeview Road to Zollinger Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	2	31	70	-	None	25 *mph*	Collector
2025	9100	2	33	-	70	TWTL	30 *mph*	Framework

Planned Projects: none

Tremont Road Looking North Near Ridgeview Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

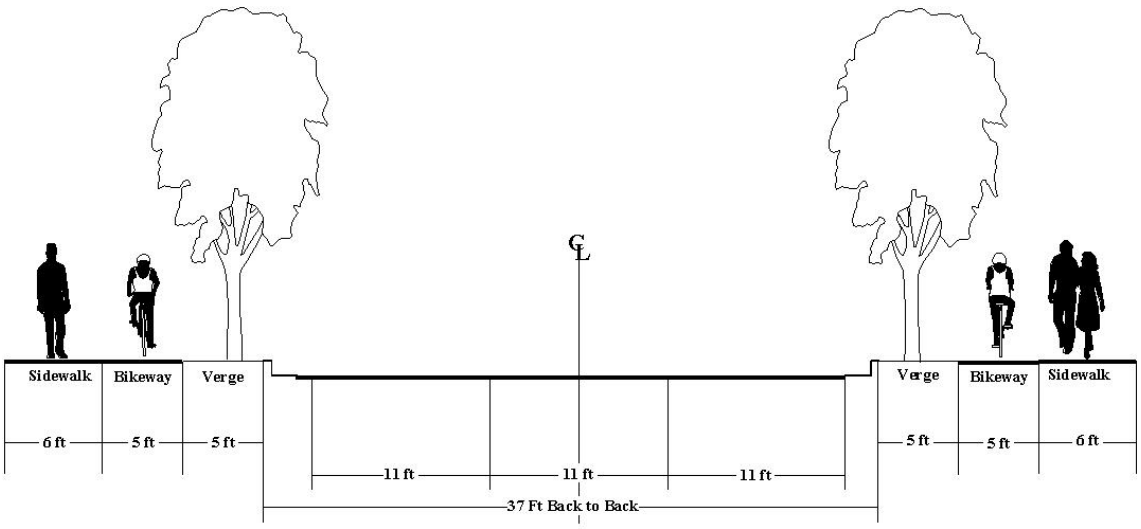
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Tremont Road from Zollinger Road to Fishinger Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	10402	4	41-51	80	-	None	25 *mph*	Collector
2025	19100	2	33	-	80	TWTL	30 *mph*	Framework

Planned Projects: none

Tremont Road Looking North Near Kingsdale Shopping Center

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

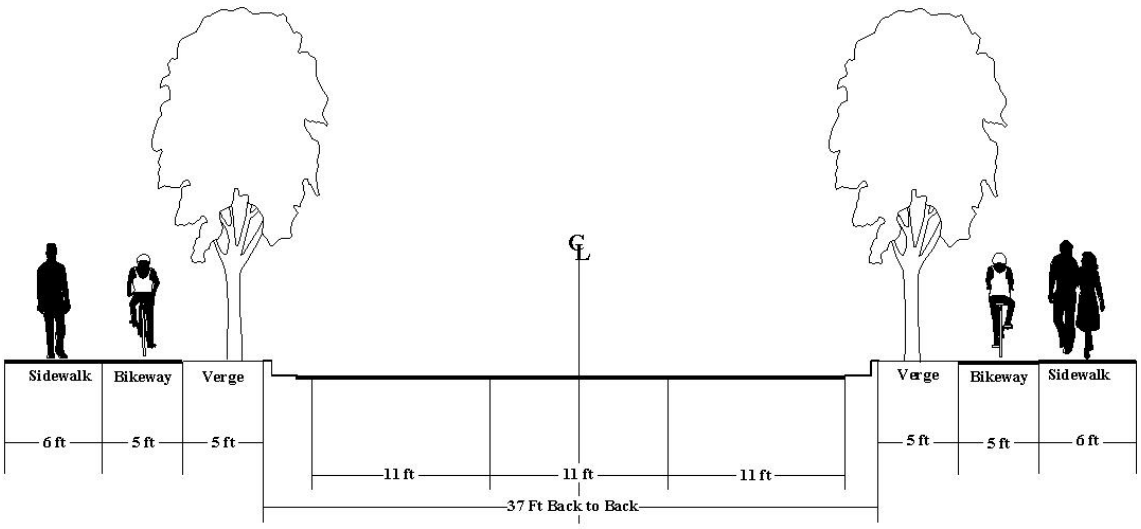
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Tremont Road from Fishinger Road to Kenny Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	7401	4	44	70	-	None	35 *mph*	Minor
2025	18900	2	33	-	70	TWTL	30 *mph*	Framework

Planned Projects: none

Tremont Road Looking North Near Pemberton Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

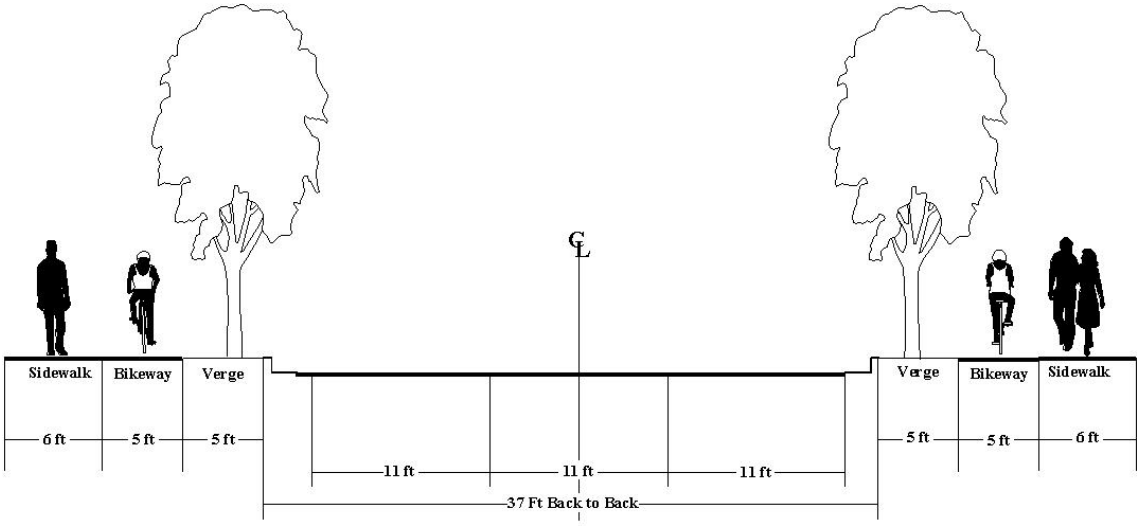
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Zollinger Road from North Star Road to Northwest Boulevard

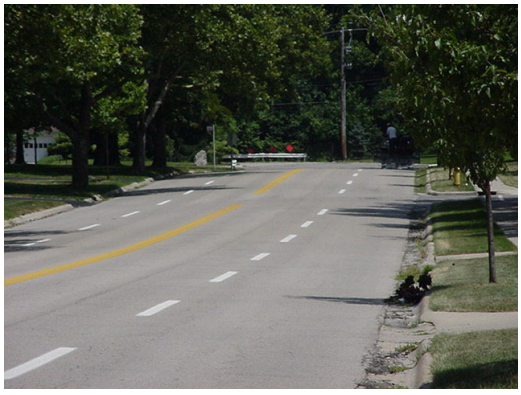


Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	n/a	4	41	80	-	None	35 *mph*	Collector
2025	2600	2	33	-	80	TWTL	30 *mph*	Non-Framework

Planned Projects: none



Zollinger Road Looking East Near Halstead Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

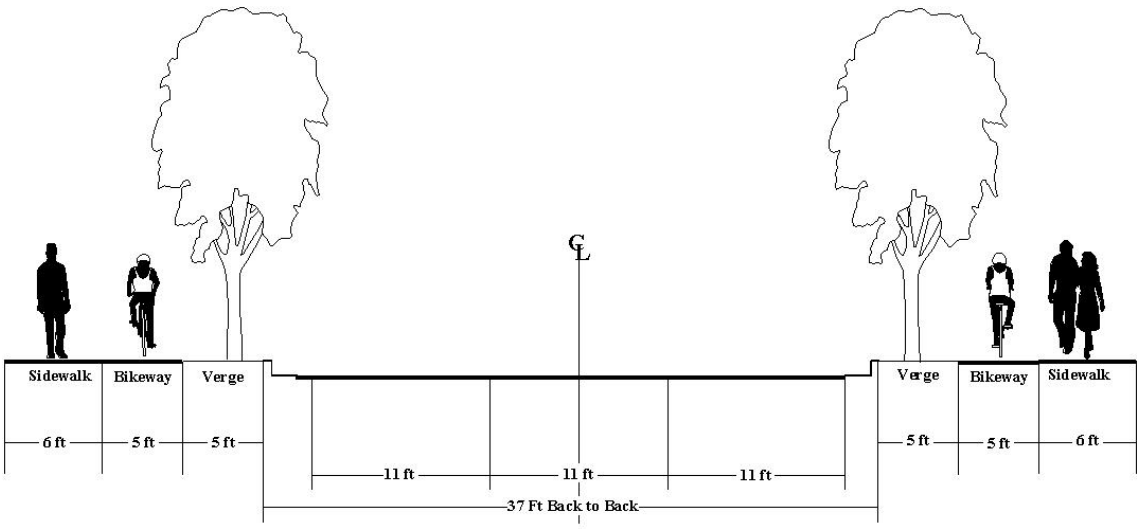
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Zollinger Road from Northwest Boulevard to Tremont Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	5802	4	41	60	-	None	35 *mph*	Collector
2025	7900	2	33	-	70	TWTL	30 *mph*	Non-Framework

Planned Projects: none

Zollinger Road Looking East Toward Northwest Boulevard

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

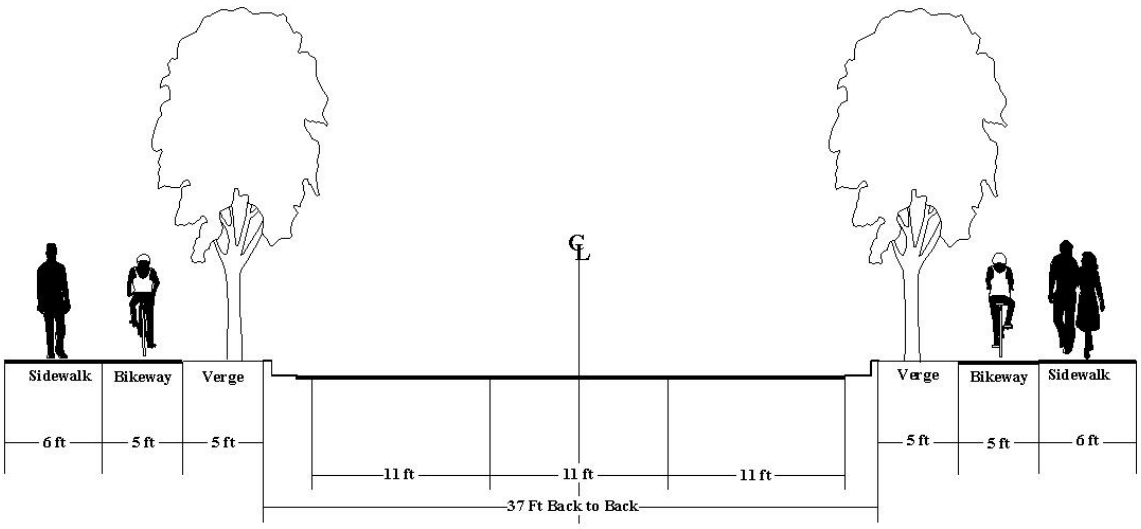
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Zollinger Road from Tremont Road to Redding Road



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	4702	4	41	60	-	None	35 *mph*	Collector
2025	4700	2	33	-	70	TWTL	30 *mph*	Non-Framework

Planned Projects: none

Zollinger Road Looking East Toward Tremont Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

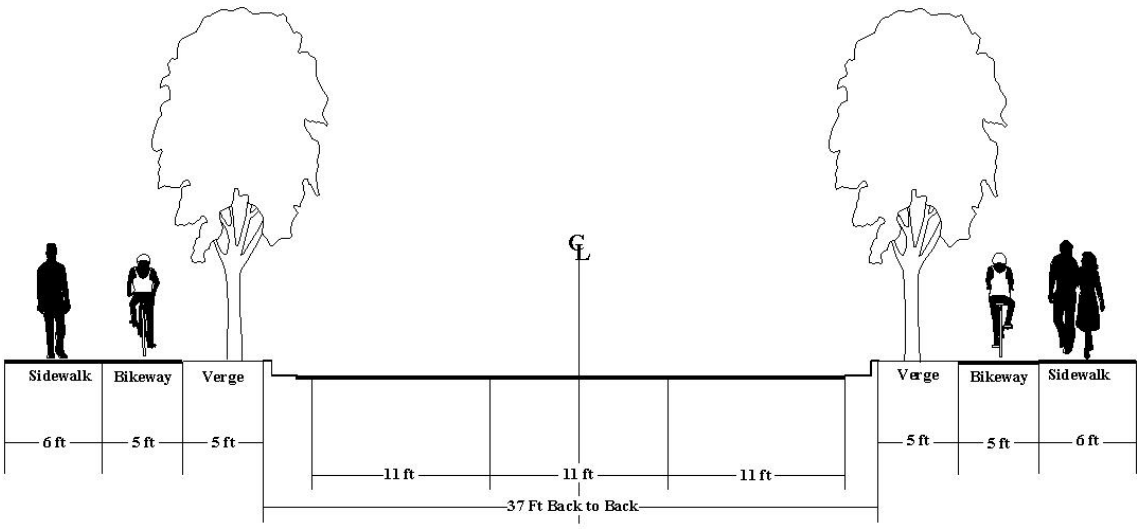
"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Zollinger Road from Redding Road to Riverside Drive



Three-Lanes with Protected Paths

Planned Roadway Section

Year	ADT	Number of Through Lanes	Pavement Width	Existing ROW	Future ROW	Left Lanes/Median	Speed Limit	Street Type
2000	5304	4	41	60	-	None	35 *mph*	Collector
2025	5300	2	33	-	70	TWTL	30 *mph*	Non-Framework

Planned Projects: none

Zollinger Road Looking East at Avalon Road

Notes:

ADT: Average Daily Traffic Volume (vehicles per day) (N/A = Not Available)

Capacity: Maximum ADT

Number of Lanes: Indicates the Total Number of Through Lanes for Both Directions of a Roadway

Median: "None" - Indicates Double Yellow Line

"TWTL" - Indicates Two-Way Turn-Lane

ROW: right-of-way

All pavement and right-of-way widths shown are in feet.

Existing ADT - Existing traffic counts were coded so that the last digit reflects the year of the count. (Example 22,009 reads 22,000 ADT in 1999.)

Appendix B

Traffic Projections

Prepared by MORPC

Traffic Projections for the Upper Arlington Transportation Plan Update

To

Kimley-Horn and Associates
PO Box 33068
Raleigh, North Carolina 27636-3068

For

The City of Upper Arlington

From

Mid-Ohio Regional Planning Commission
285 East Main Street
Columbus, Ohio 43215

(614) 228-2663

November 21, 2001

Table of Contents

I. Introduction

In February 2001 MORPC received several inquires from consultants concerning the announcement from the city of Upper Arlington Public Services Director to solicit proposals for an update to the city's Transportation Plan. In response, MORPC reviewed the announcement and prepared a description of the typical services MORPC can provide for the Upper Arlington Transportation Plan update. This was provided to all consultants preparing proposals who contacted MORPC and is included in Appendix A..

After being selected by Upper Arlington for the Transportation Plan update, Kimley-Horn and Associates met with MORPC in June to discuss what MORPC can provide. In July MORPC provided raw average daily traffic estimate ranges from the travel demand model for facilities in the Upper Arlington area. In October the Mid Ohio Regional Planning Commission (MORPC) was contracted by Kimley-Horn and Associates for the city of Upper Arlington to prepare future traffic estimates to evaluate one new roadway alignment. This complete scope is provided in Appendix B.

This report describes the land use and demographic information and assumptions for the Upper Arlington area used in the regional travel demand model to develop the 2025 average daily traffic estimates. Also, included are the highway network improvement assumptions. Finally, two sets of 2025 average daily traffic estimates are provided. The first are updated 2025 base estimates and the second is the 2025 estimates with a new roadway connection between Zollinger Road and Ackerman Road.

II. Land Use and Demographic Assumptions

This is a summary of the land use assumptions that was used in the travel demand model. This data is part of the regional land use data that was prepared for use in the 2025 Long Range Transportation Plan adopted by MORPC in 2001. The land use was prepared from state and local sources, and excerpts of the data were sent to all local governments for comments and review in the summer of 2000. Comments received at that time were incorporated into the land use projections.

Overview of the Land Use Forecasting Process

The regional land use projections are directed by county level population forecasts generated by the Ohio Department of Development, Office of Strategic Research. Regional employment totals, and a breakdown of the employment into various industrial sectors including industrial, retail, office and public, among others are based on employment projections prepared by the Ohio Bureau of Employment, Office of Labor Market Information. Local planning documents are used to guide the geographic distribution of land use in the region.

The Travel Demand Model requires that data be prepared at a particular geography of Traffic Analysis Zones (TAZ). The TAZ boundaries are determined based on travel opportunities and land use composition. Hard physical boundaries, such as rails, rivers and interstates are used as boundaries. The TAZ are geographically small in areas of dense development, and large in more rural areas.

Regional land use is distributed into the TAZ based on historic land use patterns, known development activity and local long range land use plans. The forecasts are updated on a 3-5 year cycle, and local input is relied upon heavily.

The land use components for the Travel Demand Model are many. They include population, housing counts, automobile ownership, labor force, employment, floor space (square footage) and acreage for industrial, retail, office and public sectors. The forecasts are based on a historic data set that MORPC has been maintaining since 1964. Demographic information from the US Census are incorporated into the data set. Employment, floor space and acreage data are collected by MORPC from building permits, aerial photography, field studies and county auditor offices.

The 2025 forecasts were launched from a year 2000 data set baseline. The baseline set was developed before the release of the 2000 census data. MORPC is currently in the process of rectifying the base year data and projections against the results of the 2000 decennial census. Consequently, the forecasts described below do not reflect results of the 2000 Census.

Horizon Year
The horizon year for this study is the year 2025.

Study Area
The study area used for analysis includes the area bound by:
North : North side of Bethel Road
South: Interstate 70
West: Interstate 270
East: Olentangy River

The study area is larger than the corporate limits of Upper Arlington to account for a more regional perspective on land use and traffic affecting the city.

Land Use Overview
The study area was subdivided into 8 areas to more easily discuss the forecasts. A summary of the major land use categories is included in Appendix C as Tables 1 and Table 2. A map of the sub-areas is also included.

Residential
Overall, the study area is expected to achieve relatively slow growth with a less than 10 percent increase in population, and slightly higher than 10 percent increase in job growth over the next 25 years. Approximately 9,400 new housing units are projected. Approximately one half of these are expected in the sub areas west of the Scioto River. The 4,600 or so new housing units projected east of the river are distributed among the sub areas, with the greatest share occurring along the Bethel Road corridor, outside the city boundaries. There are instances where new housing is expected, but population is expected to decline. This is due to a reduction household sizes.

Retail/Office
Commercial and industrial growth patterns parallel the housing growth. Most new commercial and industrial growth is expected west of the Scioto River. Growth within the city limits is expected to remain relatively stable, with the exception of approximately 200,000 square feet of new office projected for the Riverside Drive/Henderson Road area. An additional 450,000 square feet of new office is projected for the Ohio State area.

Redevelopment at along Olentangy River Road and around the Lennox shopping center account for 130,000 new retail floor space. Kingsdale shopping center is projected to

experience a significant decline in retail floor space. No alternative land uses are assumed for this area.

Industrial
Industrial uses are projected decline in floor space along the Riverside Drive corridor by approximately 10 percent. Outside of a small amount of new industrial growth at OSU, all new industrial growth is projected for the Trabue Road corridor.

Summary
Tables of the detailed data by TAZ are included in Appendix C, as are graphs and thematic maps of the projected land use for the area.

III. Transportation Network Assumptions

In addition to the future land use forecasts, the assumptions about the future transportation system is important in the development of future traffic estimates. Consistent with the assumptions used in the 2025 estimates provided in July, any projects on the MORPC FY 2002-2005 Transportation Improvement Program (TIP) and in the funded portion of MORPC 2025 Transportation Plan were included.

Within Upper Arlington there are no projects on the TIP with the closest significant projects being the Lane Avenue widening from Olentangy River Road to High Street and the addition of ramps to and from the south at the Ohio State University Hospital and SR 315. A TIP map and complete project listing is included in Appendix D.

There are also few projects in the Upper Arlington area funded in the 2025 Transportation Plan. The ones of note that may have the most impact on the traffic estimates is major widenings of Trabue Road from US 33 west to Hilliard-Rome Road and Kenny/Godown Road from Henderson Road to Bethel Road. There are also minor widenings on Kinnear Road east of Kenny Road and on Henderson Road west of Chevy Chase Court. Maps and complete lists of transportation plan projects in the Upper Arlington area are provided in Appendix E.

