

September 10, 2021

Michael Liggett City of Columbus 111 N. Front Street Columbus, OH 43215

#### RE: RTMC Mobility Study - Part I Update Memo

Carpenter Marty Transportation (CM) was retained by the City of Columbus to complete the Renner Road/Trabue Road/McKinley Avenue Corridor (RTMC) Mobility Study. The RTMC forms a route from the west side of Columbus to Franklinton/Downtown. It services many communities: Rush Creek, Marble Cliff Crossing, San Margherita, Scioto Woods, Golfview Woods, Brookhollow, and Trabue Woods. These areas have a wide range of land uses such as residential, light and heavy industrial, recreational, warehouse, retail, and heavy railroad use. The RTMC is critical to these areas due to the connectivity it provides to US-33, I-70, and I-670 which sequentially provide access to the remaining local, state, and national vehicular transportation system in the area. The purpose of this memo is to summarize the Part I scope items completed thus far and serve as an interim submittal prior to the commencement of Part II. The detailed scope of services for the RTMC Mobility Study can be seen in **Attachment A**.

#### **Goals & Objectives**

The first step of the mobility study process was to establish goals and objectives for the project. Through coordination with the City of Columbus and stakeholder group (described later), the following goals and objectives were developed for the project:

- 1) Improve mobility in the RTMC
- 2) Maximize economic vitality
- 3) Improve health and safety
- 4) Improve access to employment

These goals and objectives were developed to aid the project team going forward. The results from the study are expected to bring forward short and long-term, implementable solutions, for the corridor.

#### **Previous & Planned Efforts**

CM was provided a comprehensive list of planned developments/projects within the corridor ranging as far back as 2016. The planned developments and improvement projects have been summarized in a separate document found in **Attachment B**. Additionally, a map of the corridor showing the locations and development types of all planned developments in the area is provided in **Attachment B**. Developments range from multifamily residential to industrial/warehousing. Improvement projects not related to private development have been focused on bridge rehabilitation of Trabue Road over the Norfolk Southern Railroad. A shared-use path project was also proposed for the south side of Trabue Road, which was never implemented. The development



summary describes the types of developments proposed and/or constructed in the RTMC and any roadway improvements associated with them.

#### **Demographics**

A thorough study of area demographics was conducted. Understanding factors affecting the health, safety, and welfare of the RTMC communities is important when conducting a mobility study. Demographic data was obtained via a public survey (described later), census data, and StreetLight data. A summary of the demographics review is described below. The full demographics data can be found in **Attachment C**.

StreetLight software was used to obtain demographic data for the corridor. This software uses cellphone location data to determine the number of vehicles that pass through or stop in user-defined zones. Zones were set on signalized intersection approaches within the RTMC. To obtain demographic information, StreetLight infers a general home location for each device based on travel patterns. This location is then attributed to a census block, from which the demographic information is gathered from US Census data.

Streetlight demographic data is broken into four segmentations:

- 1) Residents within the zone identified (the census blocks)
- 2) Workers within the zone
- 3) Visitors to the zone
- 4) Combination of all three (resident, worker, or visitor anyone driving through the corridor)

Traveler attributes including level of education, family status, household income, and race are produced by StreetLight for each segmentation. Results for these attributes are output as percentages. **Tables 1-4** summarize the results of the traveler attributes for the combined segmentation (residents, workers, or visitors). Outputs for all attributes and segmentations are provided in **Attachment C**.



#### Table 1 – Education of Head of Household

| Education<br>Level       | No HS Diploma | HS Diploma | Some College | Bachelor's<br>Degree | Graduate<br>Degree |
|--------------------------|---------------|------------|--------------|----------------------|--------------------|
| Percent of<br>Population | 10.31%        | 27.17%     | 26.60%       | 23.55%               | 12.38%             |

#### Table 2 – Family Status

| Family Status            | With Kids | With No Kids | With Kids<br>under 6 years old | With Kids between<br>6-17 years old |
|--------------------------|-----------|--------------|--------------------------------|-------------------------------------|
| Percent of<br>Population | 36.99%    | 63.01%       | 17.39%                         | 27.56%                              |

#### Table 3 – Income Range

| Income<br>Range          | <\$20k | \$20-35k | \$35-50k | \$50-75k | \$75-100k | \$100-125k | \$125-150k | \$150-200k | >\$200k |
|--------------------------|--------|----------|----------|----------|-----------|------------|------------|------------|---------|
| Percent of<br>Population | 15.41% | 14.16%   | 13.95%   | 20.86%   | 13.48%    | 8.94%      | 5.30%      | 4.27%      | 3.63%   |

#### Table 4 – Race

| Race       | White   | Black  | Indian | Asian  | Islander | Other Race | Multiple Races | Hispanic |
|------------|---------|--------|--------|--------|----------|------------|----------------|----------|
| Percent of | 82.32%  | 8.26%  | 0.21%  | 4.21%  | 0.08%    | 2.40%      | 2.52%          | 4.73%    |
| Population | 02.3270 | 0.2070 | 0.2170 | 4.2170 | 0.0070   | 2.40 %     | 2.3270         | 4.7370   |

In addition to the traveler attributes seen above, StreetLight also provided a breakdown of the 'home' location of travelers and the 'work' location of travelers used in the analysis. These visualizations can be seen in **Figure 1** and **2**. The yellow dots shown in each figure represent the zones set along the RTMC to gather the data.



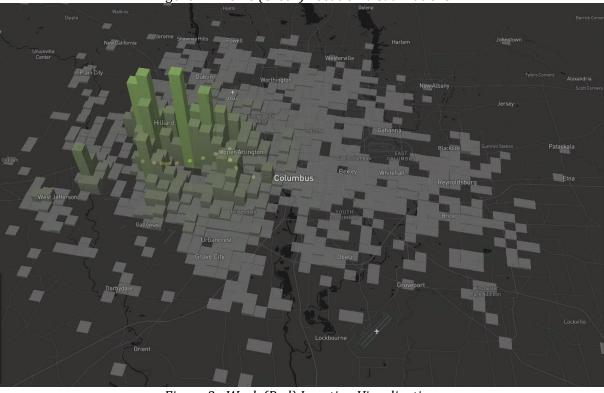
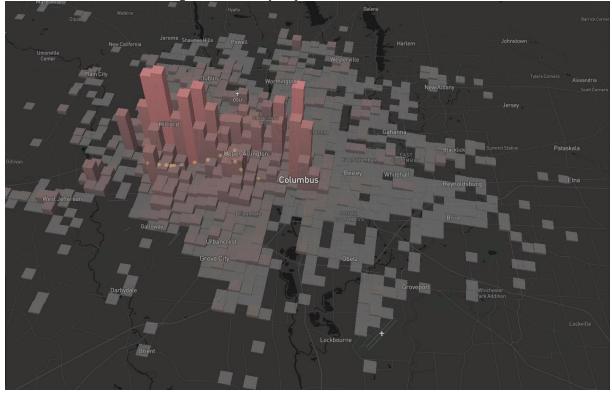


Figure 1 – Home (Green) Location Visualizations

Figure 2 – Work (Red) Location Visualizations





#### Public Engagement

With the assistance of CM, the City of Columbus developed a Steering Committee and Advisory Panel inclusive of government agencies, MORPC, COTA, area commissions, land owners, employers, and advocacy organizations. The full list of Steering Committee and Advisory Panel members can be found in **Attachment D**.

The purpose of this diverse group is to solicit feedback as the study progresses and to assist with public engagement. Initial meetings were held to discuss the study team, study process, public engagement, project evaluation criteria, goals, and objectives. CM and the City of Columbus developed a presentation for the Steering Committee meeting held on February 18, 2021. The presentation from said meeting can be found in **Attachment D**.

In a subsequent meeting held on March 17, 2021, the Steering Committee and Advisory Panel provided CM and the City of Columbus with strengths, weaknesses, opportunities, and recommendations for the corridor. Discussions with the Steering Committee and Advisory Panel led to the development of an 18-question online public survey to further engage the community and determine the priorities of the general public. The survey was distributed to the public through the City of Columbus social media and information platforms, as well as through the Steering Committee and Advisory Panel members. The survey was posted on May 17, 2021 and concluded on June 17, 2021. A total of 1,093 responses were received. A detailed summary of the survey results is provided in **Attachment E**.

#### **Existing Physical & Operational Conditions**

#### Existing Conditions Inventory

An initial assessment of the existing conditions of the area was developed to determine what mobility infrastructure is currently provided in the RTMC. Map exhibits were developed for the entire corridor to show existing roadway classifications, intersections, sidewalks, pedestrian crossings, shared-use paths, bike lanes, and transit routes. The existing conditions exhibits can be found in **Attachment F**.

#### Crash Data & Heat Maps

Crash data for the study area was obtained from ODOT Transportation Information Mapping System (TIMS) for three complete years of available data (2017-2019). A total of 579 crashes were obtained. OH-1 reports for the crashes were not reviewed and crash data was not cleaned. The data was plotted graphically in heat maps to be used to identify areas of concern. Heat maps were produced for several sub-sets of the crash data: all crashes, injury and fatal crashes, and pedestrian and bike crashes. These maps can be seen in **Attachment G**.

Based on the crash data pulled from TIMS, the intersections of Renner Road & Hilliard Rome Road and Trabue Road & N. Wilson Road were identified as areas of concern due to crash frequency and severity. There are no specific areas of concern that experience a high frequency of crashes involving pedestrians and cyclists. McKinley Avenue from just north of Lake Shore Drive to Fisher Road experienced two such crashes in the three-year period. All other such crashes were singleincident locations that are spaced away from other similar crashes.



Roadway segments and intersections within the study area identified on ODOT and MORPC highcrash location lists are summarized as follows:

- ODOT State Fiscal Year (SFY) 2015 Safety Integrated Projects (SIP) Map for Franklin County Local Systems
  - Renner Road & Hilliard-Rome Road was identified as a high priority intersection
  - Trabue Road & Wilson Road identified as a high priority intersection
  - Almost the entire Renner Road/Trabue Road corridor from Alton & Darby Creek Road to Hague Avenue was identified as high priority segments
  - The McKinley Avenue corridor also had many segments identified as high priority segments from just south of Trabue Road to north of Fisher Road
- MORPC Top 100 Regional High-Crash Intersections (2015-2017)
  - Hilliard Rome Road & Renner Road intersection was identified as the fifth highest crash incident intersection on the list

Details regarding the high-crash locations can be found in **Attachment F**.

Columbus' Vision Zero initiative was also considered when reviewing crash history and areas for safety improvements. The Vision Zero Crash Data for High Injury Network is shown in **Figure 3**. This shows the RTMC has several locations with moderate crash density. The segment of Trabue Road from Trabue Frontage Road to Gilmore Park Avenue is also identified on the High Injury Network. This data further supports the crash data summarized above and the need for the RTMC and intersections of Renner Road & Hilliard Rome Road and Trabue Road & N. Wilson Road to be further studied.



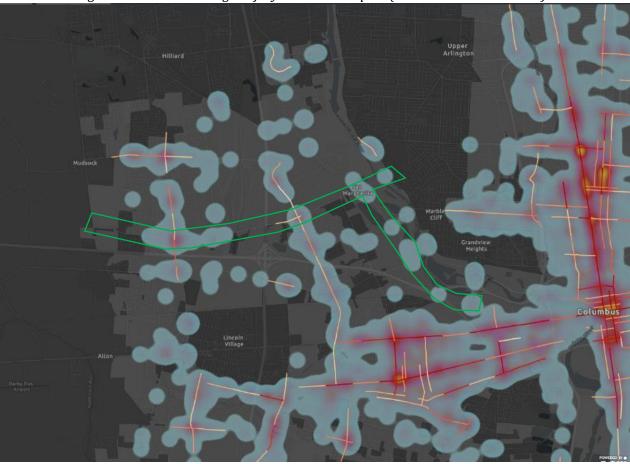


Figure 3 – Vision Zero High Injury Network Graphic (RTMC Outlined in Green)

#### Origin-Destination (OD) Data

StreetLight software was utilized to conduct several OD analyses of the RTMC. OD data utilizes the relative amount of traffic that passes through a user-defined zone (the origin) and exits or passes through a separate zone (the destination) to map the top routes for the corridor. The data obtained includes the average daily traffic (ADT) from the entire year of 2019 for all vehicle classes as well as for trucks only. Zones were set on signalized intersection approaches within the RTMC. Separate output visuals were produced for top routes to and from the selected zone(s). Top routes for all vehicles to the entire RTMC are shown in **Figure 4** and from the RTMC are shown in **Figure 5**. Note, the zones were set up as "pass-through" zones. So, this does not show vehicles that started or ended in the corridor. This shows vehicles where vehicles traveling through or in the corridor come from before they enter the corridor and where they go to after they leave the corridor. The figures show the majority of vehicles traveling to/from the RTMC travel to/from Alton & Darby Creek Road, Dublin Road, Riverside Drive, or I-70 east. Separate top route outputs for vehicles and trucks for each signalized intersection approach can be found in **Attachment G**.



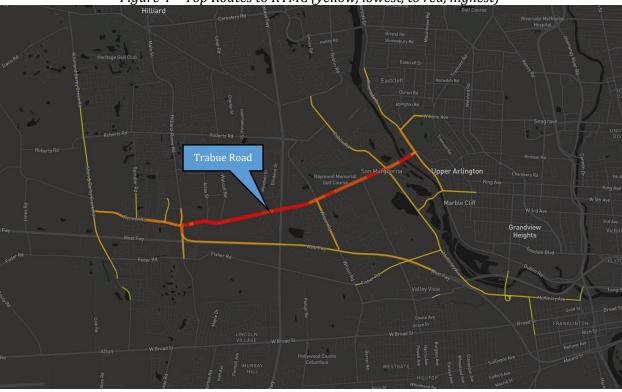
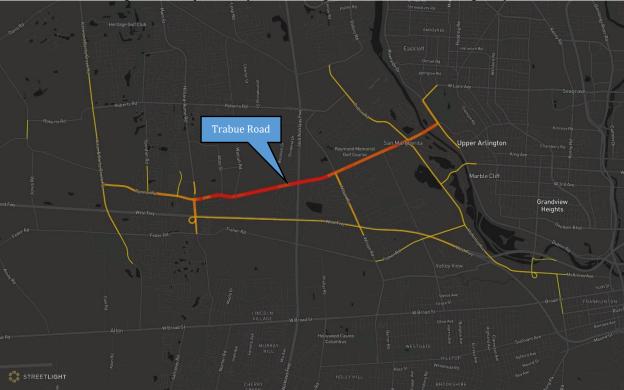


Figure 4 – Top Routes to RTMC (yellow, lowest, to red, highest)

Figure 5 – Top Routes from RTMC (yellow, lowest, to red, highest)





Top routes analysis for trucks shows a different distribution of origins and destinations compared to all vehicles. Trucks traveling to the RTMC originate from I-70 east and west, Riverside Drive, and to a lesser extent Alton & Darby Creek Road and Dublin Road. Trucks traveling from the RTMC utilize all of the same routes as those traveling to the RTMC, with the addition of a large amount traveling to I-270 south. Top routes analysis for trucks at individual intersections also displays more differences between top routes compared to other intersections, whereas the data with all vehicles generally shows common top routes for each intersection.

Top routes data was also obtained for the combination of all census blocks touching the RTMC. Results for the census block top routes shows a similar to/from distribution primarily utilizing I-270, I-70, I-670, Roberts Road, and Hilliard Rome Road. Outputs for the census block top routes can be found in **Attachment G**.

#### RTMC Mobility Study - Part II Scope Summary

Part II of the RTMC Mobility Study is expected to begin in late fall/winter 2021, pending funding. By this time, traffic impacts from the COVID-19 pandemic are expected to be normalized. It should be noted that traffic patterns and volumes may not ever return to pre-pandemic conditions. Work from home trends and less reliance on personal motor vehicles have increased during the pandemic and will likely continue for the foreseeable future. Business and school restrictions are expected to be lifted, and communities will likely be free to travel as they choose.

The general scope of services for Part II includes:

- Traffic Data Collection
  - Turning movement counts at major intersections
  - ADT counts along major segments of the RTMC
- Future Conditions Assessment
  - Planning year of 2045 using growth rates, collected data, and future land use plans for undeveloped property
  - Development of recommended projects
- Additional Steering Committee Engagement
  - Input on project recommendations
    - Additional public engagement
- Project Evaluation
- Reporting & Deliverables

If I can help in any way, do not hesitate to contact me at dlaurent@cmtran.com or 614.656.2421 anytime.

Sincerely,

Drew Laurent, AICP Transportation Planner Carpenter Marty Transportation

### Attachment A Scope





### The RTMC Mobility Study

#### <u>(Renner Road - Trabue Road - McKinley Avenue Corridor)</u>

### Scope of Services

#### Introduction

Any task mentioned in this Scope of Services document is assumed to be the responsibility of the Consultant unless stated otherwise. Tasks to be provided/conducted by the City or others are specifically identified.

#### BACKGROUND

The Renner Road/Trabue Road/McKinley Avenue Corridor (RTMC) forms a route from the west side of Columbus to Franklinton/Downtown. It services many communities: Rush Creek, Marble Cliff Crossing, San Margherita, Scioto Woods, Golfview Woods, Brookhollow, and Trabue Woods. These are communities of Columbus with proud residents and business owners. These areas have a wide range of land uses such as residential, light and heavy industrial, recreational, warehouse, retail, and heavy railroad use.

The RTMC is critical to these areas due to the connectivity it provides to US-33, I-70, and I-670 which sequentially provide access to the remaining local, state, and national vehicular transportation system in the area.

The RTMC is under significant development pressure, which generally brings additional traffic. People who use and live along the RTMC have expressed concerns. The Sugar Farms development, near Renner Road on the west side of the City, and the Cover My Meds development in Franklinton bookend the RTMC. Along the corridor, there are several developments in various stages of planning, zoning, and (re)development. Several mixed-use developments of significant size are occurring near the center of the RTMC. Over the years, other significant corridor developments have occurred, such as the UPS facility.

#### PURPOSE & NEED

Due to residents' mobility concerns, sparked by development pressures in the corridor (the *need*), the City of Columbus is undertaking a mobility study of the RTMC. This study will analyze past planning efforts, current/future mobility conditions, public input to identify areas lacking satisfactory mobility, and develop solutions to improve mobility (the *purpose*). The *purpose and need* will be refined by the Steering Committee (defined later in this Scope) and additional public input as part of the study.



#### GENERAL STUDY OVERVIEW

The City of Columbus is hiring a Consultant to undertake a mobility study of the RTMC. The study area will include:

- Renner Road from Alton Darby Creek Road to Trabue Road<sup>1</sup>
- Trabue Road from Renner Road to Riverside Drive (US-33)<sup>2</sup>
- McKinley Avenue from Trabue Road to Grandview Avenue

The project will include study and analysis of:

- past planning efforts relating to all modes of transportation for people and goods
- existing and future conditions as they relate to modes of transportation for people and goods
- needs and desires of community members and roadway users through creative public engagement

Projects will be developed to provide improved mobility of people and goods in the RTMC areas where it is unsatisfactory. These projects will be developed through typical planning and engineering methods and through the public engagement process. Projects could include, but are not limited to:

- modifications to the existing corridor roadways
- modifications to the transit system
- modifications to the pedestrian and bicycling environment
- public education efforts
- modifications to alternate corridors

Project evaluation criteria will be developed in conjunction with City staff and the committee. The criteria will be used to evaluate the projects to determine which should be given implementation priority. The study will conclude with a "next-steps" framework.

#### **Study Details**

#### GOALS AND OBJECTIVES

Goals and objectives for the RTMC Mobility Study will be necessary to keep tasks efficient and focused. At the start of the study, the City and the Consultant will collaborate to develop goals and objectives, which will guide the Consultants actions. The goals and objectives will be presented to the Steering Committee for comment and input. However, the Committee will not develop the goals and objectives because they are likely to have desires beyond the scope of this study.

<sup>&</sup>lt;sup>1</sup> This study will not perform capacity analysis or develop capacity improvements for the section of Renner Road from Rome Hilliard Road to Alton Darby Creek Road (inclusive of those roadways' intersections with Renner Road). The Sugar Farms Impact Study contains these items. Those results will be utilized in this study. However, all other items in this scope will be performed in this corridor. Modifications to the Sugar Farms improvements will be considered and studied to assure the mobility goals of this study are reached.

<sup>&</sup>lt;sup>2</sup> Intersection influence areas (typically 500 feet from the intersection) at Wilson Road, Hague Avenue, McKinley Avenue, Dublin Road, Riverside Drive, and Fisher Road will be considered part of the study area.



Goals will be driven by the purpose and need and will help evaluate the projects identified in this effort. General goals, such as *improved mobility* in the RTMC, are obvious. However, other goals may be important. Goals such as *maximizing economic vitality, improving health/safety,* and *improving access to employment* may be desirable to the City and will be considered. Objectives will help determine what this study will focus on; many are defined in this Scope of Services. Objectives of *maximizing the outreach of public engagement, engaging community leaders, determining community's concerns/needs, identifying projects which meet goals,* and *developing a next-steps framework* will be considered.

#### PREVIOUS AND PLANNED EFFORTS

Based on input and assistance provided by the City, the consultant will research prior planning and engineering efforts relating to the RTMC area. This will include planning documents such as the thoroughfare plan, traffic impact and access studies, signal warrant analyses, CIP projects planned or being considered, and any other studies or projects that may aid in the study of the corridor. Projects planned or considered for the corridor will be identified.

#### DEMOGRAPHICS

A thorough study of the RTMC demographics will be conducted. It is important to understand factors affecting the health, safety, and welfare of the RTMC communities when conducting a mobility study. This data will also be used to shape public engagement so disadvantaged or economically-challenged individuals can be reached. Demographics such as the economic conditions, number of residents, car ownership, rates of employment, age, and others will be studied.

Projects may be identified from this data. For example, a low-income, highly unemployed, residential area with low vehicle ownership and no transit service could lead to a project that would bring transit to that area.

#### PUBLIC ENGAGEMENT

This study was undertaken primarily due to concerns of residents and users of the RTMC. Therefore, thorough public engagement will be the key to the success of this study. Success will depend on whether the affected communities feel heard and supported. For this reason, we are proposing a multifaceted approach to public engagement.

#### Steering Committee

The first task will be the formation of a RTMC Steering Committee. This will be carried out with input from community officials/representatives, Department of Public Service (DPS), City Council, the Mayor's Office, and others as determined by DPS. The Consultant will help in the formation of this Committee, but potential Committee members will be invited by the City. The expectation is that much of this contact will be done by higher-level City personnel. This group is expected to include corridor/community leaders, major employers, major land owners, City leaders, MORPC, DPS, COTA, Franklin County, and others with a significant stake in what occurs on the RTMC. Other interested parties will be encouraged to attend but will not have a vote on matters of the Committee.

This Steering Committee will be involved in many aspects of the study including:



- a. An initial meeting to introduce the study team, go over the study process, solicit input on the proposed public engagement plan, and develop/modify the project evaluation criteria. Goals and objectives of the study, developed prior to this meeting by the City and the Consultant, will be presented for their comment and input. Their input on existing RTMC issues and concerns will be solicited.
- b. After the analysis and public engagement efforts (defined below) are completed and summarized, a second Committee meeting will review public concerns, project ideas, and other insights from those efforts. RTMC safety and mobility analysis information will be presented (as defined later in this Scope). Additional input on projects will be obtained and discussed at this meeting.
- c. After projects are rated using the project evaluation criteria (defined later in this Scope), this will be presented to the Committee to obtain support.

The Consultant and the City may change the meeting items proposed above as determined appropriate.

The Consultant will develop and distribute meeting minutes to DPS for review and concurrence. The minutes will then be distributed to all Steering Committee members for feedback. At the second and third Committee meeting, minutes of the prior meeting will be approved.

The Consultant will plan and facilitate these Steering Committee meetings with City input. The City will lead the meetings. A key Consultant task will be keeping the Committee focused on the goals and objectives. Other input not related to the goals and objectives (i.e. corridor beautification efforts) will be directed to a post-meeting discussion and referred to the proper agency or department.

#### Specific Public Engagement

Holding engagement events "where the people are" is viewed as the most successful way to obtain public input and engagement. For a cost similar to the typical open-house public meeting, a Consultant representative can set up in the lobby of a major employer, church, community center, golf course, or other public place in the RTMC. They can bring a flip chart, a few displays, and have quality one-on-one discussions about issues and desires for the RTMC. Additionally, one large, open-house style meeting will be held to provide another opportunity for input.

The Consultant will handle planning and carrying out these meetings with City input and attendance. The open house advertisement will be mailed to those adjacent to the corridor. The flyer and mailing will be completed by the Consultant with City review/approval. Other methods of providing the advertisement to interested parties will be explored. This effort will be documented and become part of the public input summary developed by the Consultant.

#### Broad Public Engagement

The key to successful public engagement is obtaining input from as many interested people and RTMC users as possible. Applications are available that allow quality online questionnaires to be developed and used in a *very* cost-effective manner. All effective public engagement efforts are now using these tools with remarkable success. Input from a wide range of people provides data



which is less skewed by advocates who sometimes dominate standard open house public meeting input. An online questionnaire will be arranged and developed by the Consultant with City input and review. Data from the questionnaire will be analyzed to identify the key issues and ideas. Results from the survey will be part of the public input summary developed by the Consultant and presented to the Committee.

#### EXISTING AND FUTURE CONDITION ASSESSMENT

#### Existing Physical and Operational Conditions

The Consultant will inventory and assess the conditions of the following aspects of the RTMC:

- roadways
- intersections
- sidewalks
- pedestrian crossings (including general ADA compliance of curb ramps)
- multi-use paths
- bike lanes
- freight routing
- transit routing

Items that will be assessed in a general way include:

- Crash history
- Speeds
- Congestion
- Travel mode used and percentage breakdown of each
- COTA routes and stops
- Heavy vehicle percentage
- Infrastructure condition
- Land use
- Planned and expected developments
- General identification of where RTMC users come from and go to (origin-destination)
- Adherence to industry standards and best practices

An assessment of the operational conditions of the RTMC will be aided by traffic data collection. This will consist of Average Daily Traffic (ADT) counts on the roadway segments between the major intersections and peak hour turning movement counts of each signalized intersection and any intersection expected to be a future candidate for signalization. Other intersections of significance may also be counted, as determined by the City.

Many developments are planned for the RTMC. Since any project from this study will be implemented several years after its completion, *planned* developments will be considered part of the existing condition assessment. The Consultant will obtain traffic studies, develop and distribute traffic for those that do not have studies, and assign that traffic to the corridor.



RTMC crash data from 2017-2019 will be obtained from ODOT and plotted graphically. Areas of concern will be identified. Raw crash data will be used as-is. Crash reports will not be reviewed or corrected. ODOT and MORPC identified high-crash locations in the area will be documented.

Existing condition data will be analyzed and modeled to identify intersections and roadway links that are currently below acceptable levels of congestion or safety<sup>3</sup>. Current use of other non-vehicular modes of travel will be a key part of this analysis.

Origin-Destination (O-D) data will be obtained for the RTMC. Data will be obtained that may provide insight into the following:

- the section of the RTMC a traveler may utilize
- where they may enter/exit the corridor
- which direction they are traveling
- what parts of the city they are generally coming from (origin) and going to (destination)

Additional breakdown of the O-D data may be conducted if determined useful/insightful by the Consultant and the City. This data will be categorized into light vehicle and heavy vehicle datasets. This data will be utilized to identify projects outside the RTMC that may provide substantial and more cost-effective benefits to the RTMC. This data will also be used to refine identified projects based on the overall travel patterns in and around the RTMC. A full understanding of travel patterns in the area will help the Committee and the City/Consultant team make fully informed decisions on project development, evaluation, and ranking.

#### Future Condition Assessment

A planning year of 2045 will be utilized by the Consultant to evaluate future conditions. The Consultant will work with the City and MORPC to produce a 2045 land use map for the corridor based on developments that are likely to occur by 2045. Major properties in the corridor will be specifically considered. Smaller parcels will be generally considered. These land uses will be discussed with MORPC and the City to reach consensus. MORPC will then use these land uses to supply growth rates to the Consultant to project collected data to 2045. O-D data may be used to provide growth to specific movements at intersection.

Both existing and future condition ADTs will be used to provide a general analysis of vehicular operational conditions in the RTMC. Turning movement data will be analyzed and modeled to identify intersections that are currently above acceptable levels of congestion. Use of other non-vehicular modes of travel will be part of this future condition assessment. This analysis will be used to identify specific projects.

There are several major intersections in the RTMC that have received ongoing attention from various agencies. The offset intersection of Trabue/Dublin/McKinley, which is split by a railroad crossing, has been a topic for years and is one of the most important intersection in the corridor. It has challenging conditions that will make project identification extremely difficult. However, it will be a key focus of this

<sup>&</sup>lt;sup>3</sup> As determined by the City with input from the Steering Committee.



effort. The Trabue/Wilson intersection is critical and has received upgrades over the years as traffic to/from I-70 has increased.

#### **PROJECT EVALUATION**

Projects will be identified from the assessment of existing and future conditions with input from the Steering Committee, the public, and the City. These projects will be separated into low-cost and medium/high-cost projects. These two lists will then be evaluated to eliminate or modify projects not meeting the identified goals. From those lists, priorities can be objectively set based on evaluation criteria reflecting the goals developed.

The Consultant will develop evaluation criteria for City review and comment. Once changed to suit the City, the criteria will be presented to the Steering Committee for feedback. After discussion with the City, changes will be made based on the Committee input to produce a final evaluation criteria. Typical items, such as project costs and impacts, will be utilized. Additionally, criteria relating to heath, equity, and public welfare will be included.

The consultant will produce an evaluation matrix that evaluates each project under the criteria and will use a graphically represented scale of "poor" to "good." A poor rating will be an empty circle, and a good rating will be a full circle. All ratings between poor and good will be represented by adding quarter circles to the empty circle. Only the graphical representations will be used in this study or public meetings.

#### **REPORTING AND DELIVERABLES**

Any and all tasks mentioned in this Scope of Services document are assumed to be the responsibility of the Consultant unless stated otherwise. Tasks to be provided/conducted by the City or others are specifically identified in this document.

- a. Summary of area demographics such as home ownership, vehicle ownership, age, population density, and indicators of economic conditions will be provided at minimum
- b. Meeting minutes for Committee meetings
- c. Public Input Summary for the "where the people are" meetings, the open house meeting, and the online questionnaire
- d. Traffic counts collected via MioVision cameras<sup>4</sup>
- e. O-D data for the study area developed from StreetLight data
- f. Graphical presentation of crash data in the form of a heatmap or similar
- g. Speed data presented in the form of the 85<sup>th</sup> percentile speed, a heat map, or INRIX data
- h. Level-of-service data as determined by Synchro
- i. Draft Report
  - a. Executive summary
  - b. Introduction
  - c. Background/research
  - d. Methods
  - e. Analysis

<sup>&</sup>lt;sup>4</sup> Excepting those areas covered by studies and/or traffic counts conducted in 2018-2020.



- f. Results
- g. Conclusions
- h. Recommendations which will include improvements
- i. Next steps
- j. Final Report which addresses the City comments and input on the Draft Report.

#### **Exclusions**

- a. This is a planning-level mobility study, including many modes of travel over a lengthy corridor. To provide detailed engineering analysis or detailed projects would extend the duration of this study beyond what is desired. Therefore, those items will not be provided. All deliverables and projects will be planning-level, not engineering-level.
- b. Physical condition assessments will be general ratings and not a detailed listing of exact infrastructure conditions.
- c. Capacity results and capacity improvements beyond those listed in the associated traffic impact studies for
  - a. McKinley Road & Grandview Avenue
  - b. Renner Road from Rome Hilliard Road to Alton Darby Creek Road (inclusive of those intersections)

#### Acknowledgements

Mobility Studies are becoming commonplace as the transportation industry shifts focus from moving vehicles to moving people. There are many quality mobility studies in the public domain. We would like to acknowledge the studies specifically utilized in the development of this Scope of Services: *Georgetown Mobility Study, Final Report,* 10/25/17, Seattle DOT and *Insight 2050 Corridor Concepts, Options for Focused Growth and Mobility,* Study Report, April 2019.

8

### Attachment B Previous & Planned Efforts





#### Preferred Living – McKinley Multifamily Site

A residential site offering 481 apartment units, with commercial locations potentially being offered in the future. Located on the southwest corner of McKinely Avenue and Trabue Road and shown as 3241 McKinley Avenue *Multifamily* on the Study Area Graphic. Recommends the following improvements:

#### Trabue Rd & Hauge Ave:

- Northbound right turn lane and overlap phase (520')
- Second eastbound through lane

#### Trabue Rd & McKinley Ave:

- Eastbound right turn lane and overlap phase (520')
- Additional westbound left turn lane
- Additional southbound receiving lane

#### Dublin Road Extended-Stay Apartment Site

An extended-stay apartment site offering 270 extended-stay apartment units. Located on the north corner of Dublin Road and Old Dublin Road, shown as 2327 Dublin Road *Multifamily* on the Study Area Graphic. Recommends the following improvements:

#### Dublin Road & Site Drive:

- Eastbound left turn lane (175')
- Westbound right turn lane (175')

#### Trabue Road UPS Site Expansion

Shown as 5101 Trabue Road *Industrial* on the Study Area Graphic. The existing UPS site on Trabue Road expanded their facility by 31%, increasing both the number of employees and tractor-trailer units traveling to the facility. Recommends the following improvements:

#### Trabue Road & Walcutt Court:

- Additional westbound through lane

#### Trabue Road & Employee Driveway:

- Eastbound right turn lane (275')
- Possibility of a traffic signal installation in the future

#### Orange Barrel Media – Office Site

Located on the northwest corner of McKinley Avenue and Souder Avenue. Shown as 866 McKinley Avenue *Office* on the Study Area Graphic. The office building is to be built on the already existing Orange Barrel Media site and will employ 2,400 new workers upon completion. Recommends the following improvements:

#### Souder Avenue & Dublin Road:

- Northbound right turn lane (205')
- Change northbound lane configuration to L, L/R, R.



- Consider restricting left turns from Rickenbacker Drive during peak hours due to queuing

#### Access 1 on Souder Avenue:

- Northbound left turns from Souder into Access 1 should be prohibited

#### Souder Avenue & McKinley Avenue:

- Install 3-phase signal
- Southbound right turn lane (235')
- Modify pavement markings to provide a 70' northbound left turn lane, if possible
- Modify pavement markings to provide a 270' eastbound left turn lane, if possible

#### Access 3 on McKinley Avenue:

- Widen McKinley Avenue to provide at least 150' for a TWLT median storage for eastbound left vehicles turning into Access 3
- Westbound right turn lane (100')

#### McKinley Avenue & Central Avenue:

- Remove existing eastbound left turn signal phasing upon necessity

#### Trabue Road Hotel Site

Located on the northwest corner of Trabue Road & Rentra Drive and shown as 5595 Renner Road *Hotel/Bank* on the Study Area Graphic. This site offers a hotel with 80 rooms and the possibility of future development of a bank or small office. Recommends the following improvements:

#### Renner Road & W. St. James Lutheran Lane:

- Restrict northbound left turns during the PM Peak

#### Renner Road & Rentra Drive:

- Add a northbound left turn phase and signal head

#### Trabue Road Flex Space Site

Located on the northwest corner of Trabue Road & Walcutt Road, shown as 5210 Trabue Road *Office/Warehouse* on the Study Area Graphic. The site includes two buildings that offer a total of 24,564 square feet of light industrial/warehousing with a small amount of office space. The study concludes that a 225' left turn lane into Site Drive 1 is warranted, but not recommended due to an existing TWLTL. No other improvements are recommended.

#### Trabue Road Quarry Mixed-Use Development and McKinley Mixed-Use Development

The Quarry site is proposed to develop into a mixed-use development including single family units, multifamily units, office space, retail space, restaurant space, a clubhouse, and a public park. This site is shown as 2400 Old Dublin Road *Mixed-Use* and Quarry Trails Metro Park on the Study Area Graphic.

The McKinley development is bounded by Trabue Road to the north, McKinley Road to the east, a railroad to the west, and a lake to the south. The site is proposed to include a mixed-use development with 991 multifamily units and 170,000 square feet of retail space.



These two developments were studied in conjunction to each other to determine roadway improvements needed along Trabue Road, McKinley Avenue, and Dublin Road. The study area encompasses Trabue Road from N Hague Avenue to Riverside Drive, McKinley Avenue from W 5<sup>th</sup> Avenue to Trabue Road, and Dublin Road from Trabue Road to the Northmost Quarry Site Drive.

The study is still underway and therefore all recommended improvements may not necessarily be feasible due to area constraints. Additionally, alternatives are being evaluated that could significantly change the structure of the roadway network and are summarized below. It should be noted that each of these alternatives come with their own set of roadway improvements to be applied throughout the corridor.

#### Alternative 1 – Trabue Road, McKinley Avenue, Dublin Road Widening

This alternative recommends providing additional through lanes along Trabue Road, McKinley Avenue, and Dublin Road. Widening along Riverside Drive would be expected to range from approximately W. Lane Avenue/Greycliffe Lane south to approximately Club Road. This would provide adequate space for added lanes to taper back to original pavement width after widening for the Trabue Road & Cambridge Boulevard & Riverside Drive (US-33) intersection. Widening along Trabue Road would be expected to range from Riverside Drive west to Hague Avenue, where a westbound through lane could terminate into a drop right turn lane at Mapleway Drive. Widening on Dublin Road would be expected to range from Trabue Road north to approximately River Oaks Drive.

#### <u>Alternative 2 – Trabue Rd/McKinley Ave & Trabue Rd/Dublin Rd/Marblevista Blvd Dog Bone</u> <u>Roundabout</u>

This alternative recommends modifying two closely spaced intersections into a dog bone style roundabout, eliminating several conflict points by restricting turning movements. This alternative was determined to not be feasible due to the large footprint and number of circulating lanes required.

#### <u>Alternative 3 – Dublin Road-Scioto River Crossing</u>

This alternative recommends providing an additional crossing of the Scioto River just north of the proposed Quarry development, where it would connect Dublin Road to Riverside Drive. This alternative is anticipated to divert some traffic from Trabue Road.

#### <u>Alternative 4 – Dublin Road & McKinley Avenue Realignment</u>

This alternative recommends realigning the Dublin Road connection to Trabue Road to remove turning movements and conflict points between the Trabue Road/McKinley Avenue and Trabue Road/Dublin Road/Marblevista Boulevard intersections. This alternative connects Dublin Road to Builder's Place and stubs the previous Dublin Road connection just north of Trabue Road. This realignment is expected to offer substantial capacity improvements.

#### Alternative 5 - Cambridge Boulevard Termination or Restriction

This alternative recommends terminating or restricting the allowable movements to the connection of Cambridge Boulevard from Trabue Road. Removal of this connection is expected to divert some traffic along Trabue Road/Cambridge Boulevard to other east/west routes and improve operations at the Trabue Road & Riverside Drive intersection. However, this alternative was not considered for further analysis based on correspondence with the reviewing agencies.



#### Alternative 6 – W. 5th Avenue Extension

This alternative recommends creating a connection from W. 5<sup>th</sup> Avenue at McKinley Avenue west to N. Hague Avenue. This alternative is expected to divert some Trabue road traffic to W. 5<sup>th</sup> Avenue by creating an alternative east/west connection in the corridor. However, this alternative was not considered for further analysis based on correspondence with the reviewing agencies.

#### 2700 McKinley Avenue Multifamily Site

This site is proposed to develop 22 condominium units and is shown as 2700 McKinley Avenue *Multifamily* on the Study Area Graphic. No roadway improvements are recommended for the development of this site.

#### Metro Development - Trabue Frontage Road Apartment Site

This site is located on the south side of Trabue Frontage Road, just east of I-270, and is shown as 4407 Trabue Frontage Road *Multifamily* on the Study Area Graphic. The site is planned to develop 312 apartment units. The following roadway improvements are recommended:

Trabue Road & Trabue Frontage Road

- Eastbound right turn lane (225')
- Westbound left turn lane (225')

#### Sugar Farm and Renner Road Sites

The Sugar Farms site is located on the northeast corner of Renner Road and Alton & Darby Creek Road and is expected to develop 548 single family housing units and 220 multifamily apartment units.

The Renner Road site is located on the southeast corner of Renner Road and Alton & Darby Creek Road and is expected to develop 165 single family housing units and 185 multifamily apartment units.

The study area consists of Alton & Darby Creek Road from Roberts Road to Cole Road and Renner Road from Hilliard & Rome Road to the 3<sup>rd</sup> Sugar Farms Site Drive, in addition to the Hilliard & Rome Road & Fisher Road intersection. The following roadway improvements are recommended:

#### Alton & Darby Creek Road & Roberts Road

- Future implementation of a roundabout

Alton & Darby Creek Road & Sugar Farms Drive 1

- Northbound right turn lane (285')
- Southbound left turn lane (285')

#### Alton & Darby Creek Road & Walker Road/Sugar Farms Drive 2

- Southbound left turn lane (285')
- Walker Road to be widened to 3 lanes to align with site drive and provide an Eastbound left turn lane (285')
- Pedestrian infrastructure should be added on the East side of Alton & Darby Creek Road



#### Alton & Darby Creek Road & Renner Road

- Northbound right turn lane (200')
- Revise pavement markings to the intersection to the north to install a TWLTL
- Extend existing southbound left turn lane (465')

#### Alton & Darby Creek Road & Cole Road/Renner Site Drive 1

- Northbound right turn lane (285')

#### Renner Road & Renner Site Drive 3

- Install a traffic signal once warranted
- Eastbound left turn lane (225')

#### Renner Road & Renner Site Drive 2

- Westbound left turn lane (225')

#### Renner Road & Tanglewood Park Boulevard

- Provide for widening related to the dual northbound left turn lanes needed at Hilliard & Rome Road & Renner Road
- Provide southbound right turn lane and westbound right turn lane as part of the Hilliard & Rome Road & Renner Road Horizon Year Vision Plan

#### Hilliard & Rome Road & Renner Road

- Extend the eastbound left turn lane
- Extend the eastbound right turn lane
- Add additional eastbound right turn lane
- Extend westbound left turn lane
- Implement westbound right turn lane
- Additional northbound left turn lane
- Additional southbound through lane

#### Alton & Darby Creek Road & Feder Road

- Westbound right turn lane (325')
- Northbound right turn lane (250')
- Extend existing southbound left turn lane (640')

#### Hilliard & Rome Road & Feder Road/Fisher Road

- Eastbound left turn lane
- Eastbound through/right lane
- Westbound right turn lane
- Additional northbound through lane
- Additional southbound through lane
- Additional southbound right lane



#### Trabue Road Bridge Improvements - FRA-270-9.30

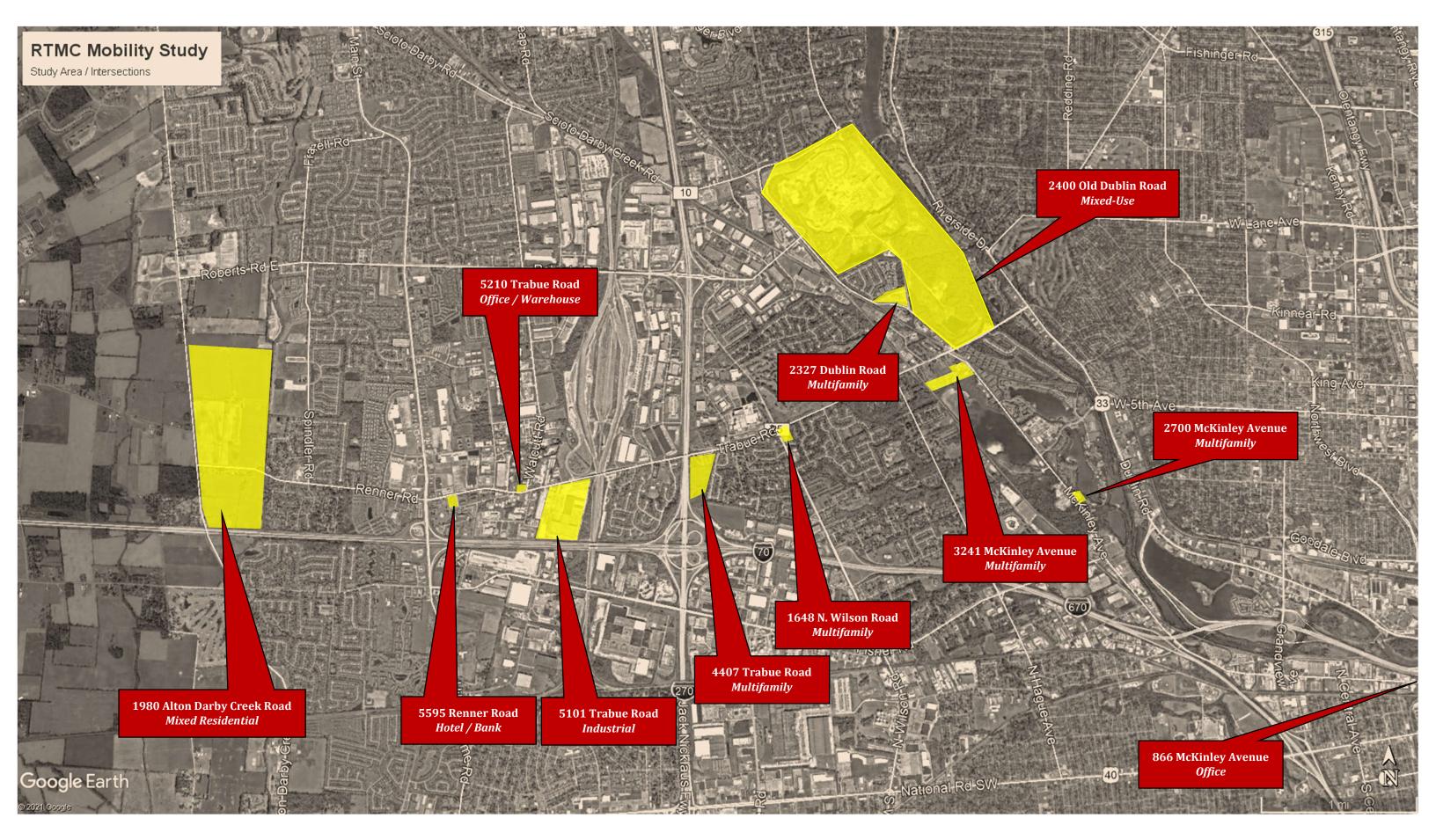
The Trabue Bridge crossing I-270 is due for rehabilitation improvements. However, these improvements are not expected to cause any lane modifications before or after the bridge; lane shifts occurring on the bridge itself will be tapered back into the original configuration on either side.