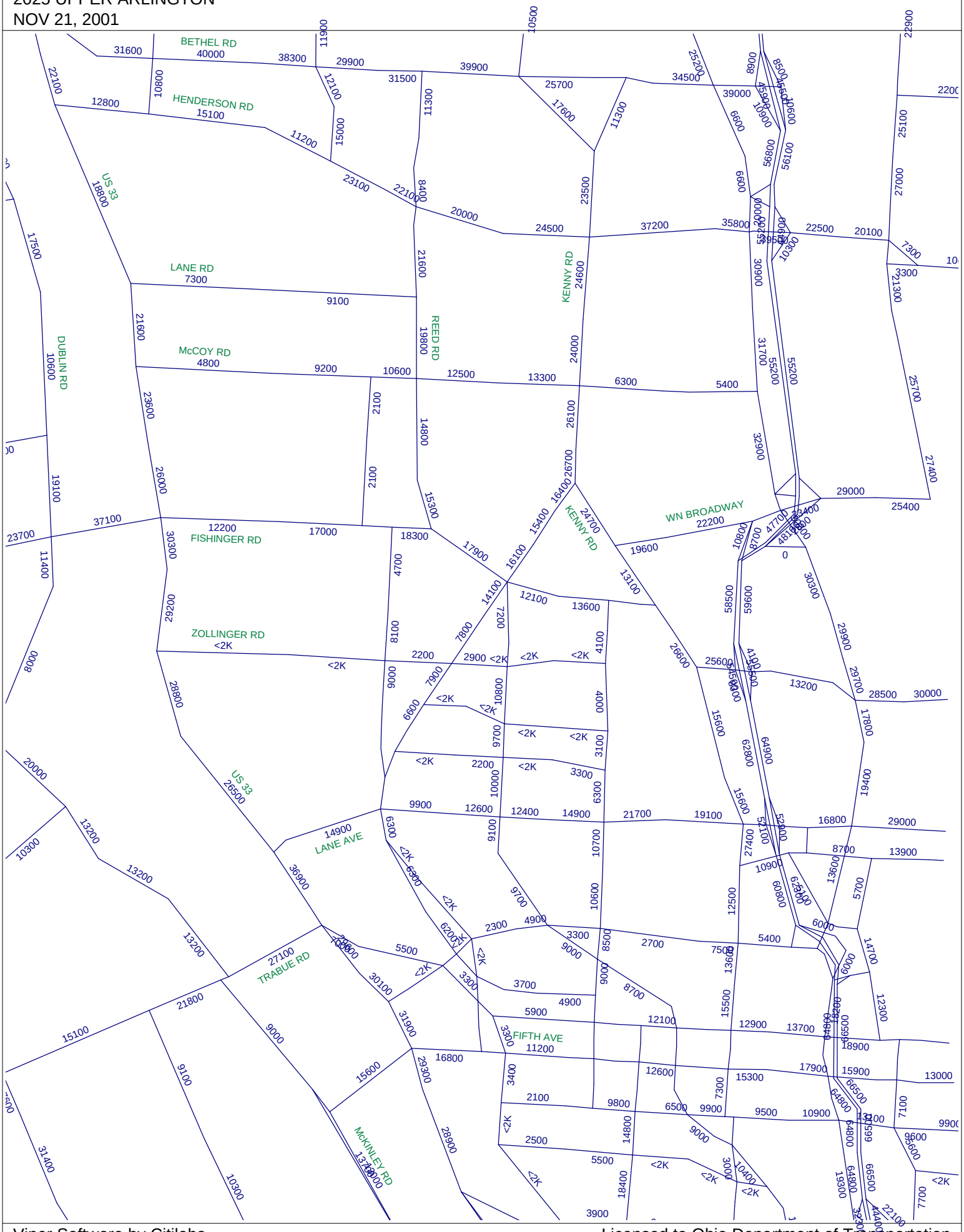
Additional information on MORPC's TIP or 2025 Transportation Plan can be obtained from our web site at www.morpc.org. Follow the links to Transportation and then the TIP and Transportation Plan respectively.

IV. 2025 Traffic Estimates

Another step in development of future traffic estimates for the Upper Arlington area is to review how well the model is estimating existing traffic. Although the model is validated at the regional level, small area forecasts such as this necessitate the need to further examine the results and perhaps make slight adjustments to the highway network. To do this MORPC compiled our existing traffic count data for the study area. The map from our 1991-2000 traffic count book is provided in Appendix F. The counts were adjusted to try to reflect year 2000 conditions. Then, based on year 2000 land use and demographic data, the model was used to prepare year 2000 traffic estimates. The counts and the model estimates were then compared and slight adjustments were made to improve the model's ability to estimate average daily traffic estimates in the Upper Arlington area. These adjustments were then carried forward for the year 2025 highway network.

The figures on the next two pages provide the 2025 average daily traffic estimates. The first is the base condition and the second is with the new three lane roadway connecting Zollinger Road to Ackerman Road. The values shown are total two way daily traffic with the exception of SR 315 which are directional daily values.

For the majority of segments the base case volumes presented here are within the ranges provided in July. However, on some segments the current values are slightly outside the ranges provided in July. This is a result of the review of the year 2000 assignments and the slight adjustments used to improve the model estimates of year 2000 conditions. An initial assessment of the segments in which the current estimates are outside the July ranges indicates that they are only slightly outside the ranges and, from a planning level perspective, do not appear very significant.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McCOY RD
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ZOLLINGER RD
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FIFTH AVE
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McKINLEY RD
KENNY RD
REED RD
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WN BROADWAY
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US 33
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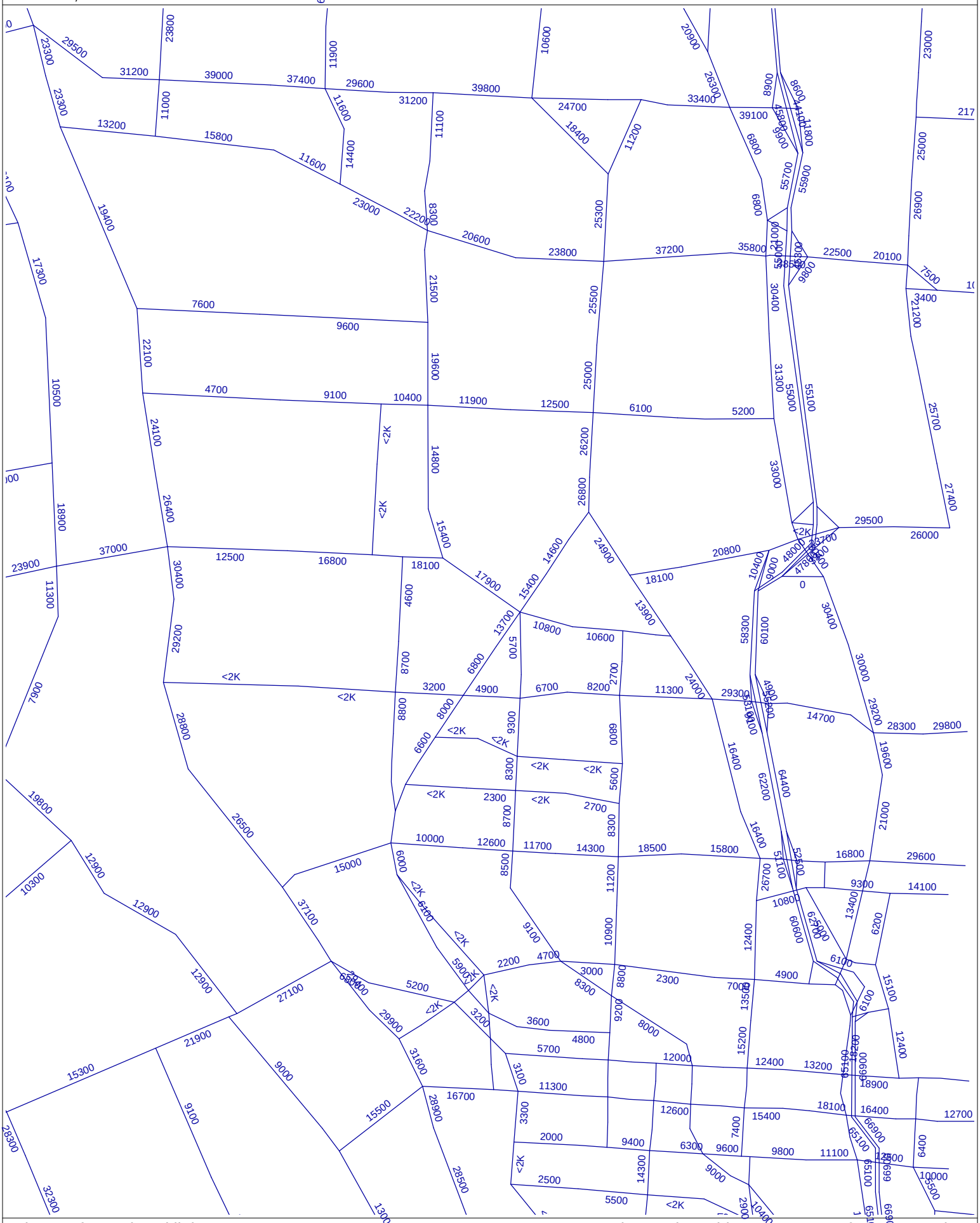
2025 UPPER ARLINGTON: WITH ALTERNATIVE
NOV 21, 2001



Appendix A

MORPC Typical Scope of Services

TO: Interested Parties

FROM: Robert Lawler

DATE: February 19, 2001

RE: RFQ for the update to the Upper Arlington Transportation Plan

MORPC has reviewed the announcement for proposal released by the city of Upper Arlington Public Services Director with regard to updating the city's Transportation Plan. MORPC has received several inquires from consultants concerning the announcement and who are participating in developing a study proposal. In response, MORPC has prepared the following description of typical services MORPC can provide for the Upper Arlington Transportation Plan update. These should be tailored to meet the specific needs of the study during the proposal stage.

In general, MORPC can develop the necessary land use inventory and projections in a form needed to generate traffic projections with the regional transportation model. Land use and transportation network assumptions used in the study will be determined by Upper Arlington and the selected consultant consistent with the objectives of the study. MORPC would then use the model to generate traffic projections for the Upper Arlington area. The attached provides details on the land use and traffic volume projection procedures MORPC would utilize.

Firms preparing proposals may use the attached information in their proposals. Contact me at 233-4160 or email rlawler@morpc.org with questions or to obtain qualifications of key staff and personnel.

MORPC Typical Scope of Services for Upper Arlington Transportation Plan Update

Development of Land Use Inventories/Projections

Land use is forecast at a very local level of geography. The region is divided into a set of zones called Traffic Analysis Zones (TAZ's). MORPC has developed a 2000 regional inventory of land use. This is the most current inventory available for the entire region. This inventory is used as input to the transportation demand model to produce 2000 average weekday traffic volumes.

MORPC's basic model includes over 40 TAZ's in the Upper Arlington area. It may be necessary to split TAZ's in the area to provide better traffic volume projections. MORPC will use information developed from previous work in this area and input from the consultants and Upper Arlington during this process. Both the 2000 inventory and future land use forecasts will be presented in the refined TAZ structure.

Our current horizon year is 2025. MORPC develops and maintains 2025 projections of land use for the region. During the development of these projections MORPC makes them available to the local communities for their review and approval.

Land use scenarios:

1. 2025 Base: MORPC's most up-to-date regional 2025 land use projections.

2. We can develop additional land use scenarios or modify the 2025 base scenario that reflect different assumptions within the Upper Arlington area.

MORPC will provide the 2000, 2025 and any additional land use scenario data by TAZ in tables. These would be in hard copy and can be provided in electronic (database or spreadsheet) form. Selected summary information can also be graphed and some land use information can be mapped and displayed on the Franklin County Auditor's base mapping.

Trip Table Development

The 2000 land use inventory and 2025 land use scenario(s) will be used to create a 2000 and 2025 trip tables. Each land use scenario will require a separate trip table. Development of the trip tables is the step in the transportation modeling process that estimates how many trips are generated by each TAZ and their origins and destinations.

Transportation Demand Model Validation for the Upper Arlington Area

MORPC will use the 2000 land use inventory to develop 2000 traffic volumes with the regional transportation demand model. MORPC will review the accuracy of the model with the refined TAZ structure for the Upper Arlington area based on traffic counts in our files and other existing sources. If necessary, adjustments will be made to enable the model volumes to more closely match the traffic counts in the Upper Arlington area.

Transportation Network Alternatives

Working with Upper Arlington and the consultants, MORPC will prepare a 2025 Base Network. The base network would include all projects expected to be on the MORPC FY 2002-2005 Transportation Improvement Program and other projects in the Upper Arlington area as identified by the consultant and/or Upper Arlington. In addition alternative networks could also be developed reflecting highway test alternatives desired to be examined in the study.

2025 Traffic Volume Projections

Based on the land use scenario(s) and 2025 network(s), one or more 2025 traffic assignments will be performed. MORPC will provide the consultant with plots of the 2025 average daily traffic assignments. If desired, MORPC can also provide the ADT data in electronic form (database, spreadsheet or text file) based on the transportation demand model's network structure. If desired, modeled turning movements can also be provided.

Meetings and Presentations

MORPC staff will be available for working group meetings to discuss land use and transportation modeling activities.

Appendix B

Scope of Work

MORPC Scope of Services
for Upper Arlington Transportation Plan Update

(1) Development of Land Use Inventories/Projections

Land use is forecast at a very local level of geography. The region is divided into a set of zones called Traffic Analysis Zones (TAZ's). MORPC has developed a 2000 regional inventory of land use. However, the 2000 inventory has not yet been adjusted to the results of the 2000 census. This is the most current inventory available for the entire region. This inventory is used as input to the transportation demand model to produce 2000 average weekday traffic volumes.

MORPC's basic model includes over 40 TAZ's in the Upper Arlington area. MORPC basic zone structure will be used. There will not be any TAZ splits in the area to provide better traffic volume projections. Our current horizon year is 2025. MORPC develops and maintains 2025 projections of land use for the region. During the development of these projections MORPC makes them available to the local communities for their review and approval.

MORPC will provide the 2000 and 2025 land use data by TAZ in tables. These would be in hard copy and can be provided in electronic (database or spreadsheet) form. Selected summary information will also be graphed and some land use information may be mapped and displayed on the Franklin County Auditor's base mapping. GIS files can be provided in ArcView format.

(2) Trip Table Development

The 2000 and 2025 regional trip tables already based on the 2000 land use inventory and 2025 land use scenario will be used.

(3) Transportation Demand Model Validation for the Upper Arlington Area

MORPC will use the 2000 trip table to develop 2000 traffic volumes with the regional transportation demand model. MORPC will review the accuracy of the model for the Upper Arlington area based on traffic counts in our files and other existing sources. If necessary, adjustments will be made to enable the model volumes to more closely match the traffic counts in the Upper Arlington area.

(4) Transportation Network Alternatives

MORPC will provide the network assumptions used for the initial assignment provided on July 18, 2001. The network included all projects on the MORPC FY 2002-2005 Transportation Improvement Program. The consultant and/or Upper Arlington will review and concur in these. One alternative network would be the Ackerman Road extension from North Star Road to Kenny Road. Any adjustments made to improve validation of the 2000 assignments will be included in the future networks.

(5) 2025 Traffic Volume Projections

Based on the 2025 regional land use assumptions and resulting trip table, 2025 traffic assignments will be performed on each network. MORPC will provide the consultant with plots of the 2025 average daily traffic assignments.

(6) Meetings and Presentations

MORPC staff will be available for working group meetings to discuss land use and transportation modeling activities.

(7) Product Delivery

It is expected that the land use and traffic information would be completed two weeks after receipt of signed contract. All work for this contract will be completed by December 31, 2001.

(8) Extended to Client

The total cost to provide these services is $2,500. Kimley-Horn and Associates, Inc. agrees to compensate MORPC for these costs.

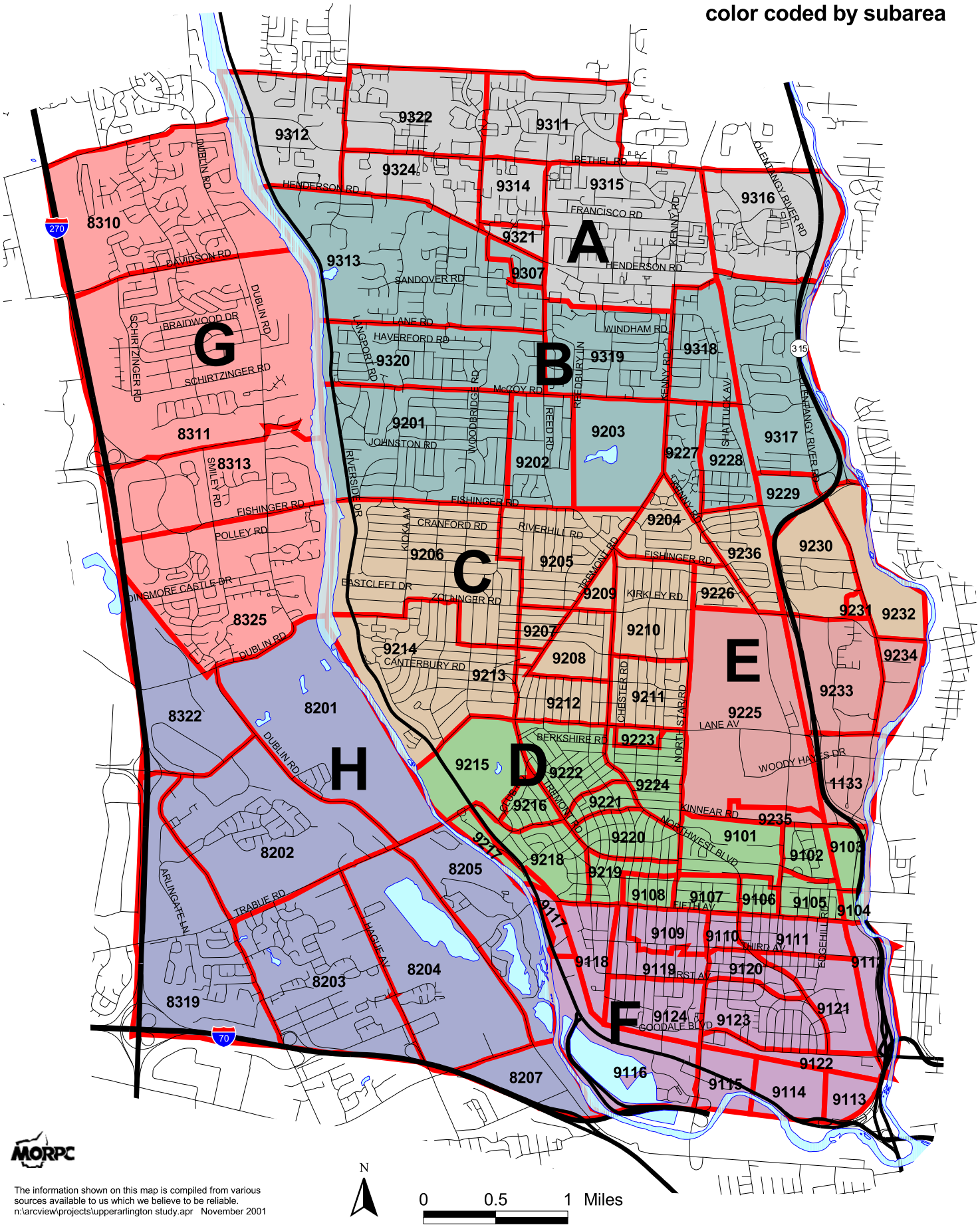
The parties to this agreement approve the study assumptions, methodology, schedule and costs described in this study request. MORPC is authorized to proceed with this study. MORPC will provide monthly invoices to Kimley-Horn and Associates, Inc. In addition, Kimley-Horn and Associates, Inc. agrees to reimburse MORPC within 30 days of receipt of invoice for its cost identified on each invoice up to the total contract amount identified in (8).

Appendix C

Land Use and Demographic Tables and Maps

Upper Arlington Traffic Analysis Zones

color coded by subarea



The information shown on this map is compiled from various sources available to us which we believe to be reliable.
n:\arcview\projects\upperarlington study.apr November 2001

Table 1:

Population, Housing, and Employment in Upper Arlington

Subarea	Pop 2000	Pop 2025	Pop Change	% Pop Change	DU 2000	DU 2025	DU Change	% DU Change	Employ 2000	Employ 2025	Employ Change	%Employ Change
A	18,633	20,475	1,842	10%	10,352	11,670	1,318	13%	8,494	8,873	379	4%
B	15,652	14,379	-1,272	-8%	6,455	6,775	320	5%	10,286	10,278	-8	0%
C	20,182	20,578	396	2%	9,670	10,137	467	5%	5,979	5,498	-481	-8%
D	12,856	13,276	420	3%	6,932	7,562	630	9%	8,269	7,134	-1,135	-14%
E	1,144	1,528	384	34%	462	829	367	79%	10,340	11,637	1,297	13%
F	10,175	10,943	768	8%	5,062	5,500	438	9%	15,368	13,726	-1,643	-11%
G	14,219	19,968	5,748	40%	5,753	8,950	3,197	56%	3,506	10,801	7,295	208%
H	10,777	11,923	1,146	11%	4,957	6,190	1,233	25%	7,343	10,437	3,094	42%
Area Total	**103,637**	**113,069**	**9,431**	**9%**	**49,643**	**57,613**	**9,431**	**16%**	**69,585**	**78,384**	**8,799**	**13%**

Prepared by The Mid Ohio Regional Planning Commission
285 E Main Street / Columbus Oh 43215/ (614) 228-2663

Figure 1: Population, Housing, and Employment in Upper Arlington

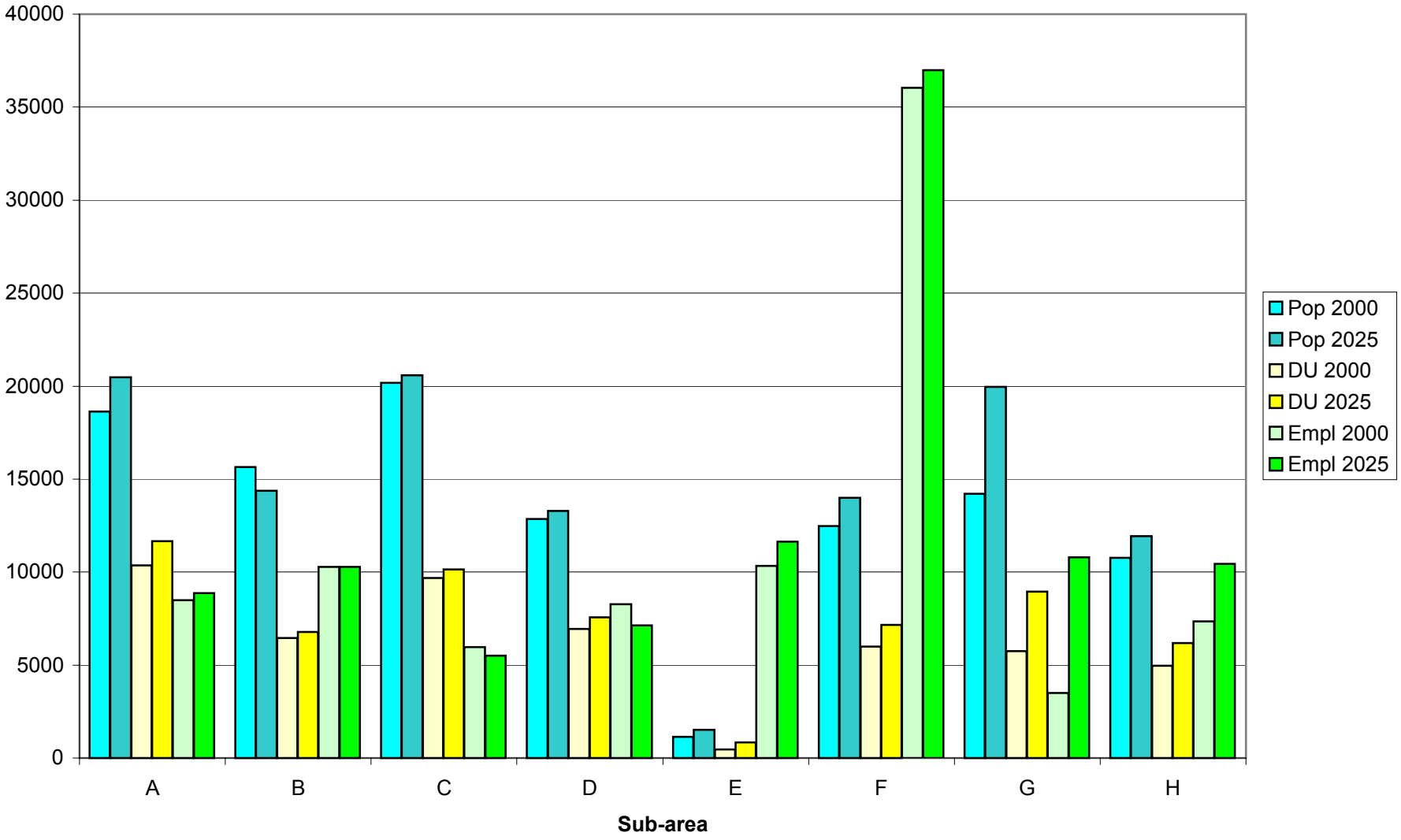


Table 2

Industrial, Retail _Office Space (square feet) in Upper Arlington

North Perimeter (Henderson to Bethel)