#### Norfolk Southern Railroad Bridge and Shared Use Path - FRA-CR27-7.85

The bridge crossing over the Norfolk Southern Railroad is due for rehabilitation improvements. However, these improvements are not expected to cause any significant roadway modifications. This plan also adds 2100 feet of shared use path along the south side of Trabue Road.

#### LinkUS NWC Community Sentiment Report

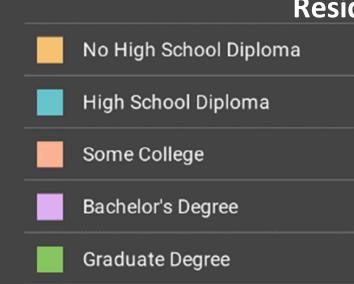
Provides detailed data from 13 stakeholder workshops and an online public survey to capture insights and opinions of individuals who frequently travel on the Northwest Corridor. 780 responses were submitted and general consensus desired a less auto-centric corridor, with more safe mobility options and green space.



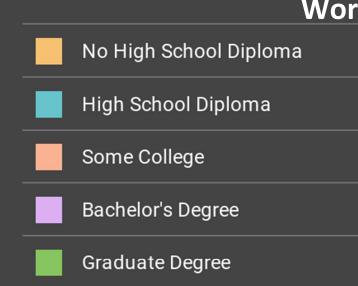
### Attachment C Demographic Data

# **Traffic by Education of Head of Household**

| <b>All Travelers</b>   |        |
|------------------------|--------|
| No High School Diploma | 10.31% |
| High School Diploma    | 27.17% |
| Some College           | 26.60% |
| Bachelor's Degree      | 23.55% |
| Graduate Degree        | 12.38% |



| Visitors Only          |        |
|------------------------|--------|
| No High School Diploma | 10.32% |
| High School Diploma    | 27.18% |
| Some College           | 26.58% |
| Bachelor's Degree      | 23.54% |
| Graduate Degree        | 12.38% |





### **Residents Only**

| 5.99%  |
|--------|
| 24.11% |
| 34.01% |
| 25.90% |
| 9.99%  |

| 8.94%  |
|--------|
| 26.40% |
| 30.76% |
| 23.48% |
| 10.43% |
|        |

# **Traffic by Family Status**

| <b>All Travelers</b>         |        |
|------------------------------|--------|
| With Kids                    | 36.99% |
| With No Kids                 | 63.01% |
| With Kids under 6 years      | 17.39% |
| With Kids between 6-17 years | 27.56% |



| Visitors Only                |        |
|------------------------------|--------|
| With Kids                    | 36.99% |
| With No Kids                 | 63.01% |
| With Kids under 6 years      | 17.38% |
| With Kids between 6-17 years | 27.57% |



### **Residents Only**

| 37.71%       |
|--------------|
| 62.29%       |
| 19.99%       |
| \$<br>25.74% |

| 39.10% |
|--------|
| 60.90% |
| 19.10% |
| 27.92% |

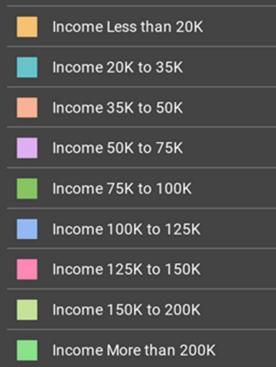
## **Traffic by Household Income**

### **All Travelers**

| Income Less than 20K  | 15.41% |
|-----------------------|--------|
| Income 20K to 35K     | 14.16% |
| Income 35K to 50K     | 13.95% |
| Income 50K to 75K     | 20.86% |
| Income 75K to 100K    | 13.48% |
| Income 100K to 125K   | 8.94%  |
| Income 125K to 150K   | 5.30%  |
| Income 150K to 200K   | 4.27%  |
| Income More than 200K | 3.63%  |

### Visitors Only

| Income Less than 20K  | 15.42% |
|-----------------------|--------|
| Income 20K to 35K     | 14.17% |
| Income 35K to 50K     | 13.94% |
| Income 50K to 75K     | 20.85% |
| Income 75K to 100K    | 13.48% |
| Income 100K to 125K   | 8.94%  |
| Income 125K to 150K   | 5.30%  |
| Income 150K to 200K   | 4.27%  |
| Income More than 200K | 3.63%  |





### **Residents Only**

| 8.6  | 58% |
|------|-----|
| 10.7 | 74% |
| 16.1 | 0%  |
| 29.0 | 03% |
| 16.6 | 58% |
| 8.9  | 94% |
| 5.4  | 11% |
| 2.9  | 96% |
| 1.4  | 16% |

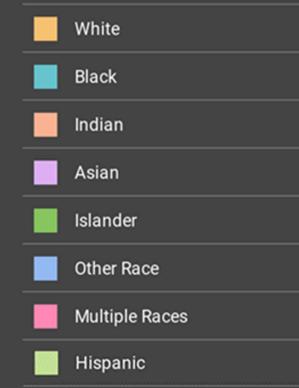
| 11.90% |
|--------|
| 13.91% |
| 14.91% |
| 23.14% |
| 15.07% |
| 8.36%  |
| 5.89%  |
| 3.38%  |
| 3.42%  |
|        |

# **Traffic by Race**

#### All Travelers White White 82.32% Black 8.26% Black 0.21% Indian Indian Asian 4.21% Asian Islander 0.08% Islander Other Race 2.40% Other Race Multiple Races Multiple Races 2.52% Hispanic Hispanic 4.73%

### Visitors Only

| White          | 82.32% |
|----------------|--------|
| Black          | 8.26%  |
| Indian         | 0.21%  |
| Asian          | 4.21%  |
| Islander       | 0.08%  |
| Other Race     | 2.40%  |
| Multiple Races | 2.52%  |
| Hispanic       | 4.72%  |



### **Residents Only**

| { | 30.29% |
|---|--------|
|   | 8.15%  |
|   | 0.15%  |
|   | 5.79%  |
|   | 0.15%  |
|   | 2.57%  |
|   | 2.91%  |
|   | 4.87%  |

| ł | 80.28% |
|---|--------|
|   | 9.20%  |
|   | 0.20%  |
|   | 4.06%  |
|   | 0.11%  |
|   | 3.40%  |
|   | 2.75%  |
|   | 5.89%  |
|   |        |

### Attachment D Steering Committee & Advisory Group



#### **RTMC Steering Committee and Advisory Panel DRAFT LIST**

#### Steering Committee

City of Columbus

- Michael Liggett, project manager
- Ryan Lowe Division of Traffic Management <u>RJLowe@columbus.gov</u>
- Andrew Dyer, Columbus City Council <u>ATDyer@columbus.gov</u>
- Jason Jenkins, Mayor's Office <u>JTJenkins@columbus.gov</u>

Mid-Ohio Regional Planning Commission

 Tobi Otulana, Associate Planner <u>totulana@morpc.org</u>

Central Ohio Transit Authority

- Andrew Neutzling, Service Planner
   <u>NeutzlingAJ@cota.com</u>)
- Drew Merrill, Planner MerrillAJ@cota.com

Franklin County

- Fritz Crosier, Engineers Office
   wcrosier@franklincountyengineer.org
- Mike Andrako, Mobility Engineer <u>mandrako@franklincountyengineer.org</u>

City of Upper Arlington

- Jackie Theil, City Engineer <u>ithiel@uaoh.net</u>
- Janie Hollingsworth, Assistant City Engineer jhollingsworth@uaoh.net

West Scioto Area Commission (Kristen McKinley, Chair, )

- Brian Endicott, Zoning Chair <u>Bendicott.wsac@gmail.com</u>
- Larry Weber, Planning Committee
   <u>lweber.wsac@gmail.com</u>
- Rita Cabrel
   <u>rcabral.wsac@gmail.com</u>

Far West Area Commission

- Sharon Rastatter, Chair <u>srastatter.fwsac@gmail.com</u>
- Kelley Arnold, Zoning Chair <u>karnold.fwsac@gmail.com</u>
- Debi Hampton
   <u>dhampton.fwsac@gmail.com</u>

Land Owners/Developers

- Joe Reidy, Thrive Companies jreidy@thrivecos.com
- Tre Giller, Metro Development tgiller@drk-realty.com
- Jarred Smith, Preferred Living jsmith@livepreferred.com

#### Advisory Panel

Advisory Panel members will receive periodic email updates on the study with the opportunity to provide comment/feedback. This panel will hold not decision making authority.

City of Columbus

- Mark Lundine, Department of Development
   <u>MALundine@columbus.gov</u>
- Rebecca Deeds, Department of Neighborhoods
   <u>REDeeds@columbus.gov</u>
- Melissa Green, Department of Neighborhoods <u>MEGreen@columbus.gov</u>
- Brad Westall, Department of Recreation and Parks
   <u>BRWestall@Columbus.gov</u>

#### Metro Parks

- Steve Studenmund, Metro Parks
   <u>studenmund@metroparks.net</u>
- Tatiana Parfenova, Landscape Architect <u>parfenova@metroparks.net</u>

Franklin County

 Jenny Snapp, Economic Development & Planning jrsnapp@franklincountyohio.gov Franklinton Area Commission

Brian Estabrook, Housing + Development Subcommittee
 <u>Bestabrook.FAC@gmail.com</u>

Greater Hilltop Area Commission

 Rachel Wenning, Chair <u>r.f.wenning@gmail.com</u>

Advocacy Organizations

- Erin Synk, Yay Bikes <u>eesynk@gmail.com</u>
- Josh Lapp, Transit Columbus chair@transitcolumbus.org

Employers/Business Associations

- McKinley Avenue Employers Association president@maeacolumbus.com
- Hilltop Business Association
   <u>suttonnr@aol.com</u>
- Franklinton Board of Trade <u>trent@franklintonbot.org</u>





# **RTMC Mobility Study**

(Renner Road - Trabue Road - McKinley Avenue Corridor)

## Agenda

- Study Area & History
- Purpose & Need
- Goals & Objectives
- Scope Outline
- Project Schedule
- Update from Thrive
- Comments/Questions

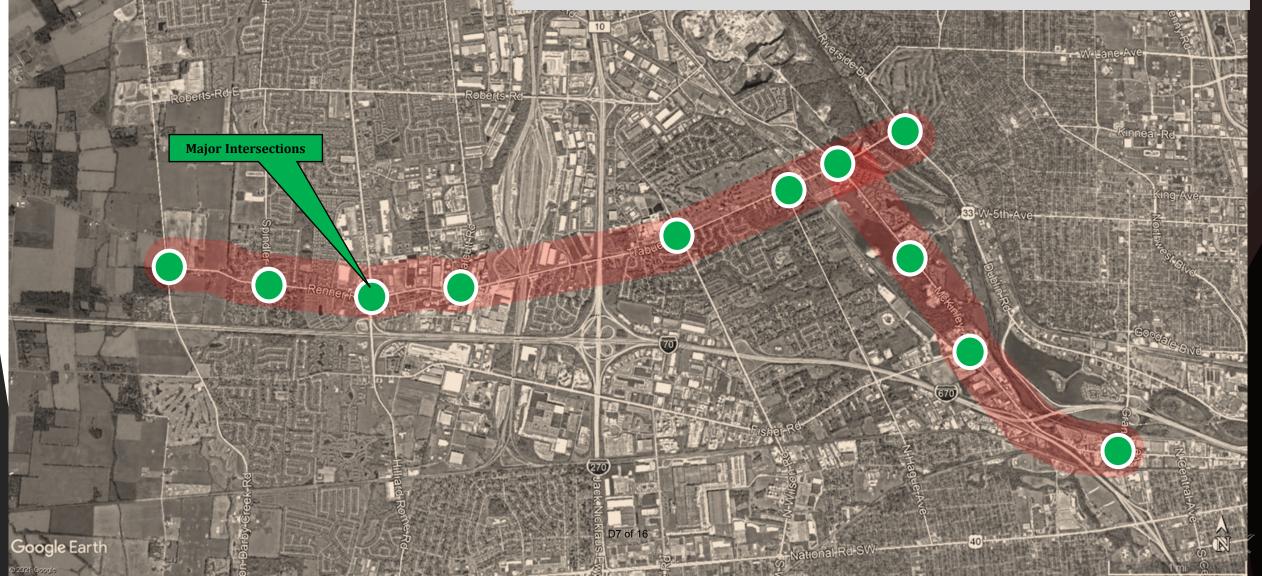


CARPE

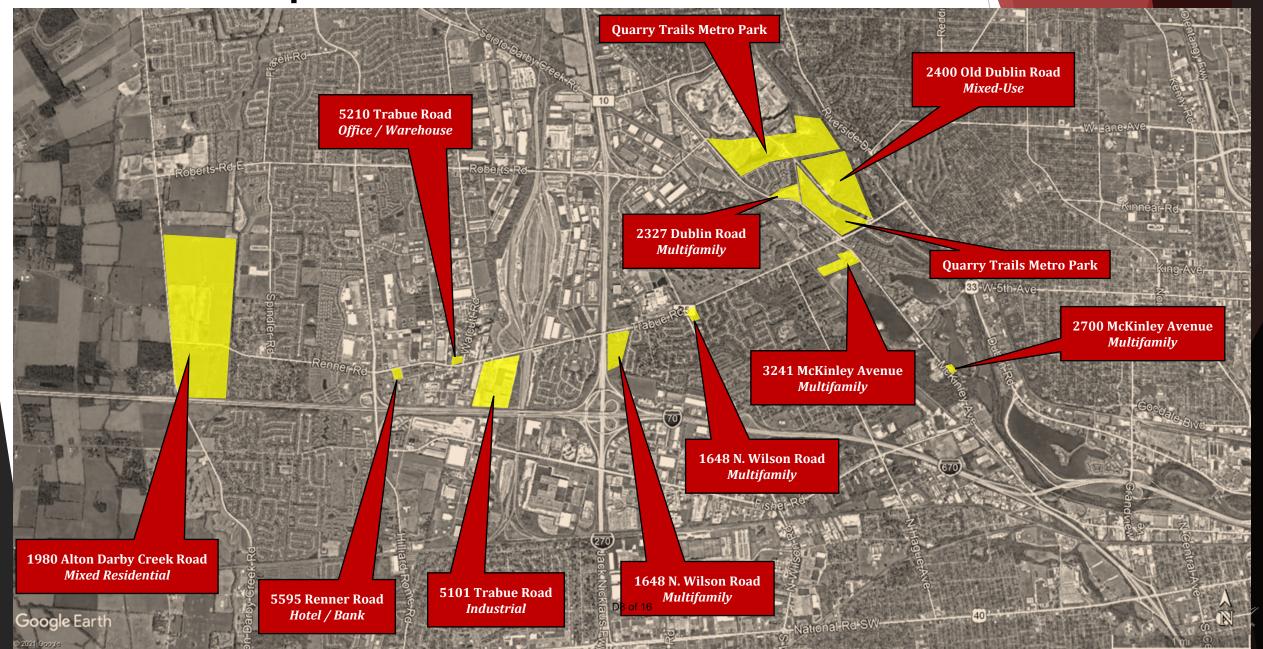
MARTY transportation

## **Study Area**

- Renner Road from Alton Darby Creek Road to Trabue Road
- Trabue Road from Renner Road to Riverside Drive (US-33)
- McKinley Avenue from Trabue Road to Grandview Avenue



## **Area Developments**



# Purpose & Need

- Pre-existing challenges
  - Mobility concerns
  - Development pressures
- Important corridor
  - Wide range of land uses
  - Connectivity to US-33, I-70, I-670, & I-270
- Growth trends in City of Columbus metro area
- Holistic/comprehensive study
  - Previous traffic study work evaluates at micro scale
  - Mobility study evaluates at macro scale



# Goals & Objectives

- General Goals & Objectives
  - Improved mobility in the RTMC
  - Maximize economic vitality
  - Improve health & safety
  - Improve access to employment
- Steering Committee and Public Input will be utilized to aid project team in expanding goals & objectives
- Use study results to bring forward implementable solutions
- Short & long-term recommendations will be identified so funding can be pursued



# Scope Outline

- Study & Analysis
  - Previous planning efforts relating to all modes of transportation for people and goods
  - Existing and future conditions transportation modes for people and goods
  - Needs and desires of community members and roadway users through creative public engagement
  - Stakeholders / Steering Committee



# Scope Outline

- Project Development Include, but not limited to...
  - Modifications to existing corridor roadways
  - Modifications to transit system
  - Modifications to pedestrian and bicycling environment
  - Public education efforts
  - Modifications to alternative corridors
- Project evaluation criteria to be developed
- Criteria will be used to evaluate projects to determine priority
- The study will conclude with "next-steps" framework



## Schedule

- COVID-19 impacts on traffic volumes & travel patterns
- Two-part study
  - Part I Scope items which can be completed *before* traffic and public meetings reach normalcy
  - Part II Scope items to be completed *after* traffic and public meetings reach normalcy



MAKIY transport

## Schedule

## Part I Schedule

| Task   | Estimated Completion              |
|--|-----------------------------------|
| Conduct initial West Scioto Area Commission and Steering Committee<br>engagement meetings                            | February-March 2021               |
| Develop study goals and objectives   | February-March 2021               |
| Research prior planning and engineering efforts relating to area   | February-March 2021               |
| Study the area demographics  | March-April 2021                  |
| Develop, disperse, and evaluate online questionnaire to identify the key<br>issues and ideas                         | April-June 2021                   |
| Inventory and assess the existing conditions of the area infrastructure  | April-May 2021                    |
| Review crash data and identified high-crash locations in the area  | May-June 2021                     |
| Conduct an origin-destination study of the area  | June-July 2021                    |
| Conduct 2 <sup>nd</sup> Commission and Steering Committee engagement meetings to present completed analysis/findings | August 2021                       |
| THE CITY OF<br>COLUMBUS<br>ANDREW J. GINTHER, MAYOR<br>D14 of 16   | CARPENTER<br>MARTY transportation |



 $\square$ 

## **Questions / Comments**

- Project page on City of Columbus website
- http://bit.ly/RTMCmobility
- Comments and questions can be submitted online via Jotform link or sent to <u>RTMC@columbus.gov</u>



THE CITY OF

COLUMB

ANDREW J. GINTHER, MAYOR

CONTACT INFO Traffic Management 111 N. Front Street Columbus, OH 43215 Office : (614) 645-3111 Fax : (614) 645-7805 Email : Contact Information IC TRAFFIC MANAGEMENT

FIND US **f** FOLLOW US **v** WATCH US **b** 

CARPENTER MARTY transportation

### ABOUT THE STUDY

The Renner Rd/Trabue Rd/McKinley Rd corridor (RTMC) serves multiple communities on Columbus west side. Additionally, it provides connectivity to Downtown Columbus, US-33, I-70, and I-670. Like many corridors across the city of Columbus, the RTMC corridor is experiencing significant growth and development brining increased pressure on the transportation network.

In response to these growing pains, as well as pre-existing challenges on the corridor, the City of Columbus is undertaking a mobility study that will comprehensively and holistically study the corridor. This study will result in realistic strategies, both long term and short term, to support the areas continued economic vitality, improve health and safety, and access to employment opportunities.

The RTMC Mobility Study will be completed in two phases. Phase One is currently underway and is expected to complete in August of 2021. Phase Two will then follow.

Documents: <u>Study Area Map</u> Public Comments:

Please submit public comments <u>here</u> or email <u>RTMC@columbus.gov</u>. If emailing, please provide your name and contact information. Anonymous comments will not be accepted.



# Next Steps - Public Survey



- Public survey to be developed
- Stakeholder input needed for survey development
- Sample Questions
  - When walking in the corridor, what issues do you see?
  - Where do you feel most safe / least safe traveling in the RTMC?
  - What is your primary mode of transportation in the corridor? Preferred mode of transportation?



## Attachment E Public Survey





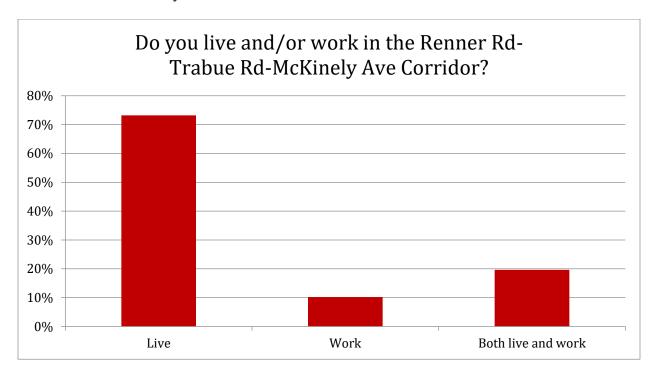
### Results of the RTMC Mobility Study Public Survey

### Background

The RTMC Mobility Study public survey was created with eighteen questions. It included a variety of multiple choice, rating scales, and open-ended response styles. It was available from May 17, 2021, until June 17, 2021. We received 1093 total responses, with the most responses (318), per day, coming in on May 19, 2021. The survey format was online via SurveyMonkey and was distributed via the stakeholder group, social media, and the City of Columbus website. The results for each question are summarized below.

People who submitted responses spent an average of 7 minutes and 11 seconds on the survey. The most skipped question was question #14, which was "Please provide any additional thoughts, comments, or suggestions regarding mobility in the Renner Rd-Trabue Rd-McKinley Ave Corridor."

**Question #1 - Do you live and/or work in the Renner Rd-Trabue Rd-McKinely Ave Corridor?** A total of 978 people provided an answer to this question. The majority of people (73.21%) indicated they live in the corridor. Many (19.63% | 192 people) that were surveyed both live and work in the corridor. Only 10.22% indicated the work in the corridor.



#### **Other Responses**

There were 124 other responses for this question. The majority of the responses (55.3%) indicated they travel through the area, with most people indicating they frequently travel through the area for work, the Quarry Plaza, child activities, shopping, dining, and/or Camp Chase Trail/Ohio to Erie Trail. Many people (21.8%) said they live close to the corridor or have relatives in the area (5.6%). There were several people (9.7%) that said "no," "neither," or "N/A." One person indicated he/she will work in the area when the jail opens.



## Question #2 - What is the zip code of your residence? What is the zip code of your place of work?

### Home

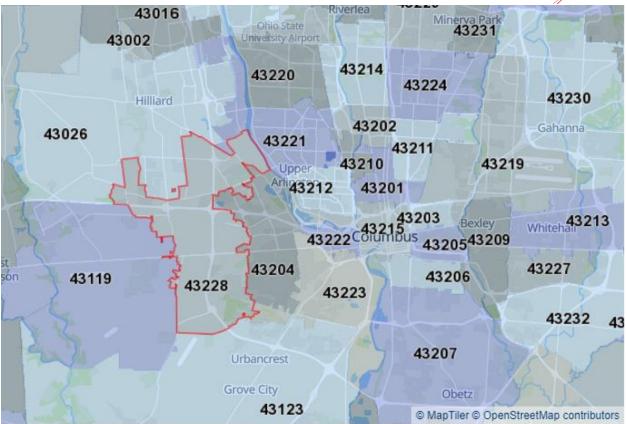
There was a total of 1,075 responses for the residence zip code portion of the question. The majority of people who responded to this survey question reside in the Columbus, Ohio 43228 zip code. A large percentage of residences reside in the Hilliard, Ohio 43026 zip code and the Columbus, Ohio 43204 zip code. An abbreviated list of work zip codes is listed below. A full list of zip codes for this category is available upon request.

### Work

There was a total of 778 responses for the place of work zip code portion of the question. The majority of people who responded to this survey question indicated they work in the Columbus, Ohio 43228 zip code, followed by the Columbus, Ohio 43215 zip code, the Hilliard, Ohio 43026 zip code, and the Columbus, Ohio 43204 zip code and 43210 zip code. An abbreviated list of work zip codes is listed below. A full list of zip codes for this category is available upon request.

| Residence Zip Codes |        |            | ] | Wo       | orkplace Zip ( | Codes      |
|---------------------|--------|------------|---|----------|----------------|------------|
| Zip Code            | Number | Percentage |   | Zip Code | Number         | Percentage |
| 43228               | 491    | 45.67%     |   | 43228    | 155            | 19.92%     |
| 43026               | 249    | 23.16%     |   | 43215    | 118            | 15.17%     |
| 43204               | 190    | 17.67%     |   | 43026    | 113            | 14.52%     |
| 43119               | 45     | 4.19%      |   | 43204    | 65             | 8.35%      |
| 43221               | 42     | 3.91%      |   | 43210    | 49             | 6.30%      |
| 43212               | 10     | 0.93%      |   | 43212    | 31             | 3.98%      |
| 43220               | 4      | 0.37%      |   | 43017    | 26             | 3.34%      |
| 43017               | 3      | 0.28%      |   | 43221    | 19             | 2.44%      |
| 43202               | 3      | 0.28%      |   | 43205    | 14             | 1.80%      |
| 43205               | 3      | 0.28%      |   | 43219    | 14             | 1.80%      |
| 43206               | 3      | 0.28%      |   | 43016    | 11             | 1.41%      |
| 43328               | 3      | 0.28%      |   | 43201    | 10             | 1.29%      |





#### Notes

Five people mentioned "home" in the work zip code category, so the home zip code was used for the work zip code field. If a company name was indicated for the work field and there was a location in the Columbus, Ohio area, the zip code provided via a Google search was used. If there was more than one office in the Central Ohio area, the work zip code was not used (i.e. Columbus City Schools, Hilliard Schools, Coldwell Banker Realty, BMV, etc.). Retired, none, and N/A entries were removed from the numerical fields for study purposes. There were a few instances when someone provided two zip codes for work. Both were used for analyzation purposes.

#### **Question #3 - How do you currently travel through the corridor? Select all that apply.**

A total of 1,092 people provided an answer to this question. The majority of people traveling through the corridor uses a personal vehicle. There were many people that use a bike, walk, and use a ride-sharing service, like Uber or Lyft. Several people indicated they use public transit or other transportation as well.

| Answer Choices                 | Responses |      |
|--------------------------------|-----------|------|
| Personal vehicle               | 99.45%    | 1086 |
| Bike                           | 12.27%    | 134  |
| Walk                           | 9.98%     | 109  |
| Ride-sharing (Uber/Lyft, etc.) | 5.13%     | 56   |
| Public transit                 | 2.56%     | 28   |
| Other (please specify)         | 2.56%     | 28   |



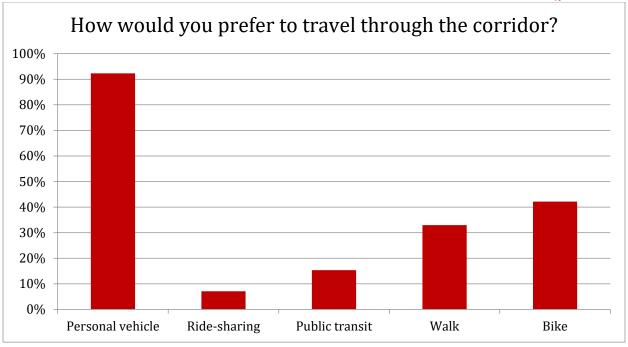
Other modes of transportation mentioned include a work or government vehicle, jogging/running, school bus, roller skating/roller blading/skateboarding, truck and trailer/semi-truck, scooter, and motorcycle. There are two people that indicated they would like to bike but do not feel safe, and there were two people that indicated they do not travel through the corridor.

| Other Modes of Transportation            | Number of Responses |
|--|---------------------|
| Work or Government Vehicle               | 8                   |
| Jog/Run                                  | 5                   |
| School bus                               | 4                   |
| Roller skate, Rollerblade, or Skateboard | 3                   |
| Would like to, but not safe (bike)       | 2                   |
| Rarely go through corridor               | 2                   |
| Truck & trailer/Semi-truck               | 2                   |
| Scooter                                  | 1                   |
| Motorcycle                               | 1                   |

**Question #4 - How would you prefer to travel through the corridor? Select all that apply.** A total of 1,089 people provided an answer to this question. Most people surveyed (92.29% | 1,0005 votes) prefer to travel through the corridor with a personal vehicle. The next most popular preference for transportation was biking (42.15% | 459 votes) and walking (32.97% | 359 votes). There were 167 people (15.34%) that indicated they prefer to travel via public transit and 77 people (7.07%) prefer to travel with a ride-sharing service, like Uber, Lyft, etc..

There were several other responses, including jogging/running (7), roller skating/roller blading/skateboarding (4), scooters/mopeds (3), light rail/Maglev (3), school bus (2), shared use path/dog walking lane (2), motorcycle (1), and wheelchair (1). Three people indicated they preferred not to be in the area and/or that it was "too scary to walk or bike."





### Question #5 - How important are each of the following goals to you? (1-5, 1 being not important at all, 5 being very important)

#### **Definitions Provided**

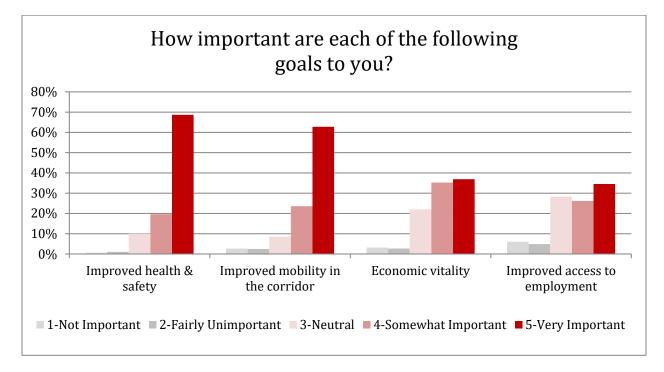
- Mobility for the corridor = transportation options that you can count on to get you where you want to go and when.
- Vitality for the corridor = transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.

A total of 1,089 people provided an answer to this question, with a total of 3,257 responses. According to public survey responses, improved health & safety is the most important goal, with 68.69% of votes for this category as very important and 19.65% of votes as somewhat important. The improved health & safety category is more popular (1,089 total votes) and has more "important" (962 votes, 748 very important and 214 somewhat important) votes than the improved mobility in the corridor category (with 938 votes, 682 very important and 256 somewhat important votes).

Economic vitality and improved access to employment were ranked very important (398 votes and 373 votes, respectively) and somewhat important (380 votes and 283 votes, respectively) to many people. Improved access to employment had the highest number of not important (65) and fairly unimportant (53) votes.



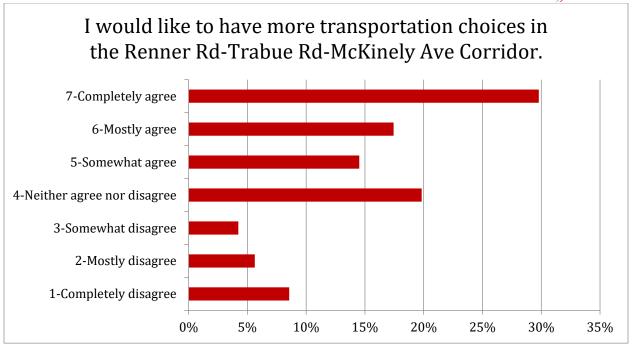
|                                   | 1-Not<br>Important | 2-Fairly<br>Unimportant | 3-Neutral | 4-Somewhat<br>Important | 5-Very<br>Important |
|-----------------------------------|--------------------|-------------------------|-----------|-------------------------|---------------------|
| Improved health & safety          | 7                  | 11                      | 109       | 214                     | 748                 |
| Improved mobility in the corridor | 29                 | 27                      | 93        | 256                     | 682                 |
| Economic vitality                 | 34                 | 29                      | 237       | 380                     | 398                 |
| Improved access to employment     | 65                 | 53                      | 306       | 283                     | 373                 |



## Question #6 - How much do you agree with the following statement? I would like to have more transportation choices in the Renner Rd-Trabue Rd-McKinely Ave Corridor. (1-7, 1=completely disagree, 7=completely agree)

A total of 923 people provided an answer to this question. The majority of responders (61.75%) agreed, rather than disagreed (18.42%) or were neutral (19.83%), with the statement regarding the opportunity for additional transportation choices in the corridor. The strongest response category was completely agree, at 29.79% of the responses, with the neutral category and mostly agree (17.44%) categories coming in next. There were several people that completely disagreed (79 responders | 8.56% of responses) with the statement.

## CARPENTER MARTY transportation



### Question #7 - Where would you like to see access or safety improvements made when considering walking and biking in the RTMC?

A total of 827 people provided an answer to this question. Safety was a popular topic when it came to walking and biking in the project area. Many people mentioned separated or protected bike lanes, sidewalks, and multi-use paths due to the volume of traffic and speeds. Several others mentioned crosswalks and pedestrian crossing improvements.

Responses indicate people would like connectivity from their homes/neighborhoods and businesses to the Quarry metro park; other Hilliard trails (Camp Chase Trail, Heritage trail, etc.); other Columbus trails (Scioto trail, etc.); Hilliard shops, restaurants, and businesses; Grandview; Arlington; and Downtown Columbus. When it came to specific locations, Trabue Road was mentioned more than any other road (261 comments). McKinley Avenue, Renner Road, Hilliard Rome Road, Wilson Road, Hauge Avenue, Riverside Drive, Scioto Darby Road, Dublin Road, 5<sup>th</sup> Avenue, the UPS distribution center, and Alton Darby Creek Road were all popular responses.

There were several people that included non-location comments and/or comments related to nonbicycle or walking improvements. For details on the top 30 locations, see below.

### CARPENTER MARTY transportation

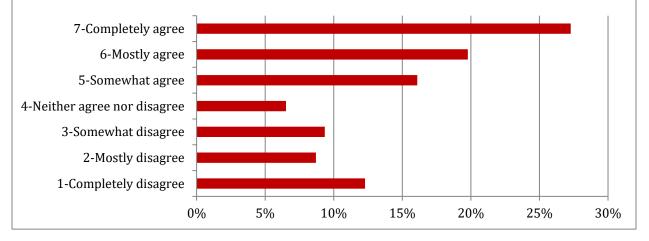
| Location                   | Number of Mentions |
|----------------------------|--------------------|
| Trabue Road                | 261                |
| McKinley Avenue            | 121                |
| Renner Road                | 117                |
| Hilliard Rome Road         | 99                 |
| Park connections           | 91                 |
| Wilson Road                | 74                 |
| Hague Avenue               | 33                 |
| Riverside Drive            | 32                 |
| Scioto Darby Road          | 28                 |
| Dublin Road                | 27                 |
| 5th Avenue                 | 24                 |
| UPS                        | 24                 |
| Alton Darby Creek Road     | 22                 |
| school                     | 21                 |
| Spindler Road              | 16                 |
| golf course                | 15                 |
| Walcutt Road               | 13                 |
| Railroad                   | 10                 |
| Roberts Road               | 9                  |
| Fisher Road                | 8                  |
| Travis Road                | 8                  |
| Golfview Woods             | 8                  |
| Shopping centers           | 7                  |
| Feder Road                 | 6                  |
| San Margarita neighborhood | 6                  |

Question #8 - How much do you agree with the following statement? I am comfortable with personal-vehicle travel time moderately increasing if it improves safety and adds additional traveling options – such as pedestrian and bicycle improvements – along the corridor. (1-7, 1=completely disagree, 7=completely agree)

A total of 920 people provided an answer to this question. The majority of responders (63.15%) agreed, rather than disagreed (30.33%) or were neutral (6.52%), with the statement regarding personal-vehicle travel time moderately increasing if it improves safety and adds additional traveling options along the corridor. The strongest response category was Completely Agree, at 27.28% of the responses. There were many people that completely disagreed (113 responders | 12.28% of responses) with the statement as well.

# CARPENTER MARTY I am comfortable with personal-vehicle travel time poderately increasing if it improves safety and adds

moderately increasing if it improves safety and adds additional traveling options – such as pedestrian and bicycle improvements – along the corridor.



## Question #9 - With continued growth in the Renner Rd-Trabue Rd-McKinley Ave Corridor, I'd like to see MORE:

A total of 846 people provided an answer to this question. The majority of comments revolved around congestion, travel times, infrastructure for alternative modes of transportation (i.e. bike, run, walk), safety, and access. Many people would like to see more sidewalks and/or multi-use paths. There were a couple of comments about bike lanes, but most indicated a protected or separated path was desired. The primary focus for the sidewalk/multi-use path comments was on safety, walkability, access, and connecting to other neighborhoods, parks, restaurants/retail, parks, and other paths. The desire for additional crosswalks was mentioned several times.

Widening the roadway to include additional lanes and/or turn lanes was another very popular topic. Many people mentioned areas between Hilliard Rome Rd., the UPS distribution center, and Riverside Drive. Traffic signals were another hot topic. Many people spoke about the length of green lights not being long enough, sometimes creating incidences of people running red lights to get through the signal cycle.

Others thought additional signals, or a turn signal, would be beneficial. Requested locations for additional signals include Hilliard Rome Road and Walcutt Road; Trabue Road and Westbelt Drive; Brookhollow subdivision; and Renner Road, by Sweetwater Estates and the corner of Galleon Boulevard.

Congestion was mentioned in many comments. The most noted specific locations were the bottlenecks near the UPS facility and the Spindler Road Sports Complex. People also mentioned it was difficult to turn out of subdivisions, turn left onto Trabue Rd., and turn at other areas along the corridor. Heavy truck traffic was mentioned several times, and the desire to have direct freeway access for inter- and intra-state commercial vehicles was mentioned. Others requested alternate routes to avoid the congestion and decrease travel time.



When people brought up safety concerns, they were mostly concerned with pedestrian and driver safety. A path to get to/from the bus stops is desired. People also said they would like to see protected and/or separated and wider paths and sidewalks; crosswalks with signage and lights; bridges over busy intersections; and a way to improve driver attention so it was safer to use paths.

People indicated they would like to see bus stop and route improvements. The majority of bus comments indicated a desire to have covered shelter, benches, trash cans, and a concrete pad where drainage is not as much of a concern. They would like to see buses pull over at stops, allowing traffic to continue. Many people would also like to see an increase in frequency and stops. People mentioned routes from the Hilliard area to the OSU campus area, without changing buses multiple times.

Beautification of streets and surroundings was a popular theme among the comments. People indicated they would like to see trash clean-up, grass mowed, replacement of invasive plants with native plants, flowers, and trees. They desire additional parks/green space, playgrounds, recreation centers, and community gardens.

Speeding was also mentioned several times, with some people suggesting additional police enforcement, additional signage, and/or speed monitor trailers. People would like to see the roadway potholes repaired, better drainage and smoother pavement. There is also interest in having additional access exit/entrance to I-70 between Hilliard and London. The common recommendations were Alton Darby Creek Road and Hague Avenue. In general, most people want access to restaurants and other retail; parks, rivers, and other paths or trails; Downtown; Upper Arlington; and other nearby neighborhoods.

Developments, future growth, and housing were a popular topics. Many people would like to see more affordable single-family housing and more (non-fast-food chain) restaurants. Several people indicated small or local businesses and family-friendly restaurants would be their preference. Other interests included groceries, drugstores, and coffee shops.

Several people thought roundabouts or traffic circles would benefit the area. Specific locations included Alton Darby Creek Road and Renner Road; Spindler Road and Roberts Road; and 5<sup>th</sup> Avenue and Lake Shore Drive.

Underpasses, overpasses, bridges, and/or tunnels were mentioned several times. Some people want the additional access and connectivity to Downtown, while others want to avoid railroad crossings or busy intersections. There were several people that wanted it for wildlife to cross so there can be fewer collisions.



| Number of<br>Responses | Comments   |
|------------------------|--|
| 309                    | Bicycle and pedestrian paths and/or lanes (including sidewalks)              |
| 288                    | Widen/additional lanes or turn lanes   |
| 103                    | Traffic signals (additional signals, signal timing, or coordination updates) |
| 78                     | Congestion, travel time, and traffic patterns                                |
| 70                     | Safety (sidewalks or paths)  |
| 57                     | Reliable public transit options & improved bus stops                         |
| 53                     | Beautification of streets and surroundings                                   |
| 40                     | Speed management/lower speed   |
| 39                     | Access   |
| 25                     | Economic growth and development  |
| 22                     | Roundabouts  |
| 20                     | Housing  |
| 17                     | Underpass/overpass/bridge/tunnels  |
| 14                     | Police enforcement   |
| 10                     | Railroads  |
| 9                      | Roadway surface improvements   |

## Question #10 - With continued growth in the Renner Rd-Trabue Rd-McKinley Ave Corridor, I'd like to see LESS:

A total of 783 people provided an answer to this question. The most popular response to this question was overwhelmingly "apartments." Many people attributed it to the congestion, while a few others commented about them being unkempt and depreciating.

Congestion, back-ups, and stopped traffic were very popular responses. Specific areas mentioned include Wilson Road to McKinley Avenue, Waltham Road to (and including) Hilliard Rome Road, Trabue Road, Renner Road, the Trabue Road/McKinley Avenue/Dublin Road intersection, the Renner Road and Hilliard Rome Road intersection, Hilliard Rome Road and the I-70 interchange, school bus stops on Renner Road, the Spindler Road area, and McKinley Avenue (due to railroad traffic on multiple tracks). Specifically, left turns and the UPS truck traffic was mentioned multiple times when it came to congestion, traffic volume, and safety.

Commercial vehicles, including semi-trucks, UPS trucks, dump trucks, and delivery trucks make up the third most popular response. People said they would like to see less of them and specifically mentioned the Quarry at Roberts Road, Trabue Road, Renner Road, Hilliard Rome Road, and Wilson Road to Dublin Road.

General volume of vehicle traffic was the fourth most popular response. Specific locations include Renner Road, between Hilliard Rome Road and Alton Darby Creek Road, and Hilliard Rome Road to the freeway. Additional popular comments are listed below.



| Number of<br>Responses | Comments  |
|------------------------|---|
| 126                    | Apartments  |
| 113                    | Congestion, backups, and stopped traffic  |
| 67                     | Commercial traffic/vehicles, including semi-trucks, UPS trucks, and dump trucks               |
| 64                     | Volume of vehicle traffic   |
| 46                     | Speeding/decrease speed limit   |
| 41                     | Bikers and pedestrians on the roads   |
| 34                     | Stop lights, red lights, or time stopped at traffic signals (timing)                          |
| 24                     | Construction, new developments, and/or growth (without proper infrastructure planning)        |
| 23                     | Potholes and road deterioration (including faded lane lines)                                  |
| 22                     | Crashes, pedestrian fatalities, and "near misses"   |
| 22                     | Trash, mud, broken glass, dead animals, etc. along the roadway; overgrown weeds and shrubs    |
| 17                     | Trains, train crossings, and railroad crossing malfunctions                                   |
| 16                     | Car-centric construction, car lanes, and/or use of personal vehicles                          |
| 15                     | Commercial, industrial, and office buildings  |
| 12                     | Adult bookstores, adult dance clubs, and other non-family-friendly businesses                 |
| 10                     | Left turn conflicts, inability to safely turn left, or people driving straight in a turn lane |
| 10                     | Run-down or dilapidated areas (including homes and businesses)                                |
| 10                     | Roundabouts or traffic circles  |
| 9                      | Housing (condos and homes)  |
| 9                      | Roads built without sidewalks/paths and without turn lanes into neighborhoods                 |
| 8                      | Density (specifically, for apartment land uses and housing)                                   |
| 8                      | Homeless panhandling & other solicitors on the road   |
| 7                      | Buses, due to trash and stopping traffic  |
| 7                      | One lane roads  |
| 6                      | Storage areas   |

## Question #11 - What are the main transportation issues that you see when traveling in/through the Renner Rd-Trabue Rd-McKinley Ave Corridor today?