Subarea	Indust 2000	Indust 2025	Indust Change	%Indust Change	Retail 2000	Retail 2025	Retail Change	%Retail Change	Office 2000	Office 2025	Office Change	%Office Change
A	83,509	122,000	38,491	46%	1,573,163	1,515,000	-58,163	-4%	1,103,383	1,347,000	243,617	22%
B	49,300	40,000	-9,300	-19%	280,700	280,000	-700	0%	883,532	974,500	90,968	10%
C	466,600	458,500	-8,100	-2%	1,074,494	1,006,200	-68,294	-6%	465,682	550,394	84,712	18%
D	1,562,710	1,409,800	-152,910	-10%	1,281,782	1,513,655	231,873	18%	400,696	388,300	-12,396	-3%
E	689,302	720,000	30,698	4%	250,280	275,605	25,325	10%	656,500	1,114,125	457,625	70%
F	3,334,680	3,049,600	-285,080	-9%	1,161,034	1,296,800	135,766	12%	1,386,093	1,564,043	177,950	13%
G	433,852	515,000	81,148	19%	1,078,688	1,610,000	531,312	49%	139,291	2,000,000	1,860,709	1336%
H	4,079,827	5,630,000	1,550,173	38%	425,424	597,900	172,476	41%	619,496	912,500	293,004	47%
Area Total	**10,699,780**	**11,944,900**	**1,245,120**	**12%**	**7,125,565**	**8,095,160**	**969,595**	**14%**	**5,654,673**	**8,850,862**	**3,196,189**	**57%**

Figure 2: Industrial, Retail, and Office Space in Upper Arlington

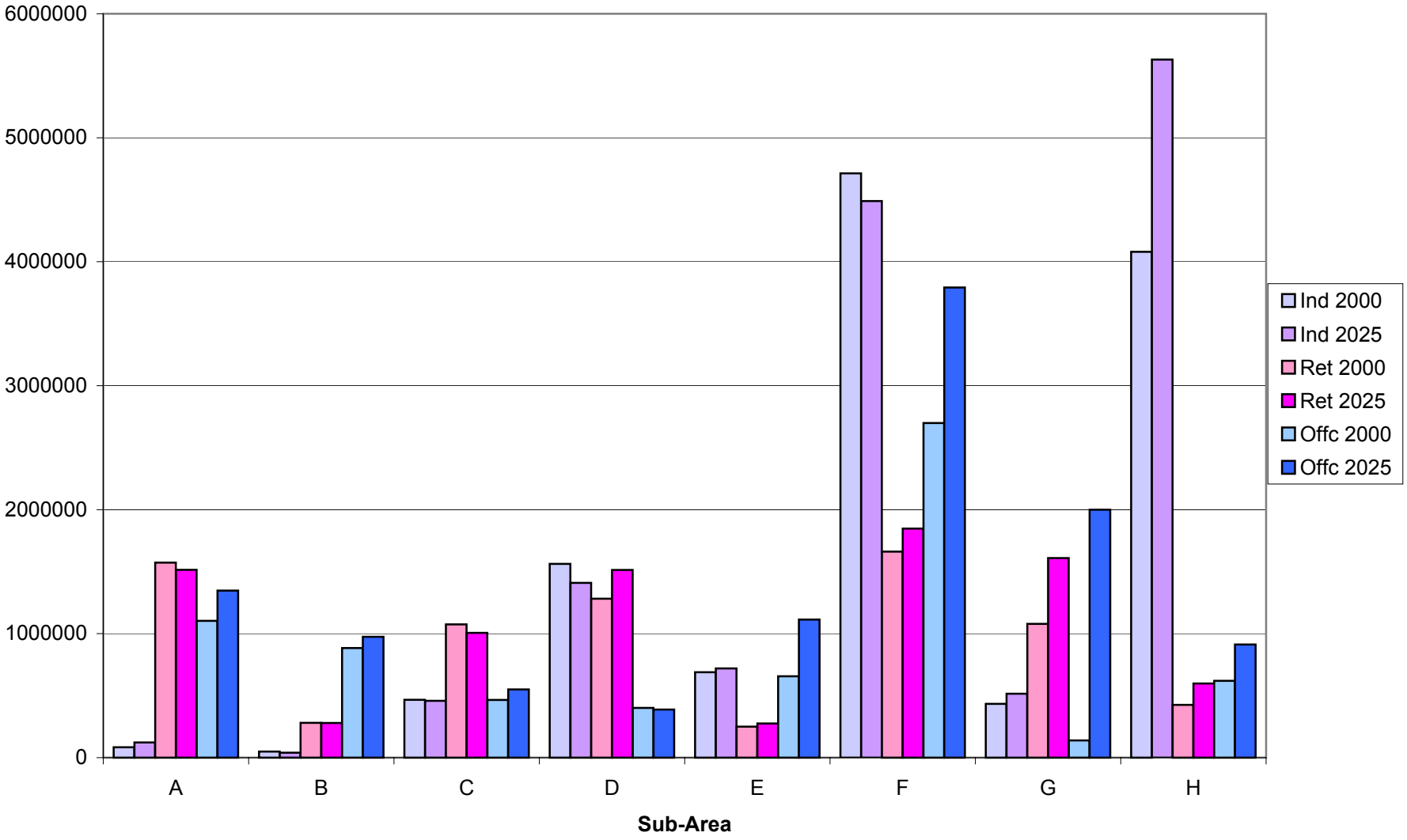


Table 3:

Population, Housing, and Employment in Upper Arlington

Subarea	TZ	Pop 2000	Pop 2025	Pop Change	% Pop Change	DU 2000	DU 2025	DU Change	% DU Change	Employ 2000	Employ 2025	Employ Change	%Employ Change
A	**North Perimeter (Henderson to Bethel)**												
	9311	4,377	4,263	-114	-3%	2,133	2,175	42	2%	1,588	1,533	-55	-3%
	9324	1,870	2,205	335	18%	1,273	1,500	227	18%	345	321	-24	-7%
	9314	1,309	1,960	651	50%	788	800	12	2%	383	425	42	11%
	9315	5,854	5,760	-94	-2%	3,464	3,600	136	4%	2,718	2,506	-212	-8%
	9316	1,591	1,584	-7	0%	959	960	1	0%	1,181	1,545	364	31%
	9321	0	251	251	0%	0	205	205	0%	631	337	-294	-47%
	9322	2,011	2,178	167	8%	851	1,270	419	49%	808	800	-8	-1%
	9312	1,621	2,274	652	40%	884	1,160	276	31%	840	1,406	566	67%
Subarea Total		**18,633**	**20,475**	**1,842**	**10%**	**10,352**	**11,670**	**1,842**	**13%**	**8,494**	**8,873**	**379**	**4%**
B	**New UA (North of Fishinger)**												
	9201	2,519	2,646	127	5%	1,084	1,200	116	11%	106	94	-12	-12%
	9202	1,048	827	-221	-21%	370	375	5	1%	65	66	1	2%
	9313	3,256	2,833	-423	-13%	1,255	1,285	30	2%	1,691	1,564	-127	-7%
	9307	0	0	0	0%	0	0	0	0%	659	667	8	1%
	9317	1,467	1,529	62	4%	638	780	142	22%	745	1,157	412	55%
	9319	2,374	1,962	-412	-17%	887	890	3	0%	58	58	0	0%
	9203	0	0	0	0%	0	0	0	0%	46	35	-11	-24%
	9227	623	588	-35	-6%	299	300	1	0%	54	94	40	74%
	9228	964	823	-141	-15%	419	420	1	0%	59	63	4	7%
	9229	0	0	0	0%	0	0	0	0%	6,400	6,200	-200	-3%
	9320	1,944	1,632	-312	-16%	727	740	13	2%	120	50	-70	-58%

Table 3:

Population, Housing, and Employment in Upper Arlington

Subarea	TZ	Pop 2000	Pop 2025	Pop Change	% Pop Change	DU 2000	DU 2025	DU Change	% DU Change	Employ 2000	Employ 2025	Employ Change	%Employ Change
	9318	1,456	1,539	83	6%	776	785	9	1%	283	231	-52	-18%
Subarea Total		**15,652**	**14,379**	**-1,272**	**-8%**	**6,455**	**6,775**	**-1,272**	**5%**	**10,286**	**10,278**	**-8**	**0%**
C	**Mid UA (Between Lane Ave and Fishinger Rd)**												
	9204	768	803	35	5%	381	410	29	8%	34	22	-12	-37%
	9210	1,267	1,294	27	2%	607	660	53	9%	179	186	7	4%
	9206	4,304	4,145	-159	-4%	1,827	1,880	53	3%	339	326	-13	-4%
	9232	341	382	41	12%	173	195	22	13%	969	1,451	482	50%
	9230	3,349	3,753	404	12%	1,913	1,915	2	0%	1,782	1,274	-508	-28%
	9205	1,997	2,110	113	6%	998	1,075	77	8%	83	66	-17	-21%
	9236	1,345	1,274	-71	-5%	641	650	9	1%	250	327	77	31%
	9209	0	0	0	0%	0	0	0	0%	1,177	685	-493	-42%
	9226	433	412	-21	-5%	206	210	4	2%	77	74	-3	-3%
	9214	2,505	2,617	112	4%	1,233	1,335	102	8%	105	117	12	11%
	9207	604	507	-97	-16%	337	345	8	2%	0	0	0	0%
	9208	542	576	34	6%	223	235	12	5%	117	112	-5	-4%
	9213	0	0	0	0%	0	0	0	0%	210	177	-33	-16%
	9211	1,364	1,283	-81	-6%	564	582	18	3%	302	277	-25	-8%
	9231	0	0	0	0%	0	0	0	0%	312	372	60	19%
	9212	1,363	1,422	59	4%	567	645	78	14%	43	32	-11	-25%
Subarea Total		**20,182**	**20,578**	**396**	**2%**	**9,670**	**10,137**	**396**	**5%**	**5,979**	**5,498**	**-481**	**-8%**
D	**Old Arlington (Fifth Ave. to Lane Ave.)**												
	9101	2,212	2,646	434	20%	1,595	1,800	205	13%	1,843	1,849	6	0%

Table 3:

Population, Housing, and Employment in Upper Arlington

Subarea	TZ	Pop 2000	Pop 2025	Pop Change	% Pop Change	DU 2000	DU 2025	DU Change	% DU Change	Employ 2000	Employ 2025	Employ Change	%Employ Change
	9220	1,212	1,101	-111	-9%	471	500	29	6%	109	77	-32	-29%
	9215	113	232	119	105%	75	105	30	40%	66	50	-16	-25%
	9222	1,869	1,621	-248	-13%	717	735	18	3%	5	21	16	311%
	9224	1,532	1,455	-77	-5%	644	660	16	2%	130	105	-25	-19%
	9223	0	59	59	0%	0	25	25	0%	396	500	104	26%
	9216	487	452	-35	-7%	176	205	29	16%	43	35	-8	-20%
	9217	143	192	49	34%	82	87	5	6%	282	306	24	8%
	9102	570	390	-180	-32%	265	265	0	0%	763	425	-339	-44%
	9103	0	0	0	0%	0	0	0	0%	1,932	1,367	-565	-29%
	9219	623	717	94	15%	320	325	5	2%	0	0	0	0%
	9105	386	610	224	58%	270	415	145	54%	910	690	-220	-24%
	9108	735	772	37	5%	503	525	22	4%	141	135	-6	-4%
	9107	1,275	1,448	173	14%	941	985	44	5%	630	621	-9	-1%
	9106	412	412	0	0%	265	280	15	6%	266	229	-37	-14%
	9104	0	0	0	0%	0	0	0	0%	491	467	-24	-5%
	9218	1,059	918	-142	-13%	504	535	31	6%	105	105	0	0%
	9221	228	253	25	11%	104	115	11	11%	157	153	-4	-3%
Subarea Total		**12,856**	**13,276**	**420**	**3%**	**6,932**	**7,562**	**420**	**9%**	**8,269**	**7,134**	**-1,135**	**-14%**
E	**Ohio State**												
	9225	75	88	13	18%	40	72	32	80%	4,459	5,806	1,347	30%
	9234	61	288	227	372%	31	147	116	374%	2,035	1,389	-646	-32%
	9233	929	1,078	149	16%	349	550	201	58%	201	373	172	86%

Table 3:

Population, Housing, and Employment in Upper Arlington

Subarea	TZ	Pop 2000	Pop 2025	Pop Change	% Pop Change	DU 2000	DU 2025	DU Change	% DU Change	Employ 2000	Employ 2025	Employ Change	%Employ Change
	9235	79	74	-6	-7%	42	60	18	43%	1,291	1,021	-270	-21%
	1133	0	0	0	0%	0	0	0	0%	2,354	3,048	694	29%
Subarea Total		**1,144**	**1,528**	**384**	**34%**	**462**	**829**	**384**	**79%**	**10,340**	**11,637**	**1,297**	**13%**
F	**Grandview, Marble Cliff (South of Fifth)**												
	9124	1,143	1,312	169	15%	496	595	99	20%	88	75	-13	-15%
	9120	986	904	-82	-8%	402	410	8	2%	49	31	-18	-37%
	9117	0	0	0	0%	0	0	0	0%	1,007	1,127	120	12%
	9118	629	684	55	9%	300	310	10	3%	157	204	47	30%
	9119	1,046	1,125	79	8%	444	510	66	15%	375	352	-23	-6%
	9109	1,048	1,007	-41	-4%	665	685	20	3%	633	582	-51	-8%
	9116	700	1,215	515	74%	507	620	113	22%	2,795	2,162	-633	-23%
	9110	467	426	-41	-9%	283	290	7	2%	322	254	-68	-21%
	9113	0	0	0	0%	0	0	0	0%	1,657	1,593	-65	-4%
	9123	2,631	2,723	92	4%	1,146	1,235	89	8%	361	409	48	13%
	9122	0	0	0	0%	0	0	0	0%	848	1,022	174	20%
	9115	159	176	17	11%	79	90	11	14%	642	707	65	10%
	9114	0	0	0	0%	0	0	0	0%	295	286	-9	-3%
	9111	612	588	-24	-4%	384	400	16	4%	2,917	1,775	-1,142	-39%
	9121	754	783	29	4%	356	355	-1	0%	2,823	2,564	-259	-9%
	9112	0	0	0	0%	0	0	0	0%	399	585	186	47%
Subarea Total		**10,175**	**10,943**	**768**	**8%**	**5,062**	**5,500**	**768**	**9%**	**15,368**	**13,726**	**-1,643**	**-11%**
G	**Hilliard Edge (West of the Scioto,north of Dublin Rd)**												

Table 3:

Population, Housing, and Employment in Upper Arlington

Subarea	TZ	Pop 2000	Pop 2025	Pop Change	% Pop Change	DU 2000	DU 2025	DU Change	% DU Change	Employ 2000	Employ 2025	Employ Change	%Employ Change
	8313	949	2,058	1,109	117%	397	1,050	653	164%	1,988	4,232	2,244	113%
	8310	4,832	6,615	1,783	37%	1,814	3,000	1,186	65%	0	1,343	1,343	0%
	8311	4,245	6,395	2,150	51%	1,669	2,900	1,231	74%	649	3,751	3,102	478%
	8325	4,194	4,900	706	17%	1,873	2,000	127	7%	869	1,475	606	70%
Subarea Total		**14,219**	**19,968**	**5,748**	**40%**	**5,753**	**8,950**	**5,748**	**56%**	**3,506**	**10,801**	**7,295**	**208%**
H	**Trabue Corridor**												
	8203	4,081	4,116	35	1%	1,928	2,100	172	9%	205	1,054	849	414%
	8207	8	0	-8	-100%	4	0	-4	-100%	284	410	126	44%
	8322	2	0	-2	-100%	1	0	-1	-100%	1,204	2,251	1,047	87%
	8201	303	1,262	959	317%	121	515	394	326%	82	62	-20	-24%
	8202	2,153	2,021	-132	-6%	784	825	41	5%	835	1,601	765	92%
	8319	1,826	1,666	-160	-9%	738	850	112	15%	2,251	1,976	-275	-12%
	8205	921	1,437	517	56%	694	1,175	481	69%	1,480	1,431	-49	-3%
	8204	1,484	1,421	-63	-4%	687	725	38	6%	1,001	1,652	651	65%
Subarea Total		**10,777**	**11,923**	**1,146**	**11%**	**4,957**	**6,190**	**1,146**	**25%**	**7,343**	**10,437**	**3,094**	**42%**
Area Tota		**103,637**	**113,069**	**9,431**	**9%**	**49,643**	**57,613**	**9,431**	**16%**	**69,585**	**78,384**	**8,799**	**13%**

Table 4:

Industrial, Retail _Office Space (square feet) in Upper Arlington

Subarea	Traffic Zone	Indust 2000	Indust 2025	Indust Change	%Indust Change	Retail 2000	Retail 2025	Retail Change	%Retail Change	Office 2000	Office 2025	Office Change	%Offic eChange
A	**North Perimeter (Henderson to Bethel)**												
	9322	0	0	0	0%	176,390	227,000	50,610	29%	12,000	12,000	0	0%
	9321	0	0	0	0%	184,436	0	-184,436	-100%	77,271	80,000	2,729	4%
	9324	1,000	0	-1,000	-100%	92,115	85,000	-7,115	-8%	21,193	20,000	-1,193	-6%
	9316	11,692	12,000	308	3%	428,699	435,000	6,301	1%	123,444	120,000	-3,444	-3%
	9315	67,960	110,000	42,040	62%	335,801	355,000	19,199	6%	426,685	425,000	-1,685	0%
	9314	0	0	0	0%	0	8,000	8,000	0%	113,500	140,000	26,500	23%
	9312	0	0	0	0%	113,717	175,000	61,283	54%	30,500	250,000	219,500	720%
	9311	2,857	0	-2,857	-100%	242,005	230,000	-12,005	-5%	298,790	300,000	1,210	0%
Subarea Total		**83,509**	**122,000**	**38,491**	**46%**	**1,573,163**	**1,515,000**	**-58,163**	**-4%**	**1,103,383**	**1,347,000**	**243,617**	**22%**
B	**New UA (North of Fishinger)**												
	9201	0	0	0	0%	18,420	11,000	-7,420	-40%	15,500	15,500	0	0%
	9227	0	0	0	0%	20,000	20,000	0	0%	8,500	8,500	0	0%
	9228	0	0	0	0%	0	0	0	0%	2,100	2,100	0	0%
	9229	0	0	0	0%	0	0	0	0%	0	0	0	0%
	9202	0	0	0	0%	0	0	0	0%	0	0	0	0%
	9317	0	0	0	0%	0	0	0	0%	271,282	380,000	108,718	40%
	9320	0	0	0	0%	7,200	15,000	7,800	108%	0	0	0	0%
	9203	0	0	0	0%	0	0	0	0%	0	0	0	0%
	9318	49,300	40,000	-9,300	-19%	21,700	22,000	300	1%	18,400	18,400	0	0%
	9307	0	0	0	0%	203,380	200,000	-3,380	-2%	65,050	50,000	-15,050	-23%
	9313	0	0	0	0%	10,000	12,000	2,000	20%	502,700	500,000	-2,700	-1%

Table 4:

Industrial, Retail _Office Space (square feet) in Upper Arlington

Subarea	Traffic Zone	Indust 2000	Indust 2025	Indust Change	%Indust Change	Retail 2000	Retail 2025	Retail Change	%Retail Change	Office 2000	Office 2025	Office Change	%Offic eChange
	9319	0	0	0	0%	0	0	0	0%	0	0	0	0%
Subarea Total		**49,300**	**40,000**	**-9,300**	**-19%**	**280,700**	**280,000**	**-700**	**0%**	**883,532**	**974,500**	**90,968**	**10%**
C	**Mid UA (Between Lane Ave and Fishinger Rd)**												
	9205	0	0	0	0%	1,500	1,500	0	0%	21,300	21,300	0	0%
	9207	0	0	0	0%	0	0	0	0%	0	0	0	0%
	9204	0	0	0	0%	0	0	0	0%	7,200	7,200	0	0%
	9214	5,000	8,500	3,500	70%	15,800	24,500	8,700	55%	8,728	12,000	3,272	37%
	9208	0	0	0	0%	18,000	18,000	0	0%	4,000	4,000	0	0%
	9209	0	0	0	0%	358,846	171,000	-187,846	-52%	60,132	80,000	19,868	33%
	9210	0	0	0	0%	2,400	2,400	0	0%	11,362	15,000	3,638	32%
	9211	0	0	0	0%	21,300	22,800	1,500	7%	69,400	74,000	4,600	7%
	9212	0	0	0	0%	10,000	10,000	0	0%	4,400	2,194	-2,206	-50%
	9213	0	0	0	0%	43,820	44,000	180	0%	17,720	18,000	280	2%
	9226	0	0	0	0%	17,000	17,000	0	0%	10,700	10,700	0	0%
	9236	0	0	0	0%	9,000	9,000	0	0%	91,000	91,000	0	0%
	9230	450,000	450,000	0	0%	91,482	93,000	1,518	2%	26,700	90,000	63,300	237%
	9232	0	0	0	0%	306,278	410,000	103,722	34%	109,940	90,000	-19,940	-18%
	9206	11,600	0	-11,600	-100%	52,300	48,000	-4,300	-8%	23,100	30,000	6,900	30%
	9231	0	0	0	0%	126,768	135,000	8,232	6%	0	5,000	5,000	0%
Subarea Total		**466,600**	**458,500**	**-8,100**	**-2%**	**1,074,494**	**1,006,200**	**-68,294**	**-6%**	**465,682**	**550,394**	**84,712**	**18%**
D	**Old Arlington (Fifth Ave. to Lane Ave.)**												

Table 4:

Industrial, Retail _Office Space (square feet) in Upper Arlington

Subarea	Traffic Zone	Indust 2000	Indust 2025	Indust Change	%Indust Change	Retail 2000	Retail 2025	Retail Change	%Retail Change	Office 2000	Office 2025	Office Change	%Offic eChange
	9104	46,000	46,200	200	0%	64,132	129,000	64,868	101%	13,200	13,200	0	0%
	9103	1,440	0	-1,440	-100%	374,800	450,000	75,200	20%	83,200	60,000	-23,200	-28%
	9102	268,600	270,000	1,400	1%	300	0	-300	-100%	0	0	0	0%
	9101	829,100	835,000	5,900	1%	221,100	260,555	39,455	18%	54,513	55,000	487	1%
	9219	0	0	0	0%	0	0	0	0%	0	0	0	0%
	9105	345,570	195,000	-150,570	-44%	106,221	125,000	18,779	18%	38,600	38,600	0	0%
	9106	2,700	1,500	-1,200	-44%	74,368	75,000	632	1%	9,000	9,000	0	0%
	9107	62,100	62,100	0	0%	139,731	147,000	7,269	5%	56,400	56,000	-400	-1%
	9108	0	0	0	0%	33,804	31,000	-2,804	-8%	17,733	18,000	267	2%
	9215	0	0	0	0%	4,500	4,500	0	0%	0	0	0	0%
	9218	0	0	0	0%	8,475	26,700	18,225	215%	10,900	12,000	1,100	10%
	9217	7,200	0	-7,200	-100%	32,064	42,000	9,936	31%	62,150	65,000	2,850	5%
	9216	0	0	0	0%	1,800	1,800	0	0%	10,000	10,000	0	0%
	9224	0	0	0	0%	3,760	2,600	-1,160	-31%	22,800	24,000	1,200	5%
	9223	0	0	0	0%	164,227	163,000	-1,227	-1%	7,500	7,500	0	0%
	9222	0	0	0	0%	1,200	2,500	1,300	108%	0	5,000	5,000	0%
	9221	0	0	0	0%	21,756	23,000	1,244	6%	14,700	15,000	300	2%
	9220	0	0	0	0%	29,544	30,000	456	2%	0	0	0	0%
Subarea Total		**1,562,710**	**1,409,800**	**-152,910**	**-10%**	**1,281,782**	**1,513,655**	**231,873**	**18%**	**400,696**	**388,300**	**-12,396**	**-3%**
E	**Ohio State**												
	9235	210,510	120,000	-90,510	-43%	68,180	68,180	0	0%	100,000	100,000	0	0%
	9233	0	0	0	0%	41,700	58,625	16,925	41%	0	0	0	0%

Table 4:

Industrial, Retail _Office Space (square feet) in Upper Arlington

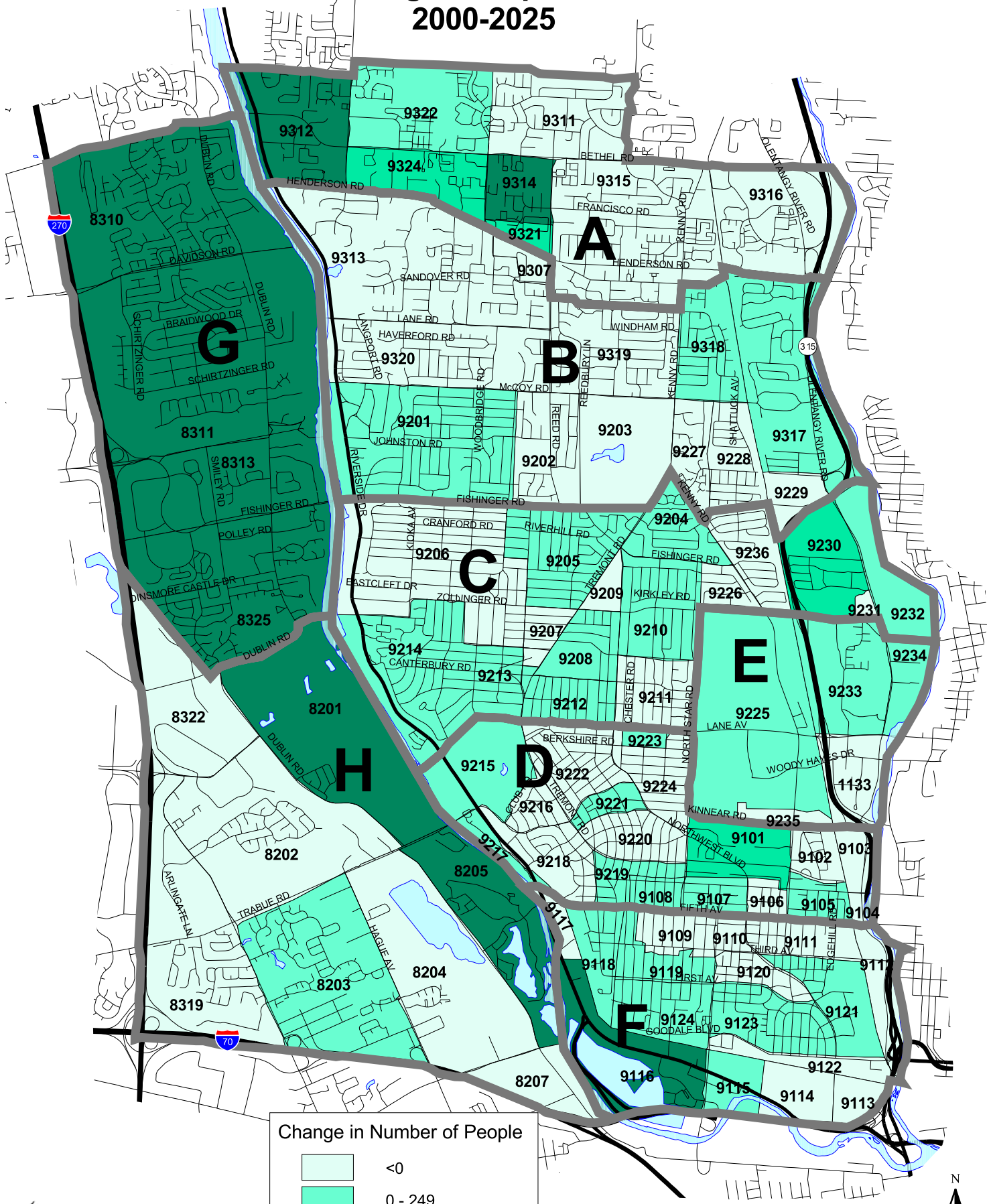
Subarea	Traffic Zone	Indust 2000	Indust 2025	Indust Change	%Indust Change	Retail 2000	Retail 2025	Retail Change	%Retail Change	Office 2000	Office 2025	Office Change	%Offic eChange
	1133	28,800	0	-28,800	-100%	0	0	0	0%	1,200	18,125	16,925	1410%
	9225	449,992	600,000	150,008	33%	135,600	144,000	8,400	6%	178,500	600,000	421,500	236%
	9234	0	0	0	0%	4,800	4,800	0	0%	376,800	396,000	19,200	5%
Subarea Total		**689,302**	**720,000**	**30,698**	**4%**	**250,280**	**275,605**	**25,325**	**10%**	**656,500**	**1,114,125**	**457,625**	**70%**
F	**Grandview, Marble Cliff (South of Fifth)**												
	9111	1,007,616	800,000	-207,616	-21%	138,788	140,000	1,212	1%	141,121	150,000	8,879	6%
	9117	164,427	165,000	573	0%	500	0	-500	-100%	320,950	325,000	4,050	1%
	9109	0	0	0	0%	132,840	153,000	20,160	15%	52,278	53,000	722	1%
	9110	0	0	0	0%	82,731	56,000	-26,731	-32%	32,170	32,000	-170	-1%
	9122	311,100	310,000	-1,100	0%	91,400	91,500	100	0%	71,600	140,000	68,400	96%
	9115	49,882	50,000	118	0%	225,935	224,000	-1,935	-1%	14,700	16,000	1,300	9%
	9112	9,400	7,000	-2,400	-26%	58,800	143,500	84,700	144%	32,300	35,000	2,700	8%
	9123	81,200	78,500	-2,700	-3%	45,500	75,100	29,600	65%	33,900	28,900	-5,000	-15%
	9121	1,063,000	1,000,000	-63,000	-6%	147,800	148,000	200	0%	255,600	260,000	4,400	2%
	9120	2,400	0	-2,400	-100%	3,200	3,200	0	0%	7,600	7,600	0	0%
	9119	6,400	5,000	-1,400	-22%	54,600	57,000	2,400	4%	48,800	53,000	4,200	9%
	9118	10,100	10,100	0	0%	45,940	49,500	3,560	8%	11,484	15,000	3,516	31%
	9116	438,455	440,000	1,545	0%	117,000	140,000	23,000	20%	314,990	400,000	85,010	27%
	9114	0	0	0	0%	0	0	0	0%	37,800	37,743	-57	0%
	9113	187,300	184,000	-3,300	-2%	0	0	0	0%	0	0	0	0%
	9124	3,400	0	-3,400	-100%	16,000	16,000	0	0%	10,800	10,800	0	0%

Table 4:

Industrial, Retail _Office Space (square feet) in Upper Arlington

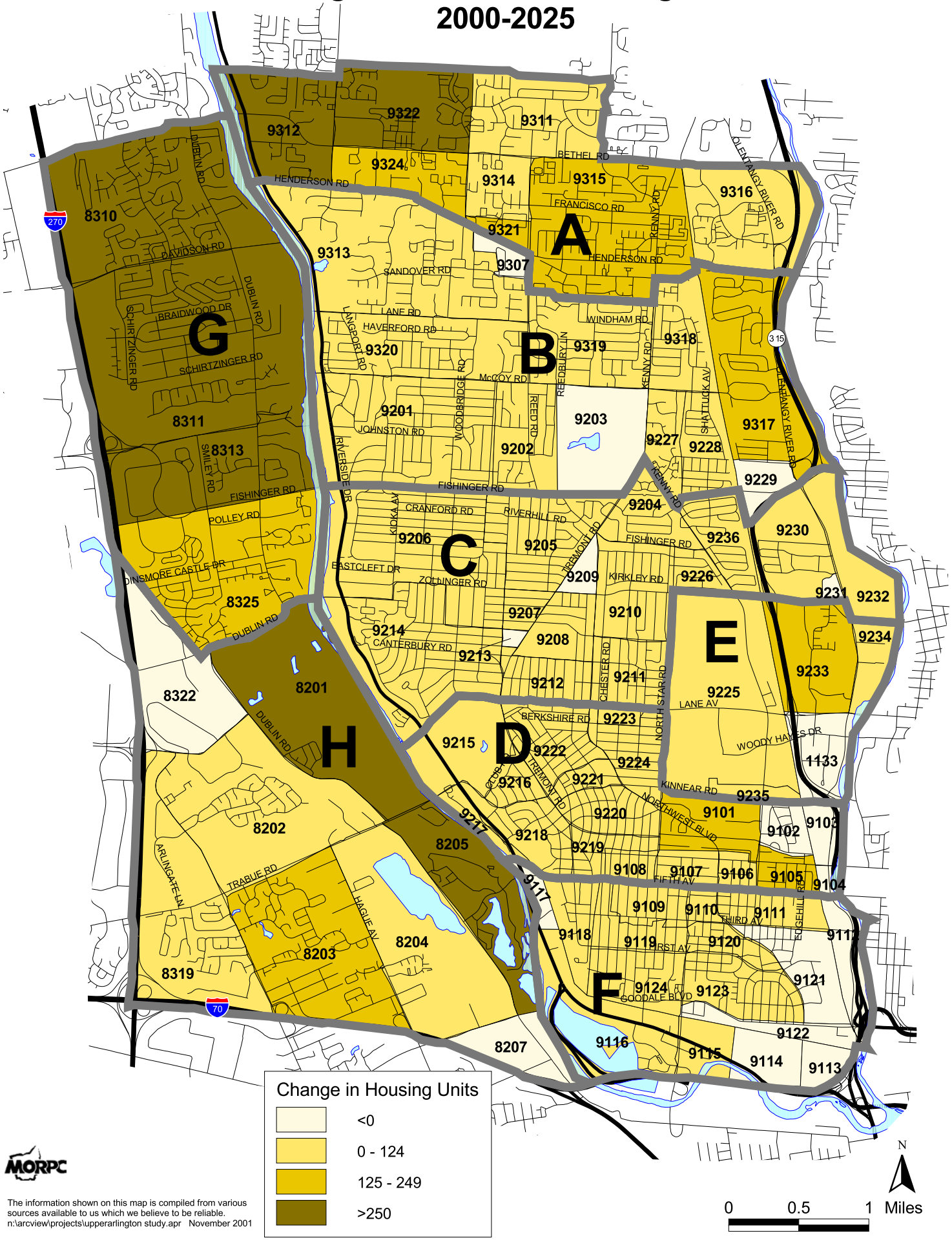
Subarea	Traffic Zone	Indust 2000	Indust 2025	Indust Change	%Indust Change	Retail 2000	Retail 2025	Retail Change	%Retail Change	Office 2000	Office 2025	Office Change	%Offic eChange
Subarea Total		**3,334,680**	**3,049,600**	**-285,080**	**-9%**	**1,161,034**	**1,296,800**	**135,766**	**12%**	**1,386,093**	**1,564,043**	**177,950**	**13%**
G	**Hilliard Edge (West of the Scioto,north of Dublin Rd)**												
	8325	433,852	500,000	66,148	15%	227,284	345,000	117,716	52%	20,000	0	-20,000	-100%
	8313	0	15,000	15,000	0%	851,404	925,000	73,596	9%	41,291	600,000	558,709	1353%
	8311	0	0	0	0%	0	260,000	260,000	0%	78,000	1,000,000	922,000	1182%
	8310	0	0	0	0%	0	80,000	80,000	0%	0	400,000	400,000	0%
Subarea Total		**433,852**	**515,000**	**81,148**	**19%**	**1,078,688**	**1,610,000**	**531,312**	**49%**	**139,291**	**2,000,000**	**1,860,709**	**1336%**
H	**Trabue Corridor**												
	8203	0	800,000	800,000	0%	21,624	20,000	-1,624	-8%	20,000	60,000	40,000	200%
	8201	0	0	0	0%	0	0	0	0%	0	0	0	0%
	8202	719,000	700,000	-19,000	-3%	83,100	90,000	6,900	8%	61,033	190,000	128,967	211%
	8204	981,794	1,010,000	28,206	3%	161,100	180,000	18,900	12%	15,500	20,000	4,500	29%
	8205	10,000	0	-10,000	-100%	0	91,000	91,000	0%	315,963	380,000	64,037	20%
	8207	184,600	195,000	10,400	6%	13,500	54,400	40,900	303%	0	7,500	7,500	0%
	8322	1,267,517	1,625,000	357,483	28%	141,600	149,500	7,900	6%	44,000	58,000	14,000	32%
	8319	916,916	1,300,000	383,084	42%	4,500	13,000	8,500	189%	163,000	197,000	34,000	21%
Subarea Total		**4,079,827**	**5,630,000**	**1,550,173**	**38%**	**425,424**	**597,900**	**172,476**	**41%**	**619,496**	**912,500**	**293,004**	**47%**
Area Tota		**103,637**	**113,069**	**9,431**	**9%**	**49,643**	**57,613**	**9,431**	**16%**	**69,585**	**78,384**	**8,799**	**13%**

Upper Arlington
Change in Population
2000-2025

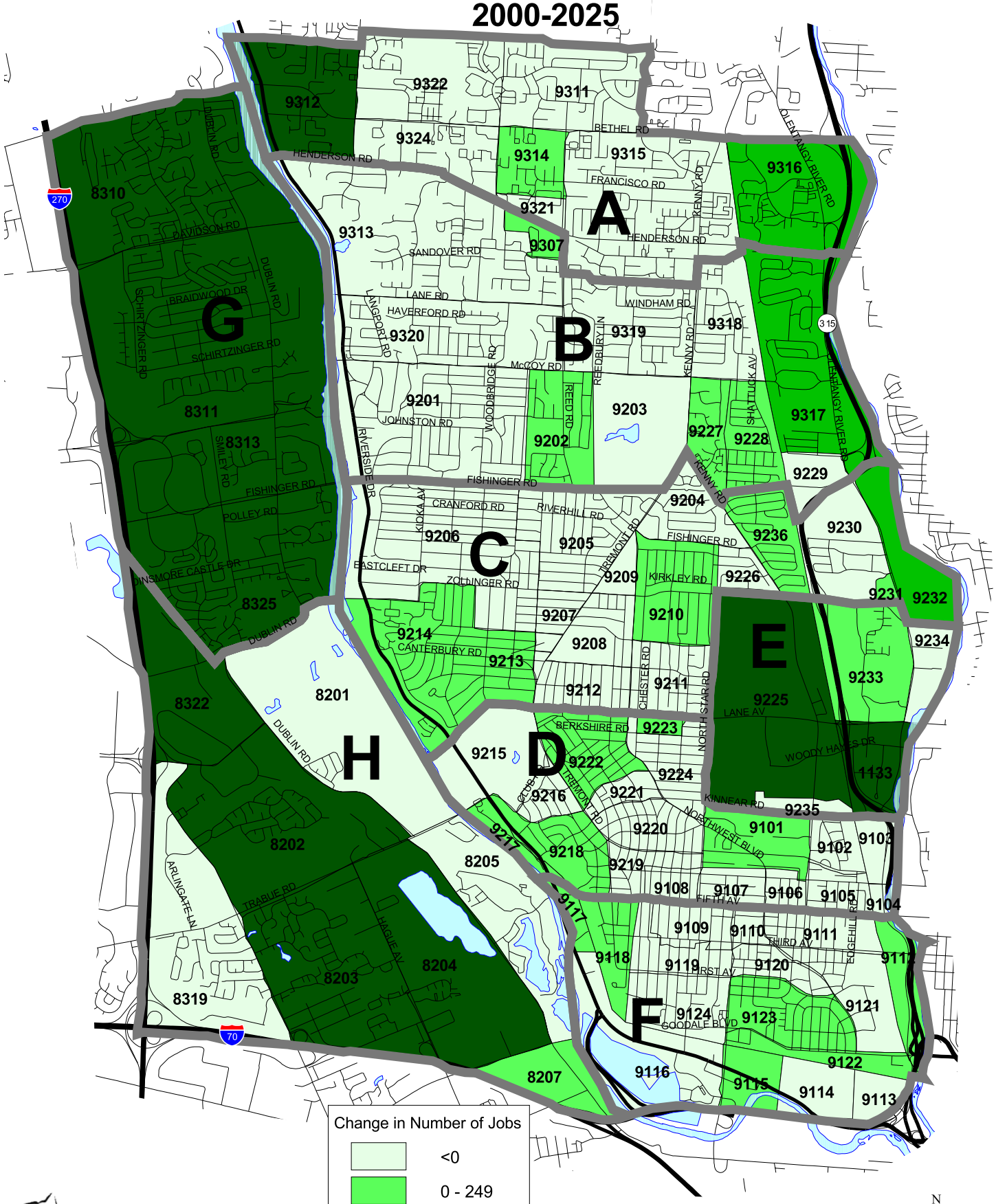


The information shown on this map is compiled from various sources available to us which we believe to be reliable.
n:\arcview\projects\upperarlington study.apr November 2001

Upper Arlington
Change in Number of Housing Units
2000-2025



Upper Arlington
Change in Employment
2000-2025



Change in Number of Jobs

- <0
- 0 - 249
- 250 - 499
- >500

MORPC

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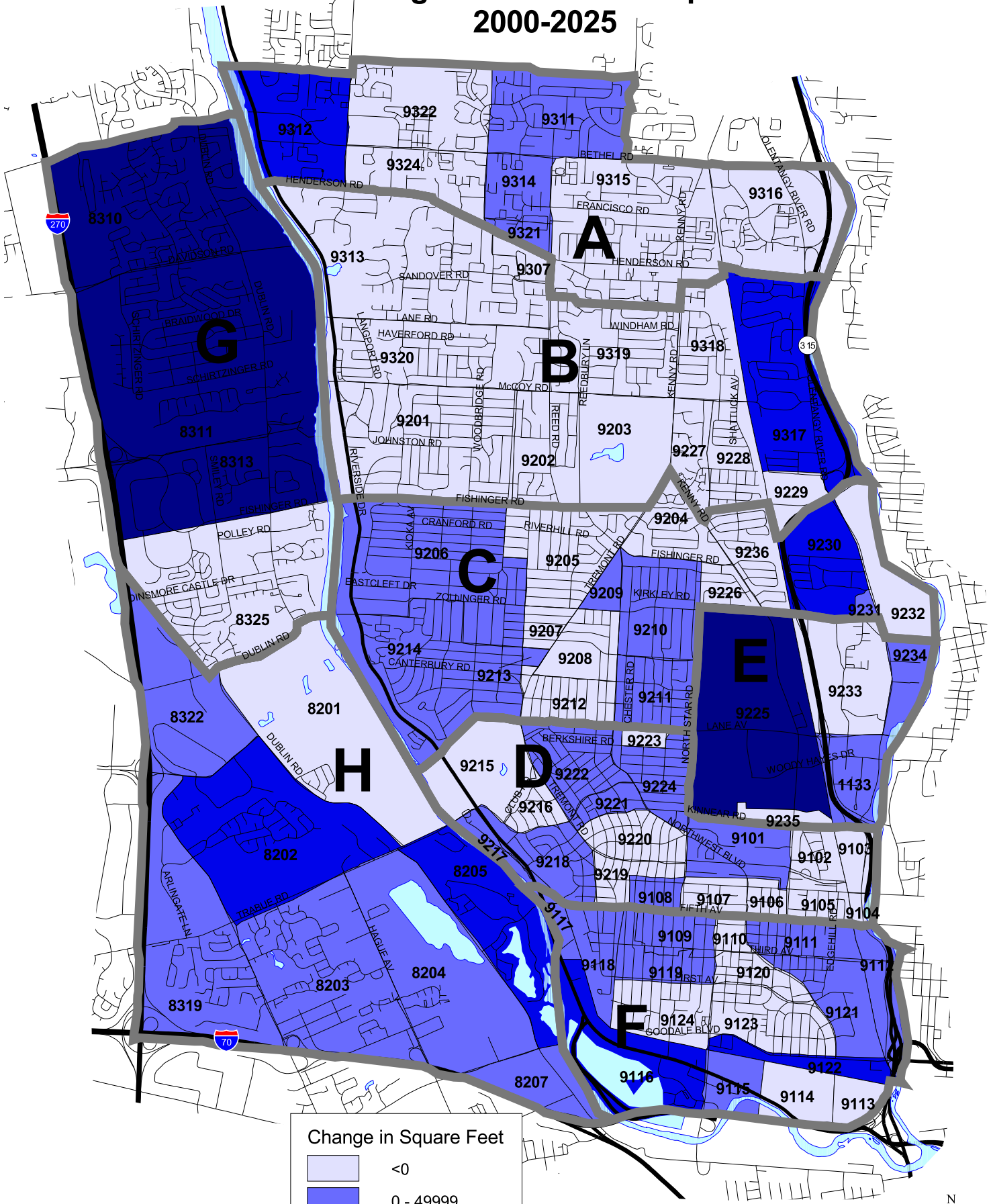
n:\arcview\projects\upperarlington study.apr November 2001