A total of 843 people provided an answer to this question. The issue most people were talking about was the congestion, back-ups, and time spent stopped in traffic. Specific areas mentioned include Renner Road, Trabue Road to Hilliard Rome Road, Wilson Road to McKinley Avenue, Riverside Drive, Trabue Road, US-33, the UPS distribution center, Spindler Road sports complex, and access to I-70. Many people suggested routing truck traffic from UPS to I-70 so Trabue Road would not be so congested.

The second most popular topic was the absence of sidewalks, paths, bike lanes, and turn lanes. Renner Road, Trabue Road, and McKinley Avenue were specifically mentioned. As mentioned in previous parts of the survey, many people would like the ability to travel via non-vehicular means



to parks and trails, Grandview, Hilliard Rome Road, businesses, bus stops, and their kids to school. Train crossing delays, especially during peak travel times, was the third most popular topic.

Roadway lane width and insufficient turn lanes were mentioned many times. Wilson Road, Renner Road, and Trabue Road, as well as the north side of Trabue Road were specifically mentioned when talking about roadway lane widths. Trabue and Ongaro was mentioned as a tough place to turn. Many people would like easier access to neighborhoods, such as the subdivision at Renner Road and Alton Darby Creek.

Traffic volumes, which could be considered a part of the top response (congestion, backups, and stopped traffic), was also a popular response. Large truck traffic, including UPS trucks, was a popular topic. Speeding and traffic signal timing rounded out the eight responses. Specific areas mentioned for speeding included Renner Road, Trabue Road, and Hilliard Rome Road. Specific areas where traffic signals were mentioned included Hilliard Rome Road and Renner Road, Trabue Road and Trabue Woods Boulevard, Trabue Road and Westbelt Drive, Trabue Road and Walcutt Road, and McKinley Road.

| Number of<br>Responses | Comments  |
|------------------------|---|
| 337                    | Congestion, backups, and stopped traffic  |
| 149                    | Roadways built without sidewalks, paths, bike lanes, and/or without turn lanes into neighborhoods                 |
| 134                    | Trains, train crossings, and railroad crossing malfunctions   |
| 114                    | Not enough lanes, merges to one lane, and/or roadway width  |
| 86                     | Volume of vehicle traffic   |
| 57                     | Commercial traffic/vehicles, including semi-trucks, UPS trucks, and dump trucks                                   |
| 48                     | Stop lights, red lights, or traffic signal timing   |
| 43                     | Speeding/decrease speed limit   |
| 27                     | Crashes, including pedestrian safety and "near misses"  |
| 27                     | Intersection safety and delays  |
| 26                     | Housing developments  |
| 25                     | Bikers and pedestrians on the roads   |
| 25                     | Poor bus stop conditions  |
| 24                     | Apartments adding to traffic congestion or other issues   |
| 20                     | Potholes and road deterioration   |
| 20                     | Left turn conflicts, inability to safely turn left, inconsistent lanes, or people driving straight in a turn lane |
| 15                     | Access to streets/locations   |
| 15                     | Car-centric construction, too many car lanes, and/or use of personal vehicles                                     |

## Question #12 - What are the top 5 destinations you travel to/from in the Renner Rd-Trabue Rd-McKinley Rd Corridor?

A total of 832 people provided an answer to this question. All the responders to this question listed at least one destination, with 95% listing two destinations, 83% listing three destinations, 65% listing four destinations, and 47% listing five destinations. The below chart displays the number of responses that were received for each of the top categories.



#### **Top Destinations**

Overall, restaurants were mentioned more (256 times) than any other comment. The second (overall) most popular response was home (with 214+ comments). Work (186+ comments), shopping in the Hilliard Rome area (185 comments), Hilliard Rome Road specifically (157 comments), Grandview (145 comments), Upper Arlington (144 comments), and Meijer (specifically mentioned, 133 comments) followed.

The most popular response for the first field was home (127+ comments). The most popular second field response was restaurants (56 comments), as well as the third response (67 comments), fourth response (61 comments), and fifth response (49 comments). The below chart shows additional popular options, with the most popular responses shown in the dark red color and the least popular destinations shown in white. The entire list is available upon request.

| Destination                            | 1   | 2  | 3  | 4  | 5  | Totals |
|--|-----|----|----|----|----|--------|
| Restaurants                            | 23  | 56 | 67 | 61 | 49 | 256    |
| Home                                   | 127 | 38 | 22 | 12 | 15 | 214    |
| Work                                   | 97  | 54 | 18 | 10 | 7  | 186    |
| Shopping (Hilliard Rome)               | 55  | 47 | 37 | 33 | 13 | 185    |
| Hilliard Rome                          | 40  | 48 | 38 | 16 | 15 | 157    |
| Grandview                              | 38  | 43 | 35 | 18 | 11 | 145    |
| Upper Arlington                        | 37  | 47 | 25 | 21 | 14 | 144    |
| Meijer                                 | 52  | 37 | 28 | 11 | 5  | 133    |
| Downtown                               | 36  | 23 | 27 | 23 | 7  | 116    |
| Parks & trails                         | 20  | 21 | 25 | 11 | 27 | 104    |
| Riverside Drive                        | 17  | 22 | 24 | 22 | 19 | 104    |
| Walmart                                | 32  | 28 | 22 | 16 | 5  | 103    |
| 70                                     | 20  | 23 | 25 | 17 | 16 | 101    |
| Westpointe Plaza (including<br>Target) | 16  | 22 | 14 | 12 | 11 | 75     |
| Grocery                                | 19  | 21 | 22 | 7  | 3  | 72     |
| School                                 | 17  | 24 | 12 | 14 | 4  | 71     |
| OSU                                    | 25  | 14 | 14 | 8  | 6  | 67     |
| 270                                    | 8   | 14 | 10 | 18 | 9  | 59     |
| Wilson Road                            | 9   | 16 | 9  | 17 | 5  | 56     |
| Hilliard                               | 11  | 15 | 11 | 10 | 8  | 55     |
| Relative's or Friend's house           | 8   | 0  | 13 | 17 | 9  | 47     |
| UPS                                    | 9   | 11 | 9  | 9  | 4  | 42     |
| Golf courses                           | 6   | 7  | 6  | 8  | 8  | 35     |
| Lane Avenue                            | 4   | 14 | 11 | 3  | 2  | 34     |
| Dublin Road                            | 4   | 9  | 7  | 7  | 6  | 33     |
| Sam's Club                             | 7   | 9  | 10 | 2  | 4  | 32     |
| Roberts Road                           | 2   | 4  | 7  | 7  | 10 | 30     |
| Trabue Road                            | 4   | 8  | 10 | 3  | 3  | 28     |

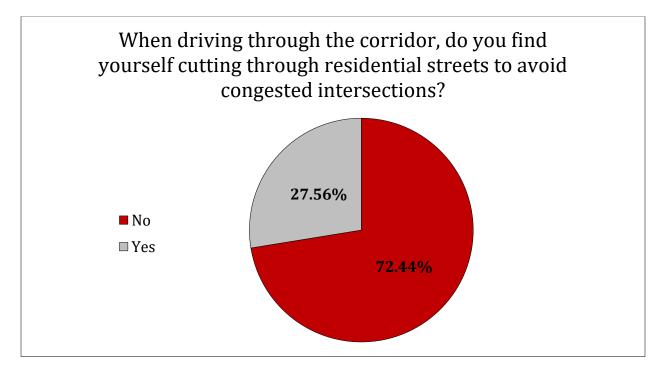


#### Notes

- It seems like some people may not have understood the question. Many people gave routes (i.e. 270; 70; "Wilson Rd South to I 70"), directions (i.e. "Corridor is a cut through or back way to Hilliard time road for us to avoid the traffic on Hilliard Rome."), or feedback (i.e. "As a way to avoid congestion/construction/road closures elsewhere") in these fields.
- If spelling or lack of description made it difficult to determine the destination (i.e. "Dublin" could have been the City or someplace on Dublin Road"), the data was not included in the results.

Question #13 - When driving through the corridor, do you find yourself cutting through residential streets to avoid congested intersections? If yes, what streets are you using as a cut-through?

A total of 889 people provided an answer to this question. The majority of responders (72.44%) indicated they did not find themselves cutting through residential streets to avoid congested intersections. There were 245 responders (27.56%) who indicated they cut through residential streets to avoid congestion.



#### **Cut-through Streets**

There were 224 comments for this question. The most utilized cut-through streets listed for this question, in order of the number of times they were mentioned, were Atlas Street, Tanglewood Park Boulevard, Walcutt Road, Nike Drive, Arlington Lane, Westbelt Drive, Ongaro Drive, Spindler Road, Hague Avenue, and Trabue Road. See the below chart for the most popular cut-through roads.

### CARPENTER MARTY transportation

| # Routes | Cut-through Streets Listed                        |
|----------|---|
| 45       | Atlas Street                                      |
| 29       | Tanglewood Park Boulevard                         |
| 29       | Walcutt Road                                      |
| 25       | Nike Drive  |
| 14       | Arlingate Lane                                    |
| 14       | Westbelt Drive                                    |
| 13       | Ongaro Drive                                      |
| 13       | Spindler Road                                     |
| 12       | Hague Avenue                                      |
| 12       | Trabue Road                                       |
| 9        | Fisher Road                                       |
| 9        | Lake Shore Drive                                  |
| 8        | Westpointe Plaza Drive/Westpointe Shopping Center |
| 7        | Wilson Road                                       |
| 6        | Newell Drive                                      |
| 5        | Bendelow Drive                                    |
| 5        | McKinley Avenue                                   |
| 5        | Vulcan Avenue                                     |
| 4        | 5th Avenue  |
| 4        | Alton Darby Creek Road                            |
| 4        | Dublin Road                                       |
| 4        | Scioto Woods Development                          |
| 4        | Westmills Drive                                   |
| 3        | Beamen Drive                                      |
| 3        | Demaret Lane                                      |
| 3        | El Paso Drive                                     |
| 3        | International Street                              |
| 3        | Renner Road                                       |
| 3        | Roberts Road                                      |
| 3        | Valleyview Drive                                  |
| 2        | Brookmont Drive                                   |

## Question #14 - Please provide any additional thoughts, comments, or suggestions regarding mobility in the Renner Rd-Trabue Rd-McKinley Ave Corridor.

A total of 491 people provided an answer to this question. Responses ranged from requests to improve air and noise pollution to giving specific locations of where people would like bicycle and pedestrian paths to lead to or from. In general, sidewalks, multi-use paths, and bike lanes were the most mentioned topic. The primary reasons for their requests stemmed back to safety, alternate routes for travel, recreation, and quality of life. Several focused comments on the importance of walkability and/or handicap accessibility.



Here are where people would like to have bike and/or pedestrian paths: Dublin Road, Hague Avenue, Trabue Road, Wilson Road, Renner Road, Roberts Road, Spindler Road, and the UPS/CSX properties to McKinley. Many people said they would like connections to Hilliard trails, the Spindler Road sports complex, Walcutt Road, Columbus trails and paths, 5<sup>th</sup> Avenue, and specifically the Scioto Trail and the new Quarry Trails Metro Park. Specific housing areas mentioned include Timberbrook Estates, Scioto Woods, Belmont apartments, Golfview Woods, Hilliard Woods, Trabue Woods, and San Margarita. Other locations included 270 crossing upgrades and requests for overpasses or underpasses at Trabue Road, Roberts Road, and Scioto Darby Road.

The second most popular response for this question was requests for roadway improvements, such as widening, traffic patterns, and pavement conditions. Many people want roadway widened, especially with new housing being constructed and/or approved. Roads specifically mentioned for widening include Renner Road/Trabue Road, from Alton Darby Creek Road to Riverside Drive; McKinley Avenue to 5<sup>th</sup> Avenue; Hilliard Rome; Hague Avenue; Trabue Road, from Dublin to Hilliard Rome Road; 5<sup>th</sup> Avenue to Hague Avenue; Spindler Road; and Wilson Road, between Trabue Road and Roberts Road. Roberts Road and Lindstrom Drive were specifically mentioned for pavement condition improvement. Some people recommended widening Wilson Road and Roberts Road, since they get more traffic when I-270 or I-70 get backed up.

Congestion, backups, and general traffic volume made up the third most popular comments. The majority of these comments involved the UPS truck traffic, railroads delays, and school pick-ups on Renner Road. Many people thought giving truck traffic their own entry and exit would help. Others thought utilizing the underpass for UPS trucks at the intermodal bridge could help. Specific areas mentioned were Renner Road, Feder Road, Roberts Road, Trabue Road and US-33, Trabue Road and McKinley Avenue, Fisher Road and McKinley Avenue, and the Spindler Road and Alton Darby Creek area.

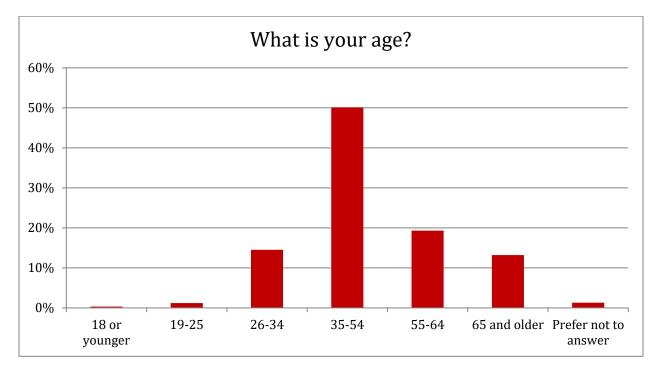
Turn lanes were another popular topic. Many people stated how time consuming and dangerous it can be to turn left in or out of many areas, especially if there is not a traffic signal. Recommendations included adding turn lanes, adding traffic signals, and adding a left turn arrow to current traffic signals. Several people mentioned some signal cycles were not long enough, causing people to sit or decide to run the red light to get through the intersection. Safety and access were often mentioned with these types of comments. Specific streets and areas include Demaret Lane, causing passing on the right shoulder; Renner Road from 70 WB onto northbound Hilliard Rome (challenging right-hand on-ramp to left-side turn lane); Hague Avenue and Trabue Road; Wilson Rd. from the residential streets; from Trabue Run Road onto Trabue Road; adding a middle lane for turning movements on Trabue Road; McKinley Avenue and Trabue Road; lengthening the turn lane on McKinley Avenue; and adding a left turn arrow on McKinley onto 5<sup>th</sup> Avenue. Many comments mentioned how difficult it is to exit subdivisions, like Scioto Woods and Bolingbrook and that the turn lane is too short for the number of cars at Brook Hollow.



| Number of<br>Responses | Comments   |
|------------------------|--|
| 145                    | Bicycle and pedestrian paths and/or lanes; sidewalks |
| 83                     | Roadway improvements                                 |
| 51                     | Congestion, backups, and traffic volume              |
| 33                     | Turn lanes/turning movements                         |
| 29                     | Traffic signals                                      |
| 25                     | Apartments   |
| 24                     | Safety   |
| 19                     | Planning   |
| 18                     | Roundabouts or traffic circles                       |
| 16                     | Access points  |
| 16                     | Speeding / speed limits too high                     |
| 11                     | Beautification and natural resources                 |
| 10                     | Intersection improvements                            |

#### **Question #15 - What is your age?**

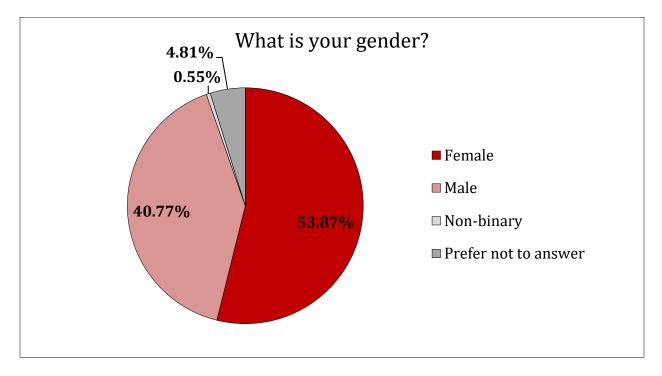
A total of 916 people provided an answer to this question. The majority of responders (50.11%) indicated they were 35-54 years old. The next largest age group was 55-64 (19.32%), followed by the 26-34 age group (14.52%) and the 65 and older age group (13.21%). There were 3 responders in the 18 or younger age group and 11 people in the 19-25 age group. There were 12 people (1.31%) that preferred not to select an age group.





#### **Question #16 - What is your gender?**

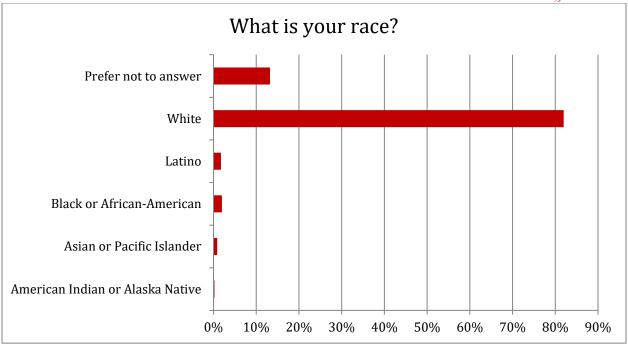
A total of 915 provided an answer to this question. There were more female responders (493 | 53.88%) than male responders (373 | 40.77%) and 5 non-binary responders (0.55%). Several people (44 | 4.81%) preferred not to provide a gender.



#### **Question #17 - What is your race?**

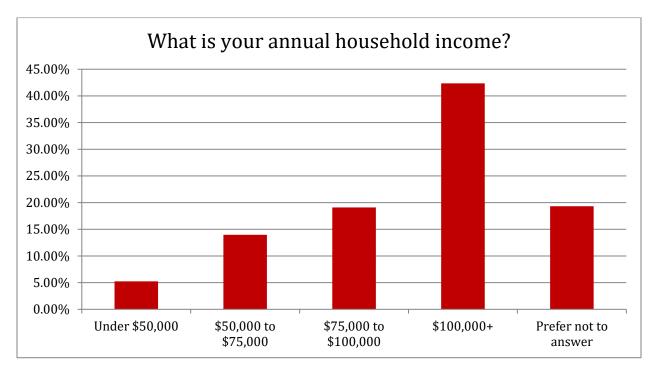
A total of 915 people provided an answer to this question. The majority of people (81.97%) who answered this question indicated their race is White. People with a preference not to respond were the next most populated group (13.22%). There were two American Indian or Alaska Native responders, eight Asian or Pacific Islander responders, sixteen Latino responders, and eighteen Black or African American responders.

### CARPENTER MARTY transportation



### Question #18 - What is your annual household income?

A total of 916 people provided an answer to this question. The majority of responders (42.36%) fell in the \$100,000+ income category. People with a preference to not respond were the next most populated group (19.32%), closely followed by the \$75,000 - \$100,000 income group (19.10%). The lowest income group (under \$50,000) made up 5.24%. Also note the large category of people choosing not to provide income information, of the surveyed group.



## Attachment F Existing Conditions Inventory



## LEGEND

### ROADWAY CLASSIFICATION

INTERSTATE / FREEWAY ARTERIAL COLLECTOR LOCAL

### MOBILITY

CROSSWALK SIDEWALK SHARED-USE PATH BIKE LANE TRANSIT ROUTE



MINOR STREET STOP-CONTROLLED INTERSECTION

F2 of 13

EXISTING INFRASTRUCTURE

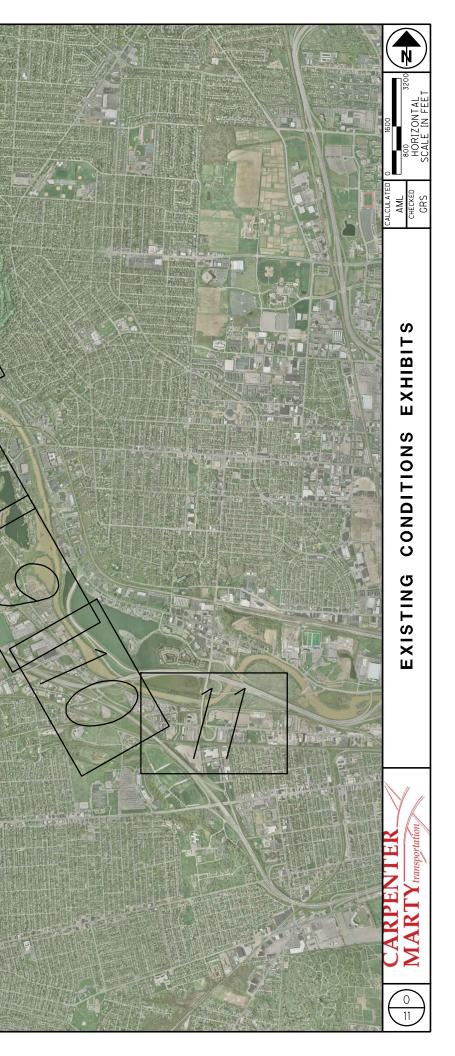
SIGNALIZED INTERSECTION

BUS STOP

 $\bigcirc$ 

0

 $\bigcirc$ 





 $\bigcirc$ 

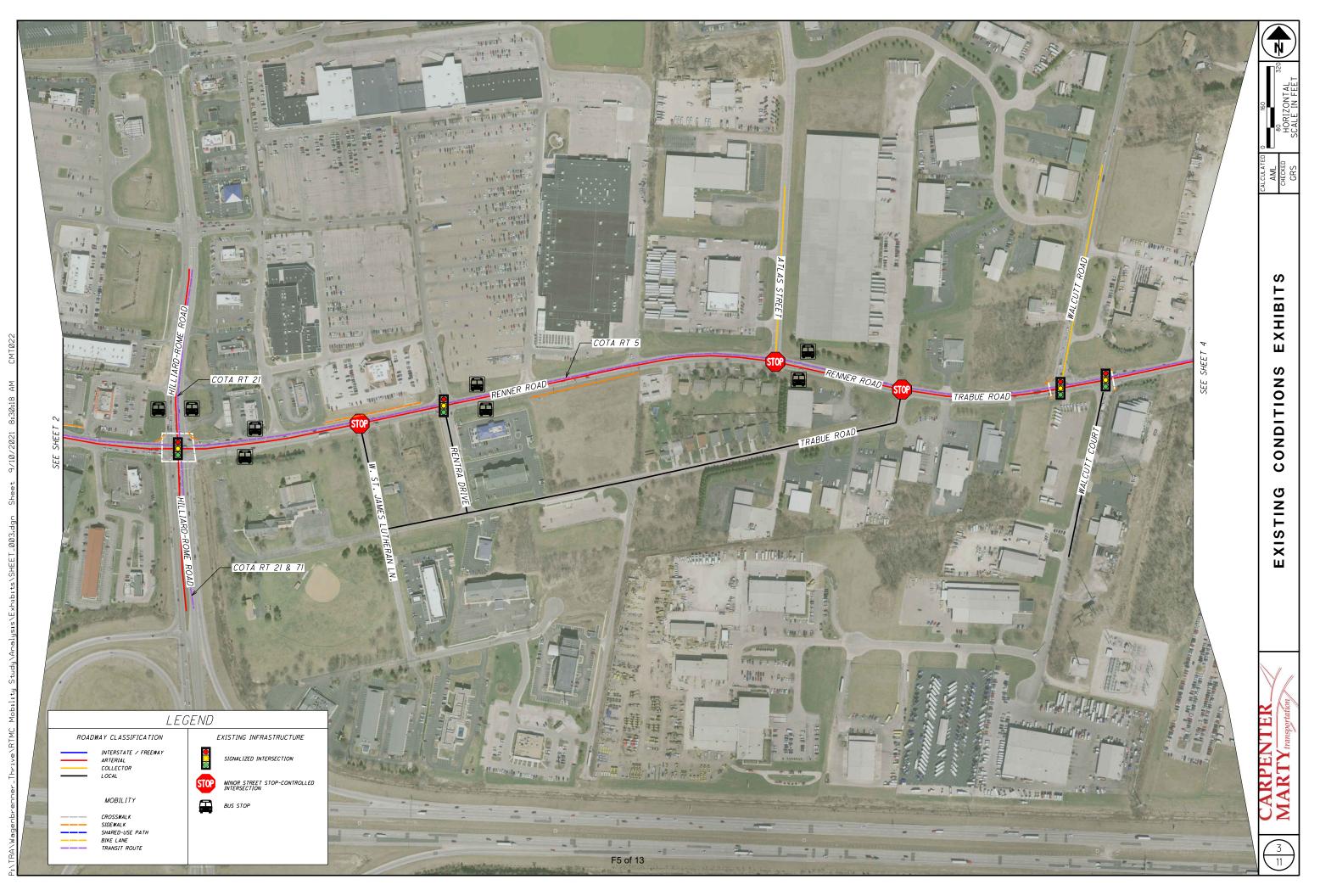


 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 

 $\bigcirc$ 



0

 $\bigcirc$ 

 $\bigcirc$ 



 $\bigcirc$ 

0



 $\bigcirc$ 

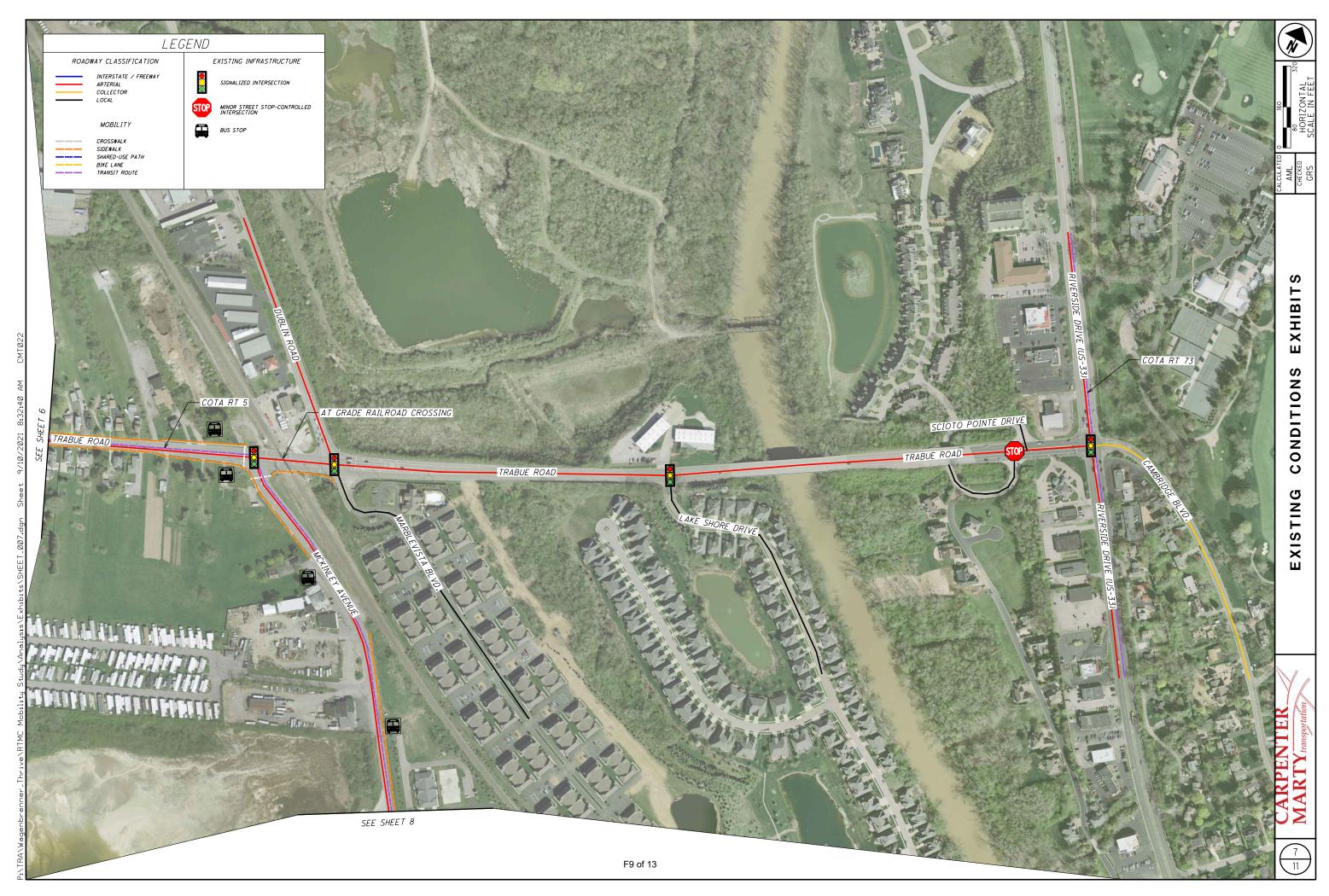
0



0

 $\bigcirc$ 

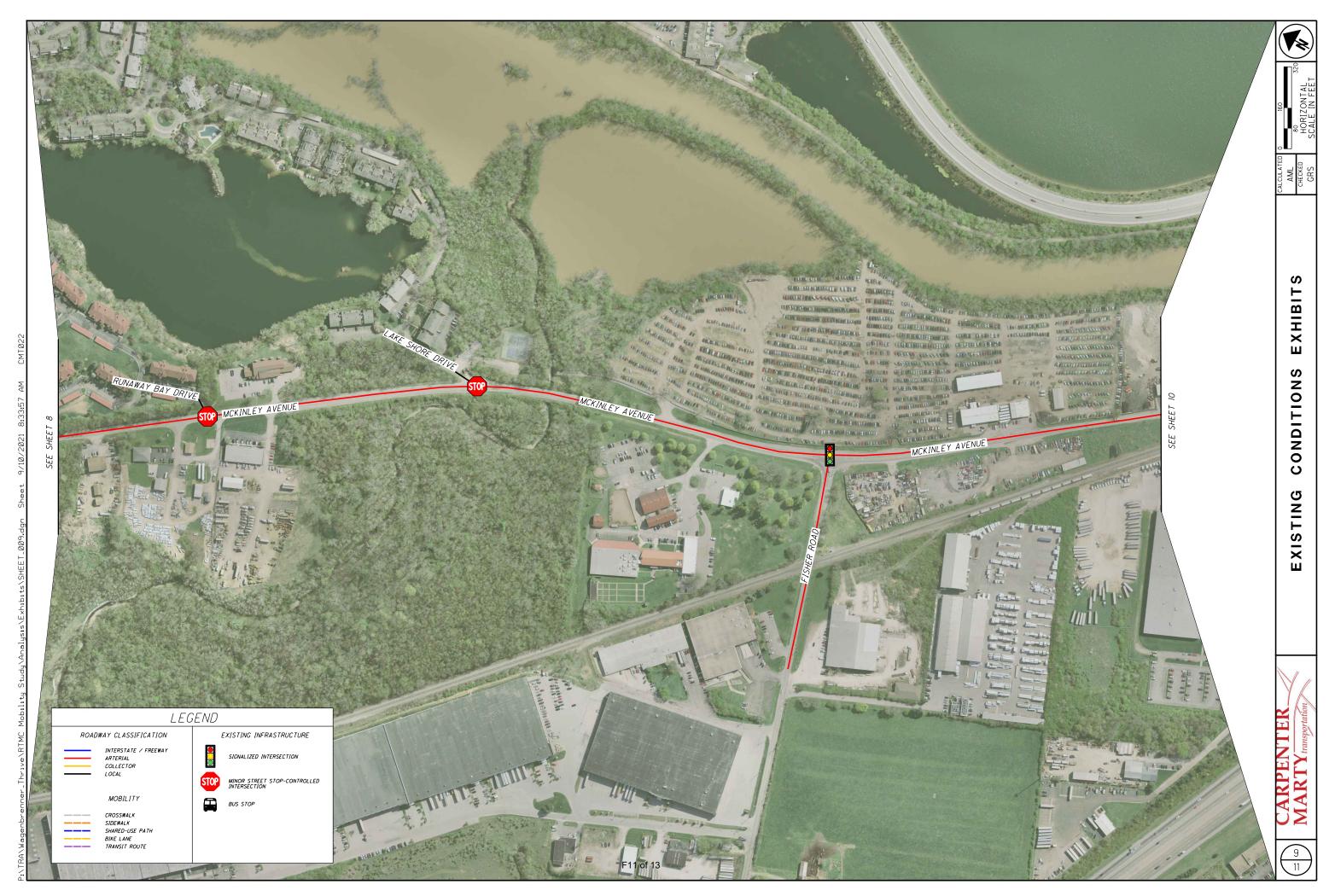
 $\bigcirc$ 



 $\bigcirc$ 

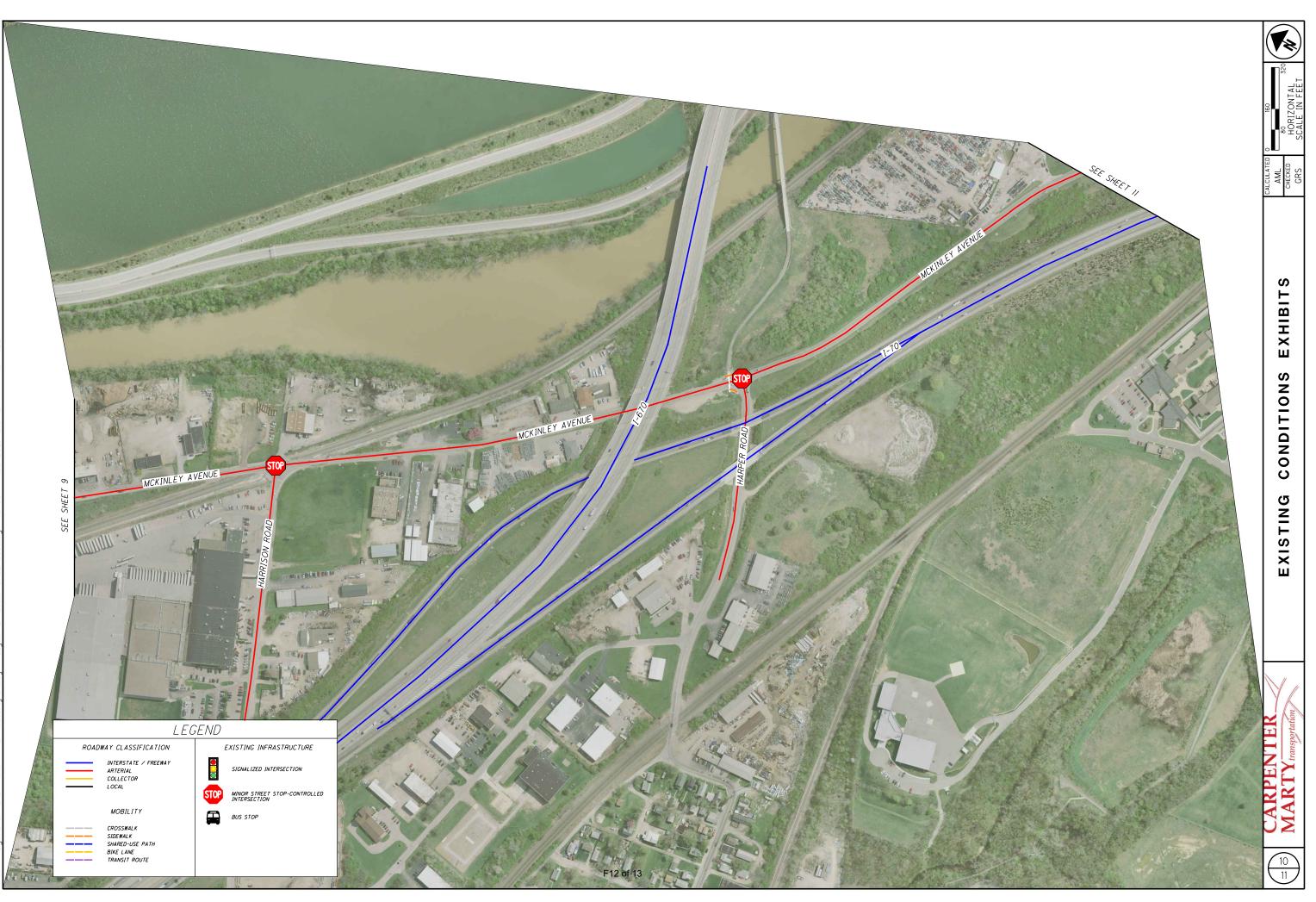
0





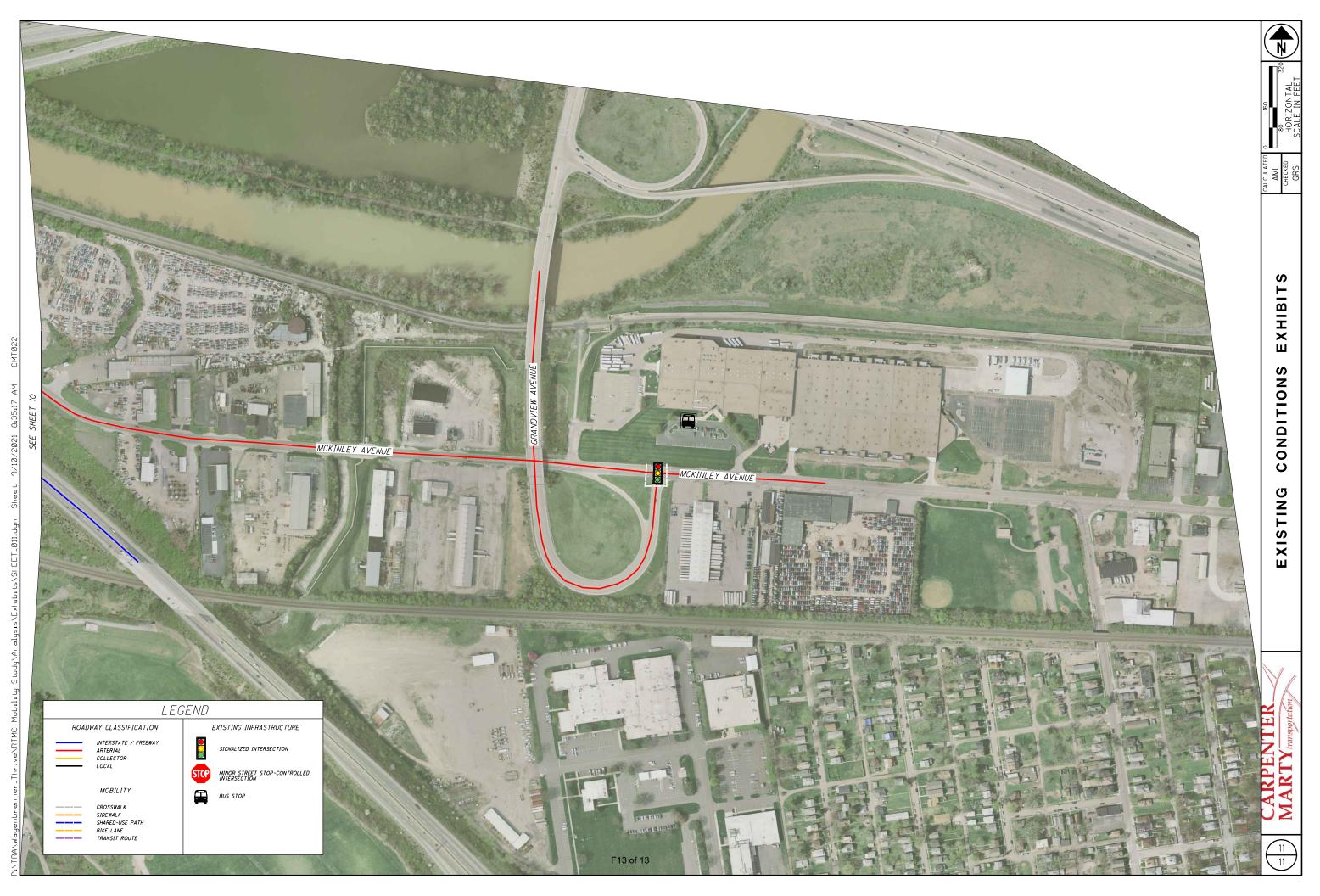
 $\bigcirc$ 

0



 $\bigcirc$ 

 $\bigcirc$ 



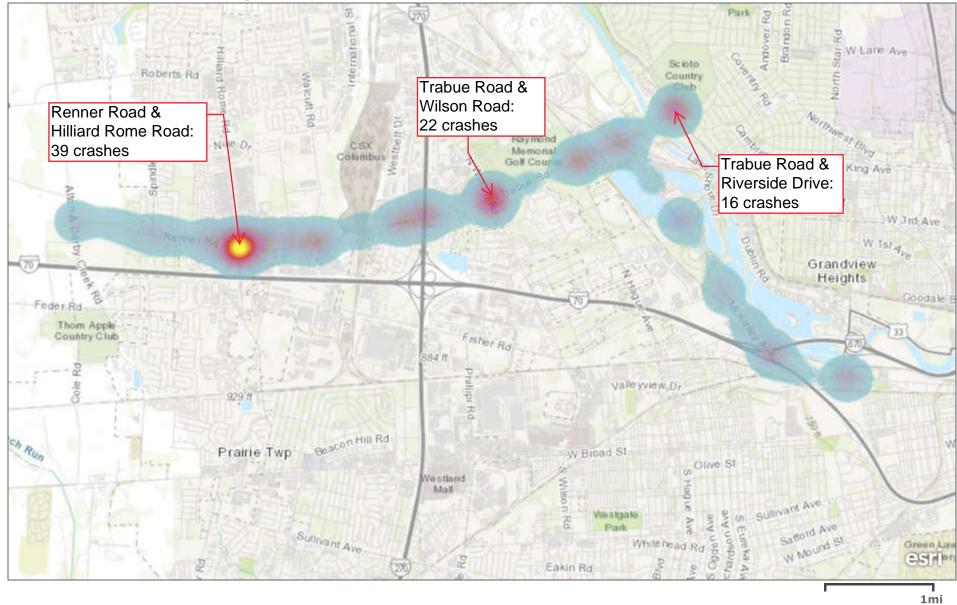
 $\bigcirc$ 

0

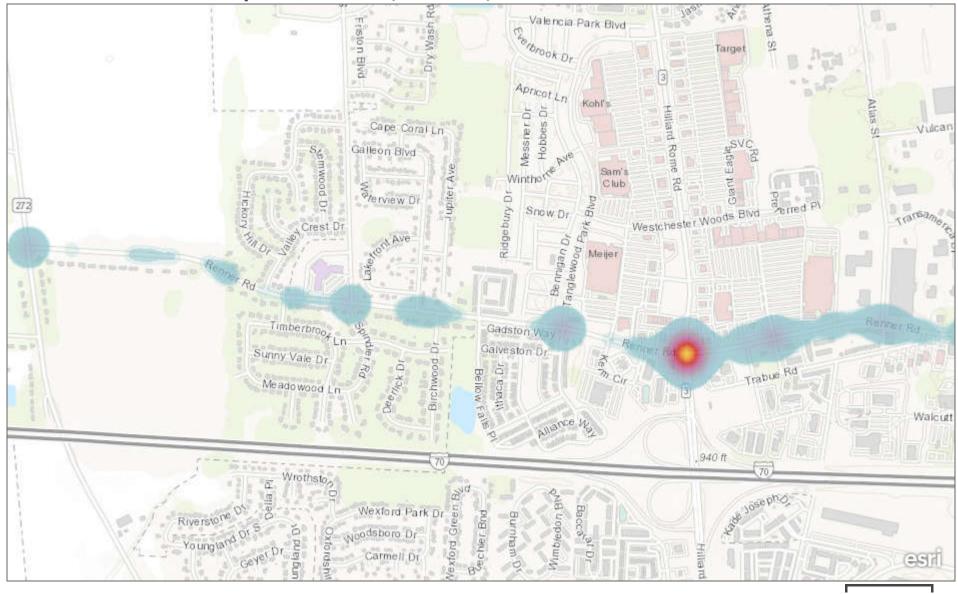
# Attachment G Crash Data & Heat Maps



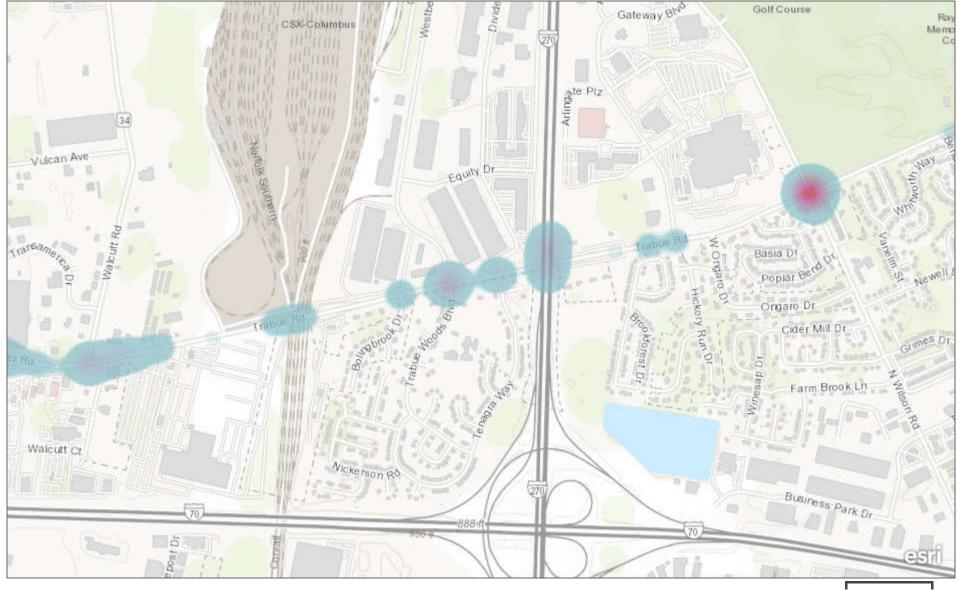
All Crash Data Heat Maps



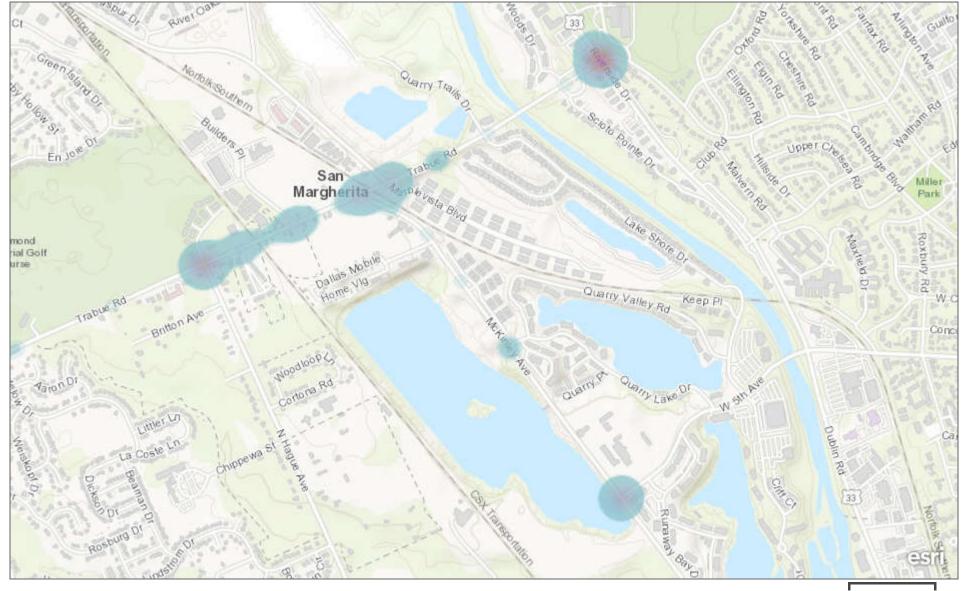
Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