N

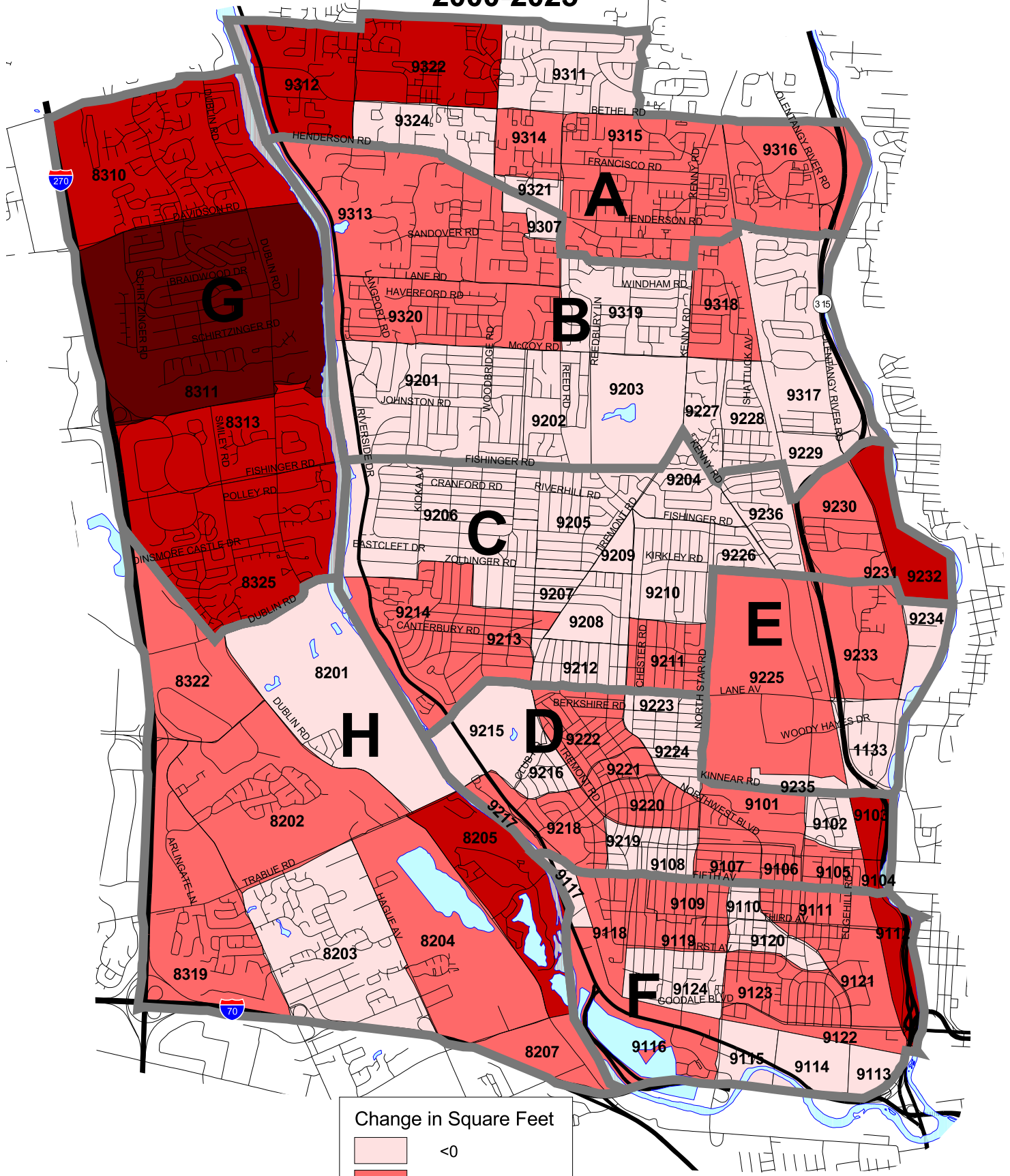
0 0.5 1 Miles

Upper Arlington
Change in Office Floor Space
2000-2025



The information shown on this map is compiled from various sources available to us which we believe to be reliable.
n:\arcview\projects\upperarlington study.apr November 2001

Upper Arlington
Change in Retail Floor Space
2000-2025



Change in Square Feet

- <0
- 0 - 49999
- 50000 - 249999
- >250000

MORPC

N

0 0.5 1 Miles

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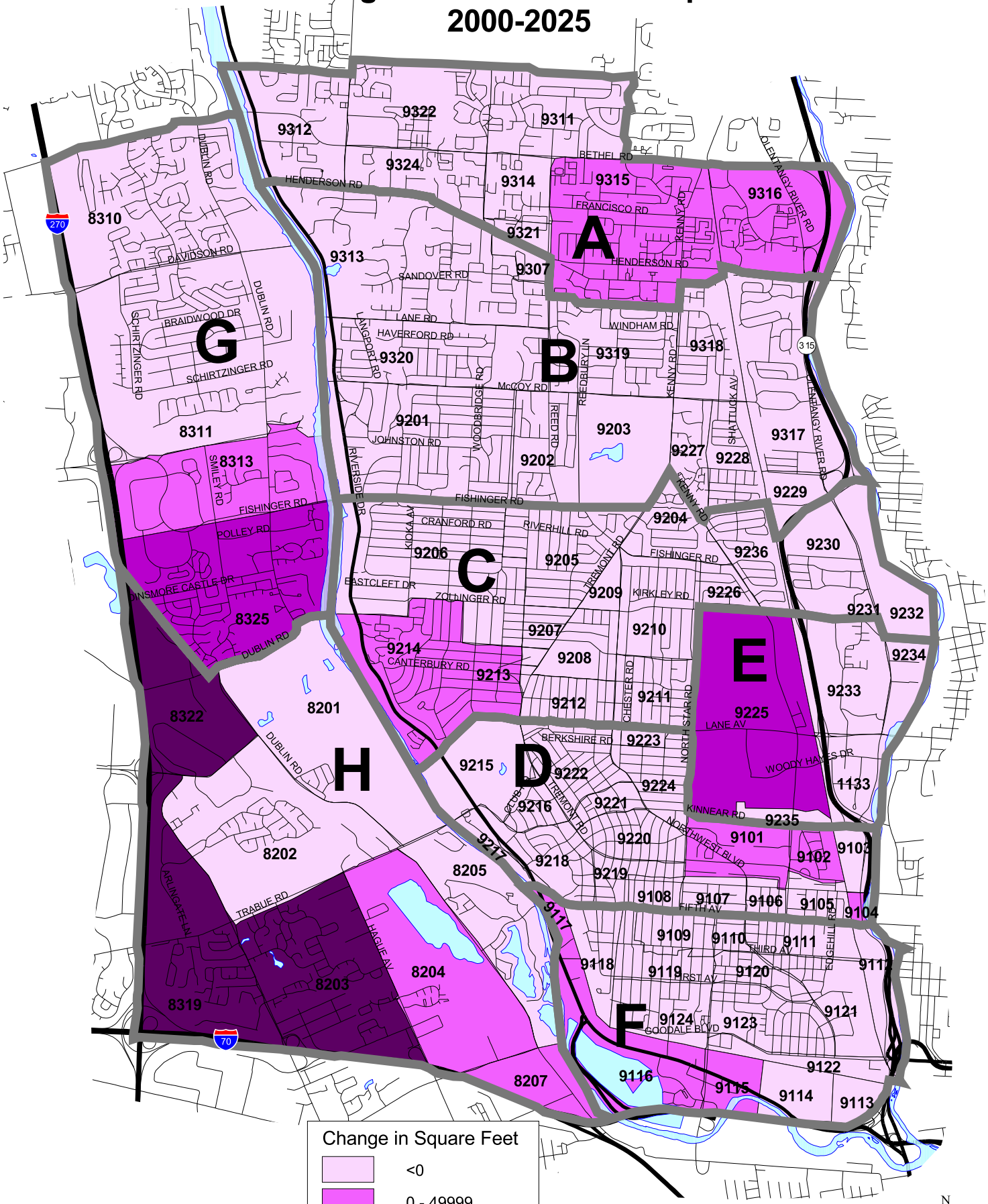
n:\arcview\projects\upperarlington study.apr November 2001

Upper Arlington
Change in Industrial Floor Space
2000-2025



Appendix D

MORPC FY 2002-2005 TIP and Project List

TRANSPORTATION IMPROVEMENT PROGRAM
PROJECT LOCATION MAP

Fiscal Years 2002 - 2005

July 1, 2001 to June 30, 2004
Adopted by Resolution T-12-01

Mid-Ohio Regional Planning Commission
285 East Main Street
Columbus, Ohio 43215-5272
(614) 228-2663
June 2001

Please check www.MORPC.org for updates to this map and project listing.

N

0 2 4 Miles

MARION COUNTY
UNION COUNTY
MORROW COUNTY
DELAWARE COUNTY
KNOX COUNTY
MADISON COUNTY
FRANKLIN COUNTY
LICKING COUNTY
FAIRFIELD COUNTY
PICKAWAY COUNTY

Ashley
Delaware
Ostrander
Powell
Dublin
Worthington
Westerville
New Albany
Johnstown
Sunbury
Galena
Hilliard
Gahanna
Pataskala
Bexley
Whitehall
Reynoldsburg
Grove City
Obetz
Groveport
Canal Winchester
Pickerington
Lithopolis

SCIOTO RIVER
DELAWARE RESERVOIR
ALUM CREEK RESERVOIR
HOOVER RESERVOIR
OLENTANGY RIVER
ALUM CREEK
WALNUT CREEK
BIG DARBY CREEK

LEGEND

CONSTRUCTION PHASE FY 2002 - 2005	CONSTRUCTION PHASE after FY 2005 (Construction not part of TIP)
Major Widening	
New Roadway Location	
New Interchange	
Minor Widening/Safety Improvement	
Interchange Upgrade	
Intersection Improvement	
Resurfacing/Maintenance	
Bridge	
New Bikeway	
Enhancement/Streetscape/Landscaping/Study	
Landscaping/Other	
100 100 100 100 Map Location Number	100 100 100 100
Planning Area	

Downtown Area

The information shown on this map is compiled from various sources available to us which we believe to be reliable.
n:\arcview\tplan\tip 2001.apr June 8, 2001

**MORPC ID Map Key to Accompany state Fiscal Years 2002 to 2005 TIP

MORPC ID #	County-Route-Section	Project Name	Agency
3	FRA-Rideshare/Vanpool-	Rideshare/Vanpool/Workforce/Ozone, Ridesharing	MORPC
7	ALL-Line Item Project-	Planning, Planning Activity	ODOT
8	ALL-Line Item Project-	Preperation and Guidance, Planning Activity	ODOT
9	ALL-Line Item Project-	Bridge Inspection, Bridge Inspection	ODOT
10	ALL-Line Item Project-	Consultant, Environmental Assess	ODOT
14	FRA-Paving the Way-Program	Paving the Way Program from 2004 to 2005, Program Administration	COLUMBUS
22	ALL-Recreational Trails-	ODNR Trails, Pedestrian Recreational Trails	ODNR
25	FRA-COTA-MMTT	COTA MMTT west of High St at across from Convention Center N of	COTA
33	ALL-Line Item Project-	Railroad Highway Crossing, RR Grade Separation	ODOT
34	ALL-Line Item Project-	Rideshare Program, Ridesharing	ODOT
36	ALL-Line Item Project-	Transportation Enhancement, Enhancement Activity	ODOT
37	ALL-Line Item Project-	ODOT Operations Division, Resurfacing	ODOT
38	ALL-Line Item Project-	Operation and Maintenance, Maintenance Activity	ODOT
53	ALL-LINE ITEM PROJECT-	Public Safety Program 402, Safety Program	ODOT
78	ALL-LINE ITEM PROJECT-	Scenic Byway Program, Enhancement Activity	ODOT
86	FRA-LOCAL Human-Service	Local Human Service Agency, Purchase	HUMAN
89	FRA-COTA-	COTA Operating Revenue, Transit	COTA
94	FRA-COTA-Buses	COTA Buses, Transit Purchase	COTA
102	FRA-SGNL12-0.00	Columbus Signals Phase 12, Signalization	COLUMBUS
113	FRA-US0062-01.30	Town St at Scioto River, Bridge Replacement	COLUMBUS
117	FRA-US0062-22.708	US-62 (Main St) at Scioto River, Bridge Replacement	COLUMBUS
118	FRA-SSILS1-0.00	SSI Landscaping from I-670 Grandview Ave to E of Neil to SR-315 Broad	ODOT 6
122	FRA-IR0071-17.75	I-71 at East Long and Spring Sts, Bridge Rehabilitation	ODOT 6
127	FRA-IR0670-01.25 B-1	SSI I-670 B-1 from Neil Ave to to I-71, New Freeway	COLUMBUS
128	FRA-IR0670-2.610	I-670 B-3 from Chessie RR Track to Neil Ave, New Freeway	ODOT 6
151	FRA-SGNL11-0.00	Columbus Signals Phz 11, Signalization	COLUMBUS
154	FRA-IR0670-0.000	I-670 from I-70 to Grandview Ave, Resurfacing	ODOT 6
155	FRA-IR0670-A1-BKW	I-670 Bikeway A-1, Bikeway, Class I Path	ODOT 6
173	FRA-CR0003-24.505	Hilliard-Rome Road (Hilliard) from Roberts Rd to Cemetery Rd, Major	HILLIARD
176	FRA-CR0029-0.27	Scioto Darby Rd (CR-29) from Amity Rd to Alton Darby Creek Rd, Minor	FRANKLIN
177	FRA-Avery-Tuttle Blvd Ext	Avery Rd from Tuttle Blvd Ext to Shier-Rings, Major Widening	DUBLIN
180	FRA-SR0029-Leap	Scioto-Darby Rd (SR-29) from Main St to Leap, Minor Widening	HILLIARD
184	FRA-Roberts-Hilliard/Rome	Roberts Rd from Hilliard-Rome Rd to I-270, Major Widening	COLUMBUS
195	FAI-SR0256-Diley-Col St	SR-256 from Diley Rd to Columbus St, Minor Widening	PICKERINGTON
199	FRA-SR0745-Dublin Bikeway	Dublin Bikeway (SR-745) from SR-161 to Glick Rd, Bikeway, Class I Path	DUBLIN
207	FRA-Tuttle Crossing Blvd-Avery	Tuttle Crossing Blvd Ext from Avery Rd to Wilcox Rd, New Roadway	DUBLIN
220	FRA-Emerald PKWY-Bright	Emerald PKWY from SR-257 to Bright Rd, New Roadway	DUBLIN
238	FRA-CR0061-2.33	Hard Rd. Phase B from Smoky Row Rd. to Linworth Rd., Major Widening	COLUMBUS
240	FRA-SR0161-5.77	SR-161 - Phase B from McVey Blvd to Flora Villa Dr, Major Widening	COLUMBUS
241	FRA-OLENBK-0.00	Olentangy Bikeway from Wilson Bridge to Worthington Hills Park,	COLUMBUS
273	FRA-CR0061-1.10	Hard Rd Phase A from Sawmill to Smokey Row, Major Widening	COLUMBUS
274	FRA-CR0061-3.65	Hard Rd Phase C from Linworth Rd to Olentangy River Rd, Major Widening	COLUMBUS
275	FRA-SR0161-5.77	SR-161- Phase A from Sawmill Rd to McVey Blvd, Major Widening	COLUMBUS
276	FRA-SR0161-5.77	SR-161 - Phase C from Flora Villa Dr to Olentangy River Rd, Minor	COLUMBUS
277	FRA-SR0315-12.800	SR-315 at Clubview Blvd South, Turn Lanes	ODOT 6
280	DEL-SR0315-00.86	SR-315 at Bartholomew Run, Bridge Replacement	ODOT 6
303	FRA-Lane Avenue-High St	Lane Ave from Olentangy River to High St, Major Widening	COLUMBUS
304	FRA-315-03.48	OSU Ramps from SR-315 to Cannon Drive., New Interchange	ODOT 6
305	FRA-CR0059-3.18	Lane Ave (CR-59) at Olentangy River, Bridge Replacement	FRANKLIN
317	FRA-Worthington-Galena-	Worthington-Galena at Huntley, Intersection Upgrade	WORTHINGTON
329	FRA-US0023-Flint	High St (US-23) from Flint Rd to Lazelle Rd, Major Widening	COLUMBUS
377	DEL-County Line Road-	County Line Rd (Smothers Rd) from east of SR-3 to Cleveland Ave, New	WESTERVILLE

MORPC ID #	County-Route-Section	Project Name	Agency
408	FRA-Dempsey Road-Hempstead	Dempsey Rd from Hempstead Rd to Sunbury Rd, Minor Widening	WESTERVILLE
409	DEL-SR0003-3.420	SR-3 at TR-109 (Big Walnut Rd), Intersection Upgrade	ODOT 6
415	FRA-CR0177-B	Stelzer Rd (CR-177) from Fouraker Rd to north of I-670, Major Widening	FRANKLIN
420	FRA-SR0161-16.12	SR-161 at Sunbury Rd (CDMS 10), Major Widening	ODOT 6
421	FRA-IR0270-40.260	I-270 at SR-161(CDMS #11), Interchange Upgrade	ODOT 6
425	FRA-US0062X-19.39	US-62 at Alum Creek, Bridge Rehabilitation	ODOT 6
433	FRA-International-Gateway	Stelzer Rd at I-670, New Interchange	COLUMBUS
481	FRA-Livingston Ave-College	Livingston Ave from Nelson Rd to College Ave, Major Widening	COLUMBUS
528	FRA-CR0222-Chantry Dr	Gender Rd (CR-222) from US-33 to Chantry Dr, Major Widening	FRANKLIN
543	FAI-Diley Road-SR-256	Diley Rd from SR-256 to US-33, Major Widening	PICKERINGTON
555	FAI-US0033-01.20	US-33 at Hill (CR-18) Diley (TR-207) Rd, New Interchange	ODOT 5
572	FRA-IR0270/IR0070-00.00 Phz 2	I-270/I-70 FMS Phase 2, Freeway Surveillance	COLUMBUS
573	FRA-CR0122-Frebis	Alum Creek Dr from Frebis to Refugee, Major Widening	COLUMBUS
578	FRA-CR0122-Refugee	Alum Creek from Williams to Refugee, Major Widening	COLUMBUS
579	FRA-CR0122-2.97	Alum Creek from I-270 to Williams, Major Widening	OBETZ
604	FRA-IR0071-0.00	I-71 from Pickaway Co Line to SR-665, Reconstruction	ODOT 6
607	FRA-CR0262-03.700	Hoover Rd (CR-262) from Orders Rd to Milligan Grove Rd, Minor Widening	GROVE CITY
609	FRA-SR0665-10.09	SR-655 at Linebauch Ditch, Bridge Replacement	ODOT 6
615	FRA-Hoover/Orders Rd-I-71	Hoover/Orders Rds at I-71, New Interchange (Study)	GROVE CITY
617	FRA-Emergency Signal-System	13 Emergency Signals, Signalization	GROVE CITY
618	FRA-SR0104-01.24	SR-104/665, Intersection Upgrade	ODOT 6
619	FRA-US0062-12.985	US-62 from Broadway to I-70, Resurfacing	ODOT 6
627	FRA-US0062-01.31	US-62 at RR, Reconstruction Pavement Lower	ODOT 6
632	DEL-US0023-12.99	US-23 at Pennsylvania Ave, New Interchange	DELAWARE
636	DEL-US0036-09.780	US-36 at Delaware Run, Bridge Replacement	ODOT 6
646	DEL-IR0071-13.07/0.00	I-71 in DEL/MRW Cos, Bridge Replacement	ODOT 6
686	FRA-CR0026-Sullivant Ave	Georgesville CR-26 from Sullivant Ave to N of Broad St, Minor Widening	FRANKLIN
688	FRA-Demorest-Briggs	Demorest Rd from Briggs Rd to Sullivant Ave, Minor Widening	COLUMBUS/FRA
689	FRA-CR0143-Georgesville Rd	Sullivant Ave (CR-143) from Georgesville Rd to west of Wilson Rd, Minor	FRANKLIN
691	FRA-CR0125-3.612	Clime Rd (CR-125) from Georgesville to Harrisburg Pike (SR-3/US-62),	FRANKLIN
693	FRA-CR0003-9.82	Norton Rd (CR-3) from W Broad St to Hall Rd, Major Widening	COLUMBUS
697	FRA-CR0003-Kropp	Norton Rd (CR-3) from Kropp Rd to Bausch Rd, Minor Widening	FRANKLIN
701	FRA-CR0003-14.06	Hilliard-Rome Rd (Columbus) from I-70 to Roberts Rd, Major Widening	COLUMBUS
711	FRA-Cosgray-Scioto Darby	Cosgray Rd from Scioto Darby Rd to Hayden Run Rd, Major Widening	HILLIARD
717	DEL-071-07.81	Polaris Interchange at I-71, Interchange Upgrade	ODOT
724	FRA-Scioto Darby-Cosgray/Main	Scioto Darby Rd from Cosgray Rd to Main St, Major Widening	HILLIARD
725	FRA-Stringtown Rd-I-71 - SR-	Stringtown Rd from I-71 to SR-104, Minor Widening	GROVE CITY
726	FRA-Alton Darby Creek Rd-	Alton Darby Creek Rd from Cosgray to Scioto Darby Rd, New Roadway	HILLIARD
729	FRA-COTA-ITS	COTA ITS includes real time, signal priority & Park & Ride, Congestion	COTA
732	DEL-SR0750-0.00	SR-750 from SR-257/Glick Rd NE to intersect existing SR-750,	ODOT 6
734	DEL-US-036-18.98	US-36 at CR-34 (Galena Rd), Signalized Intersect	ODOT 6
735	FRA-IR0270-69.911	I-270 from I-70 (east) to Obetz Corp Line, Reconstruction	ODOT 6
736	FRA-IR0270-48.470	IR-270 from Obetz Corp Line to Parsons Ave, Resurfacing	ODOT 6
738	DEL-US0036-16.76	US-36 at Alum Creek, Study	ODOT 6
752	DEL-Murphy Parkway	Murphy Parkway connection south from South Liberty Street to Murphy	POWELL
757	DEL-DATA-Operating	Delaware Area Transpo Assoc., Transit	DATA
758	DEL-DATA-Capital	Delaware Area Transpo Assoc., Transit Purchase	DATA
772	FRA-SR0317-5.20	SR-317 at Rohr Rd, Turn Lanes	ODOT 6
774	FRA-SR0317-12.23	SR-317 (Hamilton Rd) at over Conrail RR, Bridge Deck Replace	ODOT 6
775	DEL-Home Rd-Scioto River	Home Rd at Scioto River, Bridge Replacement	DELAWARE
776	DEL-Lewis Center Rd-over	Lewis Center Rd at over Alum Creek, Bridge Rehabilitation	DELAWARE
777	DEL-Mills Rd-over Mills Creek	Mills Rd at over Mills Creek, Bridge Replacement	DELAWARE
781	DEL-West Orange Rd-	West Orange Rd at Olentangy River, Bridge Replacement	DELAWARE
782	FRA-Upper Arlington-Signals	Upper Arlington Signals (38), Signalization	UPPER

MORPC ID #	County-Route-Section	Project Name	Agency
787	FAI-CR0041-0.19	CR-41(Rock Mill Rd) at .19 mi from CR-39, Bridge Replacement	ODOT 5
792	FRA-SR0665-I-71	SR-665 at I-71, Study Interchange	GROVE CITY
793	FRA-SR0665-US-62	SR-665 from US-62 to I-71, Study	GROVE CITY
794	DEL-SR0003-1.29	SR-003 Corridor preservation from 1.29 m north of Fra Co line to .59 m	ODOT 6
795	FRA-IR0070-3.31	I-70 from .7 miles east of Jones Rd. to .3 miles west of Wilson Road,	ODOT 6
797	FRA-Sunbury Path-Chatham	Sunbury Leisure Path from Chatham Ridge Rd to County Line Rd,	WESTERVILLE
806	DEL-Wesley-0.00	Delaware Wesleyan Bikepath/Pathway from Olentangy Ave to William St,	DELAWARE
808	DEL-Winter-0.00	East Winter Street from Union St to Lake St, Streetscape	DELAWARE
809	FRA-AlumCO-0.00	Alum Creek Bike Trail from IR-270 to SR-161, Bikeway, Class I Path	COLUMBUS
810	FRA-Hard Rd-Sidewalks	Hard Rd from Linworth Rd to Smoky Row Rd, Streetscape	COLUMBUS
813	FRA-Morse T-0.00	Morse Rd from Appian Way to Hamilton Rd, Landscaping	GAHANNA
815	FRA-Evans-0.00	Big Splash at Evans Park, Bikeway, Class I Path	GROVE CITY
816	FRA-AlumWE-0.00	Alum Creek Bikeway from Shrock Rd to south of Westerville corp line,	WESTERVILLE
817	DEL-SR0750-0.00	SR-750 (East Olentangy St) from Olentangy Ridge Place to Beech Ridge	POWELL
818	DEL-SR0229-0.00	SR-229 (High St) from Westfield Rd to Ashley Rd, Streetscape	ASHLEY
819	FRA-GROVPT-0.00	Ohio and Erie Canal ROW from Blacklick Park in Groveport to Rager Rd,	GROVEPORT
820	FRA-US-062-0.00	US-62/SR-605 at Leisure Paths, Bikeway, Class I Path	NEW ALBANY
821	FRA-256-STS-0.00	SR-256 from Livingston Ave to I-70, Landscaping	REYNOLDSBUR
822	FRA-040-18.63	US-40 (Main St) from west of Maplewood Ave to Hamilton Rd, Streetscape	WHITEHALL
824	FRA-270-0.60	I-270 from .6 miles west of I-71 (south side) to .47 mile west of US-62,	ODOT 6
878	FRA-US0062-0.60	US-62 Evaluation from north of Church St to Zuber Rd in Pleasant Twp,	ODOT 6
881	FRA-US0040-Hamilton Road	US-40/Main Street from Hamilton Road to Big Walnut Creek,	WHITEHALL
882	FRA-West Bikeway Connector-	West Bikeway Connector from Granville Street to Mill Street,	GAHANNA
883	FRA-East Main Street-west	East Main Street at west Bexley Corp Limits, Enhancement Activity	BEXLEY
884	FRA-Canal Winchester Bikepath-	Canal Winchester Bikepath from Gender Road to Rager Road, Bikeway,	CANAL
885	DEL-Olentangy-Belle Ave	Olentangy-Belle Ave Bikeway from Olentangy/Henry Ave to Belle	DELAWARE
886	DEL-Smith Park Bikeway-	Smith Park Bikeway from Parallel to CSX RR to Smith Park, Enhancement	DELAWARE
887	FRA-SR0104-The Creek Park	Alum Creek Trail from The Creek Park to Alum Creek, Enhancement	COLUMBUS
888	FRA-Huber Park Bikeway	Huber Park Bikeway Connector from Livingston Ave to Reynoldsburg High	REYNOLDSBUR
889	FRA-COTA Bus Route	COTA Bus Route Sidewalks, Enhancement Activity	COLUMBUS
890	FRA-Canal Winchester Bikepath-	Canal Winchester Bikepath from West Street to Gender Road, Bikeway,	CANAL
891	FRA-Downtown Bikeway	Downtown Bikeway Connector from Olentangy and Lower Scioto MUT to	COLUMBUS
892	FRA-SR0161-14.48	SR-161 at SR-3 and RR, Bridge Deck Replace	ODOT 6
893	FRA-SR0104-8.18	SR-104 at Scioto River, Bridge Rehabilitation	ODOT 6
894	FRA-SR0317-9.26/15.96	SR-317(Hamilton Rd) in Columbus and Gahanna, Resurfacing	ODOT 6
895	FRA-IR0270-2.60	I-270 from US-62 to Trabue Rd, Reconstruction	ODOT 6
900	FRA-CORTRAN-	CORTRAN, Operations Facility	ODOT
904	FRA-US0033-4.67	US-33 from Riverside Green Rd to Nottingham Rd, Study	ODOT 6
905	FRA-US0023-8.32	US-23 at Conrail, Bridge Rehabilitation	ODOT 6
906	FRA-EXPO-0.00	Ohio Expo Center, Maintenance Activity	ODOT 6
907	DEL-US0023-0.10	US-23 Various, Maintenance Activity	ODOT 6
908	DEL-SR0003-1.34/3.48	SR-3 from .14 m south of CR 24 (Old 3 C HWY) to US-36/37, Resurfacing	ODOT 6
909	DEL-US0023-0.20	US-23 Various, Maintenance Activity	ODOT 6
910	DEL-US0023-0.30	US-23 Various, Maintenance Activity	ODOT 6
911	FRA-EXPO-0.00	Ohio Expo Center, Maintenance Activity	ODOT 6
912	DEL-IR0071-6.43	IR-71 Various, Signalization	ODOT 6
913	DEL-US0023-0.10	US-23 Various, Maintenance Activity	ODOT 6
914	DEL-US0023-0.20	US-23 Various, Maintenance Activity	ODOT 6
915	DEL-US0023-0.30	US-23 Various, Maintenance Activity	ODOT 6
916	FRA-US0023-2.82	US-23 at Goodale and Conrail, Bridge Rehabilitation	ODOT 6
917	DEL-GRAIL-0.00	Type A Guardrail Various, Guardrail Retrofits	ODOT 6
918	FRA-IR0070/71-5.54/16.83	I-70/I-71 Various, Signage	ODOT 6
919	DEL-US0042-6.23/6.42	US-42 at C&O RR (1.06m S of US-23), Bridge Rehabilitation	ODOT 6
920	FRA-IR0670/VAR-4.60/VAR	I-670 from SR-3 to forward approach of I-670, Resurfacing	ODOT 6

MORPC ID #	County-Route-Section	Project Name	Agency
921	DEL-SR0257-8.75	SR-257 at Mill Creek (.38 m N of US-42/SR-745), Bridge Deck Replace	ODOT 6
922	FRA-IR0670-3.80	I-670 B1 Cap at High St, Bridge Rehabilitation	ODOT 6
923	FRA-IR0270-4.97	I-270 at Georgesville Rd, Bridge Deck Replace	ODOT 6
924	FRA-IR0071-0.40	I-71Under at CR-288 (Harrisburg-London), Bridge Rehabilitation	ODOT 6
925	FRA-IR0270-43.45	I-270 Various, Maintenance Activity	ODOT 6
927	FRA-Columbus FMS-	Columbus FMS Effectiveness Part 2, Study	MORPC
928	FRA-COMBAT-	COMBAT, AVL Technology	COLUMBUS
929	FRA-SR0016-8.70	E Broad St from Taylor Station Rd to Taylor Rd in Licking Co, Major	COLUMBUS
931	FRA-Col Signal-Phase 13	Columbus Signal System Phase 13, Signalization	COLUMBUS
932	FRA-Col Signal-Phase 14	Columbus Signal System Phase 14, Signalization	COLUMBUS
933	FRA-Fiber Optic-Conversion	Signal System Fiber Optic Conversion, Signalization	COLUMBUS
934	FRA-Norton-Hall - Alkire	Norton Rd from Hall Rd to Alkire Rd, Major Widening	COLUMBUS
935	FRA-Galloway Rd Ext-West	Galloway Rd Extension from West Broad St to Feder Rd, New Roadway	COLUMBUS
936	FRA-Roberts-Hilliard Rome Rd	Roberts Rd from Hilliard Rome Rd to Columbus west corp line, Major	COLUMBUS
937	FRA-Roberts-Wilson Rd	Roberts Rd from Wilson Rd to Dublin, Major Widening	COLUMBUS
938	FRA-CR0011-10.78	Alkire Rd (CR-11) under CSX west of Harrisburg Pike, Minor Widening	FRANKLIN
939	LIC-CR0002-0.00	CR-2 Various,	ODOT 5
941	FAI-CR0017-0.00	CR-17 Various, Guardrail Retrofits	ODOT 5
942	FAI-CR0022-0.00	CR-22 from Pickerington NCL to SR-204, Resurfacing	ODOT 5
944	FAI-Rock Mill Rd-0.1 mile south	Rock Mill Rd at 0.1 mile south of Lithopolis Rd, Bridge Rehabilitation	ODOT 5
945	FAI-CR0001-	CR-1 Various, Guardrail Retrofits	ODOT 5
946	FAI-CR0002-	CR-2 Various, Maintenance Activity	ODOT 5
948	FAI-CR0020-04.74	CR-20 from section 4.74 to section 7.34, Resurfacing	ODOT 5
949	FAI-IR0070-0.00	I-70 Various, Maintenance Activity	ODOT 5
950	FAI-IR0070-0.00	I-70 Various, Guardrail Retrofits	ODOT 5
951	LIC-CR0310-04.960	SR-310 from Main St in Pataskala to Pataskala Corporation limit,	ODOT 5
952	FAI-CR-001-0.00	CR-1 Various, Guardrail Retrofits	ODOT 5
953	FAI-IR-070-0.00	I-70 at Various routes, Maintenance Activity	ODOT 5
954	FAI-CR0001-	CR-1 Various, Guardrail Retrofits	ODOT 5
955	FAI-IR0070-0.00	I-70 Various, Guardrail Retrofits	ODOT 5
956	FAI-IR0070-01.19	I-70 at 1.19 mile east of FAI/FRA Co. line, Bridge Painting	ODOT 5
957	FRA-CR0011-Gardner Rd	Alkire Rd (CR-11) from Gardner Rd to Kunz Rd, Reconstruction	FRANKLIN
958	FRA-COTA Bus Bike Racks-	COTA Bus Bike Racks, Transit Purchase	COTA
960	COS-US0036-5.75	US-36 District Wide, Maintenance Activity	ODOT 5
961	COS-SR-83-12.88	SR-83 at District wide, Maintenance Activity	ODOT 5
962	COS-SR-083-12.67	SR-83 at District wide, Maintenance Activity	ODOT 5
963	COS-US-036-5.75	US-36 at District wide, Maintenance Activity	ODOT 5
964	COS-SR-83-12.88	SR-83 at District wide, Maintenance Activity	ODOT 5
965	COS-SR0083-12.67	SR-83 at District wide, Maintenance Activity	ODOT 5
966	COS-US0036-5.75	US-36 at District wide, Maintenance Activity	ODOT 5
967	COS-SR0083-12.88	SR-83 at District wide, Maintenance Activity	ODOT 5
968	COS-SR-083-12.67	SR-83 at District wide, Maintenance Activity	ODOT 5
969	DEL-US0036-18.390	US-36 Partial/Full depth pavement from 18.390 to Knox Co Line,	ODOT 6
970	DEL-SR0037-SR-36	Houk Road (SR 37 Truck Route Connector) middle phase from SR-36 to	DELAWARE
971	FRA-Travel Model Improve-	Travel Model Improvement II, Study	MORPC
972	FRA-CORTRAN Coordinated-	CORTRAN Coordinated Traveler Info, Planning Activity	MORPC
976	DEL-Houk Road South	Houk Road South Extension, New Roadway	DELAWARE
978	DEL-US0023/42-Connector	New Connector from US-23 Pennsylvania Ave Interchange to US-42, New	DELAWARE
979	FRA-CR0026-Broad Street (US-	Georgesville Road/Philippi Road (CR-26) at Broad Street (US-40)	FRANKLIN
980	FRA-CR0105-Main Street	CR-105 (Rosehill Road) from Main Street to Rosedale Ave, Reconstruction	FRANKLIN
981	FRA-CR0045-Wilcox Road	Tuttle Crossing Boulevard (CR-45) from Wilcox Road to I-270, Major	FRANKLIN
982	FRA-CR0103-Clark State Road	Hamilton Road (CR-103) from Clark State Road to Morse Road,	FRANKLIN
983	FRA-CR0123-Groveport Road	Williams Road (CR-123) from Groveport Road to Alum Creek Drive,	FRANKLIN
984	FRA-CR0014-(Chatterton Rd)	Chatterton Road (CR-14) from Noe Bixby Road to Reynard Drive, Minor	FRANKLIN

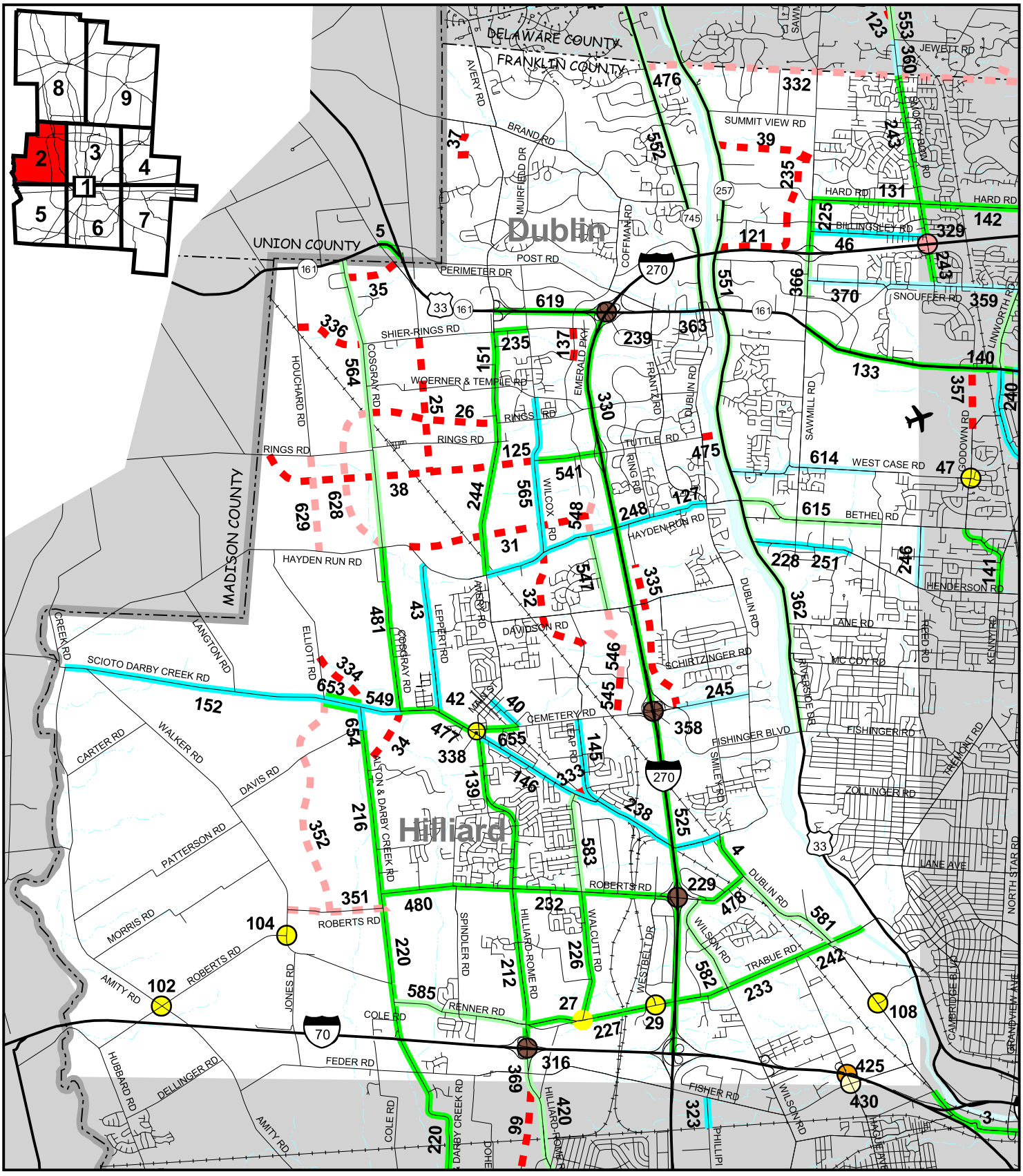
MORPC ID #	County-Route-Section	Project Name	Agency
985	FRA-CR0029-Alton Darby	Scioto Darby Creek Road (CR-29) from Alton Darby Creek Road to	FRANKLIN
986	FRA-CR0027-Dublin	Trabue Road (CR-27) at Dublin Road/McKinley Ave, Intersection Upgrade	FRANKLIN
987	FRA-Buckeye Parkway-0.00	Buckeye Parkway from Stringtown Road to SR-665, New Roadway	GROVE CITY
988	FRA-Haughn Road-Mayfair Road	Haughn Road from Mayfair Road to Orders Road, Minor Widening	GROVE CITY
989	FRA-Grove City Road-Broadway	Grove City Road from Broadway to Demorest, Reconstruction	GROVE CITY
990	FRA-Big Run Road-Holt Road	Big Run Road at Holt Road, Intersection Upgrade	GROVE CITY
991	FRA-US-040-west corp. limit	Main Street (Reynoldsburg) from west corp. limit to east corp. limit,	REYNOLDSBUR
993	DEL-SR0750-west of RR tracks	SR-750 from west of RR tracks to corp. line, Bikeway, Class I Path	POWELL
994	DEL-North Extension-Liberty	North Extension at Liberty Park at Home Road, Bikeway, Class I Pat	POWELL
995	FRA-County Line Rd (Smothers	County Line Rd (Smothers Rd) from Cleveland Avenue to Olde	WESTERVILLE
996	FRA-IR0270-Tech Center Drive	I-270/Morrison Road from Tech Center Drive to Tech Center Drive	GAHANNA
997	FRA-Morrison Road-Waterbury	Morrison Road from Waterbury Ct to Tech Center Drive, Minor Widening	GAHANNA
998	LIC-CR0042-1.74	CR 42-1.74 (Watkins Rd) from US-40 to Refugee Rd, Minor Widening	LICKING
999	FRA-Hamilton Road-proposed	Hamilton Road at proposed Tech Center/I-270 Bridge, New Roadway	GAHANNA
1000	DEL-GR2002-0.00	Various counties and routes, Guardrail Retrofits	ODOT 6
1001	FAI-CR0006-10.16	Lithopolis Winchester Rd (CR-6) from north Lithopolis Winchester Rd Corp	ODOT 5
1002	FRA-US0062-Dublin-Granville	US-62 at Dublin-Granville Road, Intersection Upgrade	NEW ALBANY
1003	FAI-CR039-1.40	Lithopolis Rd from south Lithopolis Corp Line to west of Rock Mill Rd,	ODOT 5
1004	DEL-CR0124 (Home Rd)-CSX	Home Road Grade Separation at CSX RR west of Liberty Rd, Grade	DELAWARE
1005	FRA-Dublin Rd Bikepath-Hilliard	Dublin Rd Bikepath from Hilliard Cemetery Rd to Shire Mill Rd, Bikeway,	HILLIARD
1006	FRA-Leap Rd-Scioto Darby Rd	Leap Rd from Scioto Darby Rd to Midlane Dr, Minor Widening	HILLIARD
1007	FRA-Triangle Improvement-	Triangle Improvement at Scioto Darby, Cemetery & Main St, Intersection	HILLIARD
1008	FRA-Britton Parkway-Cemetery	Britton Parkway from Cemetery Rd to Columbus Corp Line, New Roadway	HILLIARD
1009	FRA-SOMA-Cemetery Rd	SOMA from Cemetery Rd to Davidson Rd, New Roadway	HILLIARD
1010	FRA-Cemetery Rd-I-270	Cemetery Rd at I-270, Interchange Upgrade	HILLIARD
1011	FRA-EXPO-0.00	Ohio Expo Center, Maintenance Activity	ODOT 6
1012	FRA-US0033-25.96 Study	US-33 from Hamilton Rd (SR-317) to Carroll Southern Road Study, Study	ODOT 5
1013	FRA-SR0605-1.658	SR-605 from New Albany Rd to Central Collage, Minor Widening	ODOT 6
1014	FRA-SR0003-24.290	SR-3 Evaluate Roadway to improve safety from .02 mil south of Minerva	ODOT 6
1015	DEL-IR0071-01.420	Mowing in Delaware, Franklin & Morrow Counties, Maintenance Activity	ODOT 6
1016	FRA-IR0270-0.00	I-270 Various, Maintenance Activity	ODOT 6
1017	DEL-US0042-01.550	US-42 at SR-745/SR-257, Study	ODOT 6
1018	DEL-US0023-0.20	US-23 Various, Maintenance Activity	ODOT 6
1019	DEL-US-023-0.10	US-23 Various, Maintenance Activity	ODOT 6
1020	DEL-US0023-0.30	US-23 Various, Maintenance Activity	ODOT 6
1021	DEL-US0023-0.40	US-23 Various, Maintenance Activity	ODOT 6
1022	DEL-US0023-0.50	US-23 Various, Maintenance Activity	ODOT 6
1023	FRA-SR0003-22.90	SR-3 from Morse Rd to Corporate Dr, Resurfacing	ODOT 6
1024	DEL-FY2003 2 LANE-	Dummy PID for Urban 2 lane resurfacing, Resurfacing	ODOT 6
1025	DEL-VARIOUS-0.00	Delaware Various 04 Pavement, Maintenance Activity	ODOT 6
1026	DEL-VARIOUS-0.00	Various Pavement Work, Maintenance Activity	ODOT 6
1029	FAI-CR0036-0.98	CR 36 Carroll-Northern at Walnut Creek, Bridge Replacement	ODOT-5
1030	FRA-US0062-26.84	US-62 at Morse Rd, Intersection Upgrade	GAHANNA
1031	FRA-Hamilton Rd-Relocation	Hamilton Rd relocation from Hamilton Rd north to Central Collage Rd,	COLUMBUS
1032	FRA-West Campus-Rd	West Campus Road from New Albany Rd to Central Collage Rd, New	COLUMBUS
1033	FRA-IR0270-9.49	I-270 from Trabue Rd to US-33, Resurfacing	ODOT 6
1034	DEL-Blues Creek West-	Blues Creek Preserve West Trail Construction Phase III, Pedestrian	PRESERVATION
1035	FRA-FMS Completion-I-71, I-	FMS Completion (Phase 3) at I-71, I-270, I-670, SR-104, SR-315 and US-	COLUMBUS