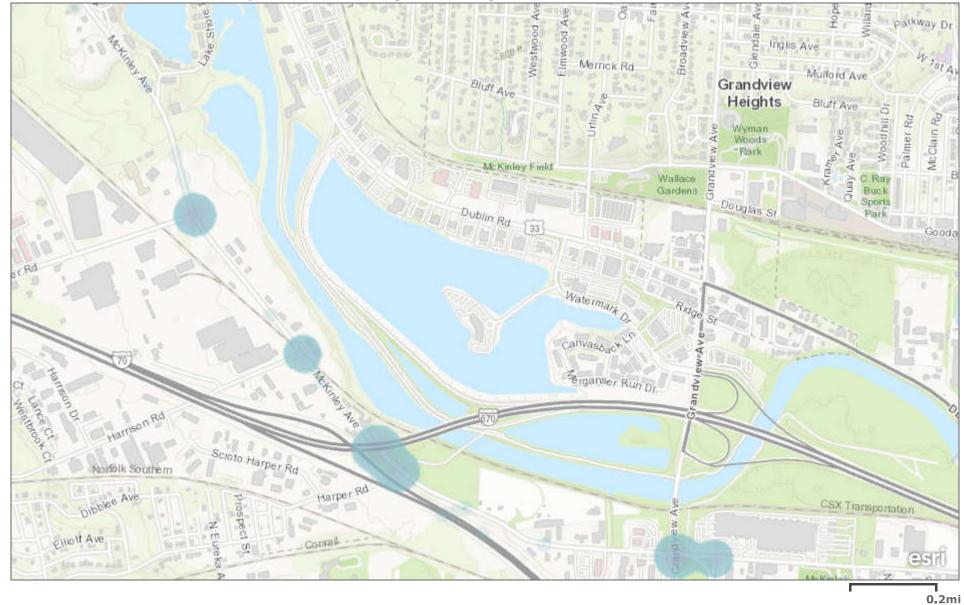
Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA



Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

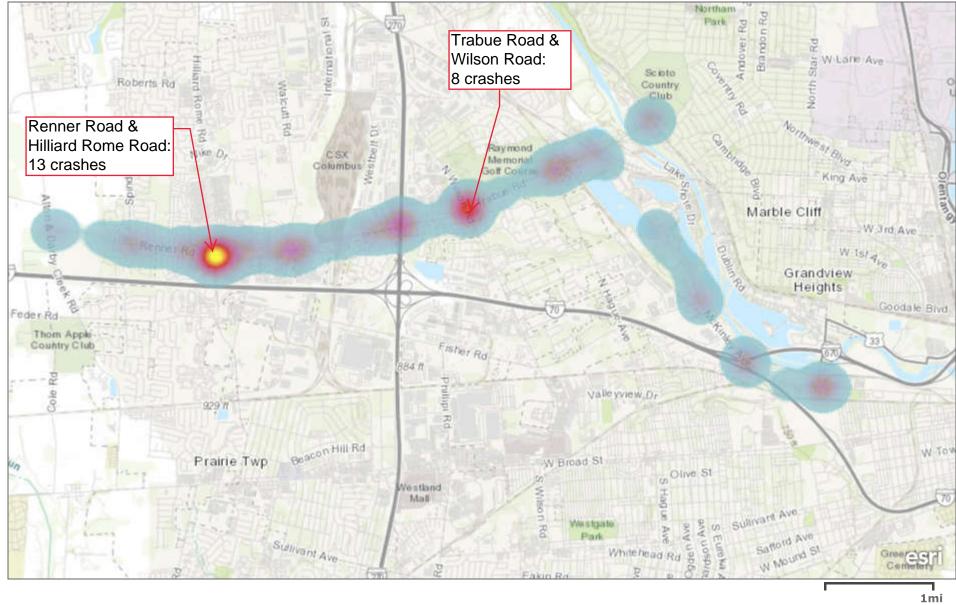


Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

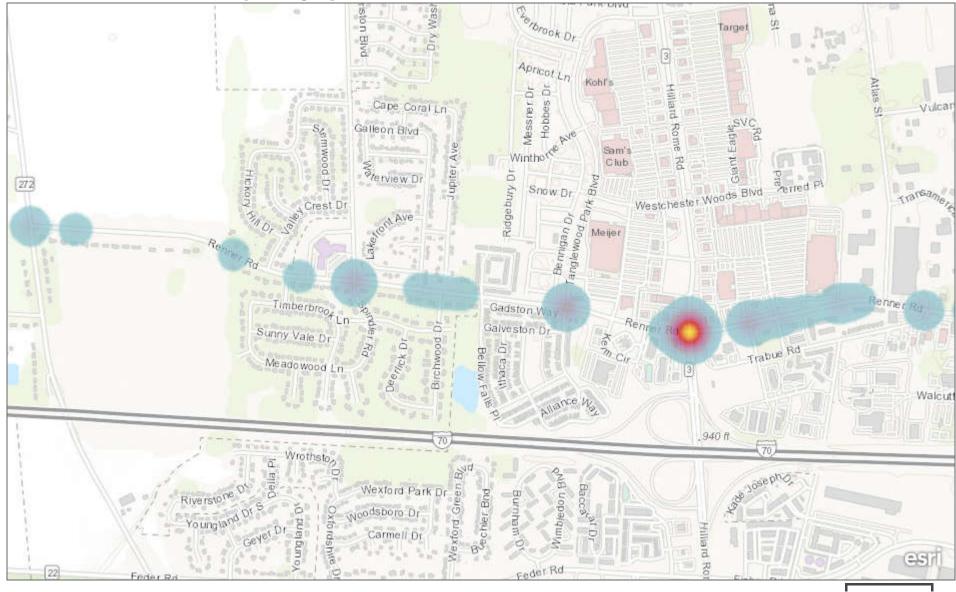


City of Grandview Heights, Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

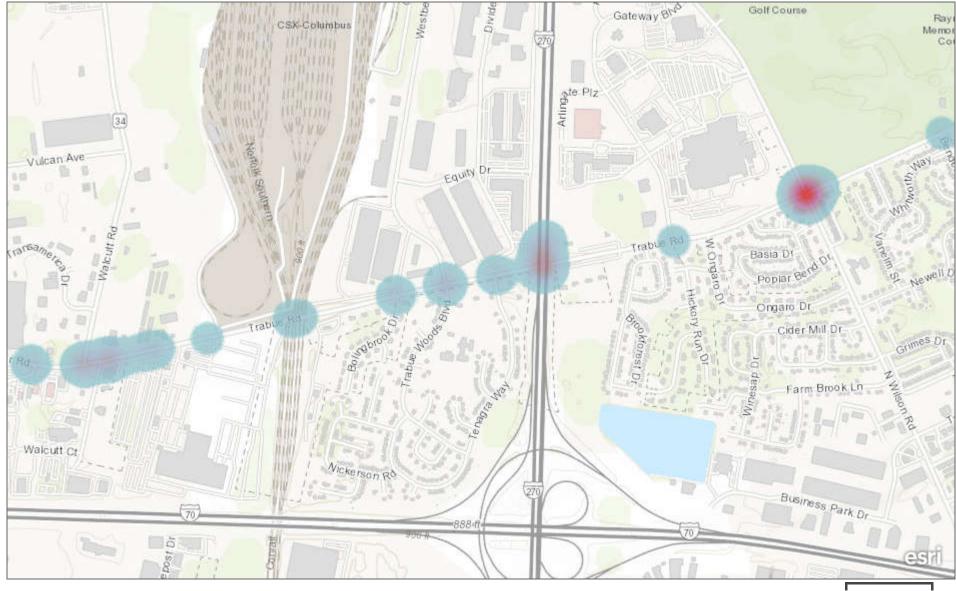
## Injury and Fatal Crash Data Heat Maps



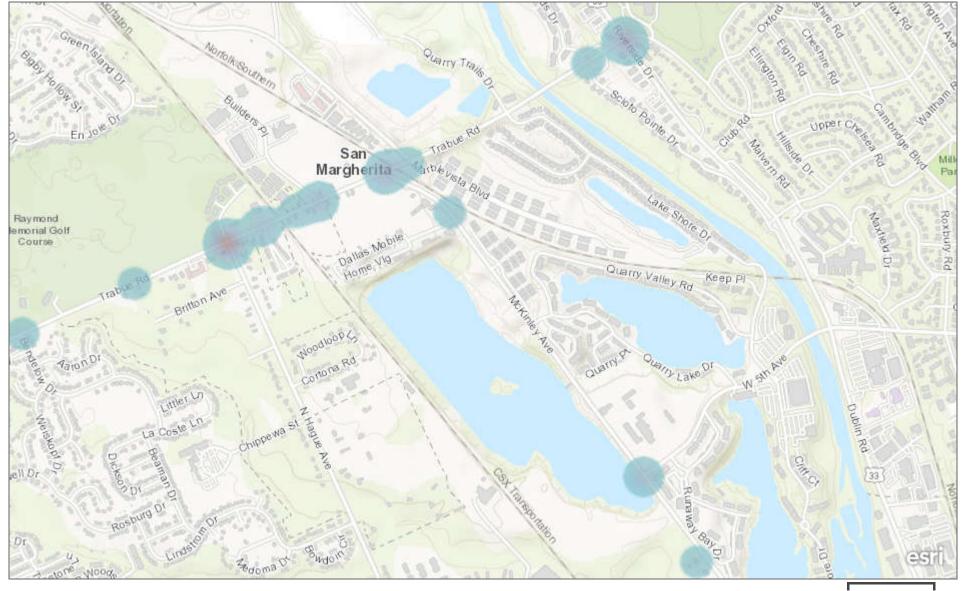
Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



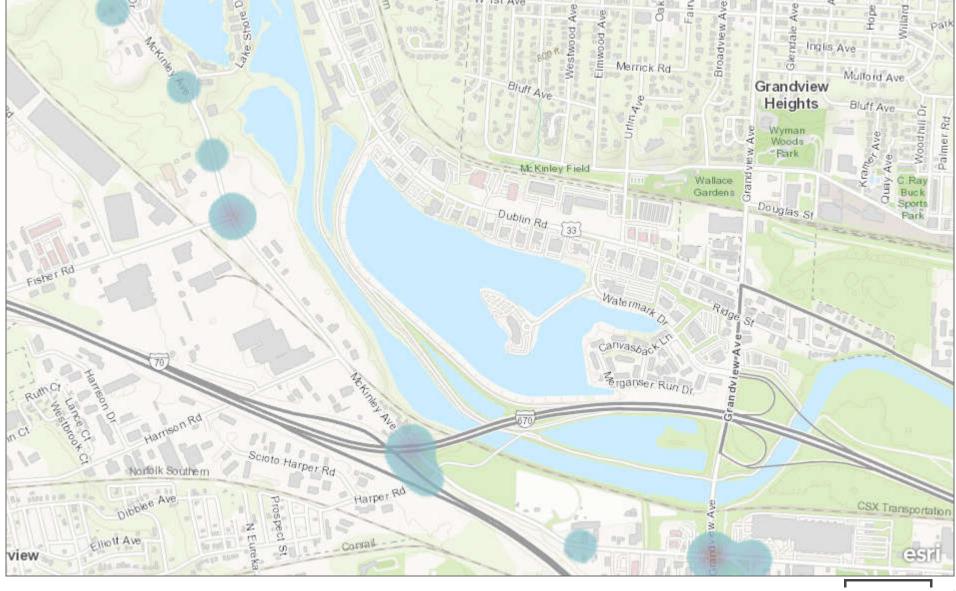
Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA



Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA



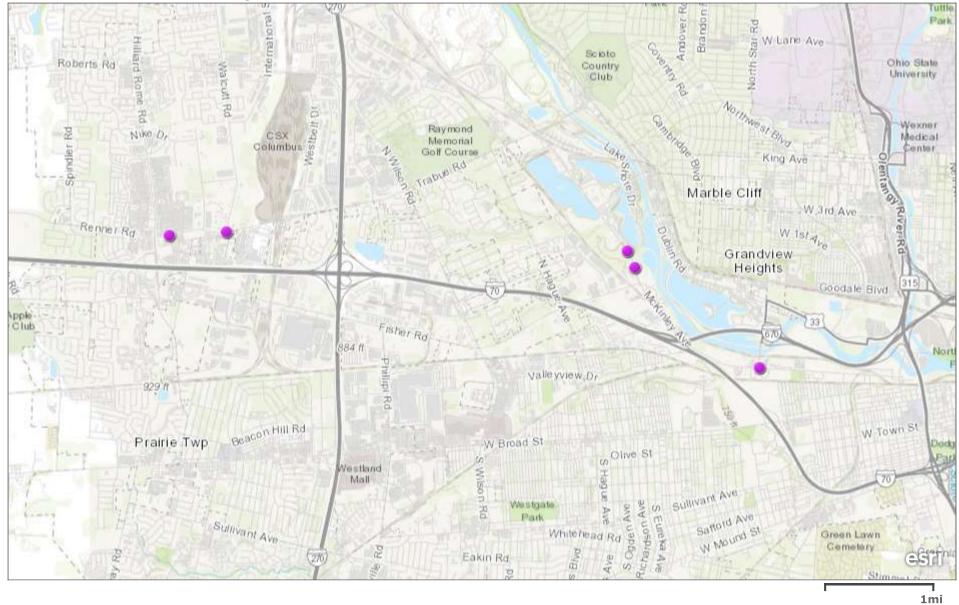
Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA



City of Grandview Heights, Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

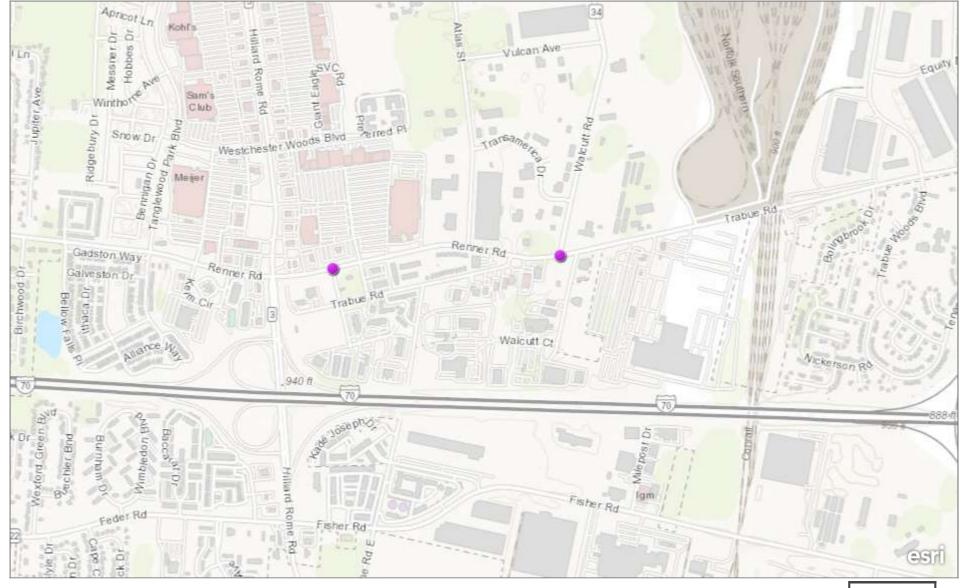
Pedestrian and Bicycle Crash Data Heat Maps

#### **RTMC Crash Data Heat Maps - Pedestrian and Bike Crashes (2017-2019)**



Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

#### **RTMC Crash Data Heat Maps - Pedestrian and Bike Crashes (2017-2019)**



Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

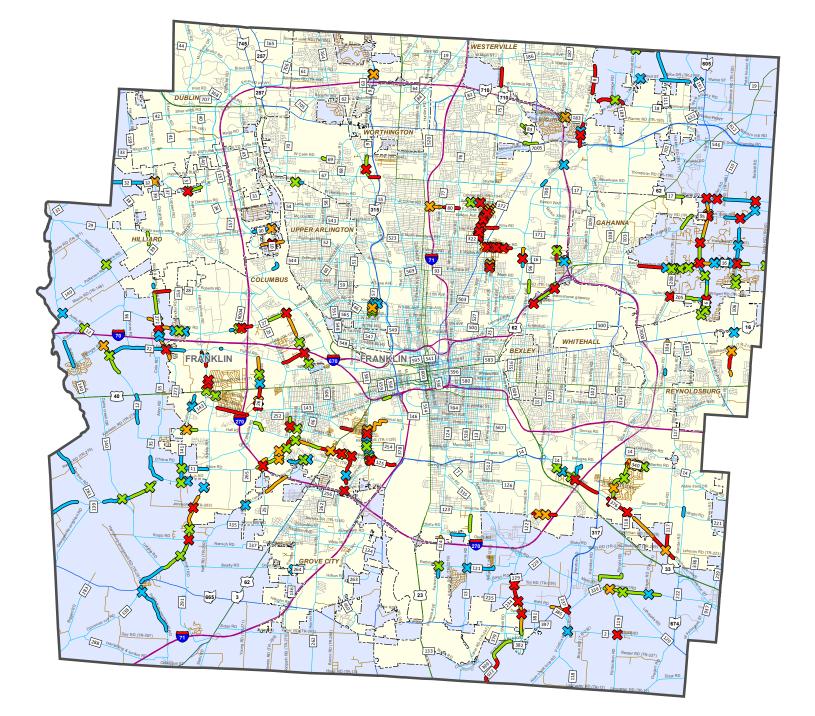
#### patkway Dr ndal Inglis Ave imwo road 0.0 Merrick Rd. Ne Field Mulford Ave Grandview Bluff Ave Heights Bluff Ave Unlin<sub>A</sub> Rd 30 McClain Rd Palmer Ro Thomas, I ő Wyman Woods ⊲ "Park Kramer Ave McKinley Field Grand Burr Ave Wallace Quay C Ray Gardens Buck Douglas St Sports Dublin Rd Park 33 Goodale Blvd Watermark Post Office Dr anva Brganser Run Dr vb.ue Dublin-Rd-0 Scioto Harper.Rd Norfolk Southern Dibble Ave Harper Rd CSX Transportation dview. iott Ave Corrai (J) 0 12 123 Þ Mc Kinle ٦

#### RTMC Crash Data Heat Maps - Pedestrian and Bike Crashes (2017-2019)

City of Grandview Heights, Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

# High Crash Location Research

## 2020 County Road High Crash Locations Franklin County

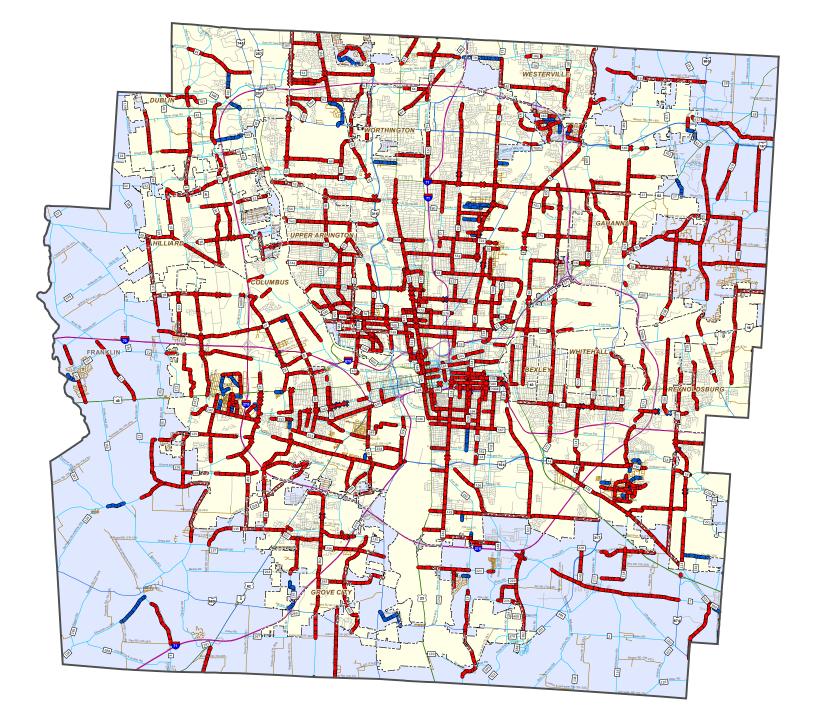


| Intersection Crashes   | Segment Crashes           | Roads by Type  |
|--|---------------------------|--|
| 🗱 5-6  | <del></del> 5 - 6         | Other Routes   |
| <ul> <li>≈ 7 - 10</li> <li>≈ 11 - 15</li> <li>≈ &gt; 15</li> </ul> | 7 - 10<br>11 - 15<br>> 15 | <ul> <li>Interstate Route</li> <li>United States Route</li> <li>State Route</li> </ul> |
| Date: 7/24/2020  | C City Boundary           | ── Co <b>cno</b> y₀Ro₂ad<br>── Township Road   |

#### \*2015-2019 Crash Data Used



## SFY2015 Safety Integrated Project Maps - Local System Franklin County



#### **High Priority**

Segments

Segments

Intersections/Interchanges

Low Cost Improvements

Other Routes

#### Roads by Type

- Interstate Route
   United States Route
- State Route
   County Road
- Intersections/Interchanges County Road
   Township Road





### TOP 100 REGIONAL HIGH-CRASH INTERSECTIONS (2015 TO 2017)

| RANK | LOCATION  | JURISDICTION    | TOTAL<br>CRASHES<br>(FREQ.) | CRASH SEVERITY  |                   |                 |                    |     | AVERAGE              | CRASH                     | CRITERIA RANKINGS     |       |      | ANNUAL CRASHES |      |      | DDIOD |               |                       |
|------|---|-----------------|-----------------------------|-----------------|-------------------|-----------------|--------------------|-----|----------------------|---------------------------|-----------------------|-------|------|----------------|------|------|-------|---------------|-----------------------|
|      |   |                 |                             | Fatal<br>Injury | Serious<br>Injury | Minor<br>Injury | Possible<br>Injury | PDO | - SEVERITY<br>(EPDO) | DAILY<br>TRAFFIC<br>(ADT) | RATE<br>(MEV<br>RATE) | Freq. | EPDO | MEV            | 2015 | 2016 | 2017  | PRIOR<br>RANK |                       |
| 1    | Dublin Granville Rd / SR 161 @ Maple<br>Canyon Dr                 | Columbus        | 157                         | -               | 5                 | 20              | 18                 | 114 | 3.32                 | 36,700                    | 3.91                  | 10    | 31   | 6              | 52   | 59   | 46    | 14            | Corr                  |
| 2    | Broad St / SR 16 @ James Rd                                       | Columbus        | 179                         | 1               | 4                 | 23              | 20                 | 131 | 3.17                 | 51,500                    | 3.17                  | 6     | 33   | 15             | 63   | 63   | 53    | 2             | LED                   |
| 3    | E Livingston Ave @ Hamilton Rd / SR 317                           | Columbus        | 188                         | 1               | 3                 | 24              | 25                 | 135 | 2.98                 | 37,600                    | 4.57                  | 5     | 48   | 3              | 59   | 70   | 59    | 1             | Colu<br>in 2          |
| 4    | Morse Rd @ Karl Rd  | Columbus        | 160                         | -               | 2                 | 38              | 15                 | 105 | 3.12                 | 44,900                    | 3.25                  | 9     | 35   | 14             | 61   | 48   | 51    | 4             | Traf                  |
| 5    | Hilliard Rome Rd @ Renner Rd                                      | Columbus        | 157                         | 1               | 5                 | 25              | 12                 | 114 | 3.61                 | 53,000                    | 2.71                  | 10    | 17   | 36             | 54   | 51   | 52    | 22            | Proj<br>proj          |
| 6    | Frank Rd / SR 104 / Refugee Rd @<br>Winchester Pike               | Columbus        | 144                         | -               | 3                 | 20              | 18                 | 103 | 3.00                 | 38,600                    | 3.41                  | 15    | 46   | 12             | 59   | 42   | 43    | 16            | ODC cons              |
| 7    | Cleveland Ave @ Dublin Granville Rd /<br>SR 161                   | Columbus        | 213                         | -               | 3                 | 32              | 27                 | 151 | 2.81                 | 53,500                    | 3.64                  | 3     | 63   | 9              | 79   | 76   | 58    | 6             | Corr<br>awa<br>begi   |
| 8    | Broad St / SR 16 @ Lancaster Ave /_<br>Reynoldsburg-New Albany Rd | Columbus        | 157                         | -               | 5                 | 23              | 16                 | 113 | 3.38                 | 57,200                    | 2.51                  | 10    | 24   | 42             | 65   | 46   | 46    | 5             | A sa<br>reco<br>func  |
| 9    | E Livingston Ave @ Brice Rd                                       | Reynoldsburg    | 131                         | -               | 3                 | 12              | 19                 | 97  | 2.88                 | 34,200                    | 3.50                  | 20    | 57   | 10             | 32   | 54   | 45    | 49            |                       |
| 10   | Cleveland Ave @ Innis Rd  | Franklin County | 110                         | -               | 3                 | 3               | 25                 | 79  | 2.98                 | 25,200                    | 3.99                  | 33    | 49   | 5              | 41   | 34   | 35    | 3             |                       |
| 11   | E Main St / US 40 @ McNaughten Rd                                 | Columbus        | 150                         | -               | 2                 | 26              | 25                 | 97  | 3.05                 | 51,600                    | 2.65                  | 13    | 41   | 38             | 58   | 46   | 46    | 12            | ODC<br>anti           |
| 12   | E Livingston Ave @ James Rd                                       | Columbus        | 146                         | -               | 2                 | 18              | 24                 | 102 | 2.77                 | 38,800                    | 3.44                  | 14    | 67   | 11             | 50   | 57   | 39    | 15            | LED<br>safe           |
| 13   | Cleveland Ave / SR 3 @ E Hudson St                                | Columbus        | 101                         | -               | 2                 | 20              | 14                 | 65  | 3.33                 | 29,700                    | 3.11                  | 46    | 30   | 17             | 30   | 35   | 36    | 10            | A sa                  |
| 14   | E Livingston Ave / US 33 @ Alum Creek<br>Dr                       | Columbus        | 125                         | -               | 4                 | 14              | 18                 | 89  | 3.34                 | 45,300                    | 2.52                  | 25    | 29   | 40             | 49   | 38   | 38    | 9             | Traff<br>com          |
| 15   | Westerville Rd / SR 3 @ Innis Rd                                  | ODOT            | 101                         | -               | 2                 | 22              | 11                 | 66  | 3.34                 | 31,000                    | 2.98                  | 46    | 28   | 21             | 28   | 30   | 43    | 59            | 201<br>impi           |
| 16   | Cleveland Ave @ Morse Rd  | Columbus        | 265                         | 1               | 1                 | 36              | 33                 | 194 | 2.47                 | 58,800                    | 4.12                  | 1     | 92   | 4              | 90   | 88   | 87    | 18            | Phas<br>Cras          |
| 17   | Morse Rd @ Westerville Rd / SR 3                                  | Columbus        | 176                         | -               | 4                 | 13              | 23                 | 136 | 2.73                 | 55,400                    | 2.90                  | 7     | 69   | 24             | 52   | 73   | 51    | 8             | A sa                  |
| 18   | Refugee Rd @ Gender Rd  | Columbus        | 140                         | -               | 2                 | 20              | 12                 | 106 | 2.63                 | 34,300                    | 3.73                  | 16    | 77   | 8              | 57   | 45   | 38    | 26            | Inte                  |
| 19   | Cleveland Ave @ Oakland Park Ave                                  | Columbus        | 110                         | -               | 1                 | 20              | 16                 | 73  | 2.86                 | 32,400                    | 3.10                  | 33    | 59   | 18             | 37   | 34   | 39    | 11            | Mine<br>201           |
| 20   | E Dublin Granville Rd / SR 161 @ Karl Rd                          | Columbus        | 130                         | -               | 1                 | 21              | 23                 | 85  | 2.80                 | 42,700                    | 2.78                  | 22    | 65   | 31             | 47   | 42   | 41    | 7             | Corr                  |
| 21   | Brice Rd @ Scarborough Blvd / Tussing<br>Rd                       | Columbus        | 193                         | 1               | 1                 | 20              | 21                 | 150 | 2.35                 | 53,800                    | 3.28                  | 4     | 103  | 13             | 80   | 52   | 61    | 28            | LED<br>desi           |
| 22   | Hamilton Rd / SR 317 @ Refugee Rd                                 | Columbus        | 126                         | -               | 2                 | 18              | 12                 | 94  | 2.73                 | 41,600                    | 2.77                  | 24    | 70   | 32             | 38   | 42   | 46    | 21            | MOF<br>imp<br>in 2    |
| 23   | Clime Rd @ Demorest Rd  | Columbus        | 82                          | -               | 3                 | 7               | 15                 | 57  | 3.50                 | 27,600                    | 2.71                  | 74    | 19   | 33             | 29   | 28   | 25    | 37            | Impi<br>proj          |
| 24   | E Main St / US 40 @ Hamilton Rd / SR<br>317                       | Whitehall       | 102                         | 1               | 2                 | 4               | 23                 | 72  | 3.12                 | 38,300                    | 2.43                  | 42    | 36   | 49             | 33   | 35   | 34    | 29            |                       |
| 25   | Livingston Ave @ Noe Bixby Rd /_<br>Woodcrest Rd                  | Columbus        | 80                          | -               | 3                 | 12              | 13                 | 52  | 3.83                 | 29,100                    | 2.51                  | 79    | 11   | 41             | 24   | 28   | 28    | 25            | A sa<br>curr<br>traff |
| 26   | Westerville Rd / SR 3 @ Ferris Rd /<br>Walnut Creek Dr            | ODOT            | 70                          | -               | 5                 | 11              | 10                 | 44  | 5.10                 | 22,900                    | 2.79                  | 103   | 3    | 30             | 10   | 24   | 36    |               | 201<br>com            |
| 27   | Cleveland Ave @ Huy Rd  | Franklin County | 70                          | 1               | 2                 | 3               | 19                 | 45  | 3.81                 | 21,500                    | 2.97                  | 103   | 12   | 22             | 26   | 20   | 24    |               |                       |





#### COMMENTS

corridor study is complete. No funding identified for design or construction, however unding is actively being pursued.

ED signals and backplates were added in 2016. Safety study completed in 2018.

olumbus conducted safety study in 2014. LED signals and backplates were added 2016. ODOT awarded safety funding. The project is currently in construction.

raffic signal retimed in 2017.

roject for improvements at this intersection were part of the I-270 interchange roject constructed in 2014.

DOT award safety funding. Project for improvements currently in design and onstruction is anticipated to begin in the summer of 2019.

corridor study is complete. LED signals and backplates were added in 2016. ODOT warded safety funding for north service road project. Construction is anticipated to egin in the fall of 2019.

safety study was completed in 2018. The City of Columbus is currently evaluating ecommendations from the study. E Broad Corridor study completed in 2009. No unding identified for design or construction.

DOT awarded safety funding. Project is currently in design with construction nticipated to begin in 2019.

ED signal heads installed in 2009. Safety study completed in 2015. ODOT awarded afety funding. Project for improvements anticipated to begin construction in 2020.

safety study of the intersection was completed in 2018.

raffic signals upgraded to LED in late 2016/early 2017. A road safety audit was ompleted at this location in 2017.

017 project added an eastbound right turn lane, upgraded the traffic signal, and nproved sidewalks

hase 2 of Morse Rd project completed in 2010, added turn lanes, signal rephasing. rashes significantly reduced in 2010 and 2011. Traffic signal retimed in 2017.

safety study of the intersection is currently in progress.

ntersection safety project completed in 2017.

Alinor improvements made in 2013. LED signals and backplates were added in 2016.

corridor study is complete. LED signals and backplates were added in 2016.

ED signal heads were installed in 2009. Improvements at this location will be esigned as part of the I-70/I-270 interchange reconfiguration project.

10RPC awarded funding and 0D0T awarded safety funding. Project for nprovements currently in the design phase with construction anticipated to begin 2019.

nprovements were made at this intersection as part of the Clime Road widening roject. LED signals and backplates were added in 2016.

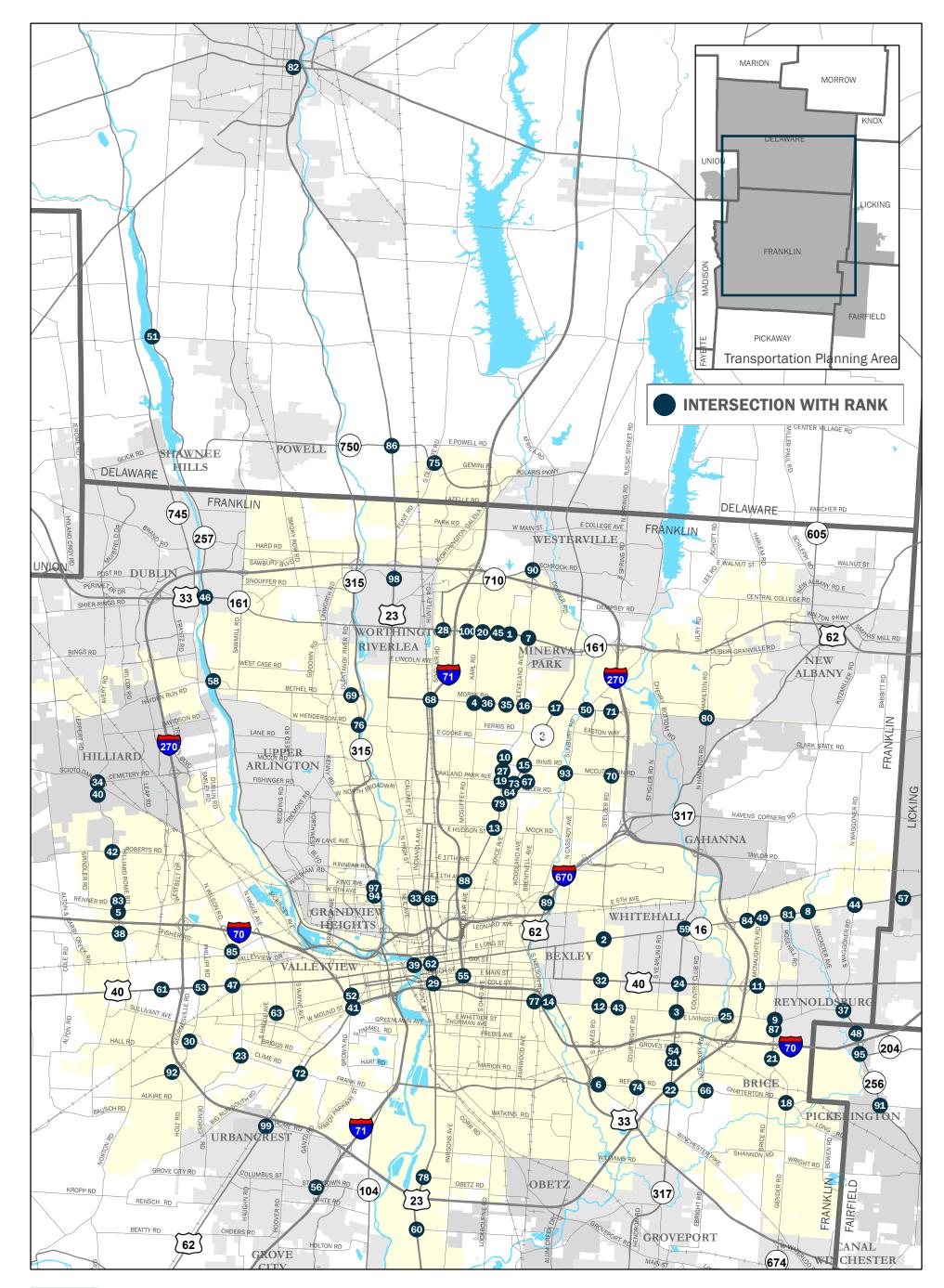
safety study of the intersection was completed in 2018. The City of Columbus is urrently evaluating LED signal heads and backplates for the signal as well as other raffic control changes along Woodcrest Rd.

017 Highway Safety Improvement Program study location. Safety study will be ompleted within the next year.





### TOP 100 HIGH-CRASH INTERSECTIONS (2015 TO 2017)



MAP

1

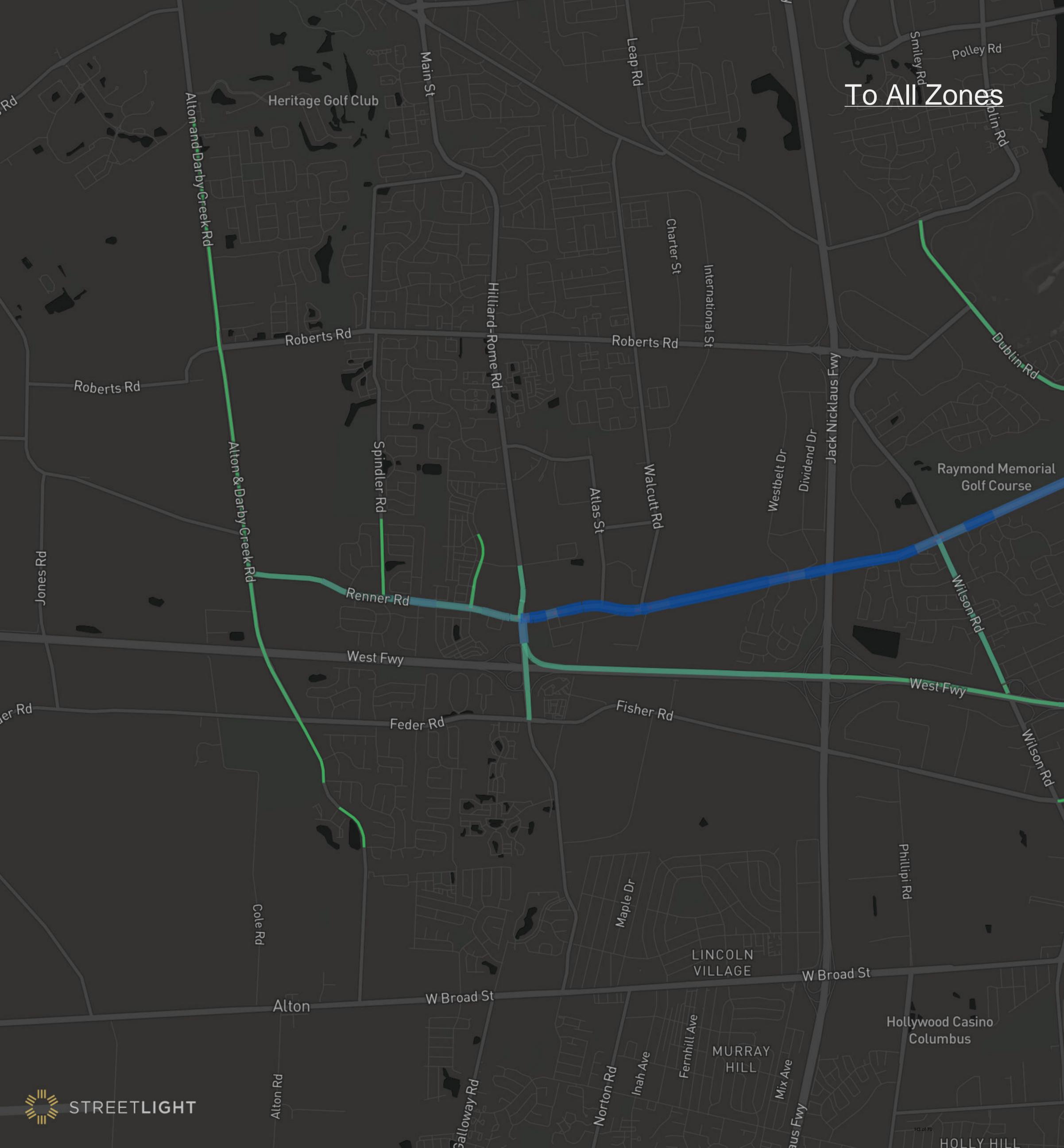
#### SOURCE: ODPS/ODOT/MORPC

The information shown on this map is compiled from various sources made available to us which we believe to be reliable. N:\ArcGIS\CORE\0&M\Safety\High\_Crash\_Locations\2015\_2017\Top100 15\_17.mxd 8/28/2018

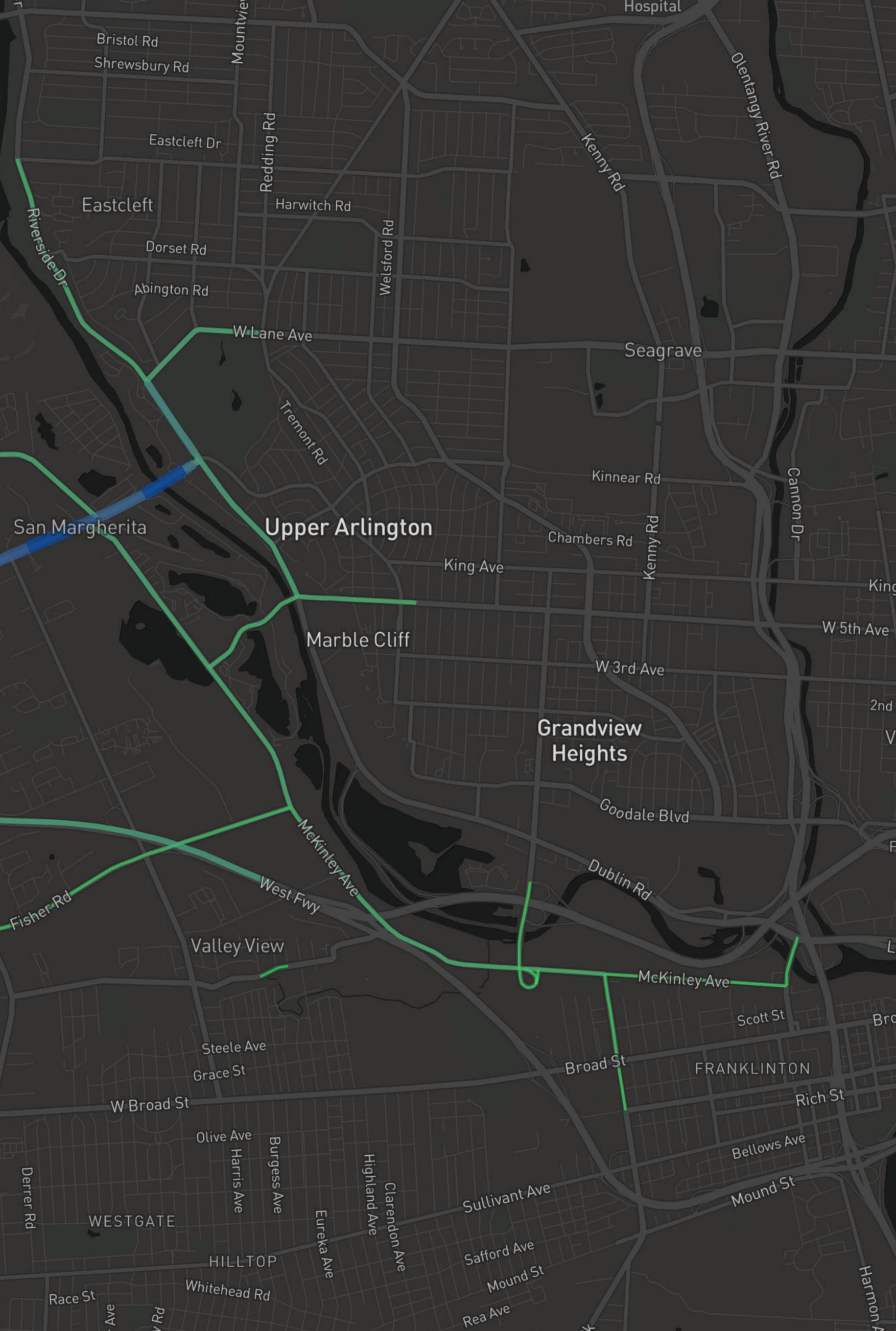
# Attachment H Origin-Destination Data

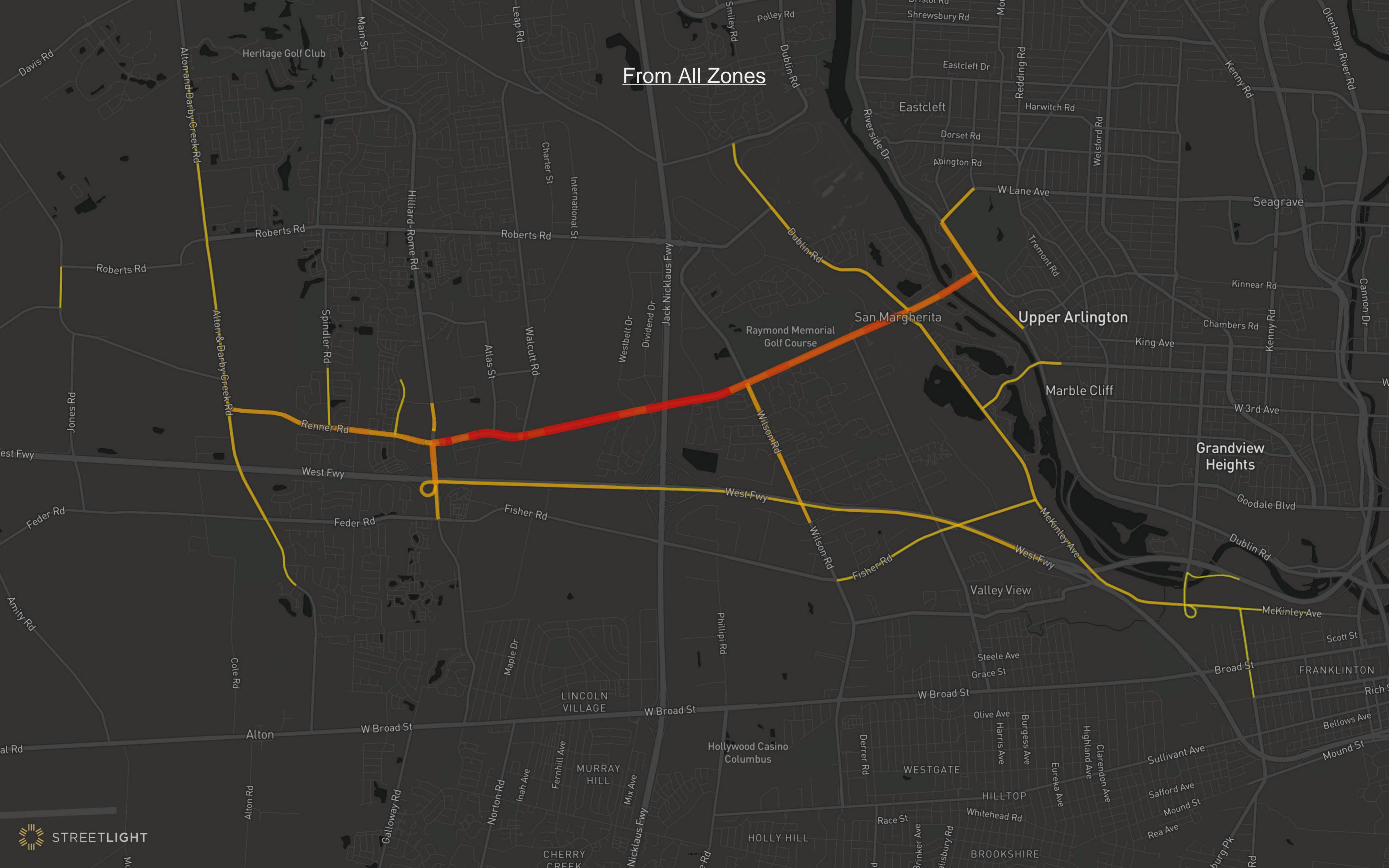


**Top Routes: All Vehicles** 













OLENTANGY WEST

KennyRd

**Riverside Methodis** Hospital

Seagrave

Kinnear Rd

W 3rd Ave

Chambers Rd 줃

King Ave

Grandview Heights

Goodale Blvd

McKinley A

FR

Dublin Rd

Broad St



R Middlesex Rd Ohio State Uni Golf Cour Rd Shrewsbury Rd Eastcleft Dr Harwitch Rd