Appendix E

MORPC 2025 Transportation Plan Maps and Project Lists for the Upper Arlington Area

2025 TRANSPORTATION PLAN CANDIDATE PROJECTS MAP

AREA 2

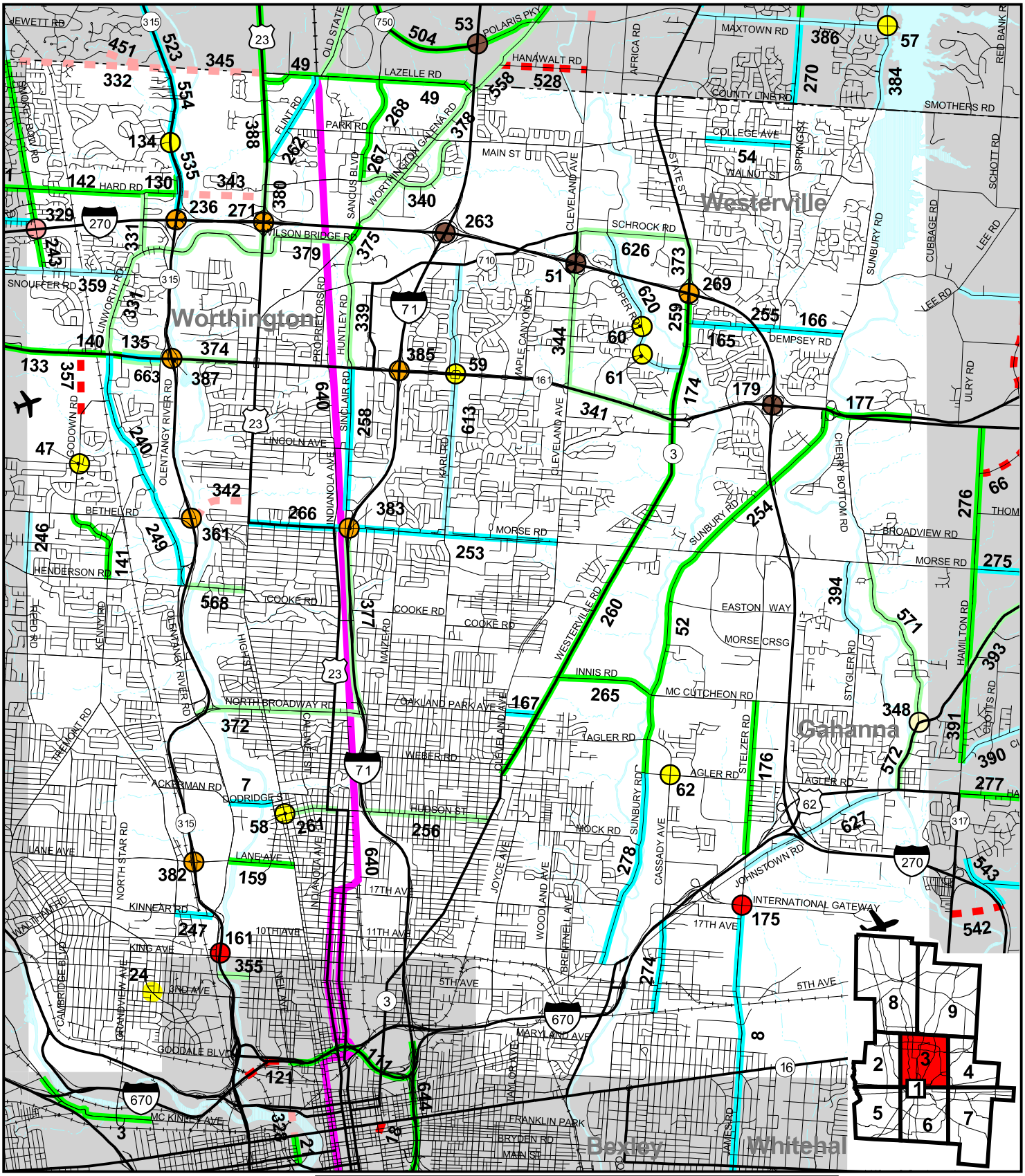


MORPC

The information shown on this map is compiled from various sources available to us which we believe to be reliable.
n:\arcview\tplan\tplan2001areas combo.apr June 18, 2001

2025 TRANSPORTATION PLAN CANDIDATE PROJECTS MAP

AREA 3



MORPC

The information shown on this map is compiled from various sources available to us which we believe to be reliable.
n:\arcview\tplan\tplan2001areas combo.apr June 18, 2001

Area Name: NW Area (Area 2)

ID	Project Limits, Improvement Description	Total Costs (M)	Plan Status
4	Dublin Rd. from Roberts Rd. to Scioto & Darby Creek Rd., Major Widening-Arterial-Add 1 through lane each direction	$1.5	Included
5	SR 161 from Eiterman Rd. to US 33, Major Widening-Arterial-Add 1 through lane each direction	$0.9	Included
25	Eiterman Rd. ext. from Tuttle Rd. ext. to Shier-Rings Rd., New Roadway-2 lanes each direction	$5.8	Included
26	Cosgray Rd.-Avery Rd. connector from Cosgray Rd. n. of Conrail tracks to Avery Rd. at Rings Rd., New Roadway-1 lane each direction	$3.3	Included
27	Trabue Rd. at Walcutt Rd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
29	Trabue Rd. at Westbelt Dr., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
31	North Hilliard connector from E. of Cosgray Rd. to Britton Pkwy., New Roadway-2 lanes each direction	$10.6	Included
32	Wilcox Rd. extension from Leap Rd. s. of Davidson Rd. to Hayden Run Rd. at Wilcox Rd., New Roadway-1 lane each direction	$3.2	Included
34	Alton & Darby Creek Rd.-Cosgray Rd. connector from Alton & Darby Creek Rd. s. of Davis Rd. to Scioto & Darby Creek Rd. at Cosgray Rd., New Roadway-2 lane	$1.2	Included
35	Cosgray Rd.-Industrial Pkwy. connector, New Roadway-2 lanes each direction	$2.4	Included
37	Tullymore Dr. ext. from Tullymore Dr. to Brand Rd., New Roadway-1 lane each direction	$1.5	Included
38	Tuttle Rd. (west) ext. from Rings Rd. near Madison Co. line to Avery Rd., New Roadway-2 lanes each direction	$4.9	Included
39	Wyandott Woods Blvd. from Riverside Dr. (SR 257) to Emerald Pkwy., New Roadway-1 lane each direction	$2.6	Included
40	Norwich Rd. from Main St. (Hilliard) to Cemetery Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.8	Included
43	Leppert Rd. from Scioto Darby Rd. to Hayden Run Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.6	Included
46	Billingsley Rd. from Sawmill Rd. to Smoky Row Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.1	Included
99	Galloway Rd.-Hilliard Rome Rd. connector from Broad St. to Feder Rd., New Roadway-2 lanes each direction	$12.5	Included
102	Roberts Rd. at Amity Rd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
104	Roberts Rd. at Walker Rd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
108	McKinley Ave. at Fifth Ave., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
121	Emerald Pkwy. from SR 257 to Bright Rd., New Roadway-2 lanes each direction	$6.0	Included
125	Tuttle Rd. (west) ext. from Avery Rd. to Wilcox Rd., New Roadway-2 lanes each direction	$5.0	Included
127	Hayden Run Rd. from Shannon Heights Blvd. to Dublin Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.0	Included
131	Hard Rd. from Sawmill Rd. to Smoky Row Rd., Major Widening-Arterial-Add 1 through lane each direction	$6.5	Included
133	SR 161 from Sawmill Rd. to McVey Blvd., Major Widening-Arterial-Add 1 through lane each direction	$14.8	Included
137	Emerald Pkwy. from Shier-Rings Rd. to Innovation Dr., New Roadway-2 lanes each direction	$1.7	Included

Area Name: NW Area (Area 2)

ID	Project Limits, Improvement Description	Total Costs (M)	Plan Status
139	Hilliard-Rome Rd. from Roberts Rd. to Cemetery Rd., Major Widening-Arterial-Add 1 through lane each direction	$18.6	Included
145	Leap Rd. from Scioto Darby Rd. to Cemetery Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$3.6	Included
146	Scioto Darby Rd. from Main St. to Leap Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$3.5	Included
151	Avery Rd. from Tuttle Blvd. ext. to Shier-Rings Rd., Major Widening-Arterial-Add 1 through lane each direction	$6.5	Included
152	Scioto & Darby Creek Rd. from Amity Rd. to Alton & Darby Creek Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$3.2	Included
212	Hilliard-Rome Rd. from I-70 to Roberts Rd., Major Widening-Arterial-Add 1 through lane each direction	$9.6	Included
216	Alton & Darby Creek Rd. from Roberts Rd. to Cosgray Rd. connector (s. of Davis Rd.), Major Widening-Arterial-Add 1 through lane each direction	$12.0	Included
220	Alton & Darby Creek Rd. from US 40 to Roberts Rd., Major Widening-Arterial-Add 1 through lane each direction	$7.3	Included
225	Sawmill Rd. from I270 to Hard Rd, Major Widening-Arterial-Add 1 through lane each direction	$1.8	Included
226	Walcutt Rd. from Trabue Rd. to Roberts Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.7	Included
227	Trabue Rd./Renner Rd. from Hilliard-Rome Rd. to Conrail overpass, Major Widening-Arterial-Add 1 through lane each direction	$8.9	Included
228	Henderson Rd. from US 33 to Sawmill Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.9	Included
229	I-270 at Roberts Rd., Interchange Upgrade-Complex, with directional ramps	$15.9	Included
232	Roberts Rd. from Hilliard-Rome Rd. to I-270, Major Widening-Arterial-Add 1 through lane each direction	$11.5	Included
233	Trabue Rd. from Conrail overpass to Hague Ave., Major Widening-Arterial-Add 1 through lane each direction	$8.3	Included
234	Shier-Rings Rd. from Avery Rd. to Wilcox Rd., Major Widening-Arterial-Add 1 through lane each direction	$1.0	Included
235	Emerald Pkwy. from Bright Rd. to Sawmill Rd., New Roadway-2 lanes each direction	$3.6	Included
238	Scioto & Darby Creek Rd. from Leap Rd. to Dublin Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.6	Included
239	I-270 at US 33/SR 161, Interchange Upgrade-Complex, with directional ramps	$16.4	Included
242	Trabue Rd. from Hague Ave. to Scioto River, Major Widening-Arterial-Add 1 through lane each direction	$2.5	Included
243	Smoky Row Rd. from Snouffer Rd. to Delaware Co. line, Major Widening-Arterial-Add 1 through lane each direction	$11.2	Included
244	Avery Rd. from Hayden Run Rd. to Tuttle Rd. ext., Major Widening-Arterial-Add 1 through lane each direction	$3.0	Included
245	Hilliard-Cemetery Rd. from Fishinger Rd. to Dublin Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.9	Not Included
246	Reed Rd. from Henderson Rd. to Bethel Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.9	Not Included
248	Hayden Run Rd. from Avery Rd. to Shannon Heights Blvd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.5	Included
250	Upper Arlington signal coordination, FMS/Signals/Other-Non transit or lane addition/widening projects	$0.5	Included

Area Name: NW Area (Area 2)

ID	Project Limits, Improvement Description	Total Costs (M)	Plan Status
251	Henderson Rd. from Sawmill Rd. to Chevy Chase Ct., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.1	Included
316	I-70 at Hilliard-Rome Rd., Interchange Upgrade-Complex, with directional ramps	$15.9	Included
330	I-270 from Cemetery Rd. to US 33/SR 161, Major Widening-Freeway-6 lane to 8 lane	$30.7	Included
332	SR 257-SR 315 connector at (on Delaware/Franklin county line), New Roadway-2 lanes each direction	$25.3	Not Included
333	Walcutt Rd./Leap Rd. connector from Walcutt Rd. at Scioto Darby Rd. to Leap Rd. north of railroad tracks, New Roadway-1 lane each direction	$2.1	Included
334	Elliott Rd. ext. from Elliott Rd. to Alton & Darby Creek Rd., New Roadway-1 lane each direction	$1.9	Included
335	Trueman Blvd. from Fishinger Blvd./Cemetery Rd. to n. of Davidson Rd., New Roadway-2 lanes each direction	$12.4	Included
336	Shier-Rings Rd. ext. from Houchard Rd. to Cosgray Rd., New Roadway-2 lanes each direction	$3.1	Included
351	Roberts Rd. from Walker Rd. to Alton & Darby Creek Rd., New Roadway-1 lane each direction	$2.3	Not Included
352	Elliott Rd. extension from Roberts Rd. to Scioto & Darby Creek Rd. at Elliott Rd., New Roadway-2 lanes each direction	$13.1	Not Included
358	I-270 at Cemetery Rd., Interchange Upgrade-Complex, with directional ramps	$15.9	Included
359	Snouffer Rd. from Bent Tree Blvd. to Linworth Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.5	Not Included
360	Liberty St. from Franklin Co. line to Jewett Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.4	Not Included
362	US 33 from Fishinger Rd. to SR 161, Major Widening-Arterial-Add 1 through lane each direction	$16.5	Not Included
363	US 33/SR 161 from Monterey Dr. to SR 745, Minor Widening/Safety-Add turn lanes to 4 or 6 lane facility	$0.9	Not Included
366	Sawmill Rd. from Federated Blvd. to I-270, Major Widening-Arterial-Add 1 through lane each direction	$5.8	Not Included
369	Hilliard-Rome Rd. from Feder Rd. to I-70, Major Widening-Arterial-Add 1 through lane each direction	$0.8	Not Included
370	Snouffer Rd. from Sawmill Rd. to Bent Tree Blvd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.4	Not Included
420	Hilliard-Rome Rd. from US 40 to Fisher Rd./Feder Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.8	Not Included
425	I-70 at Hague Ave., Interchange Upgrade-Expand a Diamond	$5.1	Not Included
430	Fisher Rd. at Hague Ave., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Not Included
475	Tuttle Rd. (east) ext. from Dublin Rd. to Riverside Dr., New Roadway-2 lanes each direction	$11.7	Included
476	Memorial Dr. extension from SR 745 to SR 257, New Roadway-2 lanes each direction	$5.8	Not Included
477	Scioto Darby Rd. from Cosgray Rd. to Main St., Major Widening-Arterial-Add 1 through lane each direction	$6.6	Included
478	Roberts Rd. from Wilson Rd. to Dublin Rd., Major Widening-Arterial-Add 1 through lane each direction	$7.2	Included
480	Roberts Rd. from Alton Darby Creek Rd. to Hilliard Rome Rd., Major Widening-Arterial-Add 1 through lane each direction	$6.0	Included

Area Name: NW Area (Area 2)

ID	Project Limits, Improvement Description	Total Costs (M)	Plan Status
481	Cosgray Rd. from Scioto Darby Rd. to Hayden Run Rd., Major Widening-Arterial-Add 1 through lane each direction	$9.2	Included
525	I-270 from I-70W to Cemetery Rd., Major Widening-Freeway-6 lane to 8 lane	$27.3	Included
541	Tuttle Crossing Blvd. from Wilcox Rd. to I-270, Major Widening-Arterial-Add 1 through lane each direction	$2.5	Included
545	Britton Pkwy. from Cemetery Rd. to Reynolds Dr., New Roadway-2 lanes each direction	$4.1	Included
546	Britton Pkwy. from Reynolds Dr. to Davidson Rd., New Roadway-2 lanes each direction	$5.5	Not Included
547	Britton Pkwy. from Davidson Rd. to Hayden Run Rd., Major Widening-Arterial-Add 1 through lane each direction	$1.6	Not Included
548	Britton Pkwy. from Hayden Run Rd. to north to existing Britton Pkwy., New Roadway-2 lanes each direction	$4.6	Not Included
549	Scioto & Darby Creek Rd. from Alton Darby Creek Rd. to Cosgray Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.5	Included
551	SR 257 from US 33/SR 161 to Home Rd., Major Widening-Arterial-Add 1 through lane each direction	$10.8	Not Included
552	SR 745 from US 33/SR 161 to Home Rd., Major Widening-Arterial-Add 1 through lane each direction	$11.9	Not Included
564	Cosgray Rd. from Hayden Run Rd. to SR 161, Major Widening-Arterial-Add 1 through lane each direction	$8.7	Not Included
565	Wilcox Rd. from Hayden Run Rd. to Woerner & Temple Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.0	Included
581	Dublin Rd. from Trabue Rd. to Roberts Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.9	Not Included
582	Wilson Rd. from Trabue Rd. to Roberts Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.7	Not Included
583	Walcutt Rd. from Roberts Rd. to Scioto Darby Creek Rd., Major Widening-Arterial-Add 1 through lane each direction	$4.9	Not Included
585	Renner Rd. from Alton Darby Creek Rd. to Hilliard Rome Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.9	Not Included
614	Case Rd. from US 33 to Dierker Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.8	Not Included
615	Hayden Rd./Bethel Rd. from US 33 to Dierker Rd., Major Widening-Arterial-Add 1 through lane each direction	$5.7	Not Included
619	US 33/SR 161 from Avery Rd. to I-270, Major Widening-Freeway-4 lane to 6 lane	$11.2	Included
628	Cosgray Rd. relocation from n. of Hayden Run Rd. to n. of Conrail tracks, New Roadway-2 lanes each direction	$6.5	Not Included
629	Houchard Rd. ext. from Hayden Run Rd. to Rings Rd., New Roadway-1 lane each direction	$2.5	Not Included
646	I-70 at west of Hilliard-Rome Rd., New Interchange-Diamond or Partial Clover	$9.1	Not Included
653	Scioto & Darby Creek Rd. from Elliott Rd. to Cosgray Rd., Major Widening-Arterial-Add 1 through lane each direction	$1.4	Included
654	Alton & Darby Creek Rd. from Cosgray connector to Scioto & Darby Creek Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.6	Included
655	Cemetery Rd. from Main St. to Norwich St., Major Widening-Arterial-Add 1 through lane each direction	$1.3	Included

Area Name: N. Franklin Co. Area (Area 3)

ID	*Project Limits, Improvement Description*	*Total Costs (M)*	*Plan Status*
7	Dodridge St. from Olentangy River Rd. to Neil Ave., Minor Widening/Safety-Add turn lanes to 4 or 6 lane facility	$3.5	Included
8	James Rd./Stelzer Rd. from Mound St. to International Gateway, Minor Widening/Safety-Add turn lanes to 4 or 6 lane facility	$7.5	Included
24	Northwest Blvd. at Third Ave., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
46	Billingsley Rd. from Sawmill Rd. to Smoky Row Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.1	Included
47	Godown Rd. at West Case Rd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
49	Lazelle Rd. from US 23 to Worthington-Galena Rd., Major Widening-Arterial-Add 1 through lane each direction	$6.4	Included
51	I-270 at Cleveland Ave., Interchange Upgrade-Complex, with directional ramps	$17.7	Included
52	Sunbury Rd. from Agler Rd. to Morse Rd., Major Widening-Arterial-Add 1 through lane each direction	$9.7	Included
54	College Ave. from Otterbein Ave. to Spring Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.4	Included
58	High St. at Hudson St., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
59	SR 161 at Karl Rd., Intersection Improvement-Add turn lanes all approaches	$0.5	Included
60	Blendon Woods Blvd. at Cooper Rd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
61	Cooper Rd. at Forest Hills Blvd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
62	Cassady Ave. at Agler Rd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
130	Hard Rd. from Linworth Rd. to SR 315, Major Widening-Arterial-Add 1 through lane each direction	$10.3	Included
131	Hard Rd. from Sawmill Rd. to Smoky Row Rd., Major Widening-Arterial-Add 1 through lane each direction	$6.5	Included
133	SR 161 from Sawmill Rd. to McVey Blvd., Major Widening-Arterial-Add 1 through lane each direction	$14.8	Included
134	SR 315 at Clubview Blvd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
135	SR 161 from Flora Villa Dr. to Olentangy River Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$4.0	Included
140	SR 161 from McVey Blvd. to Flora Villa Dr., Major Widening-Arterial-Add 1 through lane each direction	$15.0	Included
141	Kenny Rd./Godown Rd. from Henderson Rd. to Bethel Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.7	Included
142	Hard Rd. from Smoky Row Rd. to Linworth Rd., Major Widening-Arterial-Add 1 through lane each direction	$15.2	Included
159	Lane Ave. from Olentangy River Rd. to High St., Major Widening-Arterial-Add 1 through lane each direction	$10.5	Included
161	SR 315 at Cannon Dr. (OSU medical center), New Interchange-Diamond or Partial Clover	$7.8	Included
165	Dempsey Rd. from SR 3 to I-270, Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.4	Included
166	Dempsey Rd. from Hempstead Rd. to Sunbury Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.0	Included