W Lane Ave

Dorset Rd

Abington Rd

**Upper Arlington** 

emontRd

Marble Cliff

McKinley Ave

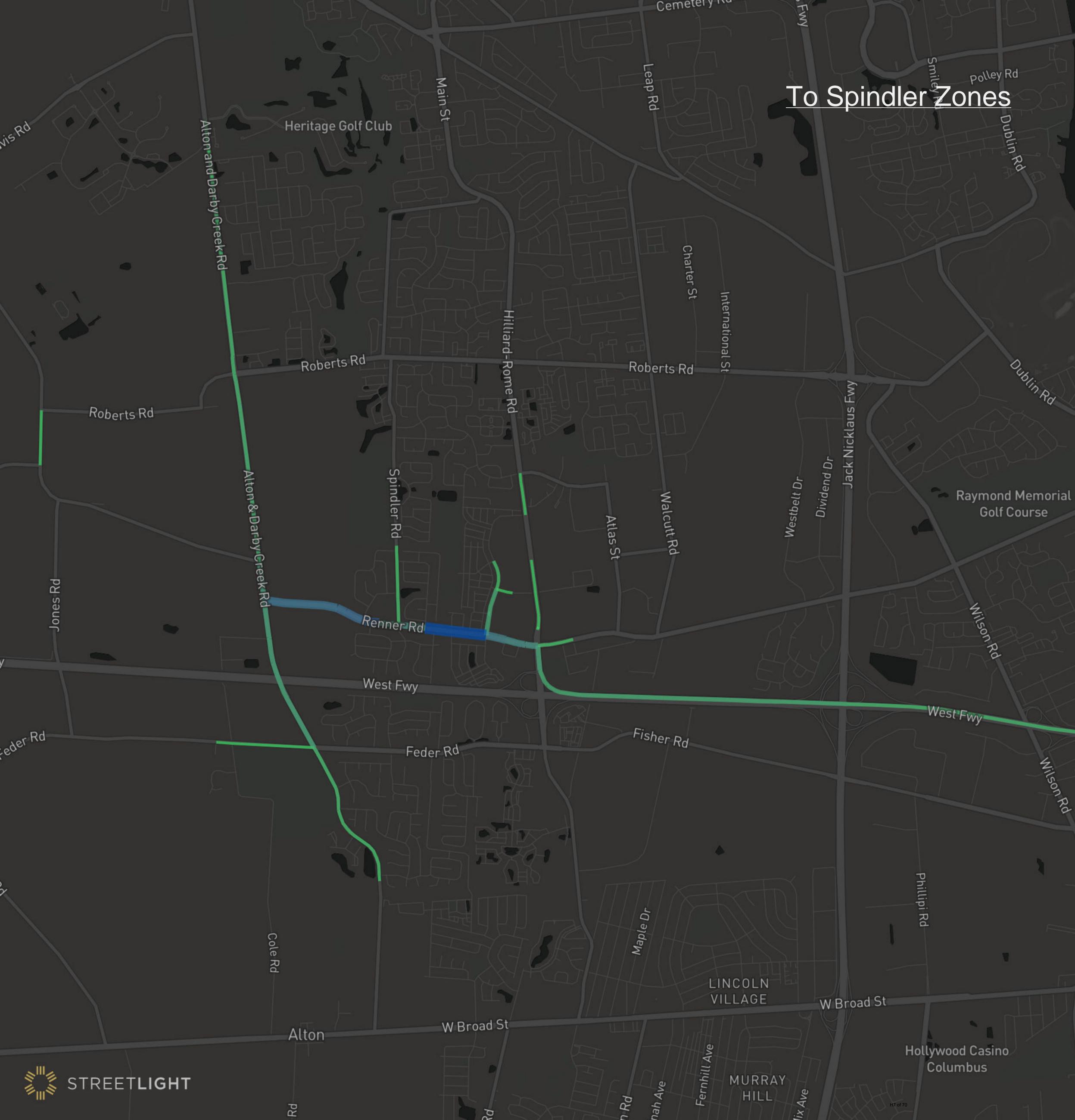
Clare Highland

West-Fwy

Valley View

Steele Ave Grace St

Olive Ave 👦





eDr

Riv

sideDr

Eastcleft Dr

### Eastcleft

Dorset Rd Abington Rd



W Lane Ave

Upper Arlington

IontRd



Marble Cliff

McKinley Ave

H

West Fwy



on Rd

Fish

r Rd

Valley View

Steele Ave Grace St

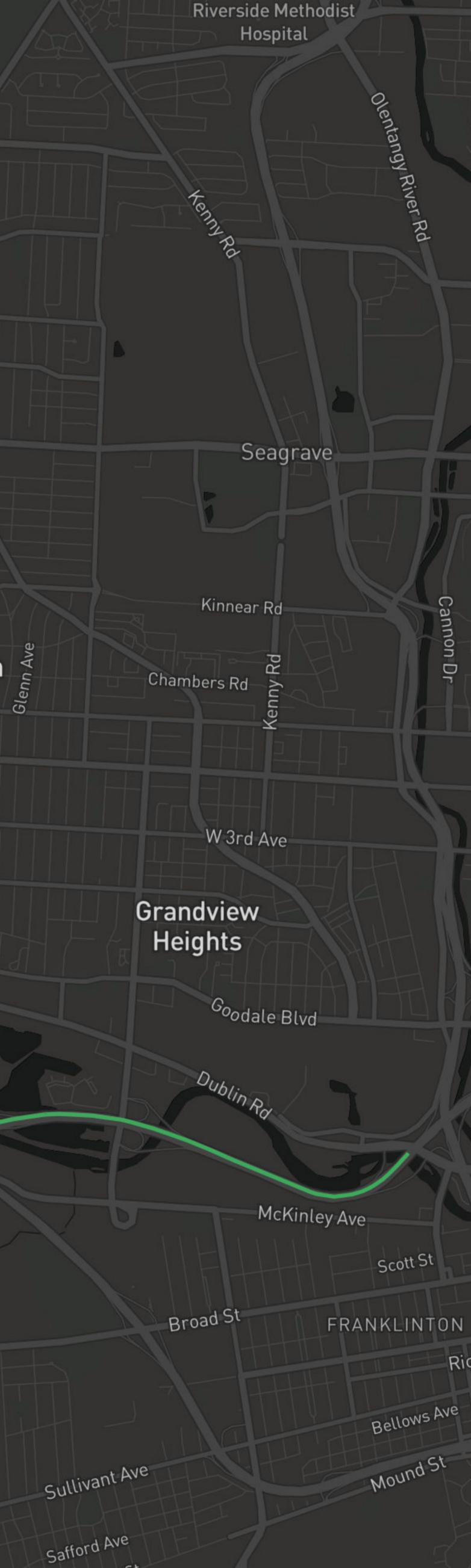
W Broad St

Olive Ave 👦 Har Pov

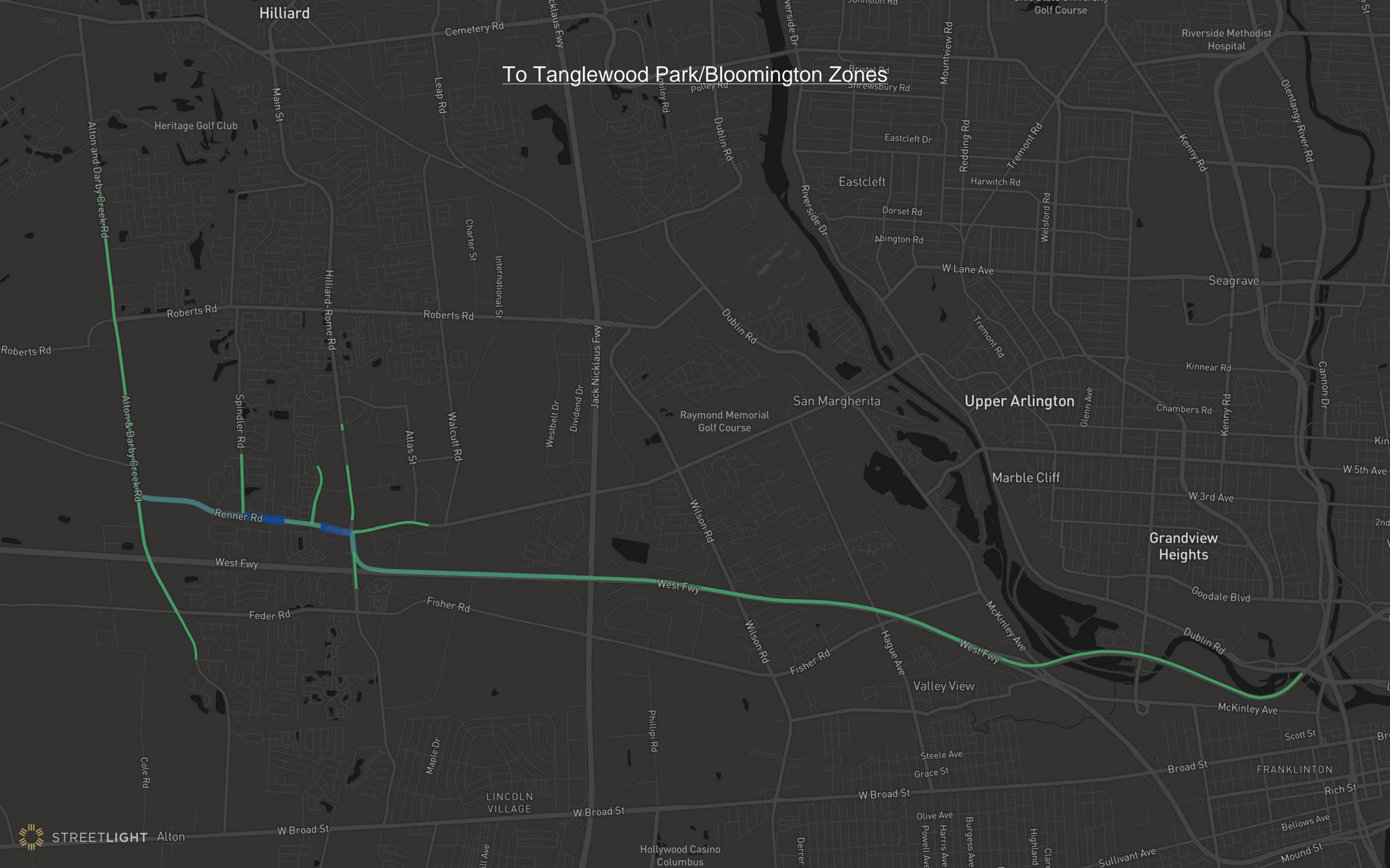
WESTGATE

HILLTOP

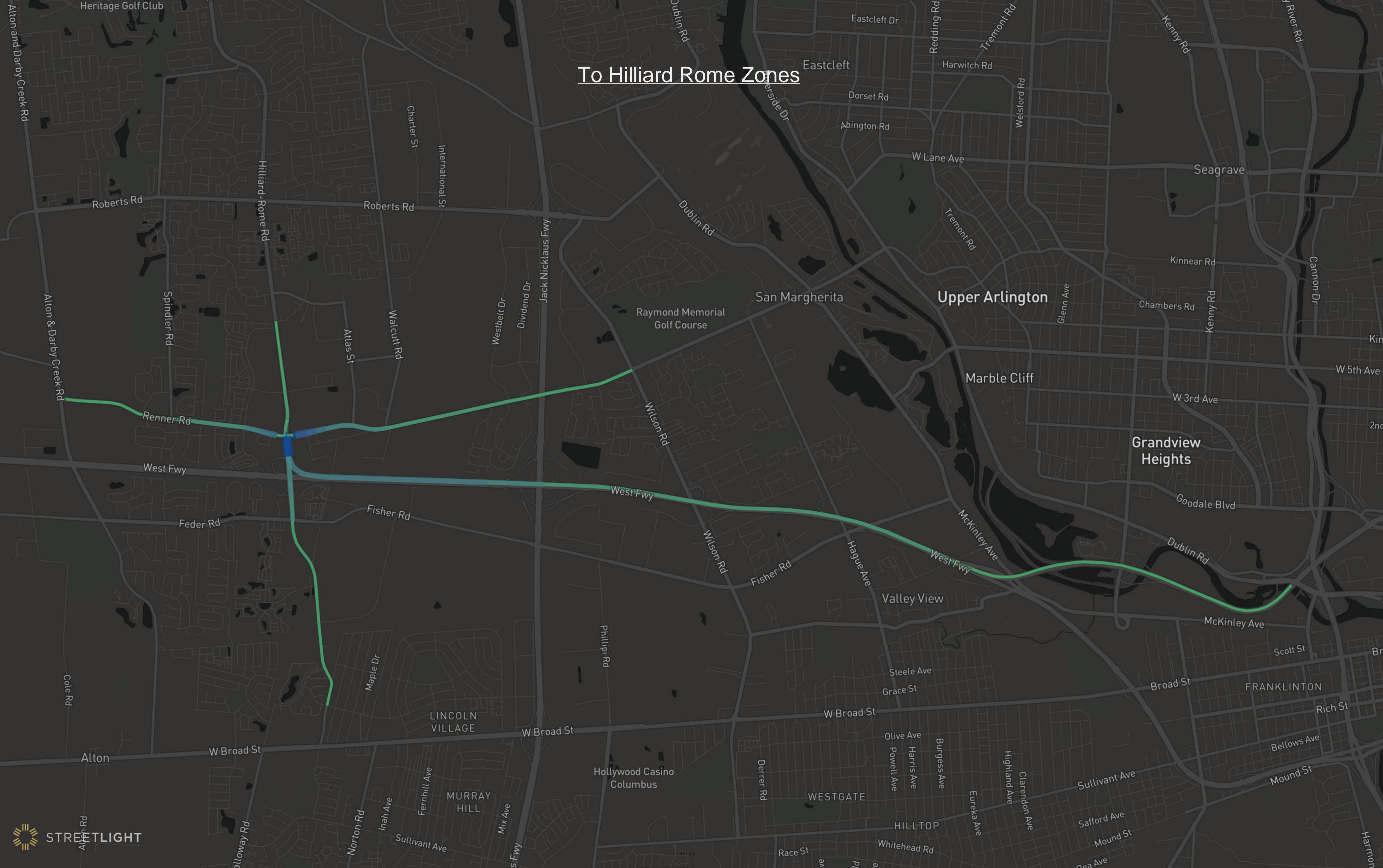
Safford Ave

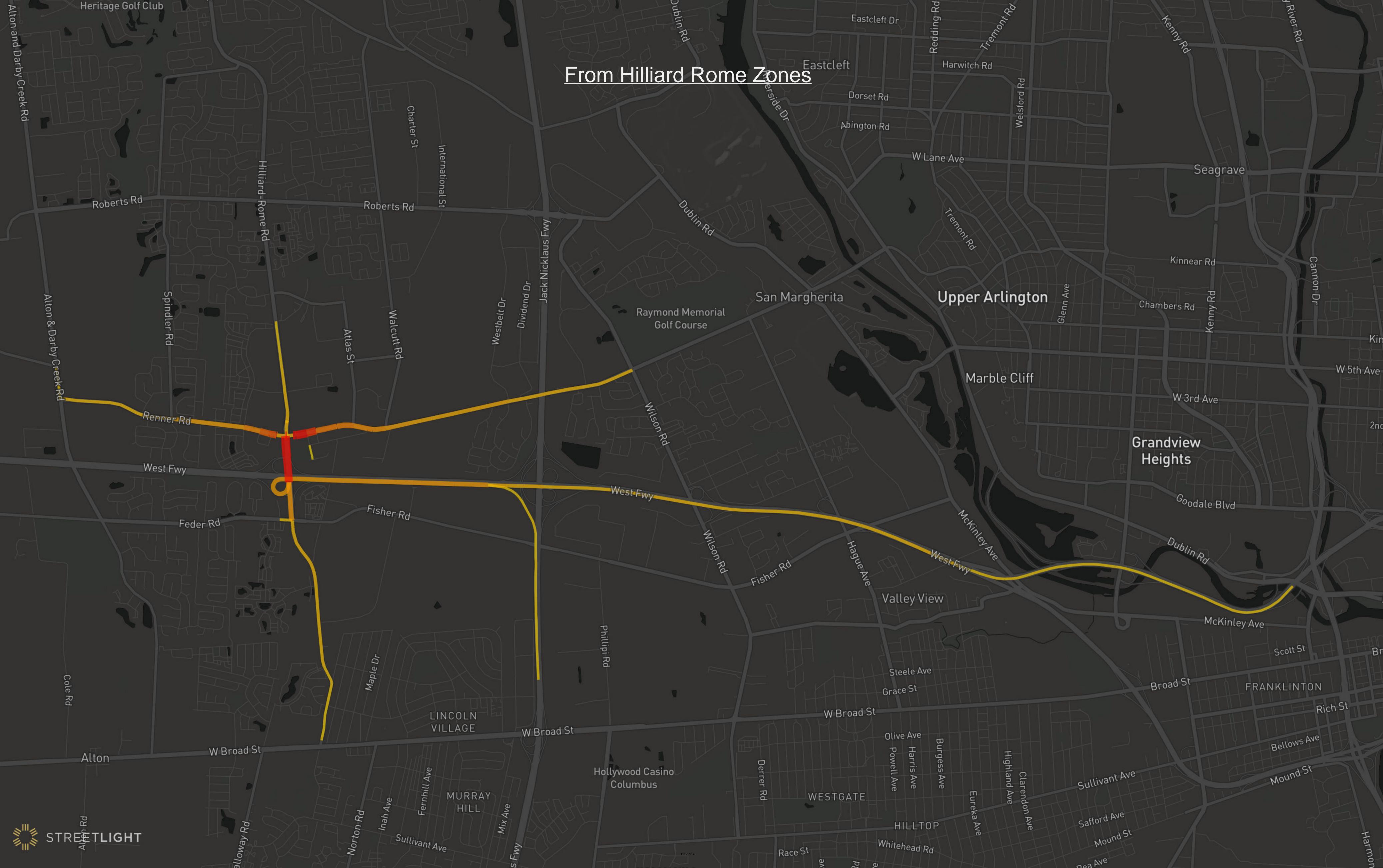


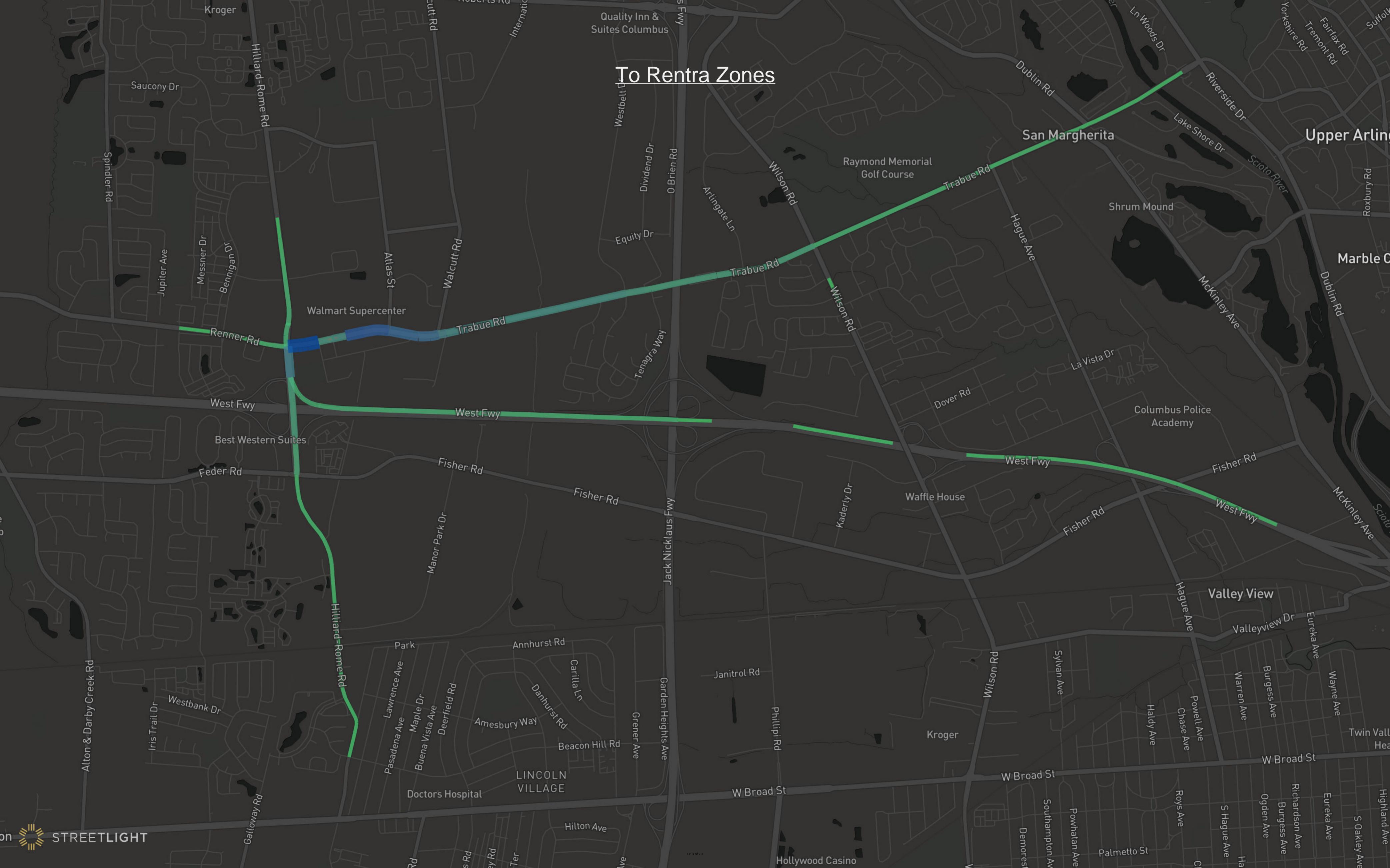




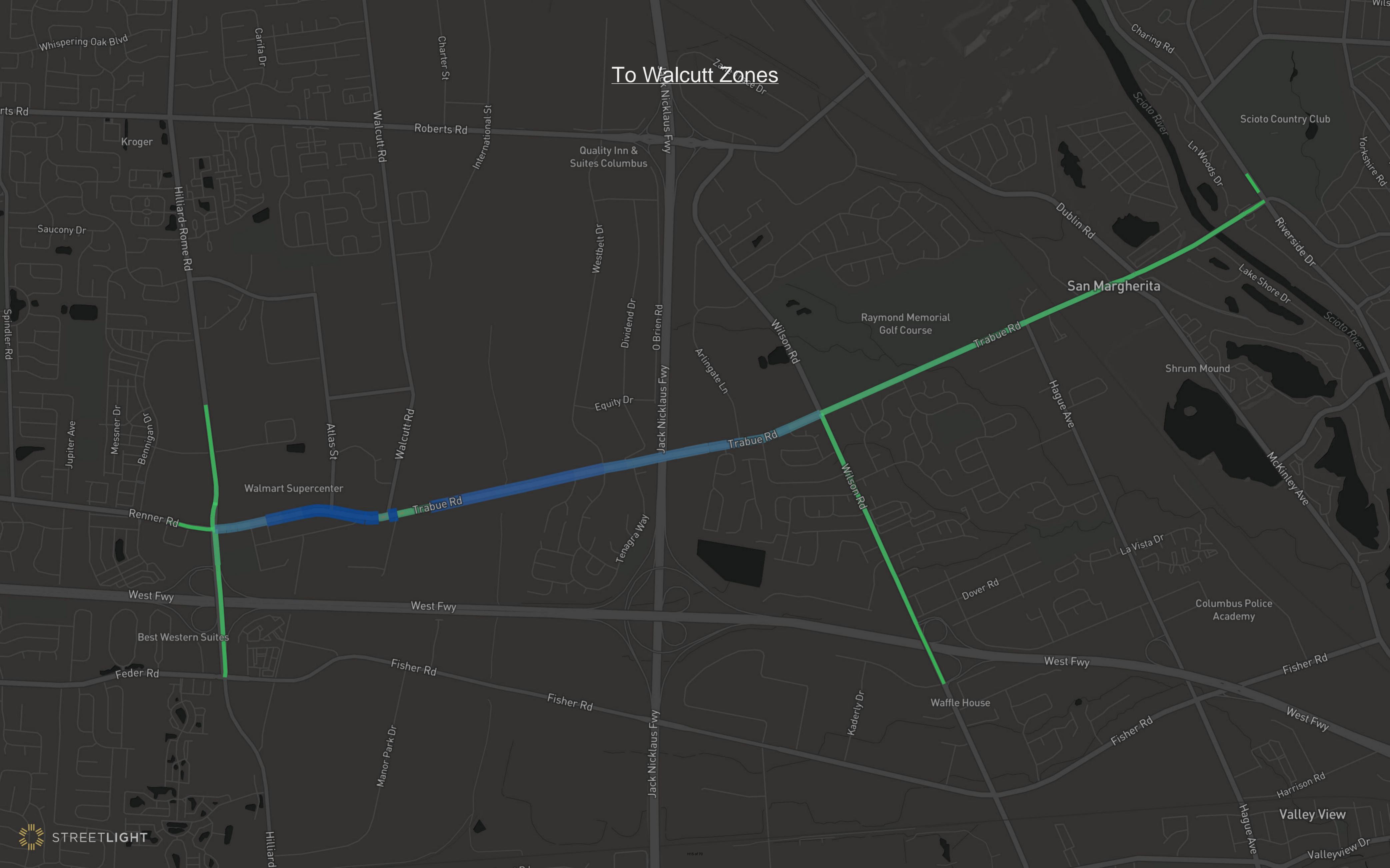


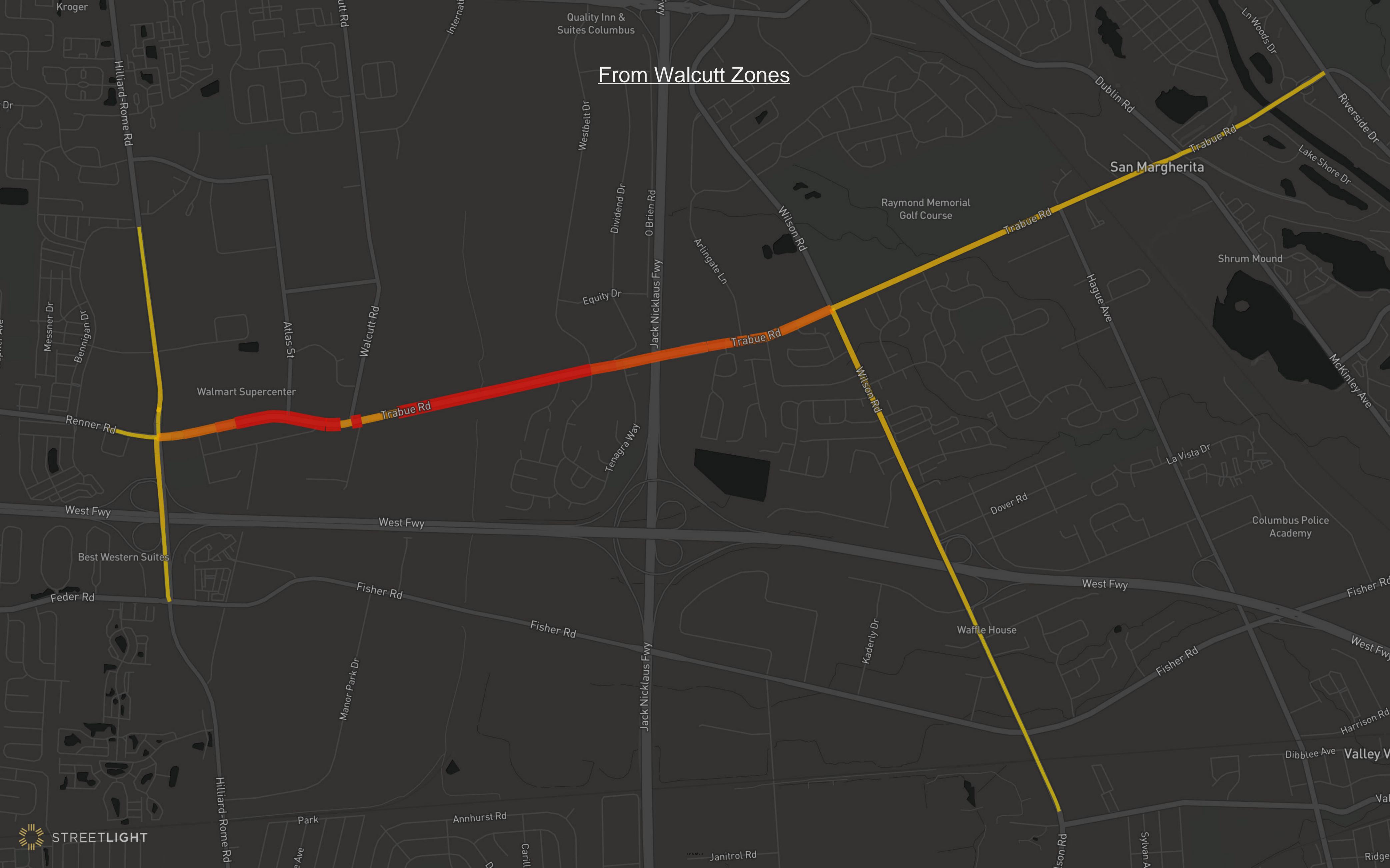


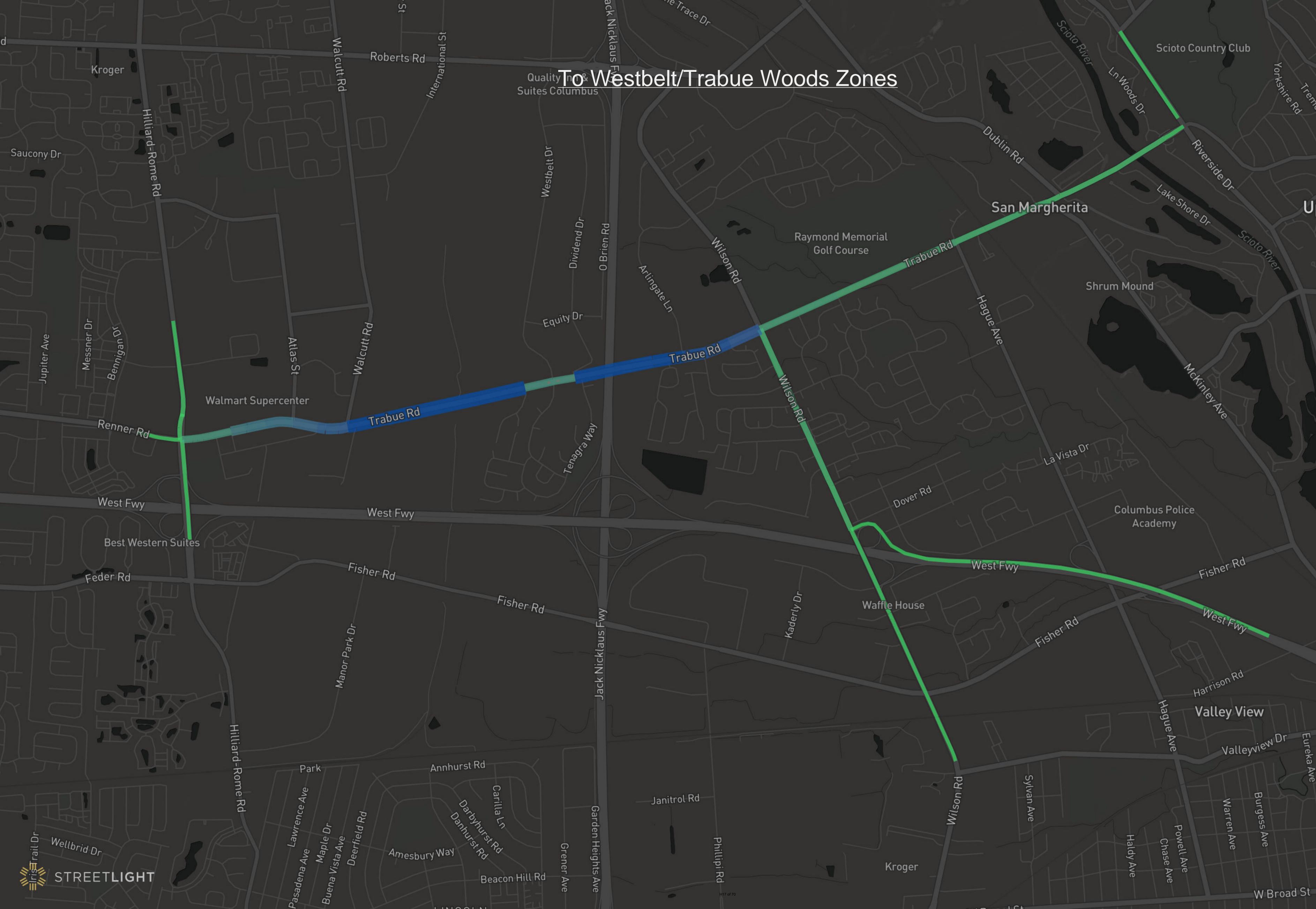














oventry Rd

Tremont Rd Tremont Rd

IITE Rd

.89

### Marble Cliff

Dublin Rd

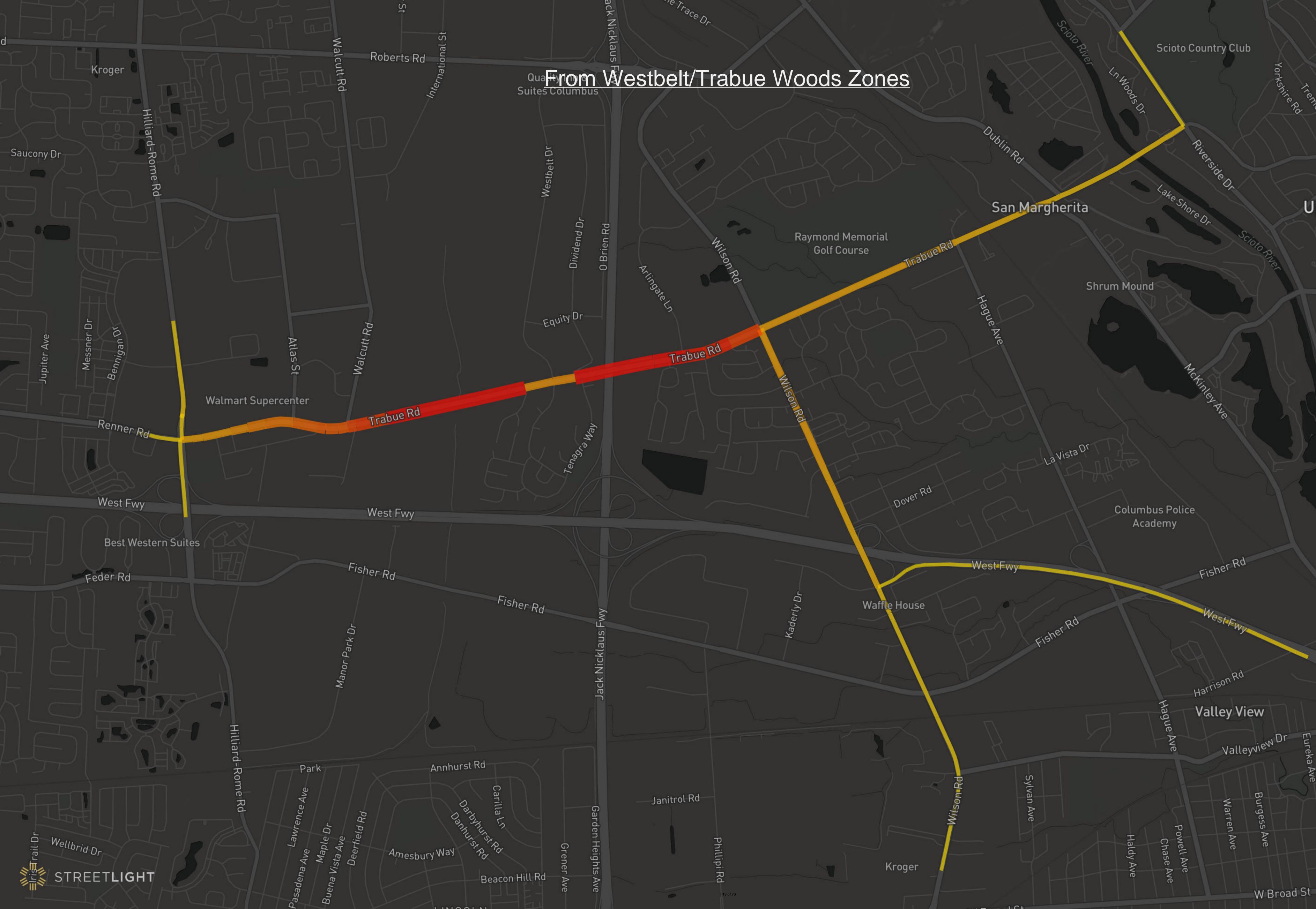
McKinley Ave

cioto Rive

Twin Valley Behavioria Health Care

W Broad St

é





oventry Rd

Fairtat Rd Tremont Rd

III E Rd

.89

### Marble Cliff

Dublin Rd

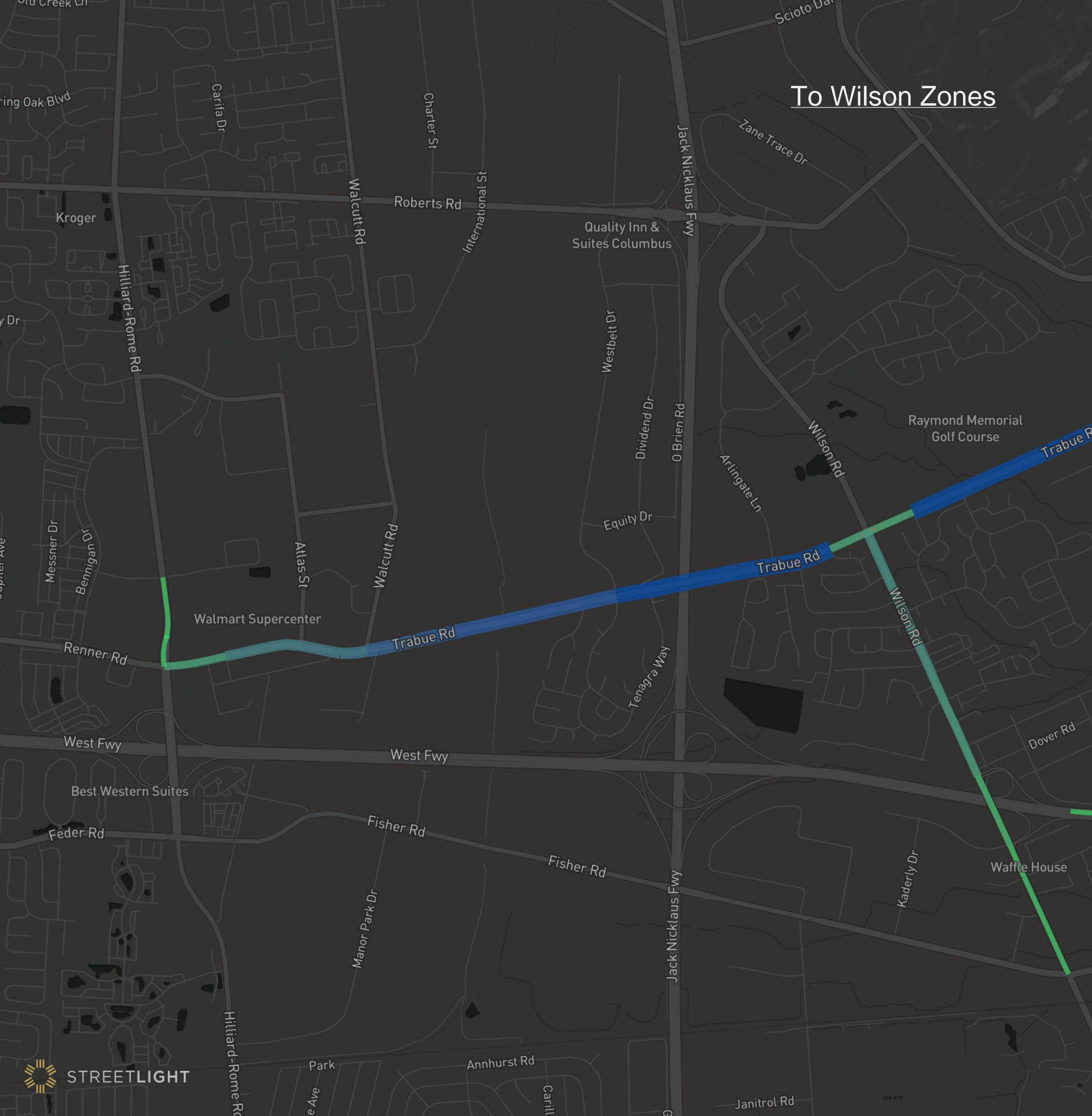
Mctinley Ave

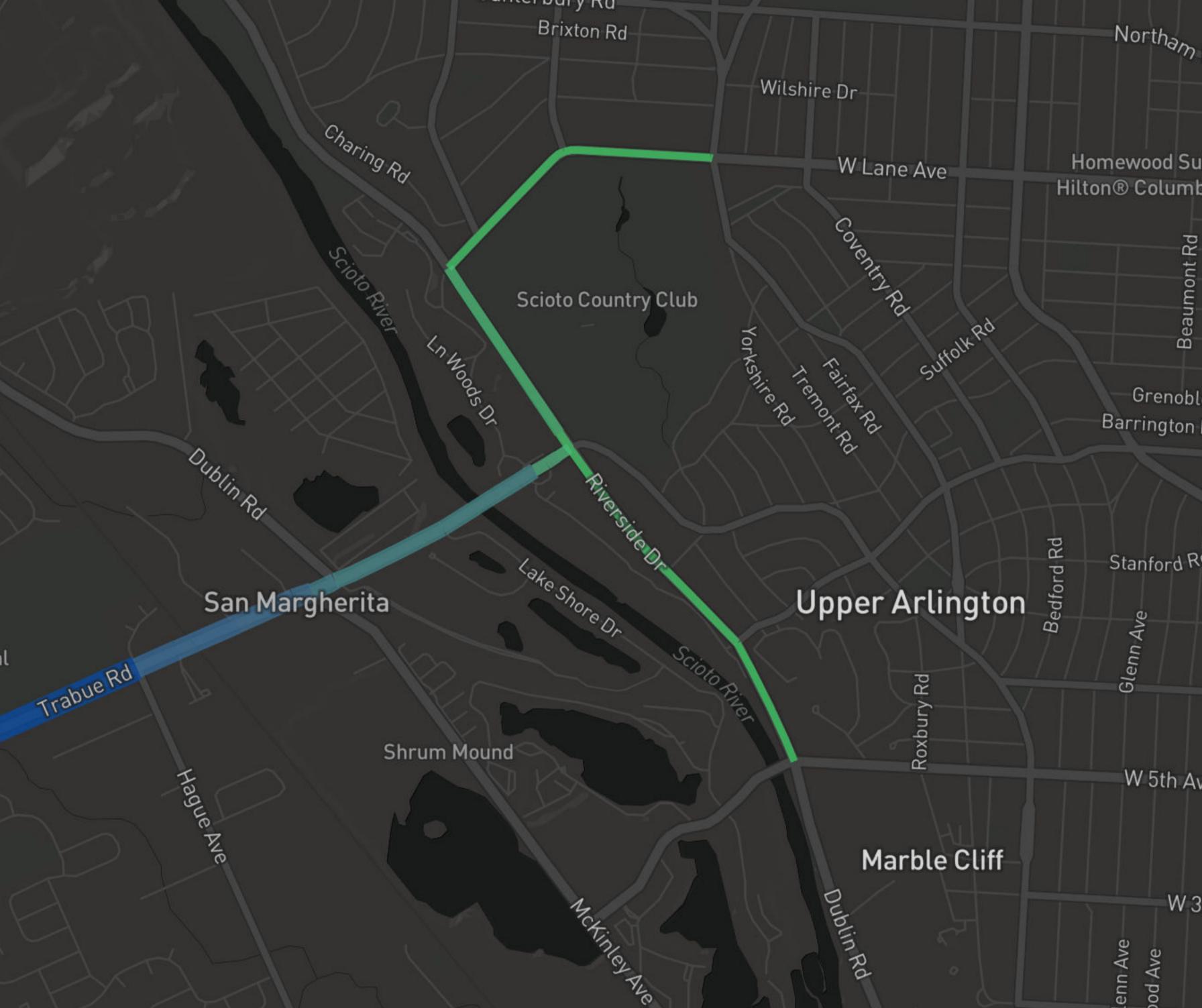
cloto Riv

Twin Valley Behavioria Health Care

W Broad St

é





La Vista Dr

Fisher Rd

Columbus Police Academy

Fisher Rd

West Fwy

Harrison Rd

Valley View

Valleyview

West Fwy

# Homewood Su Hilton<sup>®</sup> Columb

G Bluff Ave

Goo



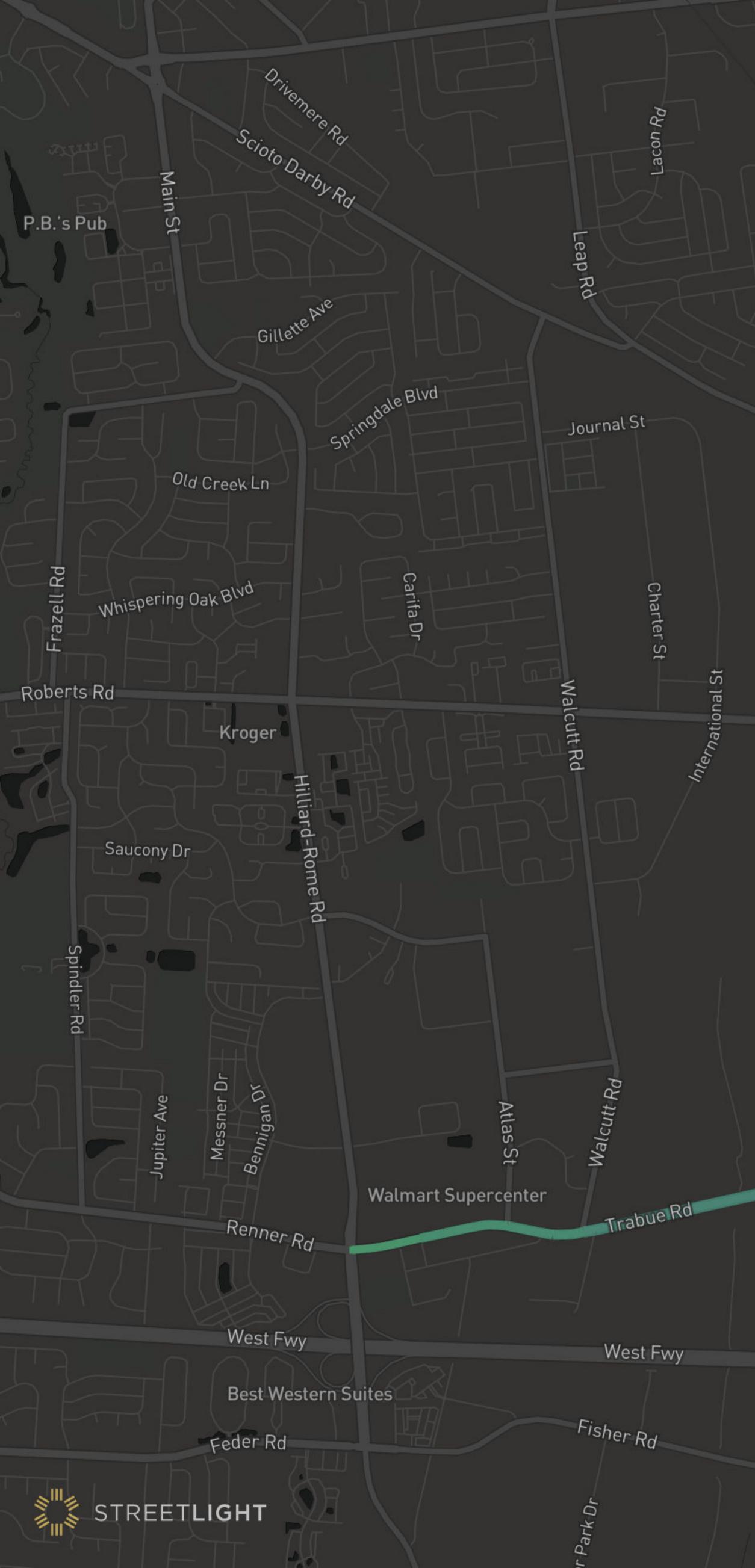
Dr m

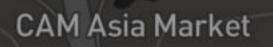
McKinley Me



Northam Rd Homewood Suites by Hilton® Columbus/0SU Barrington Rd **Upper Arlington** shland Av North St W 5th Ave Marble Cliff I Ave Ave Ave Ave Ashland , Oakland , O Gle Bluff Ave Goodale Blvd

Twin Valley Behaviorial Health Care McKin





# st To Mapleway/Hague Zones

Indian Mound

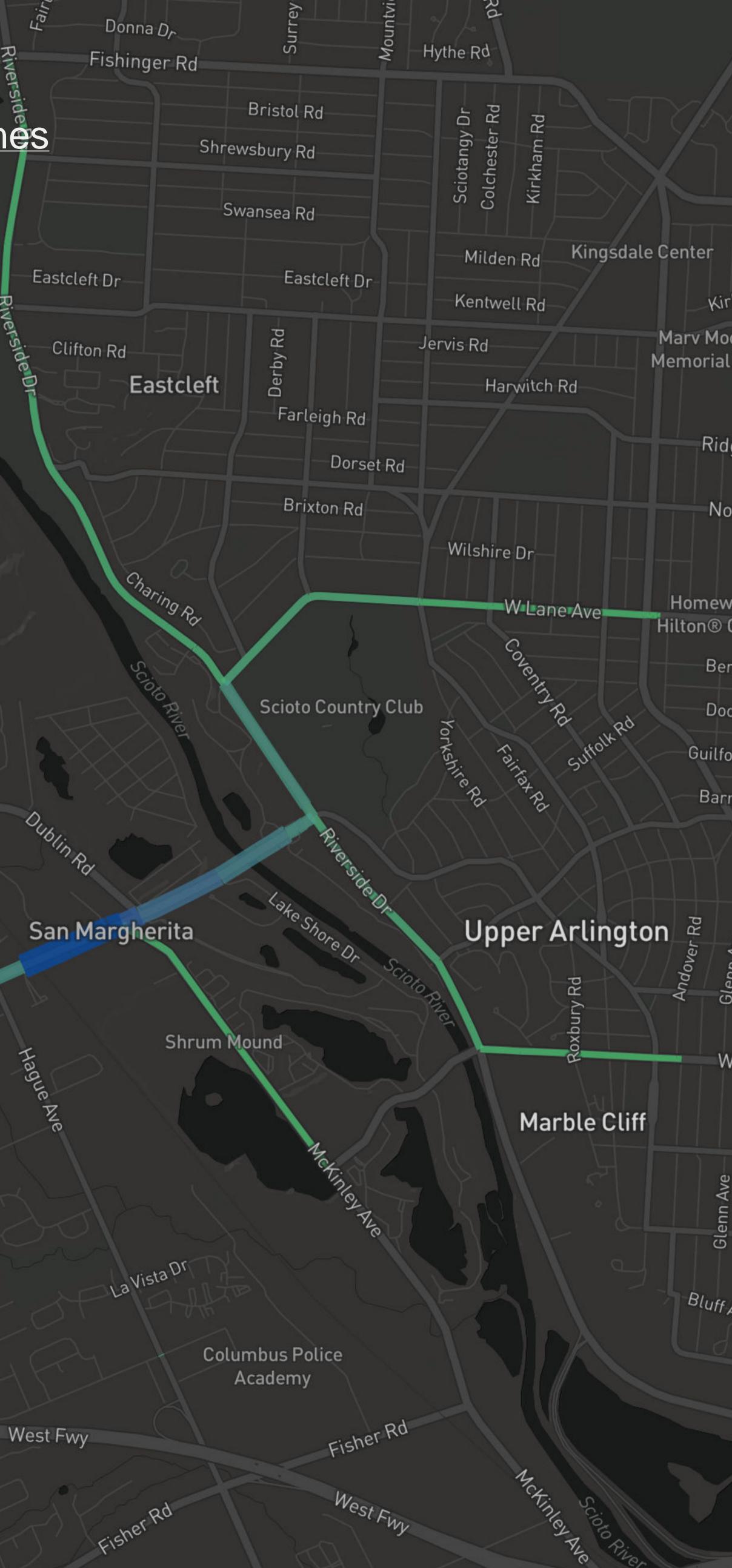
Noreen Dr Scioto Darby Rd Zane Trace Dr Quality Inn & Suites Columbus id Dr n Rd Raymond Memorial Golf Course 0 Bri ArlingateLn Div Equity Dr

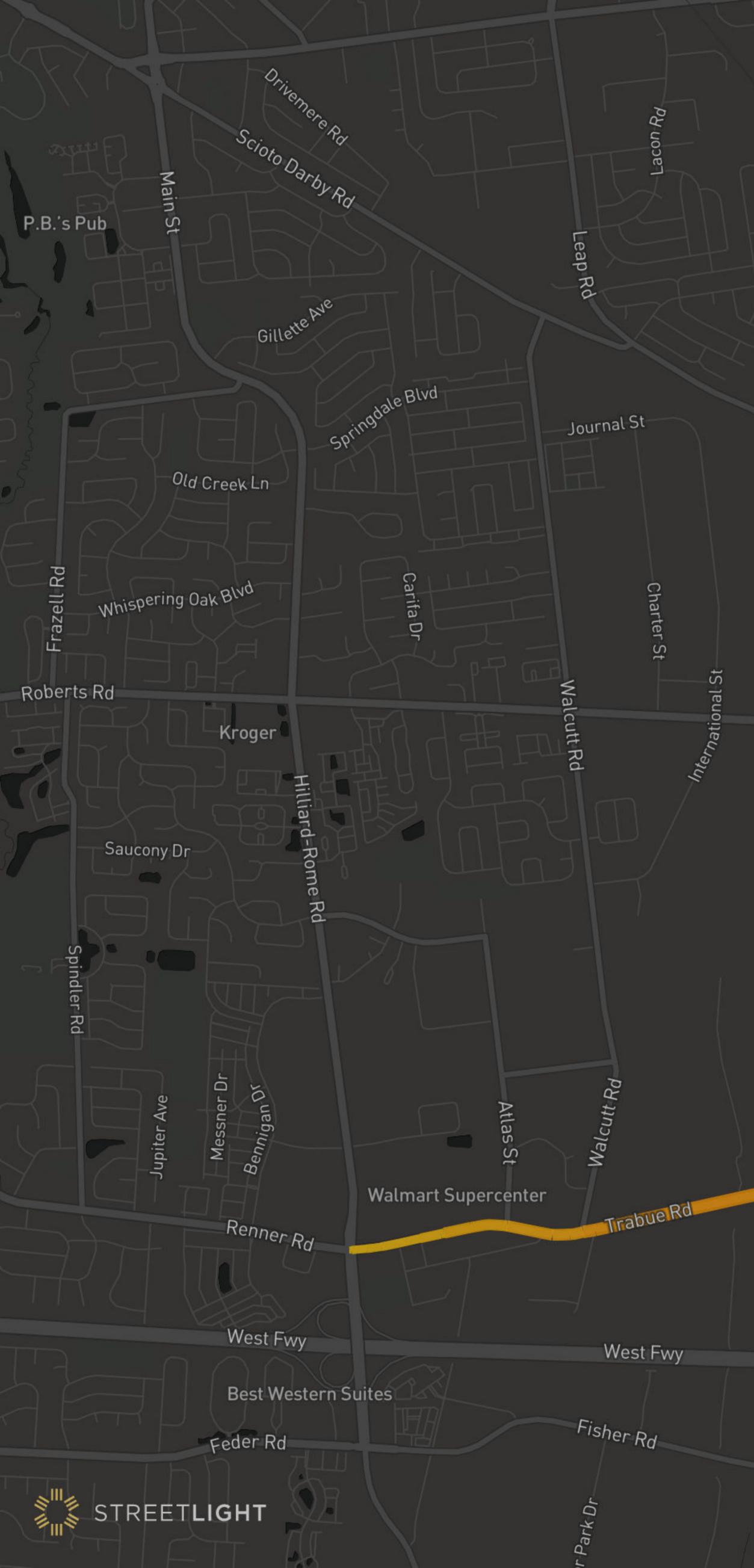
Fisher Rd

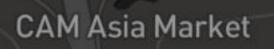
lt Dr

Waffle House

Dover Rd







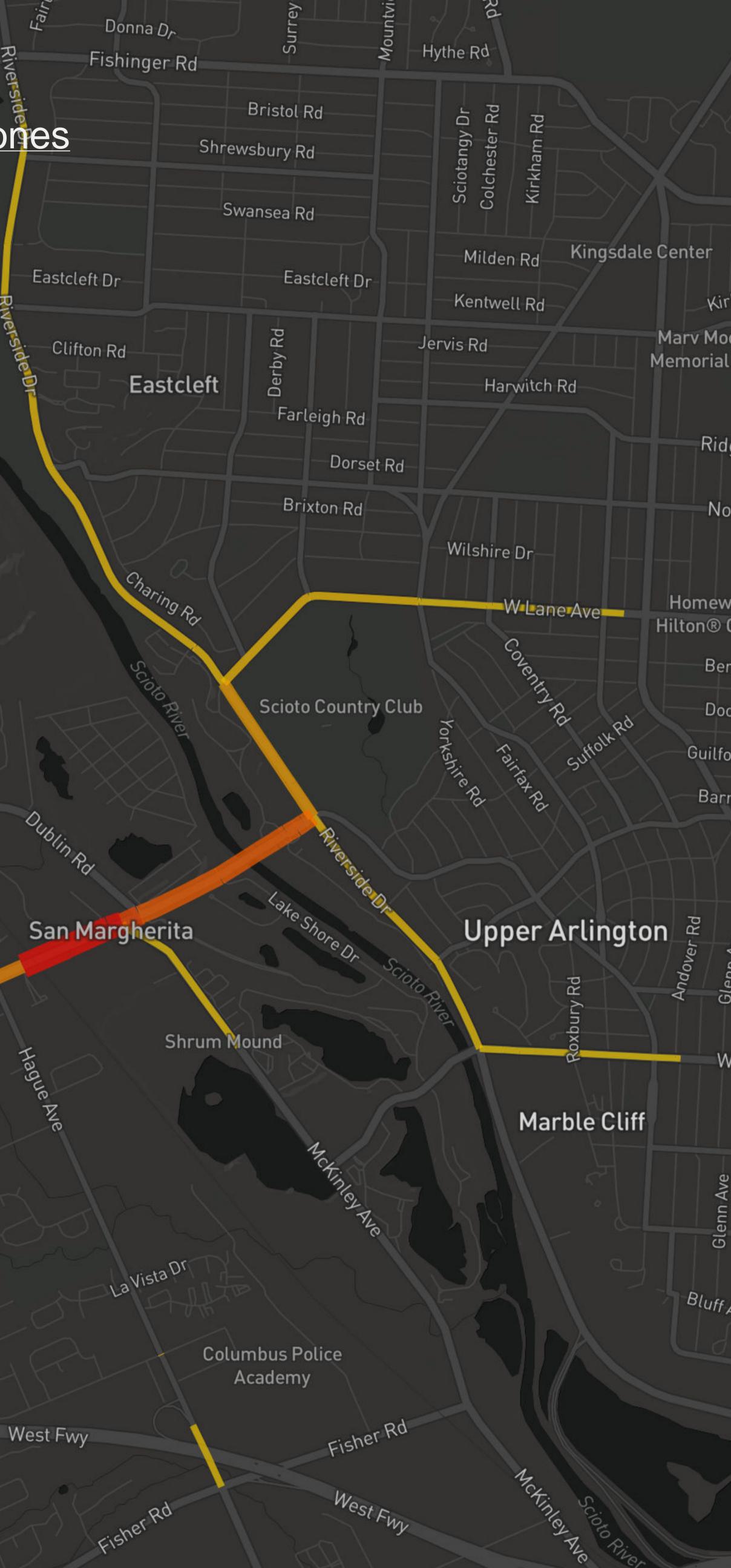
# From Mapleway/Hague Zones

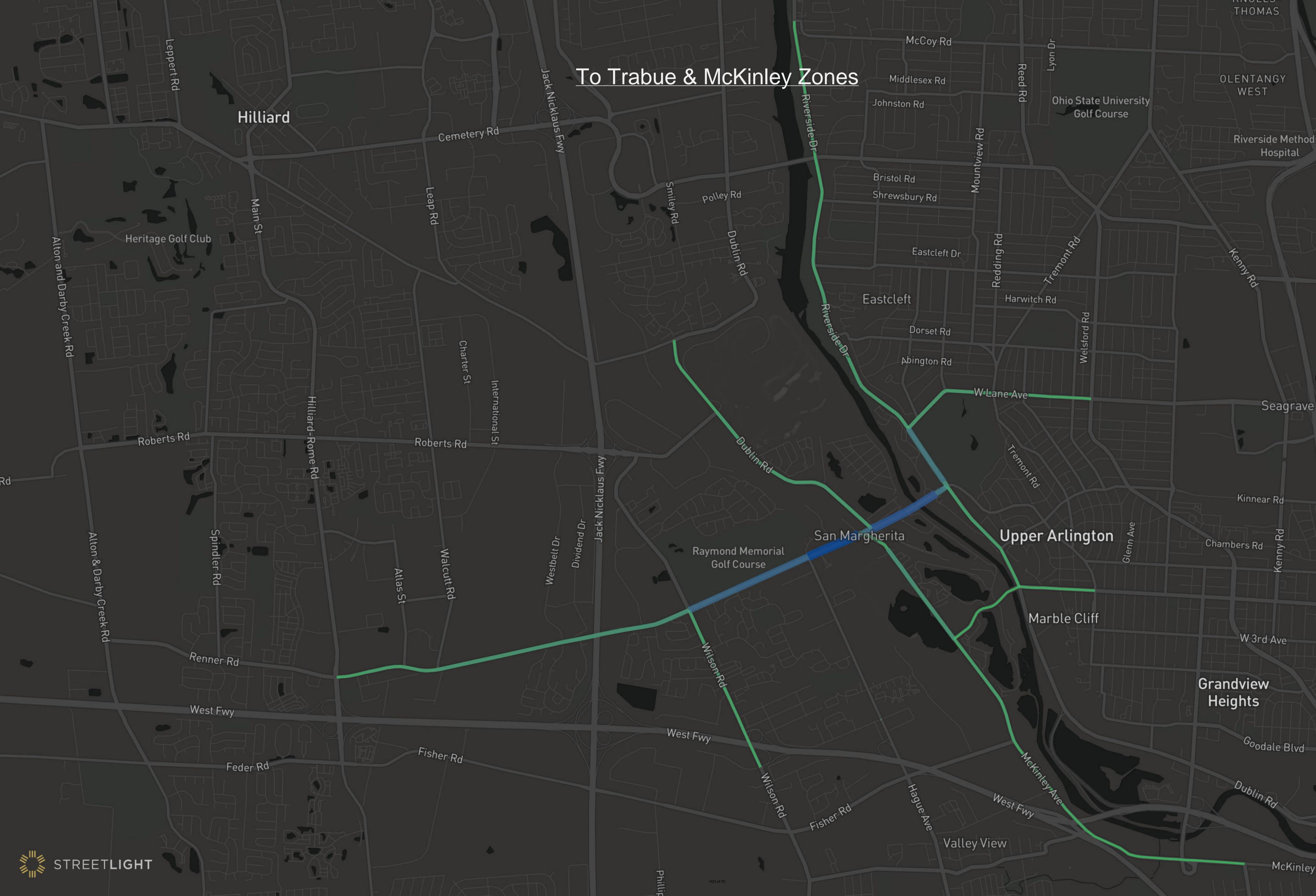
Indian Mound

Noreen Dr Scioto Darby Rd Zane-Trace Dr Quality Inn & Suites Columbus lt Dr id Dr n Rd Raymond Memorial Golf Course 0 Bri ArlingateLn Div Equity Dr Trabue Ro Dover Rd

Fisher Rd

Waffle House





CLINTON

**Riverside Methodist** Hospital

Olentangy

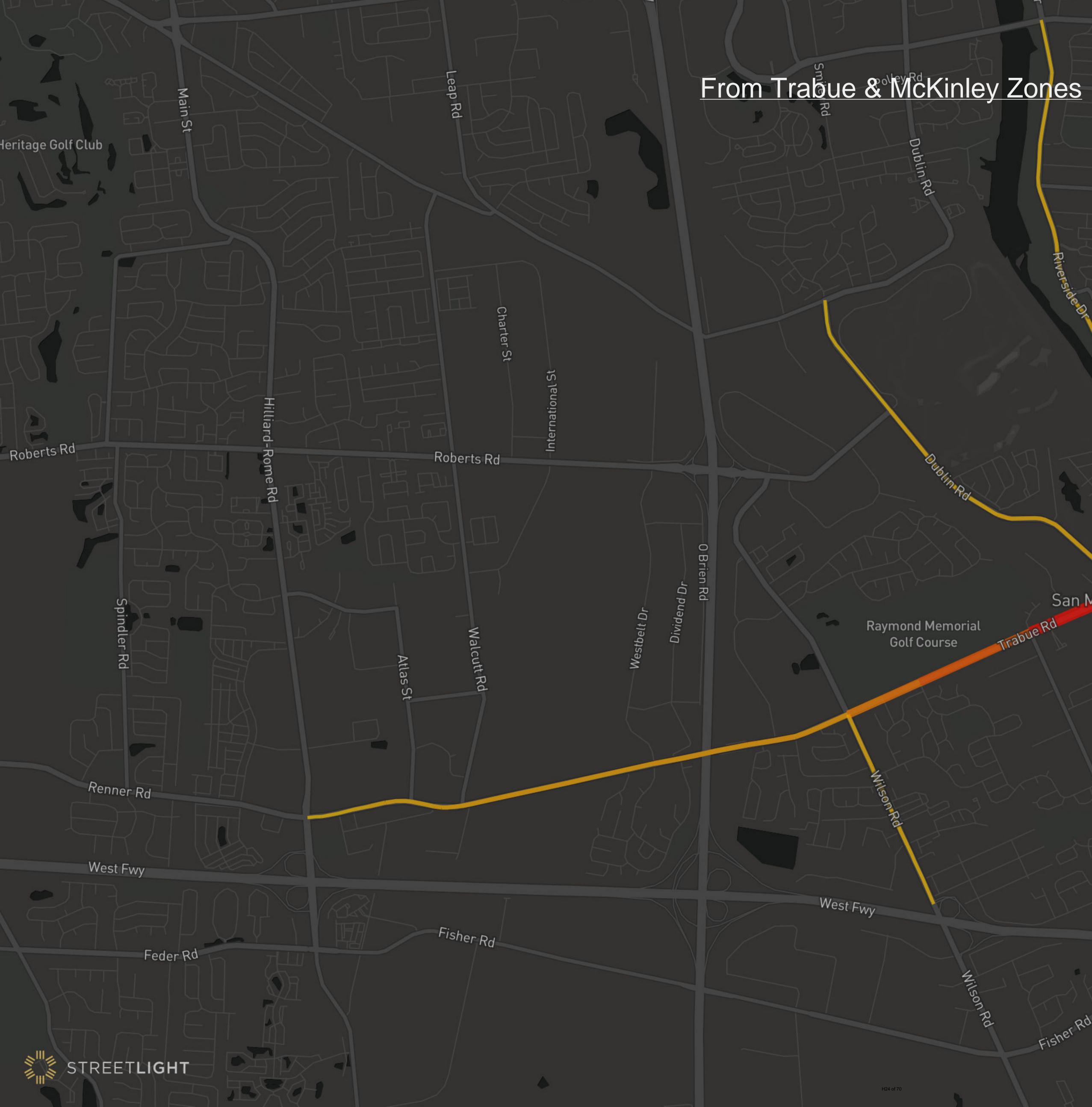
Cannon Dr

W 5th

W 3rd Ave

G<sub>oodale</sub> Blvd

McKinley Ave



Bristol Rd Shrewsbury Rd

Eastcleft Dr

Eastcleft

Dorset Rd

Abington Rd

Harwitch Rd

80

Rd

bu

pp

-W-Lane Ave

San Margherita

### Upper Arlington

Rd

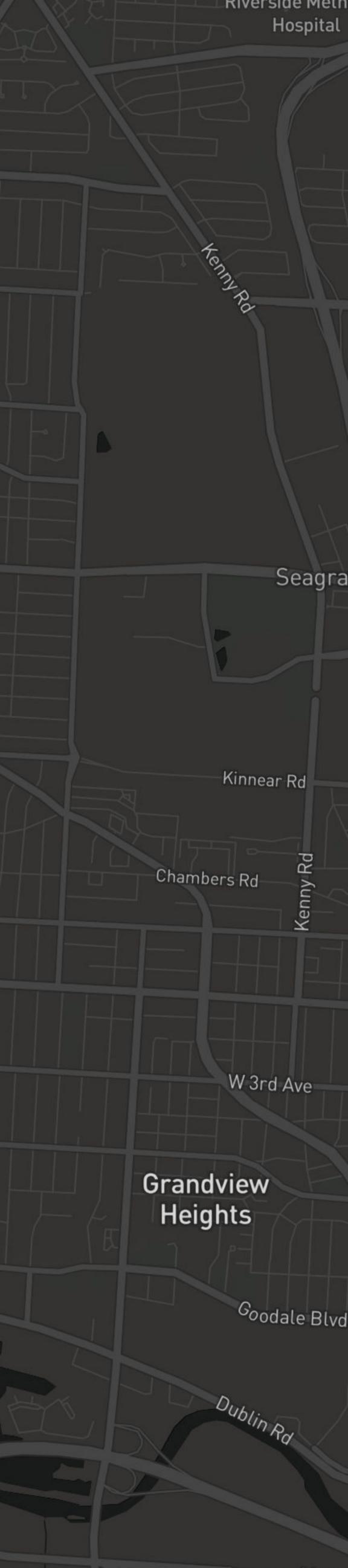
Marble Cliff

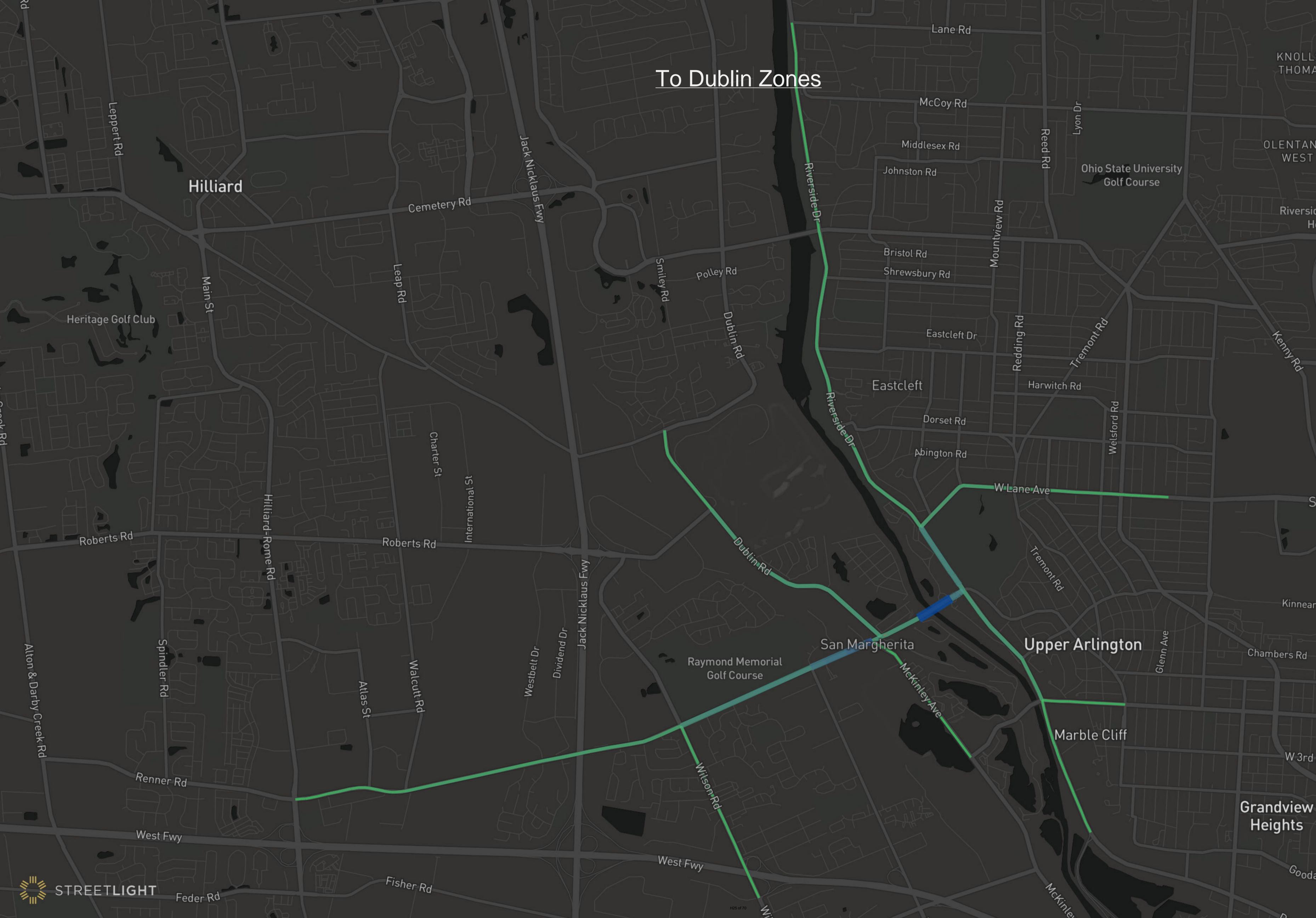
Thekin

West Fi

Valley View

lagu







KNOLLS-THOMAS

CLIN

Olentangy River Rd

Cann

OLENTANGY WEST

> Riverside Methodist Hospital

Kinnear Rd

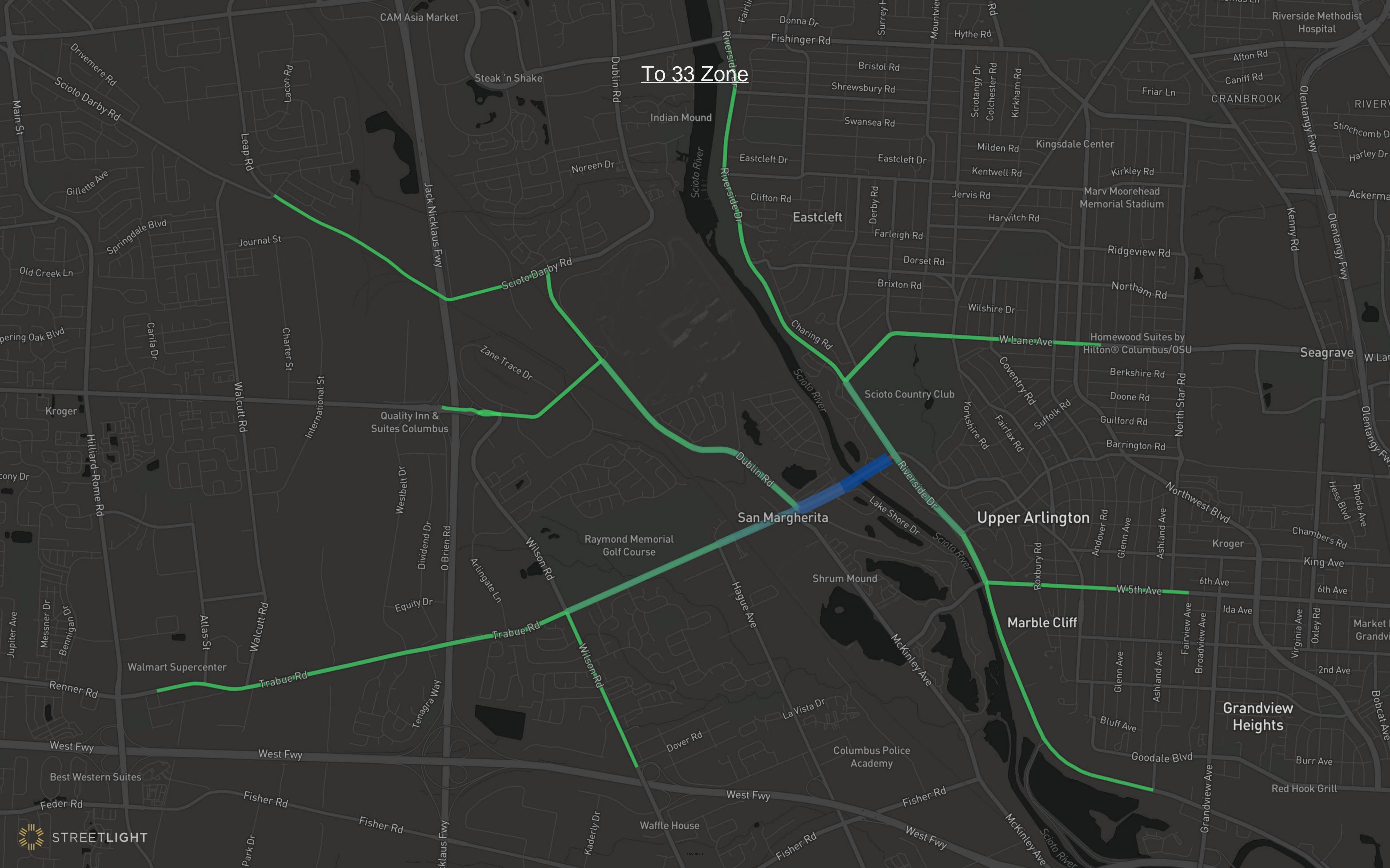
Seagrave

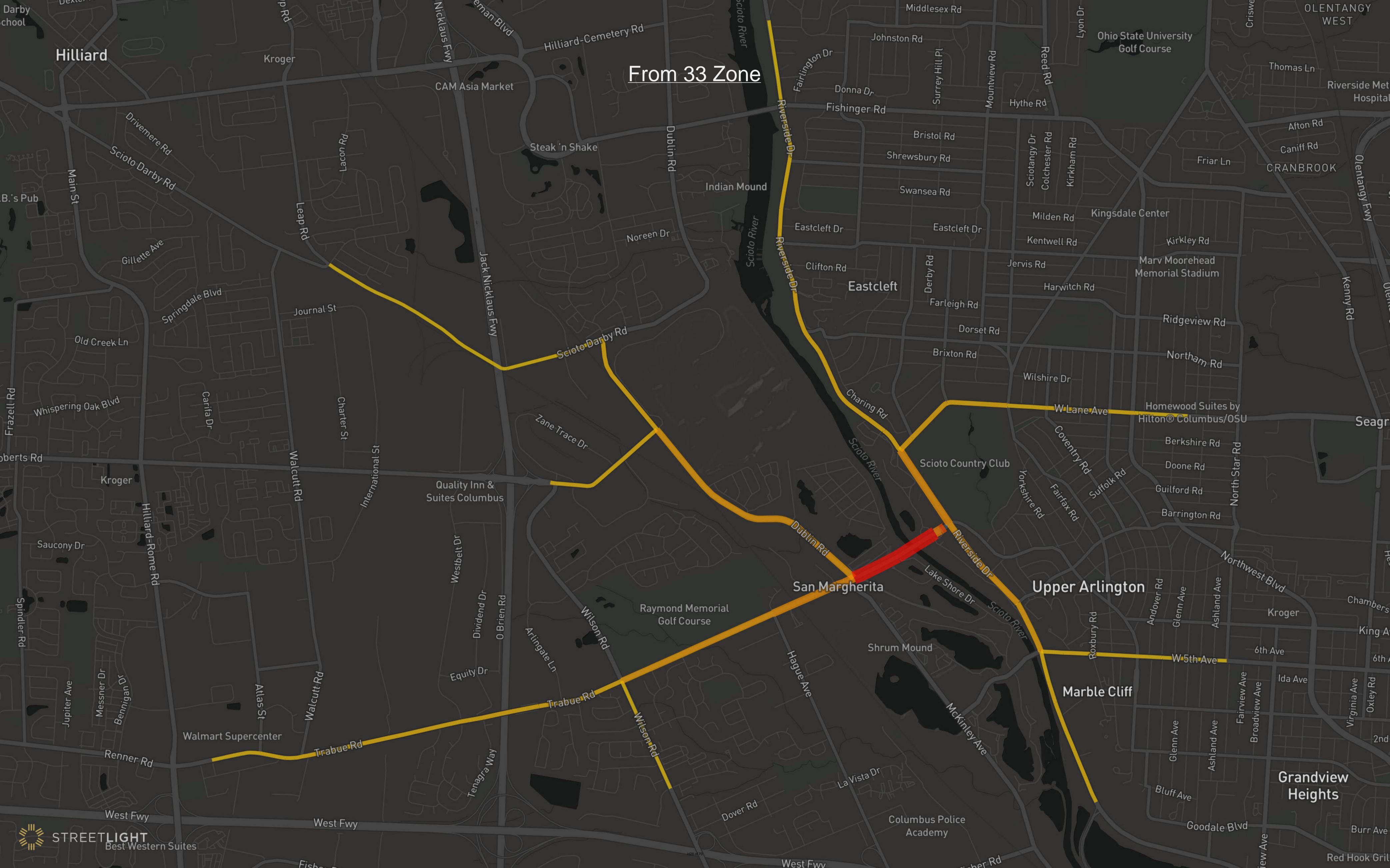
W 3rd Ave

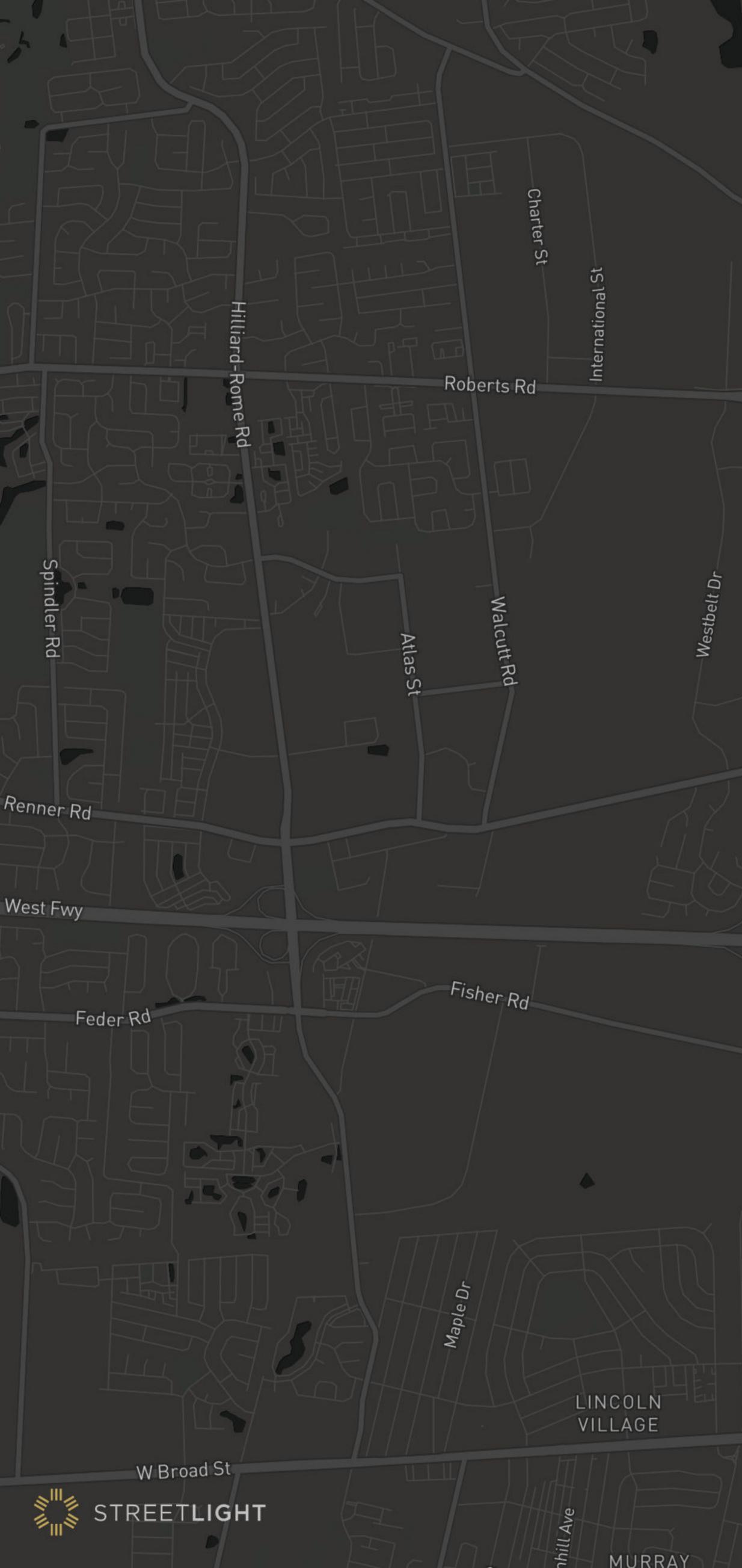
Grandview Heights

G<sub>oodale</sub> Blvd









### Eastcleft To 5th Zones

San Margherita

uin Rd

DublinRd

Raymond Memorial

Golf Course

Nils

on Rd

0 Br n Rd JQ pi

Divi

West Fwy

Wilson Rd

W Broad St

Hollywood Casino Columbus

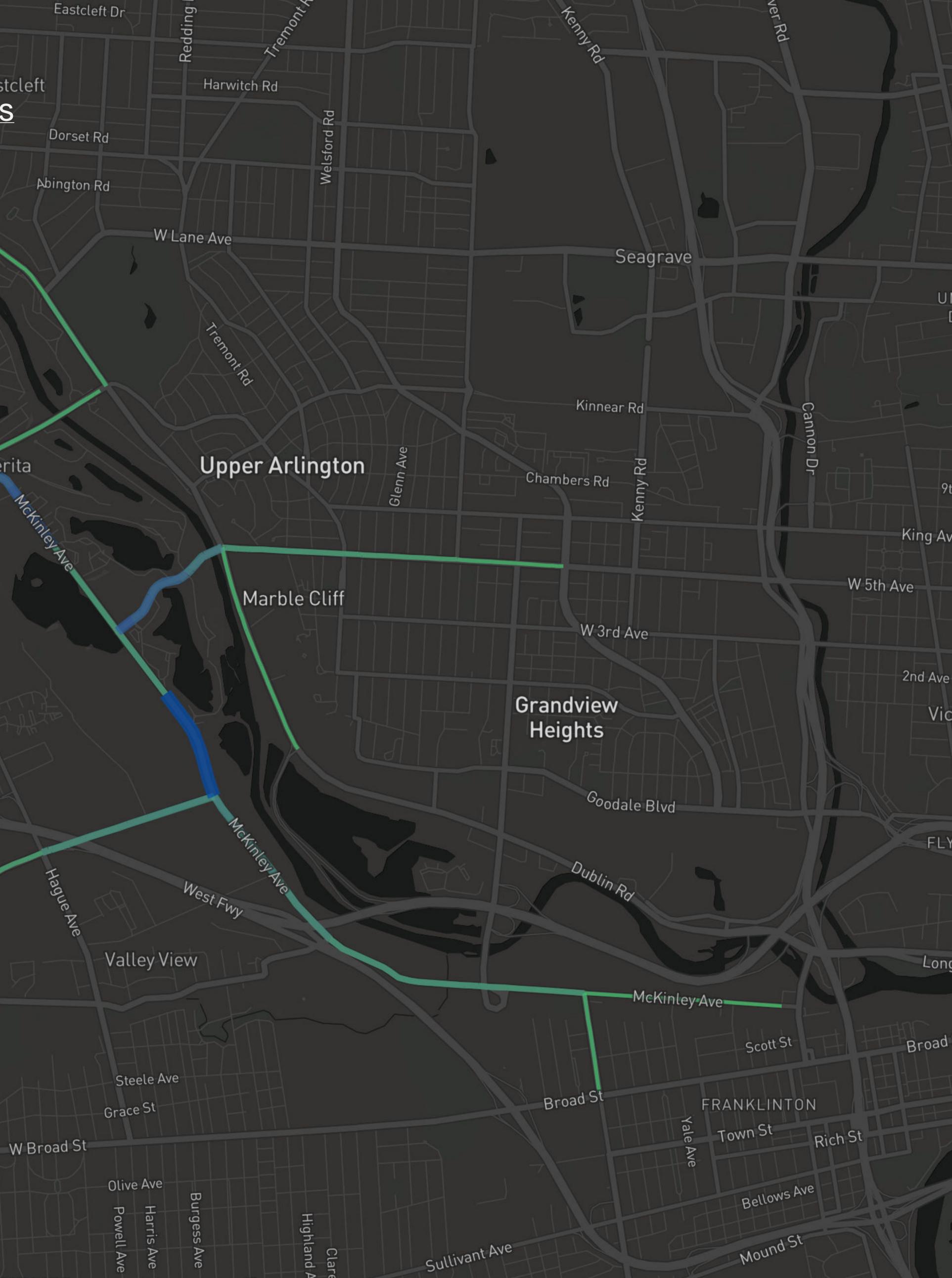
llipi

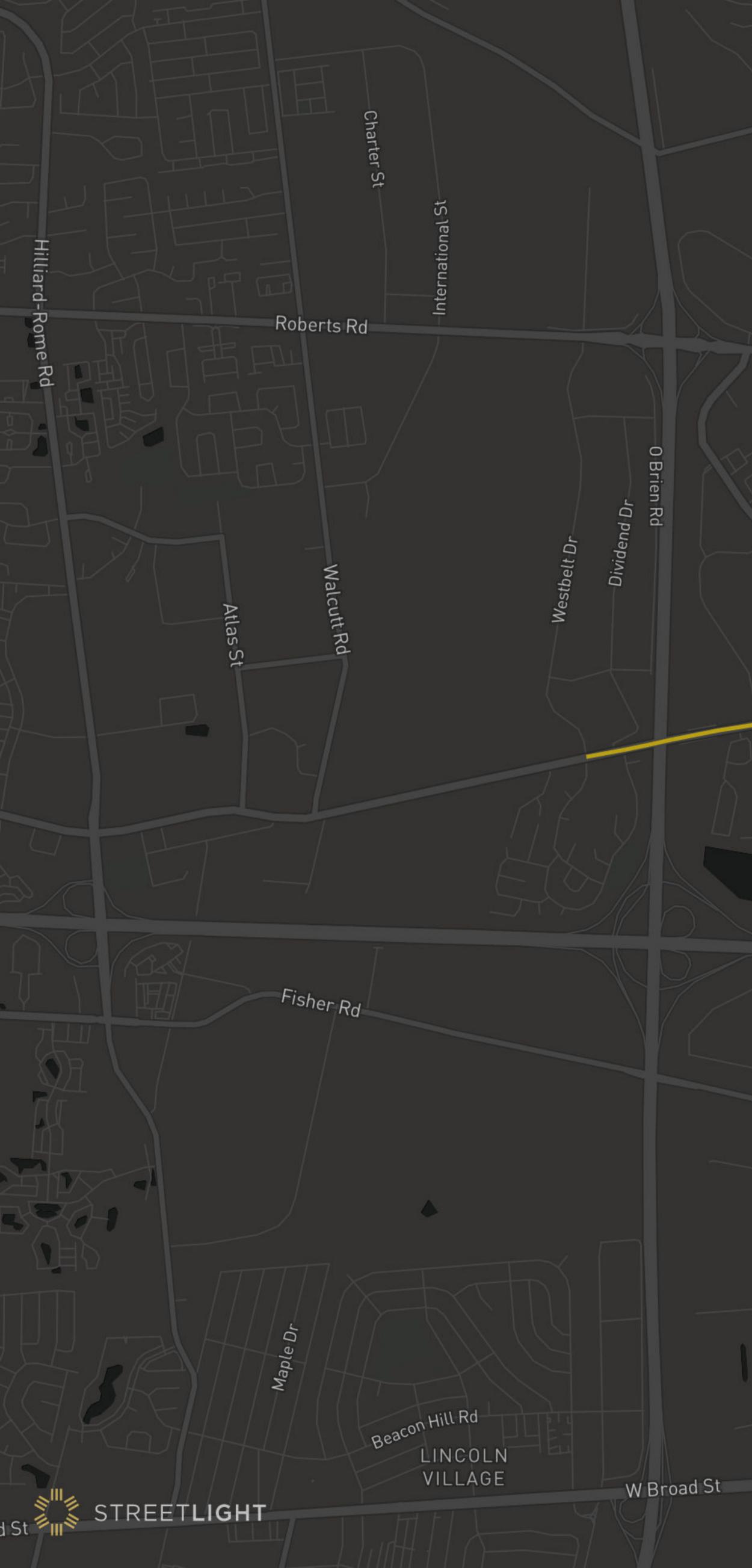
Rd

WESTGATE Winklow Rd

De

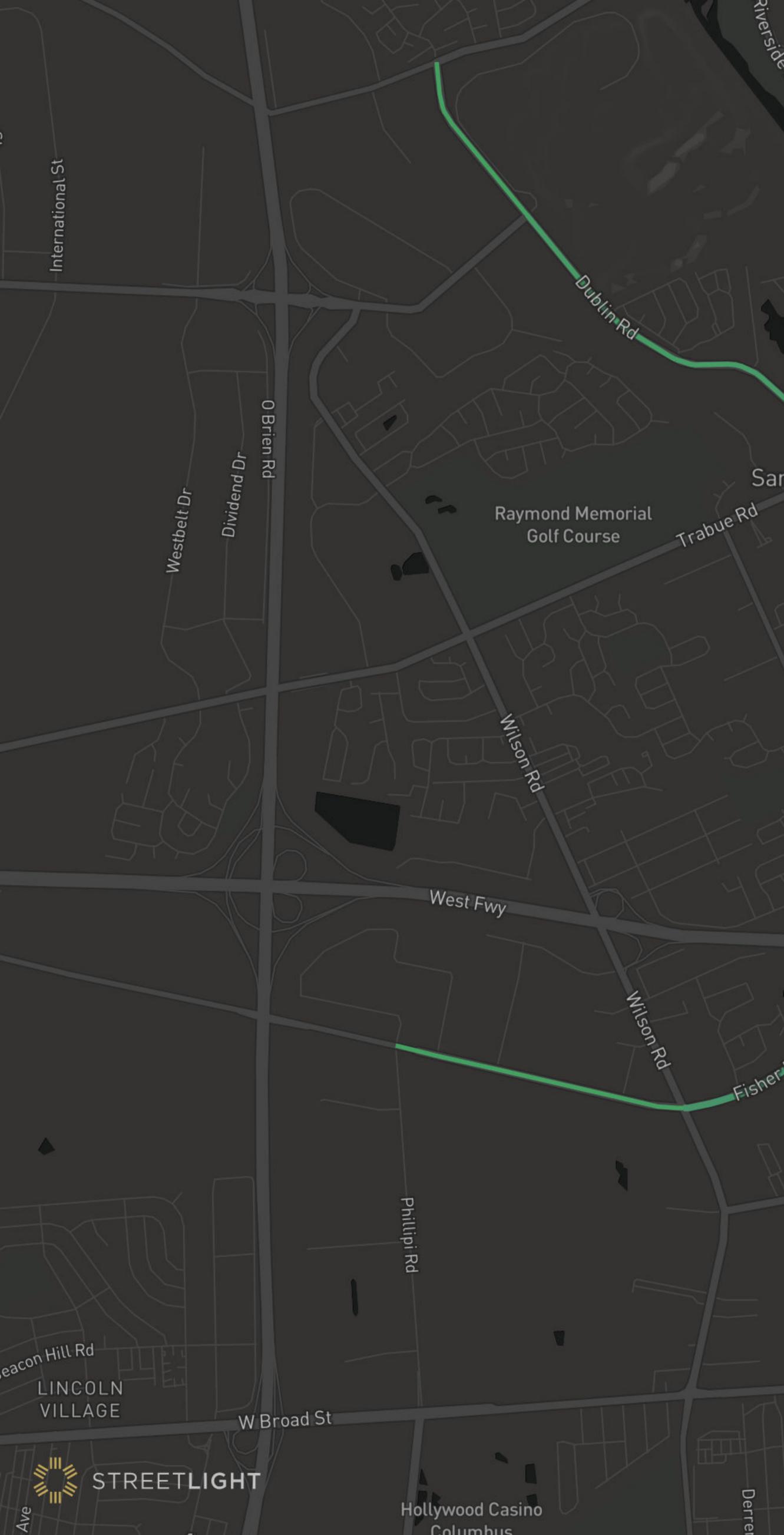
R





```
Eastcleft
                                      R
                                                        Dorset Rd
                                 From 5th Zones, Rd
                 Oublin Rd
                                    San Margherita
         Raymond Memorial
Golf Course
         Wilson Rd
  West Fwy
                        Wils
                          nRd
Phillipi Rd
                                                   W Broad St
```





Dorset Rd

Abington Rd

# To Fisher Zones

montRd

Rd

W Lane Ave

San Margherita

ideDr

Upper Arlington

Rd

Gl

Marble Cliff

Mekinle

West Fwy

V

Highl

0

Valley View

Steele Ave

Grace St

W Broad St

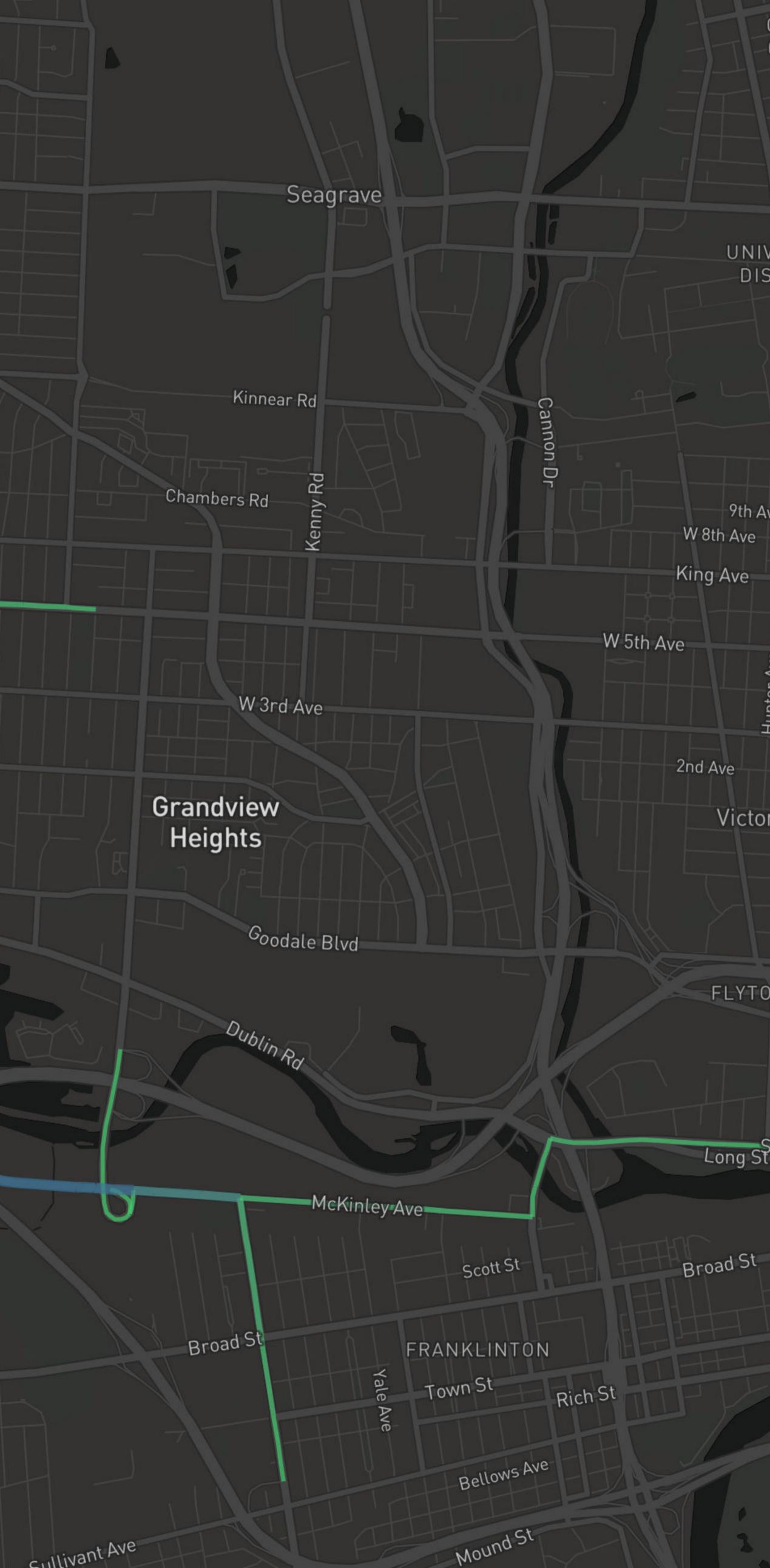
ague

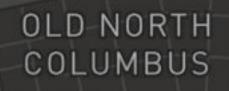
77

Olive Ave

Powell

Harris





Map

# UNIVERSITY DISTRICT

E 14th Ave E 12th Ave

4th Ave

5th St

1st Ave St

3rd St

5th Ave

9th Ave

HIGH FIVE

Victorian Village

FLYTOWN

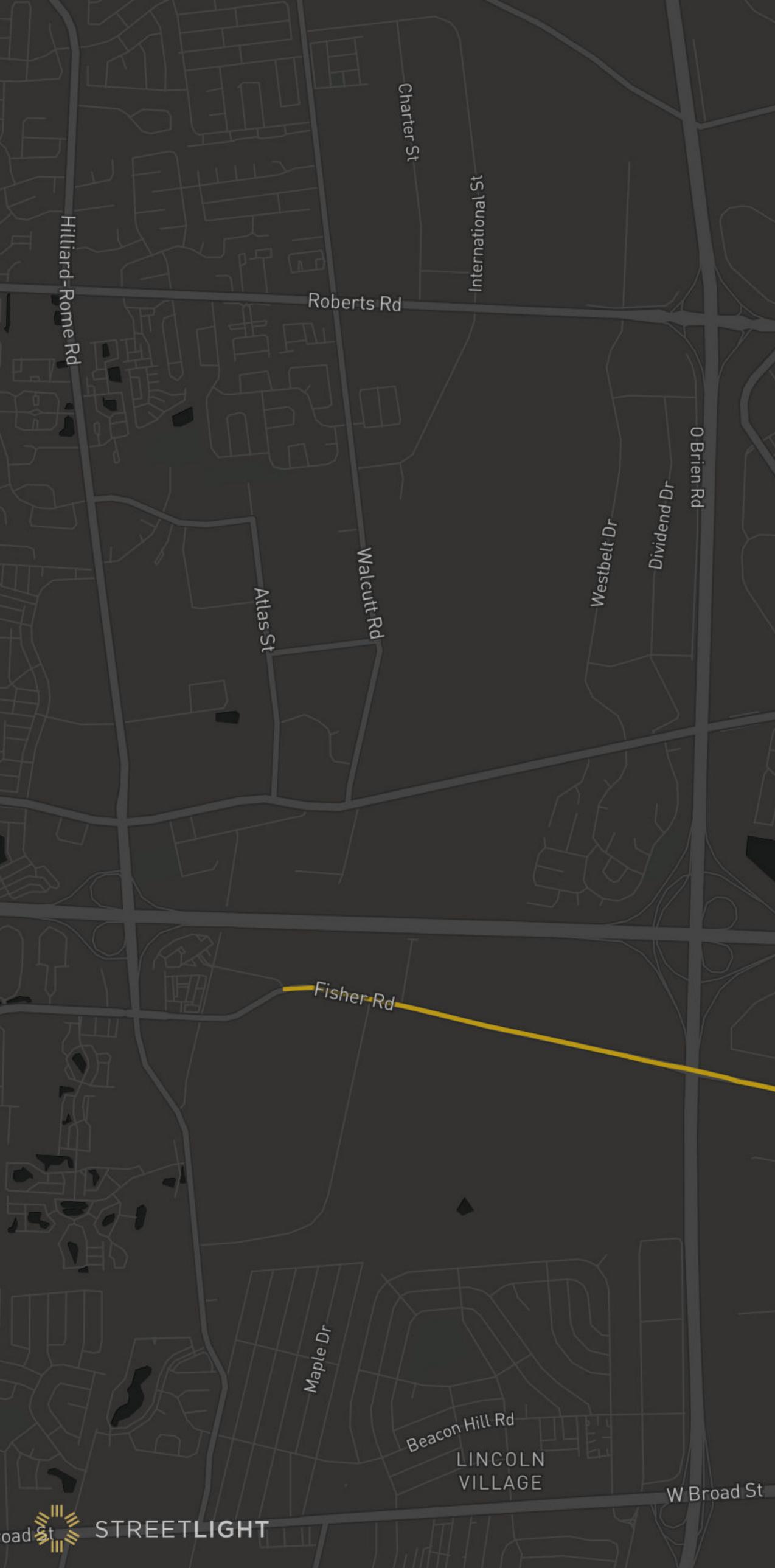
ARENA DISTRICT

Long St Pring St

### Columbus

4th St Main St

S Innerbelt



# From Fisher Zones

San Margherita

ideDr

Trabue Rd Raymond Memorial Golf Course

Nils

Rd

"Blink

West Fwy

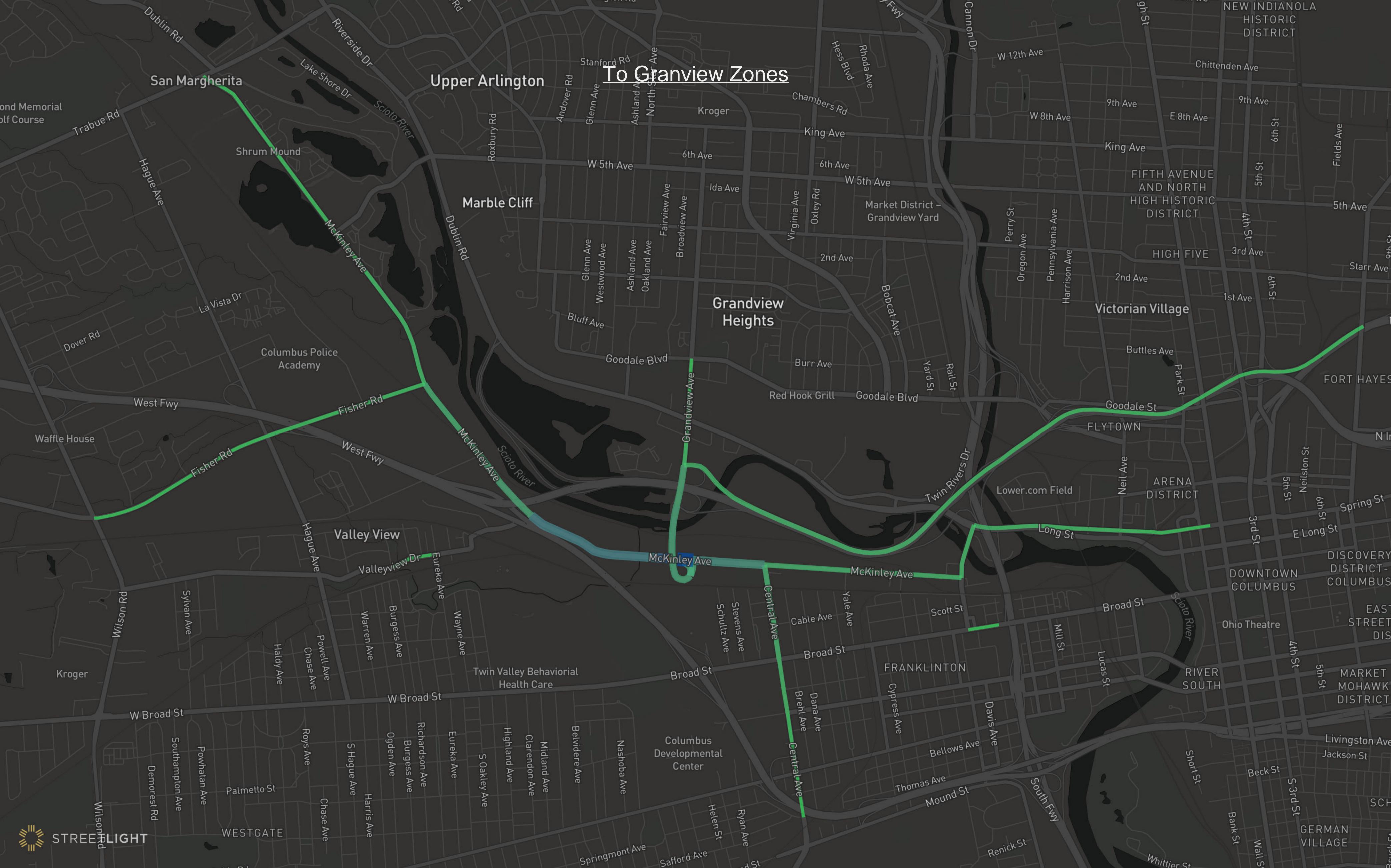
Wilson Rd

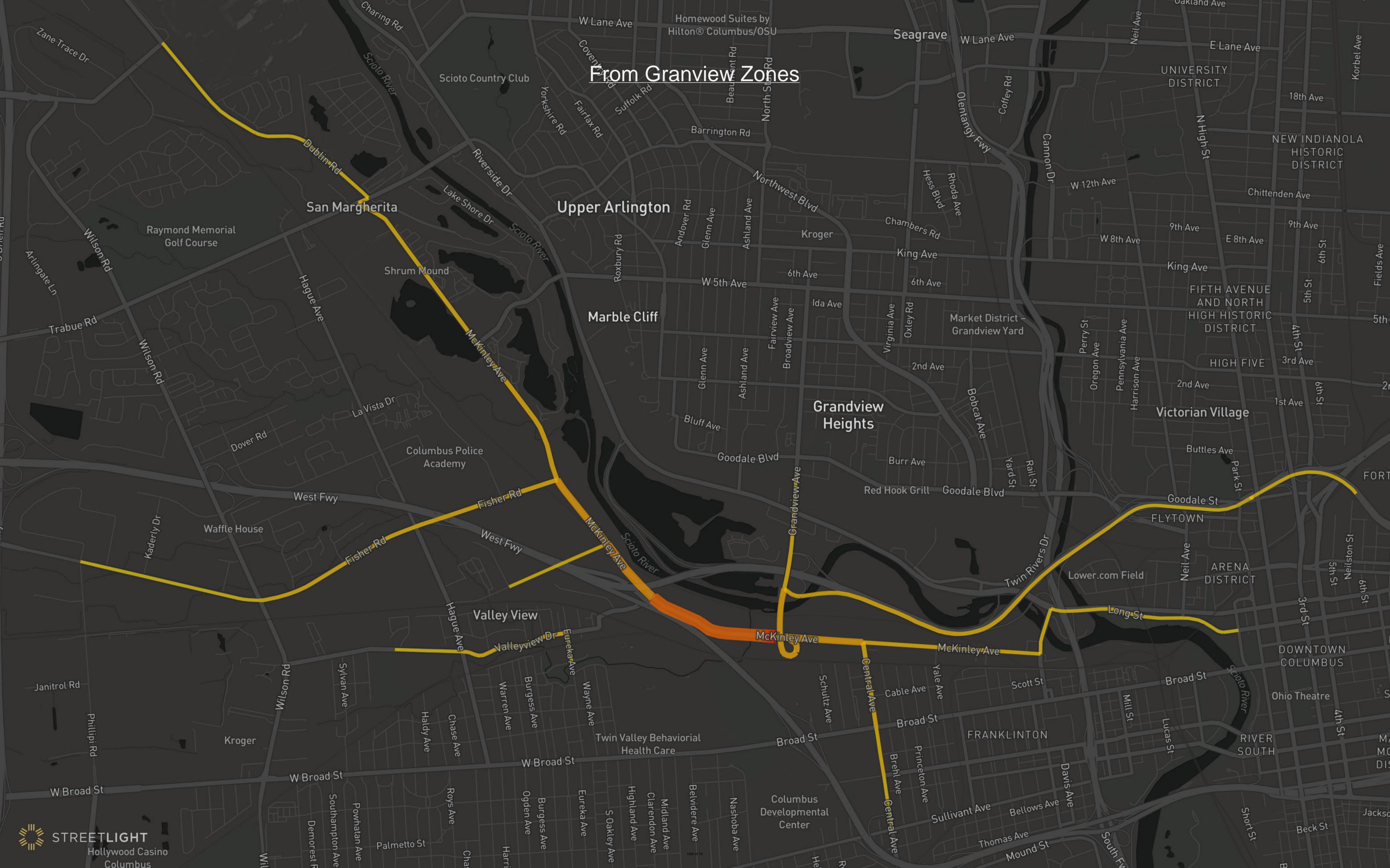
Phillipi Rd

W Broad St

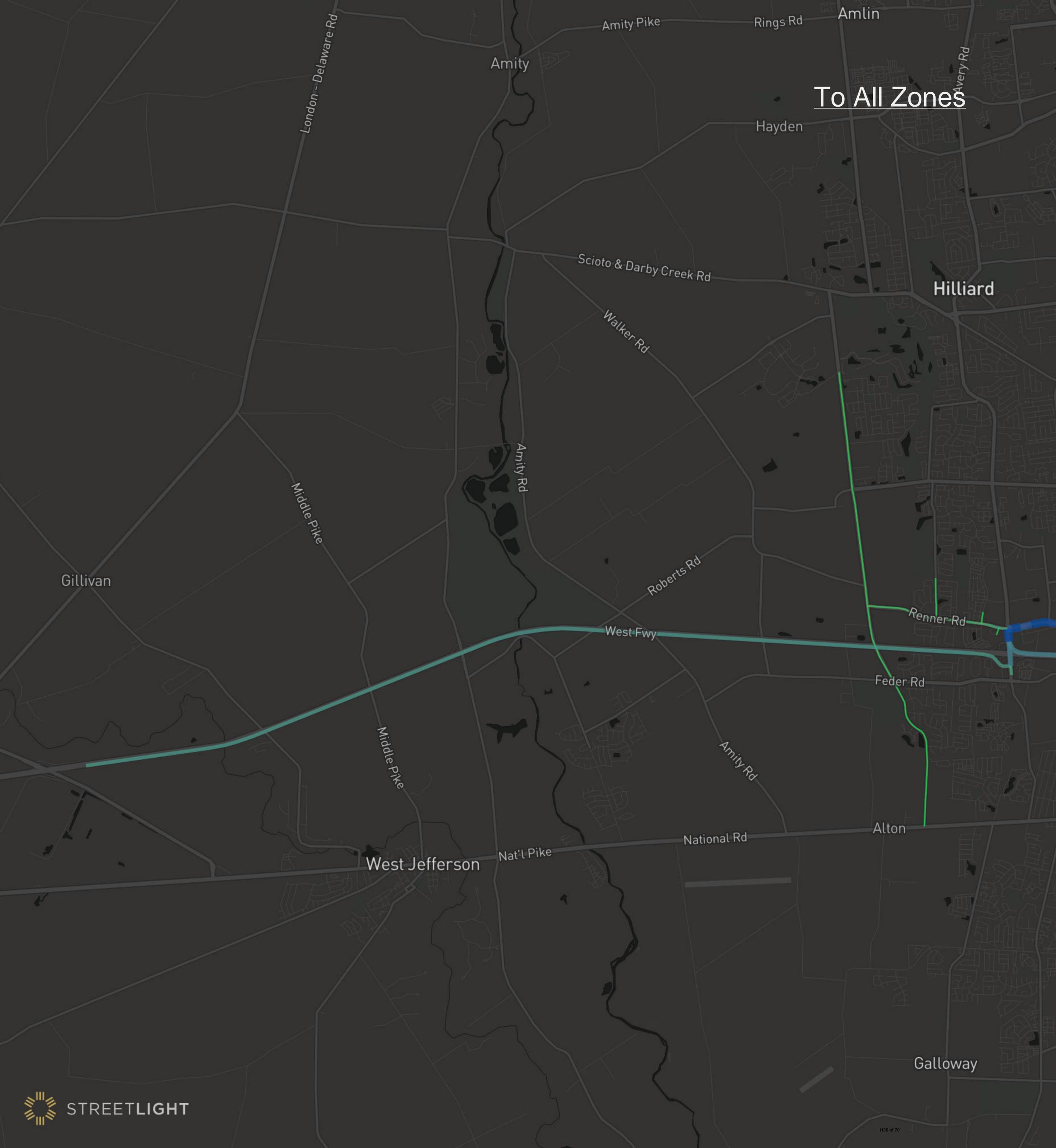
Hague







Top Routes: Trucks Only



### ± Ohio State University Airport

NORTHCREST

W Henderson Rd

Lane Rd

McCoy Rd Rd

Zollinger Rd

### Upper Arlington

Marble Cliff

U

W Broad St

HILLTOP

CHERRY CREEK

 $\leq$ 

Itt Rd

HOLLY HILL

Fisher Rd

Dublin Rd

Clime Rd

Briggsdale

Alkire Rd





CLINTONVILLE



Olentangy

OLD NORTH COLUMBUS

th St

4

mit St

FC

The Ohio State University

Town St

Grandview Heights

Rd

-Frank Rd

ARENA DISTRICT

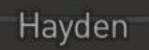
### Columb

GE

HL

So





### From All Zones

Scioto & Darby Creek Rd

Robe

Philip Rd

National Rd

West Fwy

Walker Rd

Hilliard

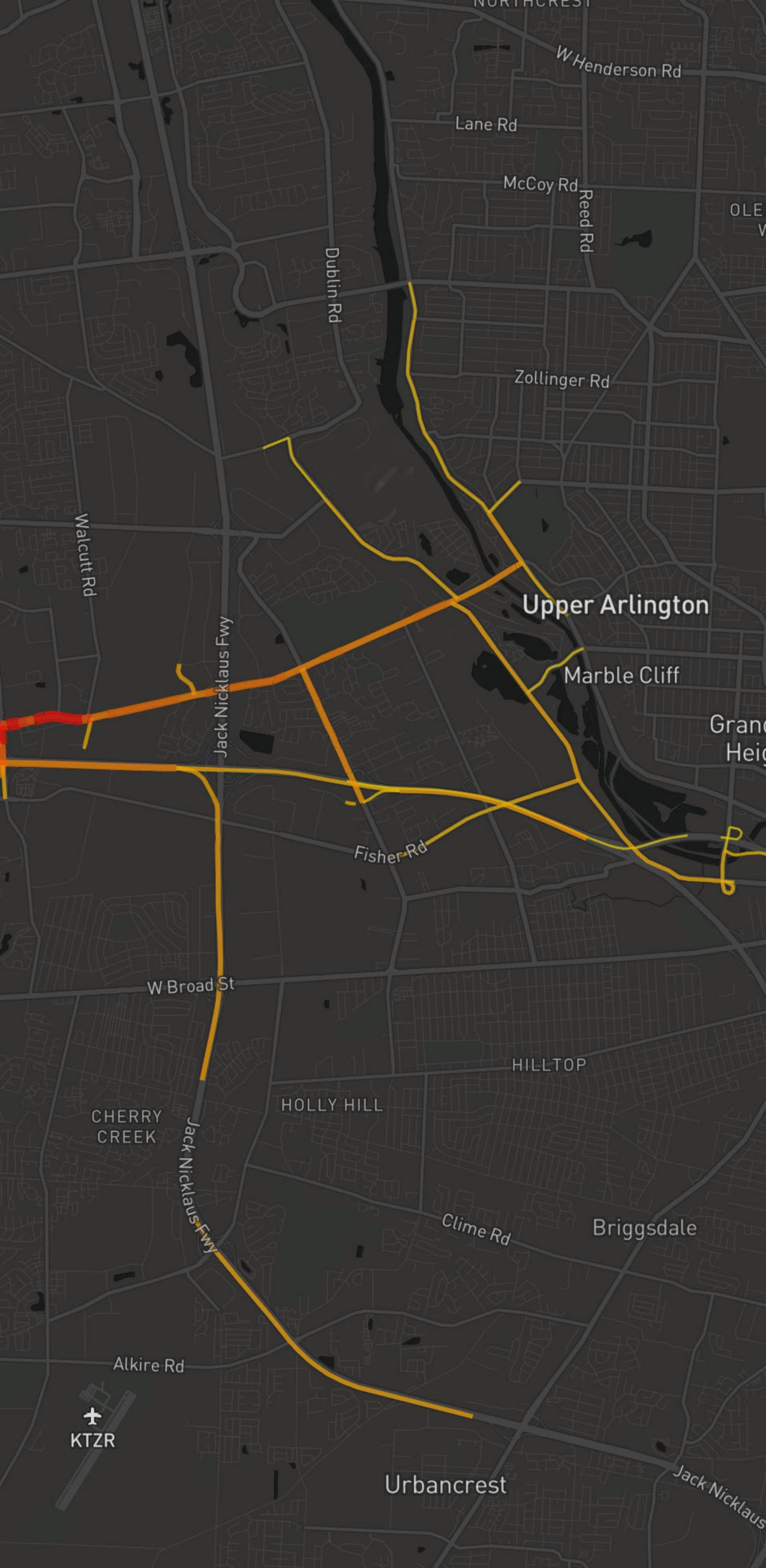
-Renner-Rd-

Feder Rd

Alton

Galloway

Georgesville



CLINTONVILLE

OLENTANGY WEST

OLD NORTH COLUMBUS

4th St

The Ohio State University

Town St

Frank Rd

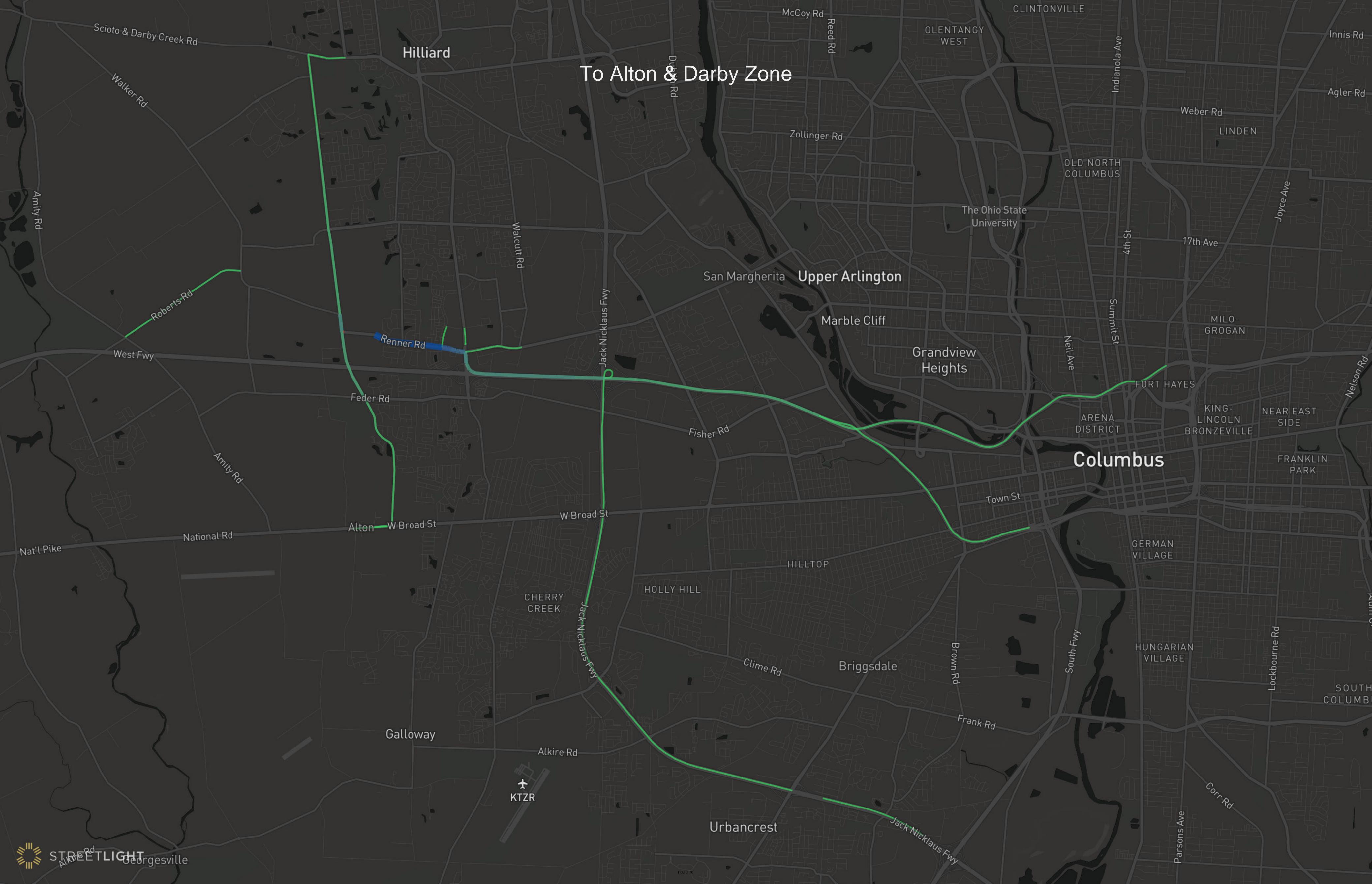


ARENA DISTRICT

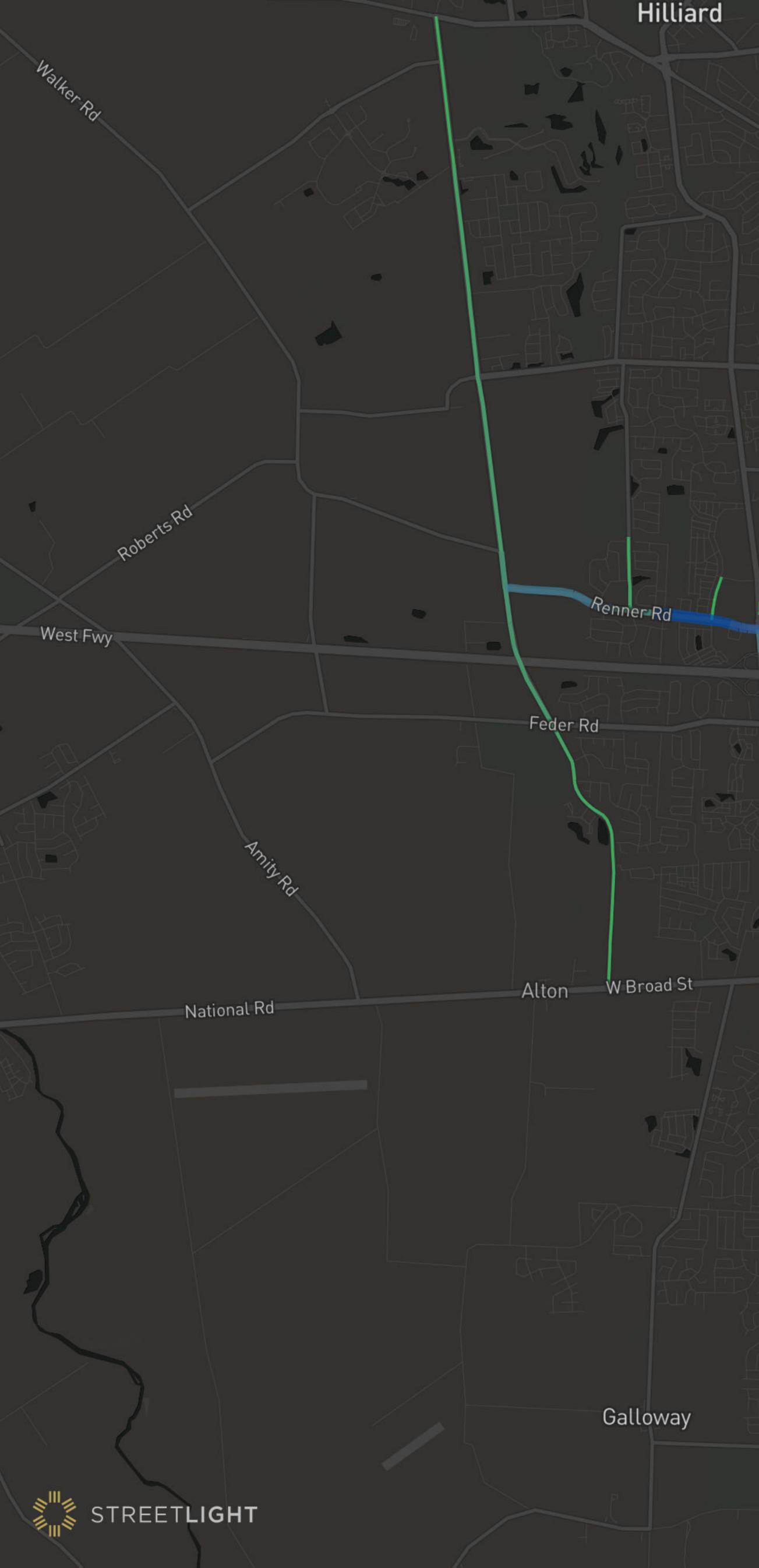
Ne

LA









# To Spindler Zones

Rd

San Margherita

Fisher Rd

W Broad St

HOLLY HILL

Alkire Rd

CHERRY CREEK

**T** KTZR

tt Rd

Zollinger Rd

OLD NORTH COLUMBUS

The Ohio State University

### Upper Arlington

a so

W 5th Ave

Marble Cliff

Grandview Heights

B

Rd

Frank Rd

FLYTOWN

Sout

Neil Ave

ARENA DISTRICT

Town St

HILLTOP

Clime Rd

Briggsdale

Weber Rd LINDEN th St 17th Ave Su Immit St MILO-GROGAN FORT HAYES KING-LINCOLN BRONZEVILLE NE Columbus GERMAN VILLAGE HUNGARIAN VILLAGE