Area Name: N. Franklin Co. Area (Area 3)

ID	*Project Limits, Improvement Description*	*Total Costs (M)*	*Plan Status*
167	Oakland Park Ave. from Cleveland Ave. to SR 3, Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.4	Included
168	SR 3 at Dempsey Rd., Intersection Improvement-Add turn lanes 2 approaches	$0.3	Included
174	SR 3 from SR 161 to south of Dempsey Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.4	Included
175	Stelzer Rd. at I-670 connector/International Gateway, New Interchange-Diamond or Partial Clover	$38.7	Included
176	Stelzer Rd. from north of I-670 to McCutcheon Rd. (CDMS 8), Major Widening-Arterial-Add 1 through lane each direction	$7.7	Included
177	SR 161 from Sunbury Rd. to Little Turtle Way (CDMS 10), Major Widening & Interchange-	$45.9	Included
179	I-270 at SR 161 (CDMS 11), Interchange Upgrade-Complex, with directional ramps	$60.5	Included
236	I-270 at SR 315, Interchange Upgrade-Complex, with directional ramps	$15.9	Not Included
240	Linworth Rd. from Olentangy River Rd. to SR 161, Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.3	Included
243	Smoky Row Rd. from Snouffer Rd. to Delaware Co. line, Major Widening-Arterial-Add 1 through lane each direction	$11.2	Included
246	Reed Rd. from Henderson Rd. to Bethel Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.9	Not Included
247	Kinnear Rd. from Kenny Rd. to Olentangy Riv. Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.1	Included
249	Olentangy Riv. Rd. from Henderson Rd. to Linworth Rd., Minor Widening/Safety-Add turn lanes to 4 or 6 lane facility	$2.5	Included
253	Morse Rd. from I-71 to Cleveland Ave., Minor Widening/Safety-Add turn lanes to 4 or 6 lane facility	$4.4	Included
254	Sunbury Rd. from Morse Rd. to SR 161, Major Widening-Arterial-Add 1 through lane each direction	$5.2	Included
255	Dempsey Rd. from I-270 to Hempstead Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.2	Included
256	Hudson St. (E.) from I-71 to Cleveland Ave., Major Widening-Arterial-Add 1 through lane each direction	$6.9	Not Included
258	Sinclair Rd. from I-71 ramps to SR 161, Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.6	Included
259	SR 3 from Dempsey Rd. to I-270, Major Widening-Arterial-Add 1 through lane each direction	$0.9	Included
260	SR 3 from Cleveland Ave. to SR 161, Major Widening-Arterial-Add 1 through lane each direction	$20.9	Included
261	Hudson St. (E.) from High St. to Summit St., Major Widening-Arterial-Add 1 through lane each direction	$2.7	Not Included
262	Flint Rd. from US 23 to Lazelle Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.0	Included
263	I-270N at I-71, Interchange Upgrade-Complex, with directional ramps	$29.9	Included
265	Innis Rd. from SR 3 to Sunbury Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.8	Included
266	Morse Rd. from High St. to I-71, Minor Widening/Safety-Add turn lanes to 4 or 6 lane facility	$4.3	Included
267	Sancus Blvd. from Worthington Woods Blvd. to Park Rd., Major Widening-Arterial-Add 1 through lane each direction	$1.6	Included

Area Name: N. Franklin Co. Area (Area 3)

ID	*Project Limits, Improvement Description*	*Total Costs (M)*	*Plan Status*
268	Sancus Blvd. from Park Rd. to Lazelle Rd., Major Widening-Arterial-Add 1 through lane each direction	$2.8	Included
269	I-270N at SR 3, Interchange Upgrade-Complex, with directional ramps	$13.6	Not Included
271	I-270N at High St. (US 23N), Interchange Upgrade-Complex, with directional ramps	$26.8	Not Included
274	Cassady Ave. from Bexley north corp. limit to I-670, Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.4	Included
278	Sunbury Rd. from Leonard Ave. to Agler Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.7	Included
329	I-270 at Smoky Row Road, New Interchange-Diamond or Partial Clover	$9.1	Not Included
331	Linworth Rd. from SR 161 to Hard Rd., Major Widening-Arterial-Add 1 through lane each direction	$9.5	Not Included
332	SR 257-SR 315 connector at (on Delaware/Franklin county line), New Roadway-2 lanes each direction	$25.3	Not Included
339	Huntley Rd. from SR 161 to Worthington-Galena Rd., Major Widening-Arterial-Add 1 through lane each direction	$5.8	Not Included
340	Worthington Woods Blvd. from Sancus Blvd. to Park Rd., Major Widening-Arterial-Add 1 through lane each direction	$6.3	Not Included
341	SR 161 from Cleveland Ave. to SR 3, Major Widening-Arterial-Add 1 through lane each direction	$5.9	Not Included
342	Morse Rd.-Bethel Rd. connector from SR 315 to High St., New Roadway-2 lanes each direction	$12.9	Not Included
343	Hard Rd. ext. from SR 315 to US 23, New Roadway-2 lanes each direction	$13.5	Not Included
344	Cleveland Ave. from SR 161 to Schrock Rd., Major Widening-Arterial-Add 1 through lane each direction	$9.8	Not Included
345	Lazelle Rd. ext. from SR 315 to US 23, New Roadway-2 lanes each direction	$7.6	Not Included
348	US 62 at Cherry Bottom Rd., Intersection Improvement-Add turn lanes all approaches	$0.5	Not Included
357	Godown Rd. ext. from Godown Rd. to SR 161, New Roadway-1 lane each direction	$1.9	Included
359	Snouffer Rd. from Bent Tree Blvd. to Linworth Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$2.5	Not Included
361	SR 315 at Bethel Rd., Interchange Upgrade-Expand a Diamond	$5.1	Not Included
372	North Broadway from Olentangy River Rd. to I-71, Major Widening-Arterial-Add 1 through lane each direction	$15.1	Not Included
373	SR 3 from I-270 to Schrock Rd., Major Widening-Arterial-Add 1 through lane each direction	$2.5	Not Included
374	SR 161 from Olentangy River Road to Evening St., Major Widening-Arterial-Add 1 through lane each direction	$5.9	Not Included
375	Worthington-Galena Rd. from Wilson Bridge Rd./Huntley Rd. to Sancus Blvd., Major Widening-Arterial-Add 1 through lane each direction	$0.5	Included
377	I-71 from North Broadway to Morse Rd., Major Widening-Freeway-6 lane to 8 lane	$14.7	Not Included
378	Worthington-Galena Rd. from Sancus Blvd. to Lazelle Rd., Major Widening-Arterial-Add 1 through lane each direction	$7.8	Not Included
379	Wilson Bridge Rd. from Linworth Rd. to Worthington-Galena Rd., Major Widening-Arterial-Add 1 through lane each direction	$7.4	Not Included

Area Name: N. Franklin Co. Area (Area 3)

ID	*Project Limits, Improvement Description*	*Total Costs (M)*	*Plan Status*
380	US 23 from Wilson Bridge Rd. to Flint Rd., Major Widening-Arterial-Add 1 through lane each direction	$5.9	Not Included
382	SR 315 interchange at Lane Ave., Interchange Upgrade-Complex, with directional ramps	$15.9	Not Included
383	I-71 at Morse Rd., Interchange Upgrade-Complex, with directional ramps	$15.9	Not Included
385	I-71 at SR 161, Interchange Upgrade-Complex, with directional ramps	$15.9	Not Included
387	SR 315 interchange at SR 161, Interchange Upgrade-Complex, with directional ramps	$15.9	Not Included
388	US 23 from Flint Rd. to Delaware Co. line, Major Widening-Arterial-Add 1 through lane each direction	$5.7	Included
394	Stygler Rd. from Ridenour Rd. to Morse Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$0.8	Not Included
535	SR 315 from I-270 to Clubview Blvd. South, Minor Widening/Safety-Add turn lanes to 4 or 6 lane facility	$0.3	Included
554	SR 315 from Clubview Blvd. South to Delaware Co. line, Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.8	Included
558	Worthington Rd. from Lazelle Rd. to Polaris Pkwy., Major Widening-Arterial-Add 1 through lane each direction	$1.3	Not Included
568	Henderson Rd. from SR 315 to High St., Major Widening-Arterial-Add 1 through lane each direction	$6.1	Not Included
571	Cherry Bottom Rd. from US 62 to Morse Rd., Major Widening-Arterial-Add 1 through lane each direction	$7.4	Not Included
572	Mill St. from Granville St. to Cherry Bottom Rd., Major Widening-Arterial-Add 1 through lane each direction	$3.2	Not Included
613	Karl Rd. from Morse Rd. to Schrock Rd., Minor Widening/Safety-Add turn lanes to 4 or 6 lane facility	$7.0	Not Included
620	Cooper Rd. from Schrock Rd. to SR 3, Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$3.6	Not Included
626	Schrock Rd. from Cleveland Ave. to SR 3, Major Widening-Arterial-Add 1 through lane each direction	$6.2	Not Included
627	Johnstown Rd. from Stelzer Rd. to Ridenour Rd., Minor Widening/Safety-Widen 2 lane road to standard lane widths with turn lanes	$1.3	Not Included
640	COTA North Corridor Light Rail, Transit-	$435.0	Included
663	SR 161 from Flora Villa Dr. to Olentangy River Rd., Major Widening-Arterial-Add 1 through lane each direction	$1.4	Not Included

Appendix F

MORPC 1991-2000 Average Daily Traffic Volume Book Pages for the Upper Arlington area

1991 - 2000
Average Daily Traffic

How to Read the Maps

The average daily traffic (ADT, 24-hour, non-directional seasonal adjusted traffic count) is at the approximate location at which the count was taken. The counts are coded so that the last digit reflects the year of the count.

Example: 22,009 reads 22,000 ADT in 1999.

Data Source

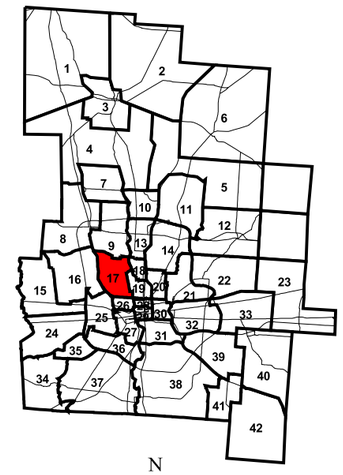
Traffic Counts reported on this map were collected from the following government agencies: ODOT, County Engineers, the City of Columbus and suburban communities, and their consultants. Counts are from 1991 - 2000 inclusively.

Funding Source

These maps were financed by appropriations from Delaware, Fairfield, Franklin and Licking counties, municipalities within these counties, and planning funds from agencies of the United States Department of Transportation and the Ohio Department of Transporation.

Base Mapping Source

The base mapping used was provided by ODOT, Franklin Co. Auditor, Delaware Co. Auditor and Fairfield Co. Auditor.



0 2000 4000 6000 Feet

Upper Arlington (17)

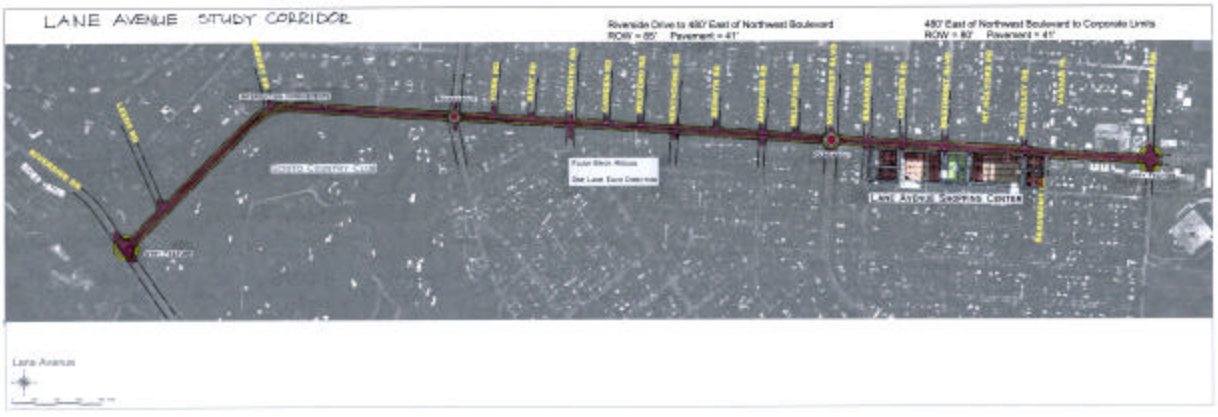
MORPC Prepared by the Mid-Ohio Regional Planning Commission

o:\arcview\trafvol\countbook00a.apr Sepetember 2000

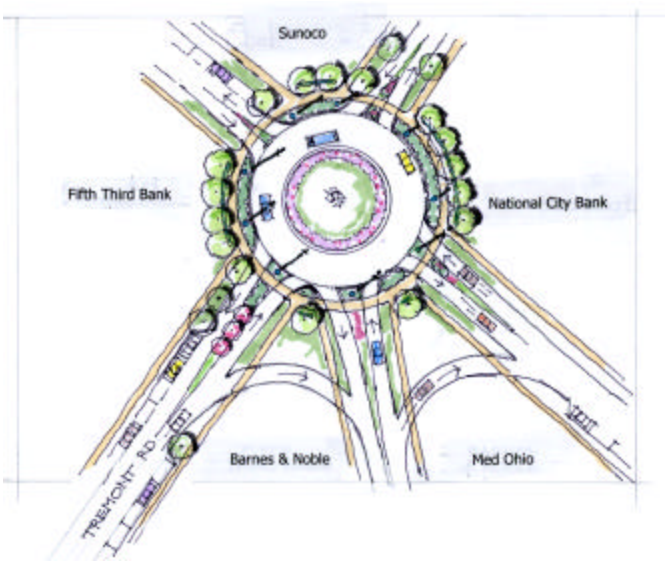
Appendix C

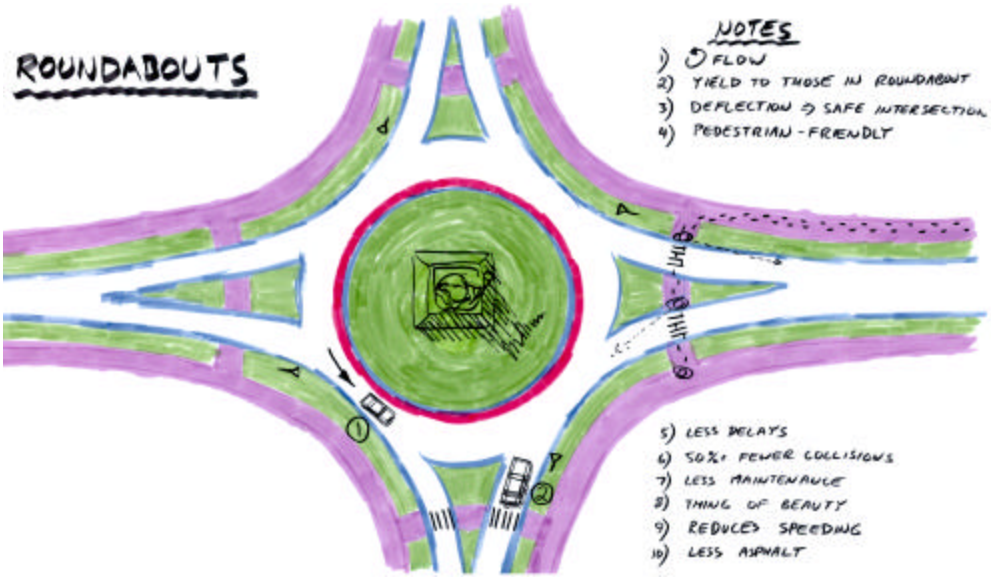
Charrette Illustrations

Charrette Corridors

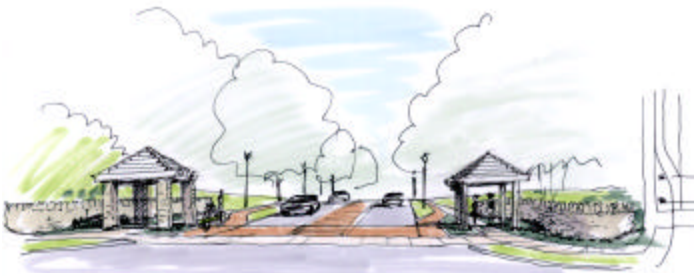


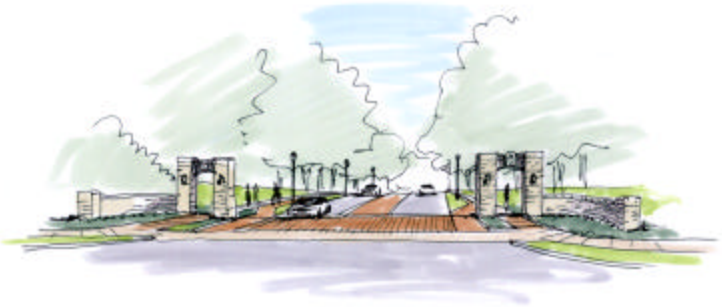
Conceptual Roundabout in Upper Arlington

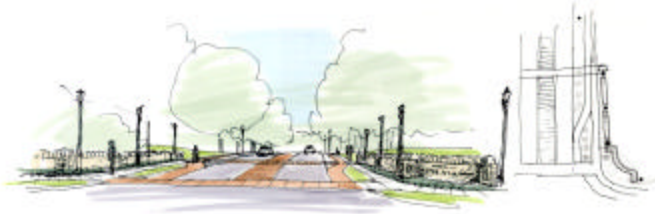




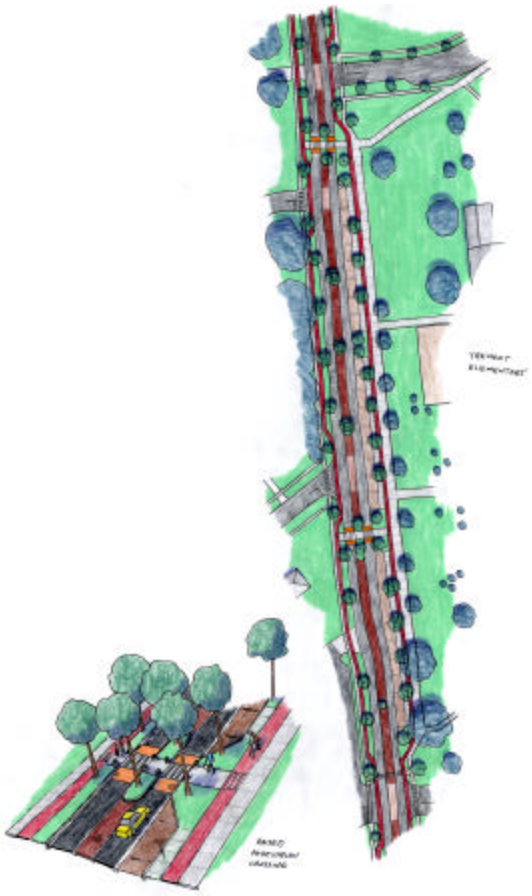
Conceptual Gateways into Upper Arlington

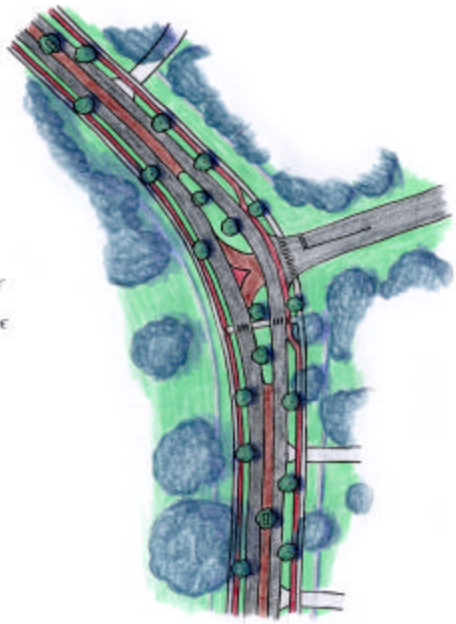




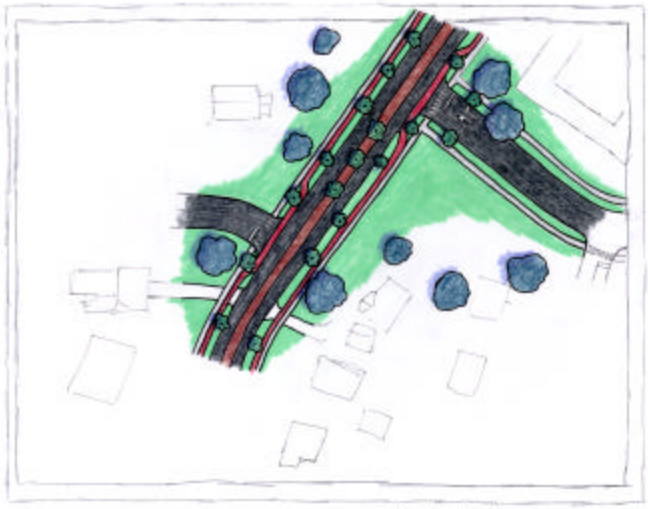


Conceptual Corridor Improvements in Upper Arlington





LANE AVENUE
AT
ASBURY DRIVE



Treatment at Northern

Conceptual Streets in Upper Arlington