Corr Rd



Zollinger Rd

ed Rd

The Ohio State University

### San Margherita **Upper Arlington**

Marble Cliff

Grandview Heights

W 5th Ave

Fisher Rd

Town St

HILLTOP

Clime Rd

Briggsdale

Rd

rrank Rd

# OLD NORTH COLUMBUS

4th St

Summit St

Web

17t

FLYTOWN

Neil Ave

S



### Columbus

GERMAN VILLAGE

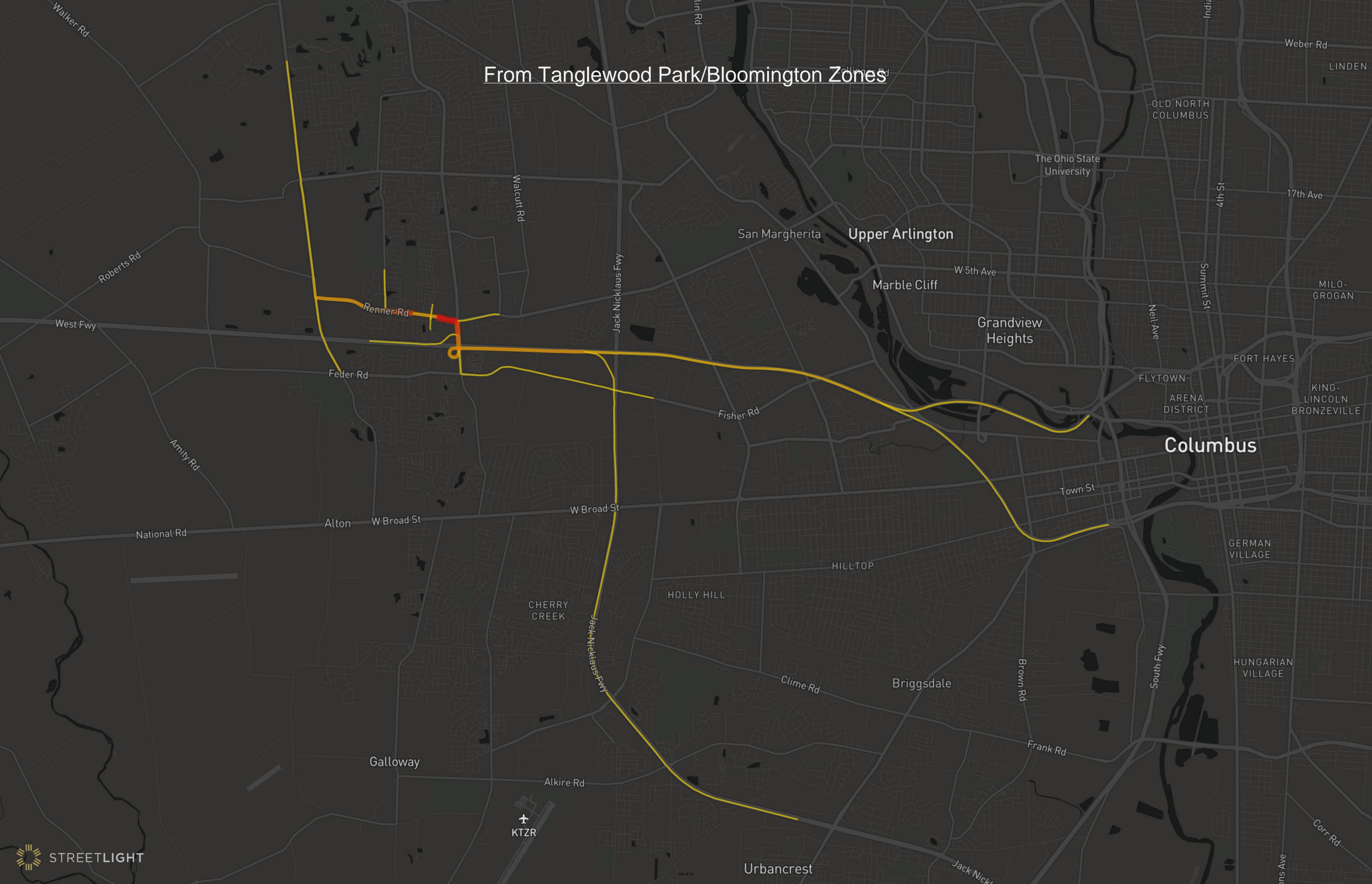
FORT HAYES

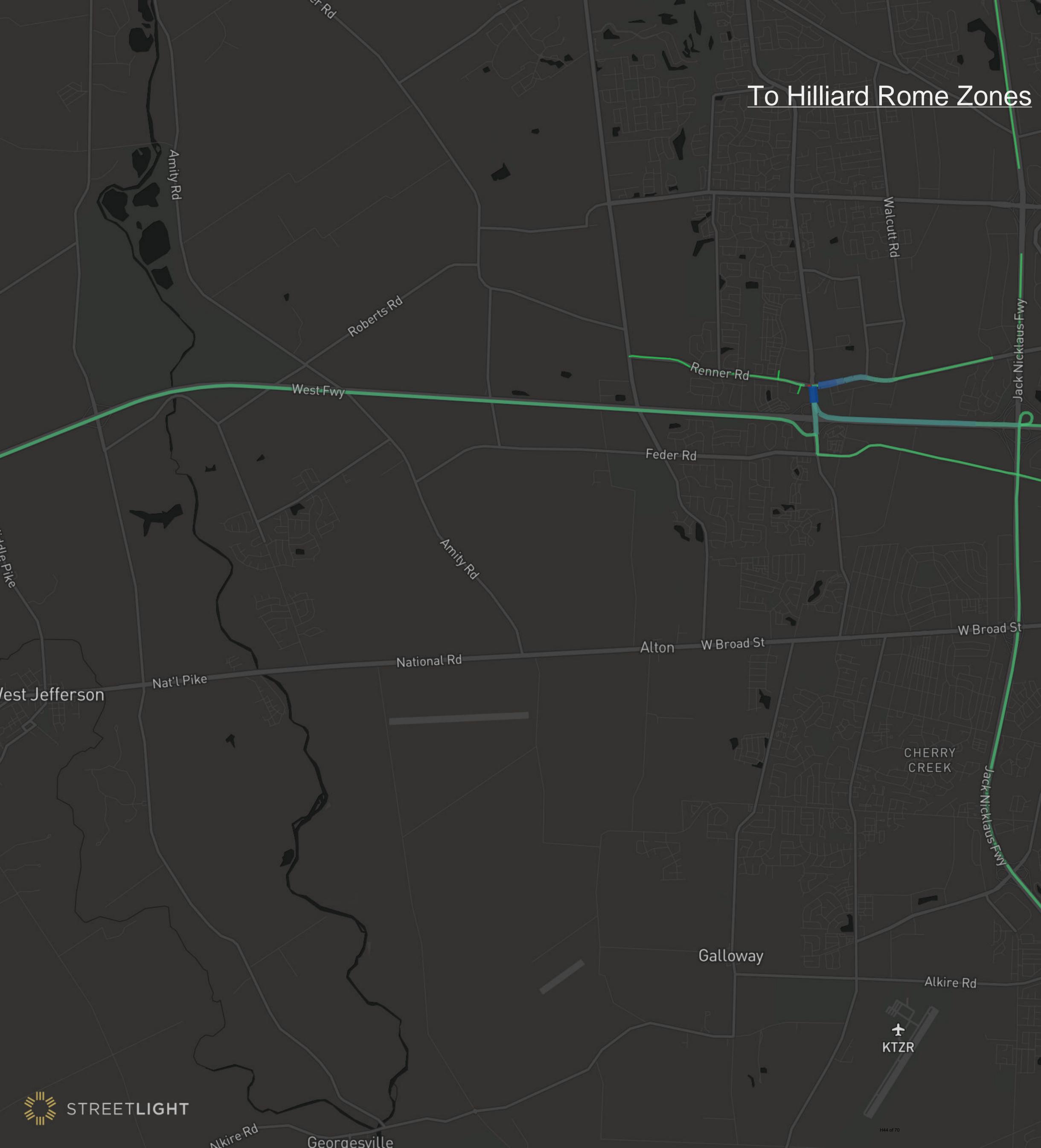
BF

HUNGARIAN VILLAGE



Weber Rd LINDEN 17th Ave MILO-GROGAN FORT HAYES KING-NEAR EAST SIDE LINCOLN FRANKI PARK Main GERMAN VILLAGE HUNGARIAN VILLAGE





Zollinger Rd

### Upper Arlington San Margherita

Marble Cliff

W 5th Ave

Grandview Heights

Fisher Rd

HILLTOP

HOLLY HILL

Clime Rd

Briggsdale

Urbancrest

OLD NORT COLUMBU

The Ohio State University

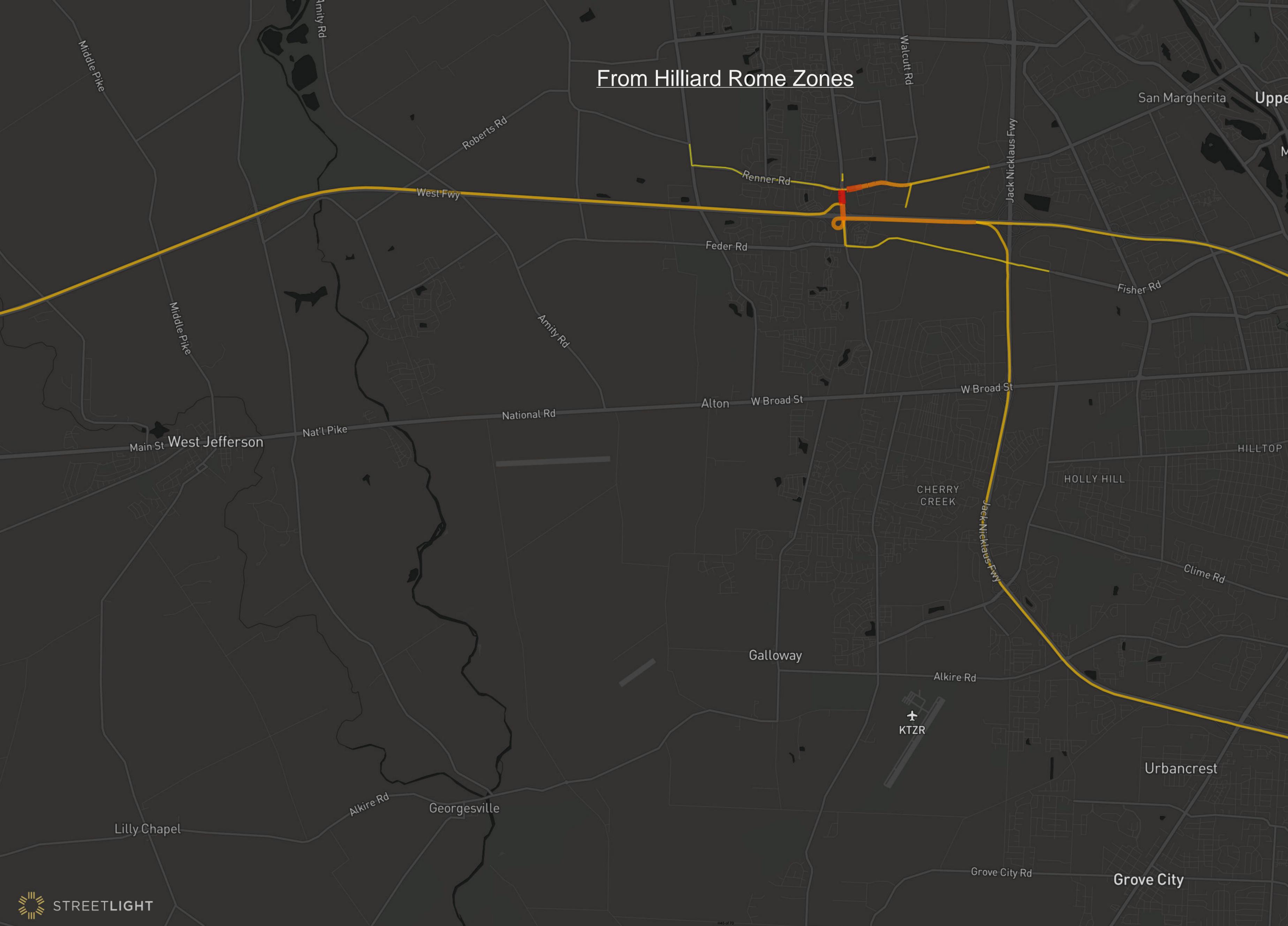
Town St

Frank Rd

FLYTOWN ARENA DISTRIC

Neil Ave

## Colu



## Upper Arlington

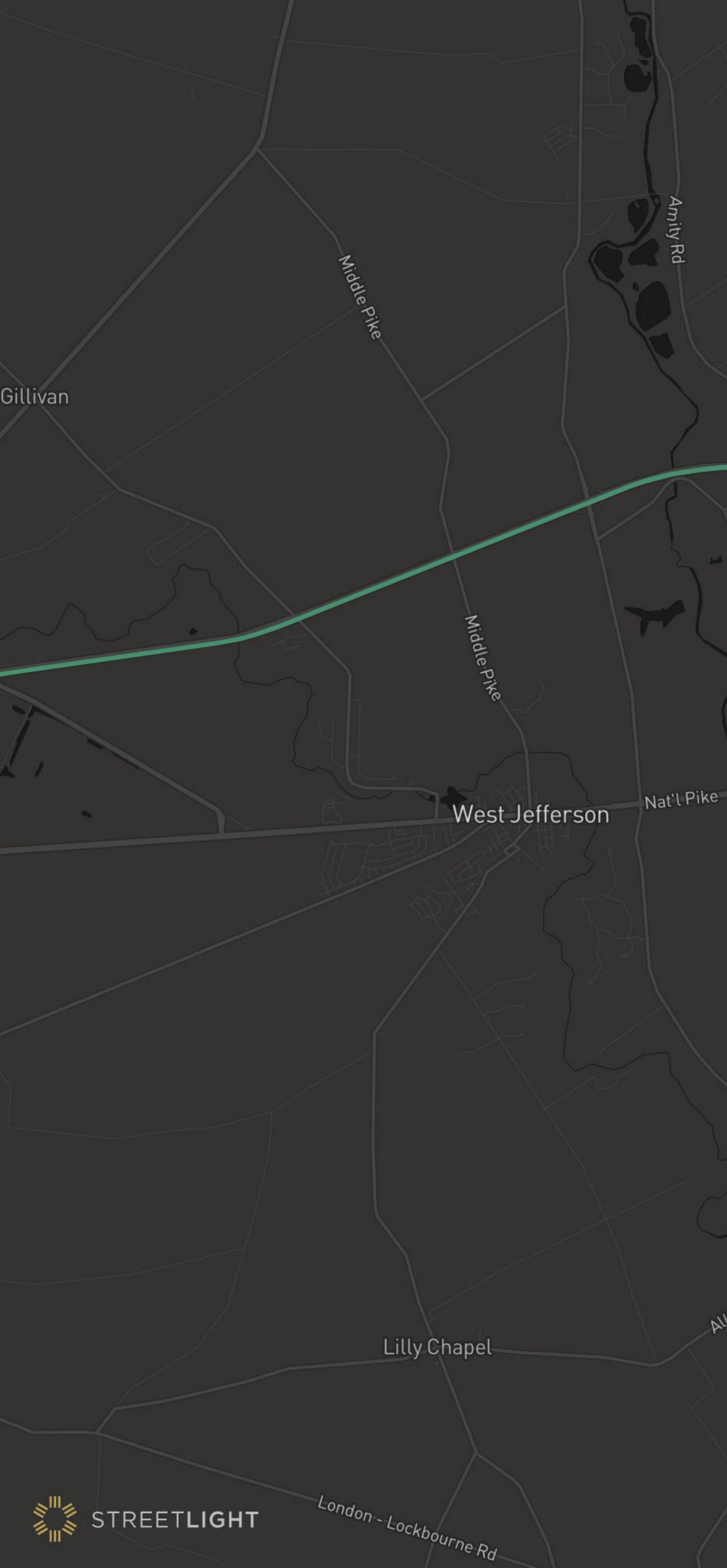
Marble Cliff

Grandviev Heights

Rd

Jack Nicklaus Fwy

W 5th Ave



# Walker Rd To Rentra Zones 2\_ = Renner Rd West Fwy Feder Rd Phnits Rd Alton National Rd Galloway Alkire Rd Georgesville

## San Margherita Upper Arlington

HILLTOP

Marble Cliff

W Broad St

CHERRY CREEK

Alkire Rd

★ KTZR

tt Rd

HOLLY HILL

Fisher Rd

in Rd

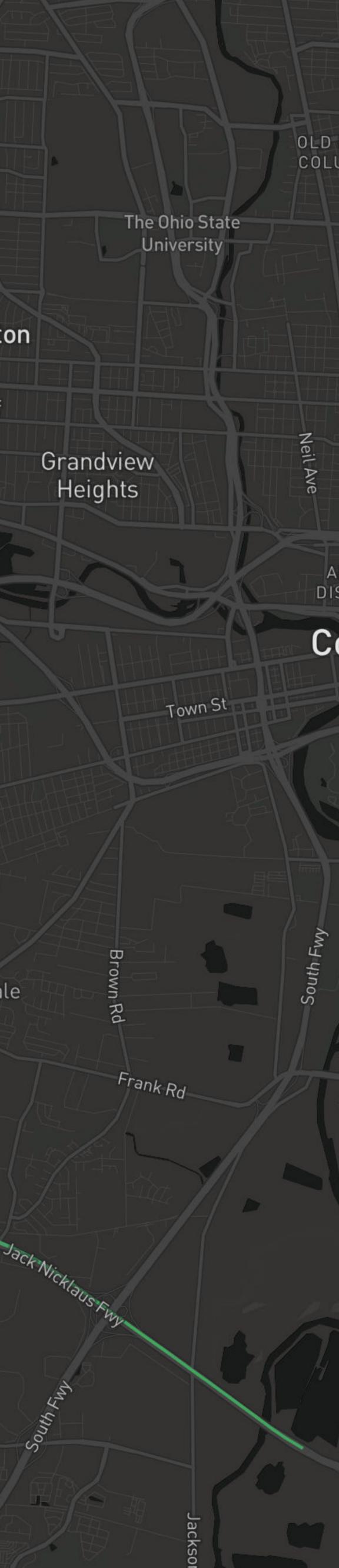
Clime Rd

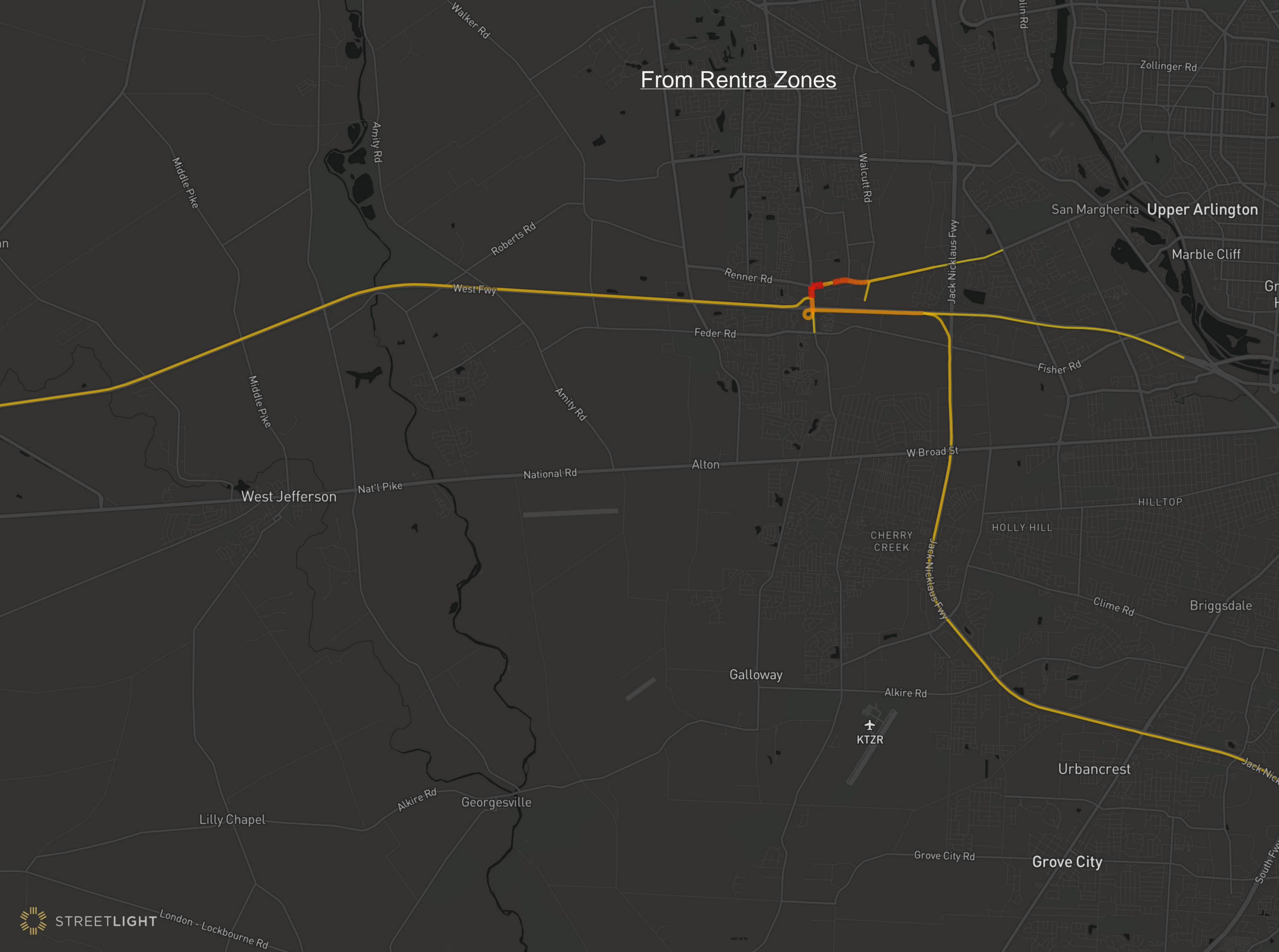
## Briggsdale

Urbancrest

Grove City Rd

**Grove City** 





OLD NORTH

The Ohio State University

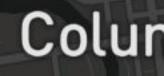
Town St

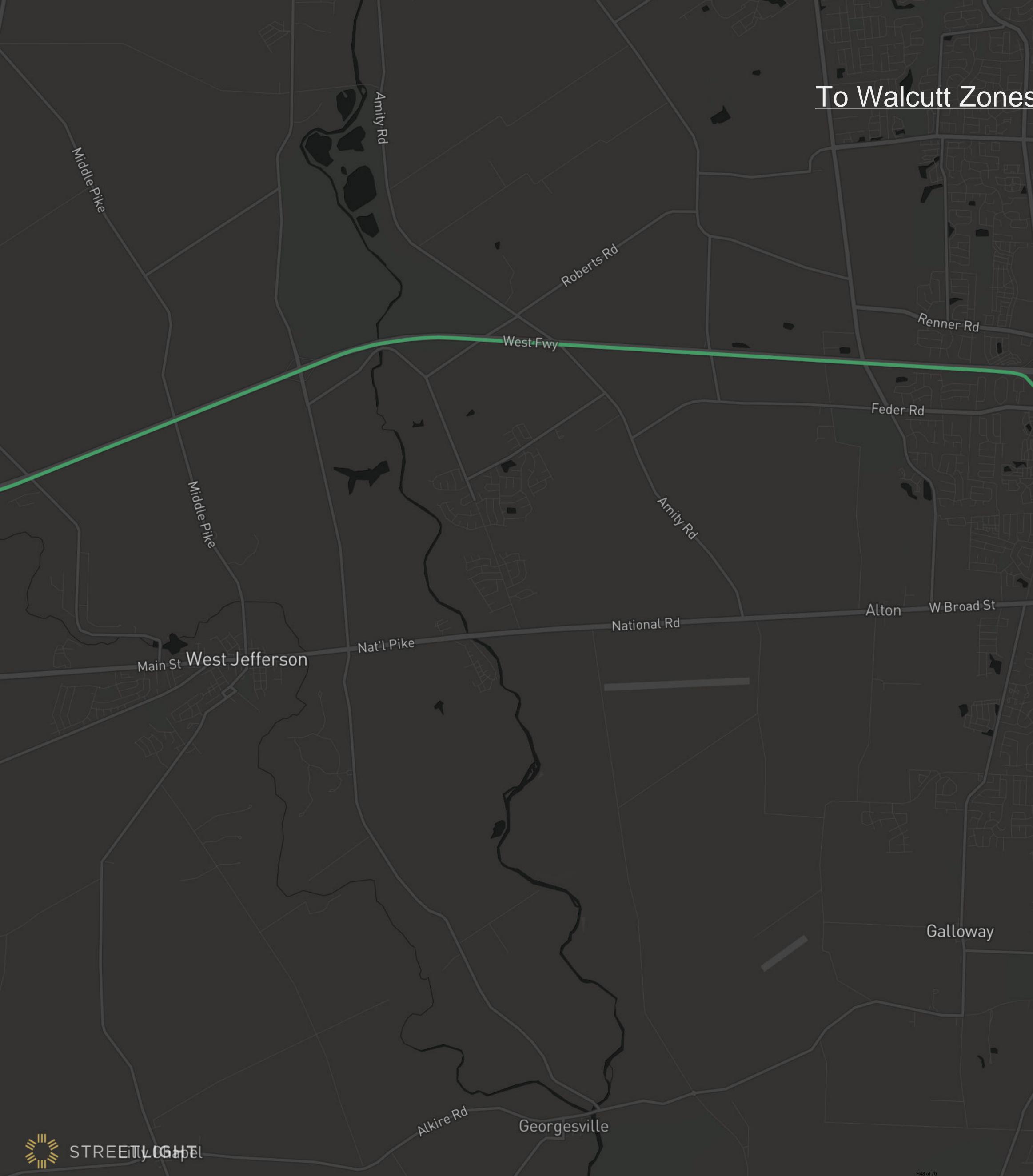
Frank Rd



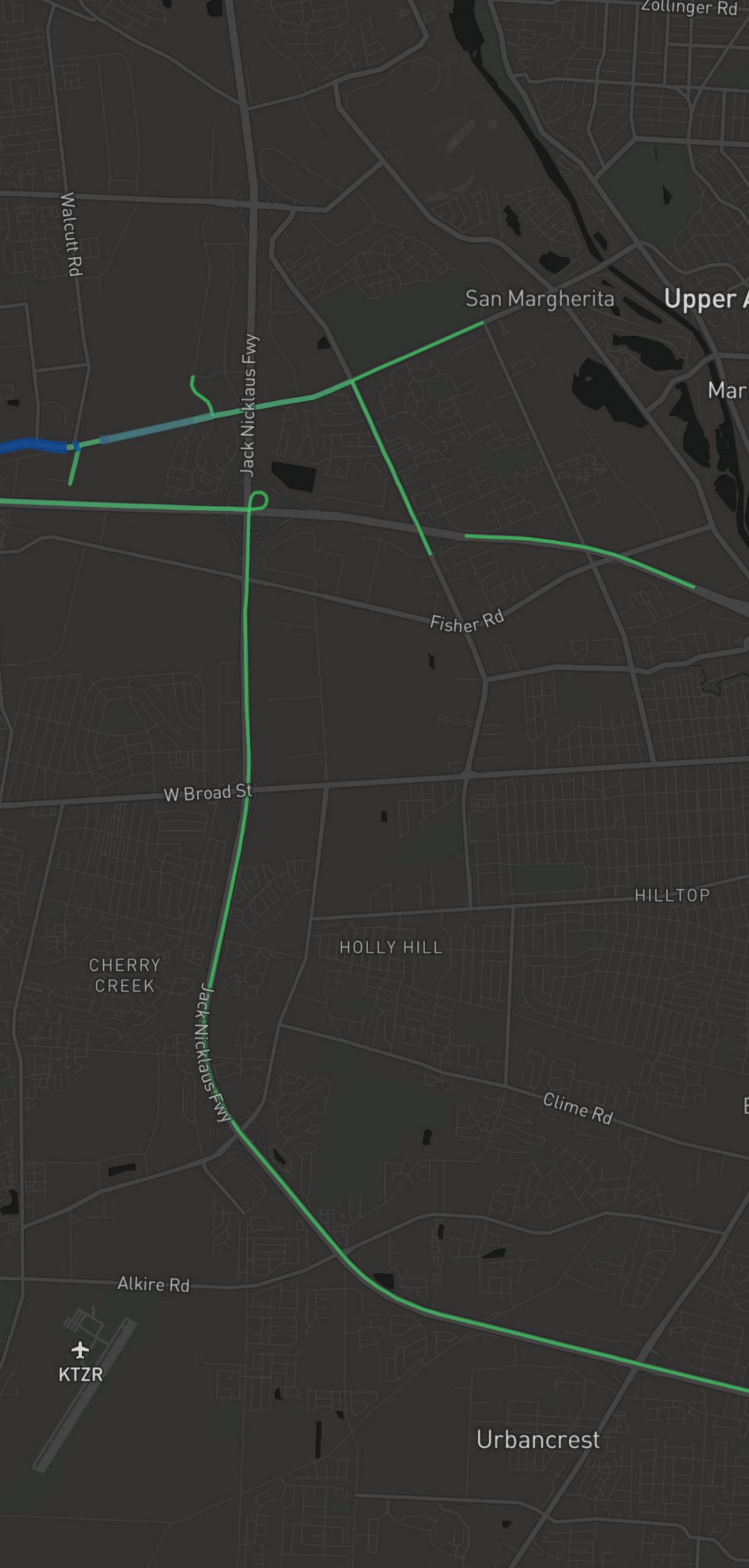


Neil A





# To Walcutt Zones



## Upper Arlington

Marble Cliff

# Grandview Heights

ω

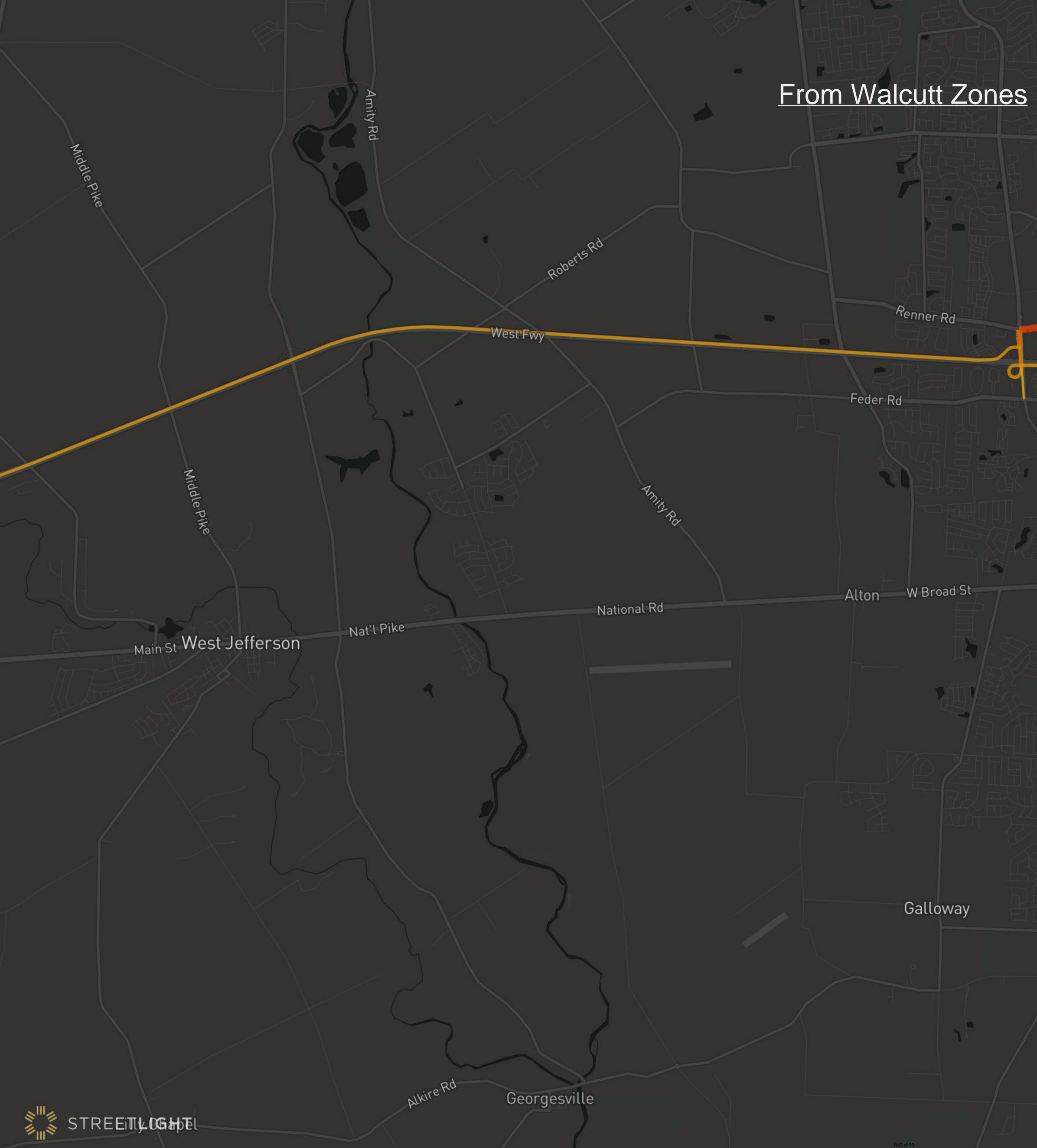
Rd

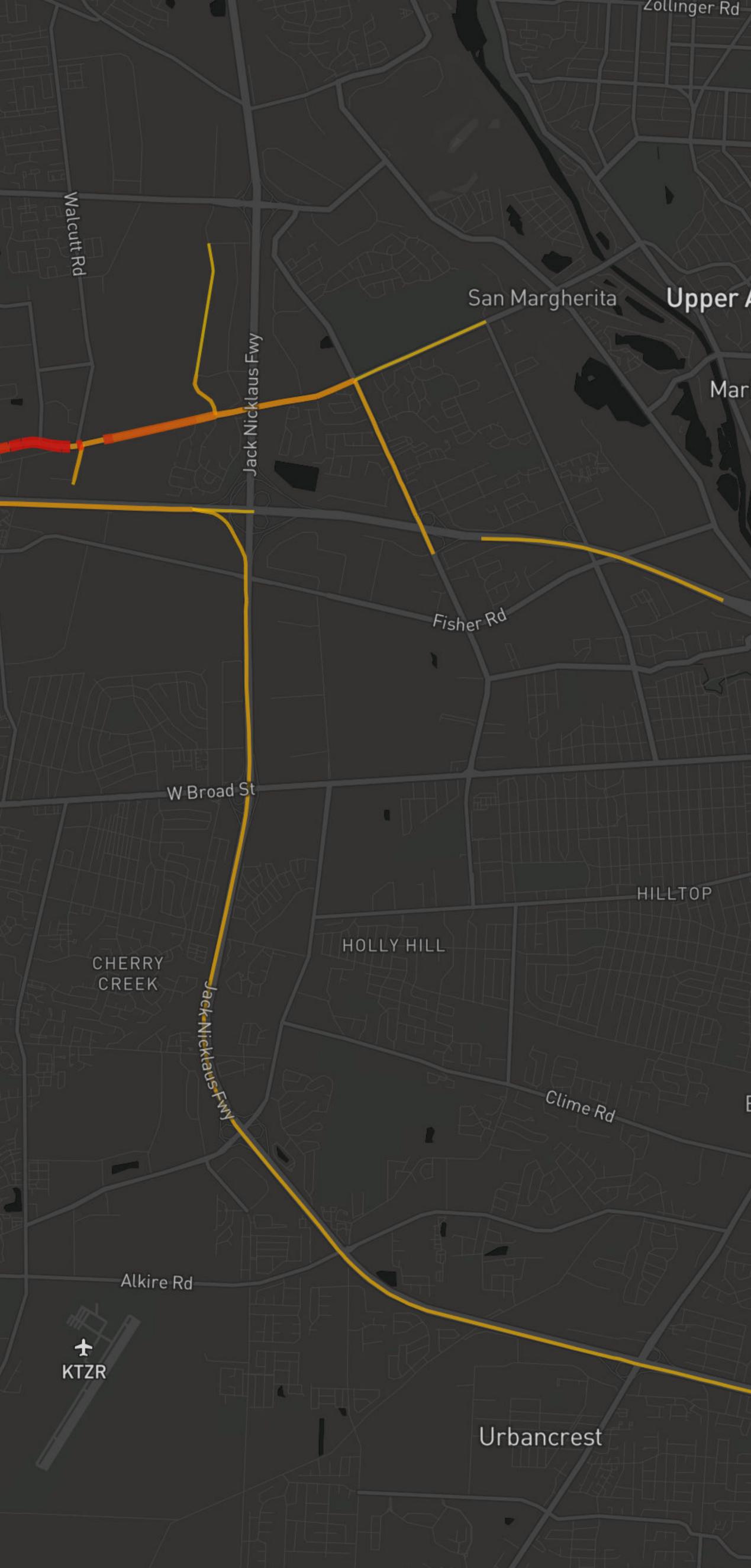
Jack Nicklaus F

Frank

W 5th Ave

The Un





## Upper Arlington

Marble Cliff

# Grandview Heights

ω

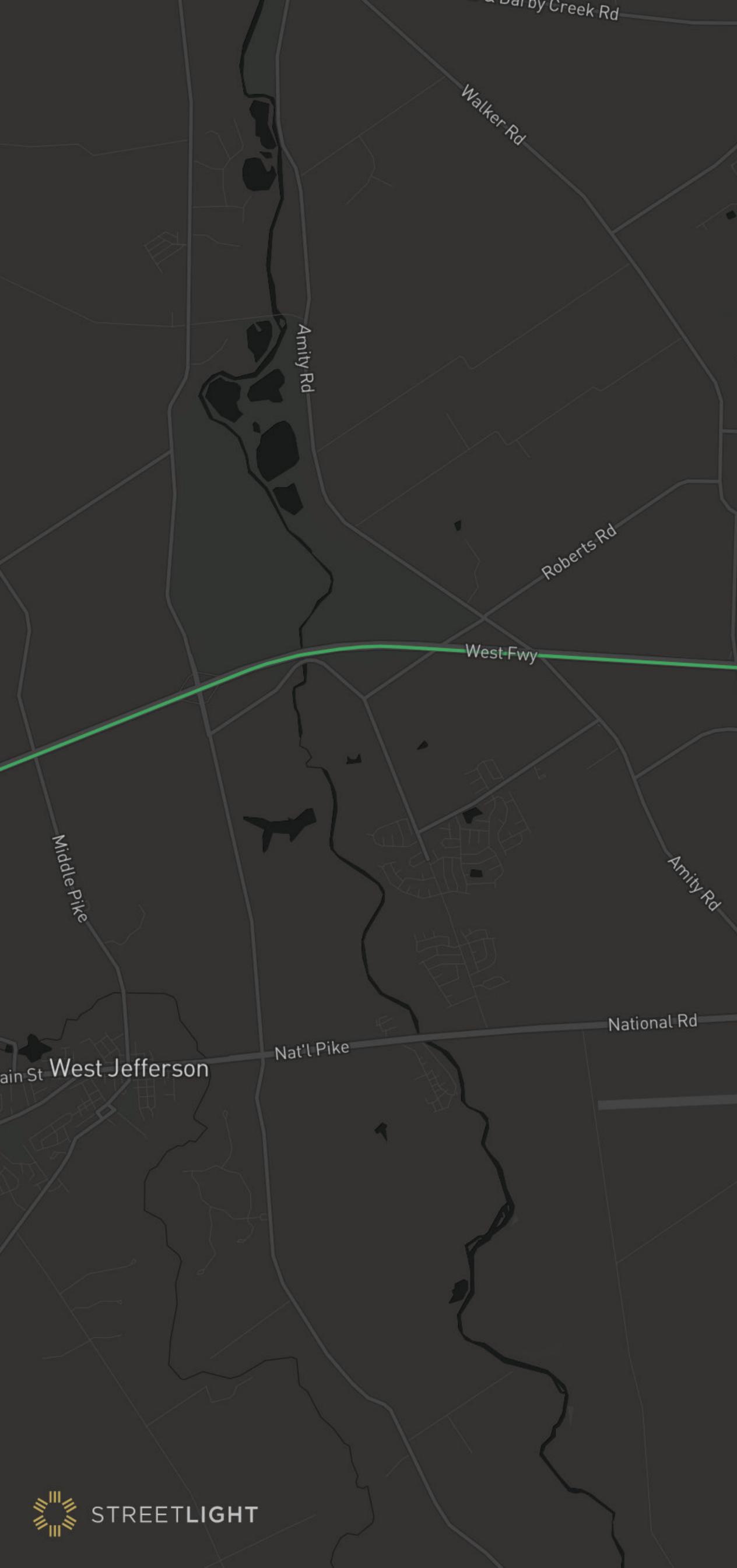
Rd

Jack Nicklaus p

Frank

W 5th Ave

The Un



Hilliard

## To Westbelt/Trabue Woods Zones

Jtt Rd

Renner Rd

The second

Feder Rd

Alton W Broad St

Galloway

Alkire Rd

CHERRY CREEK



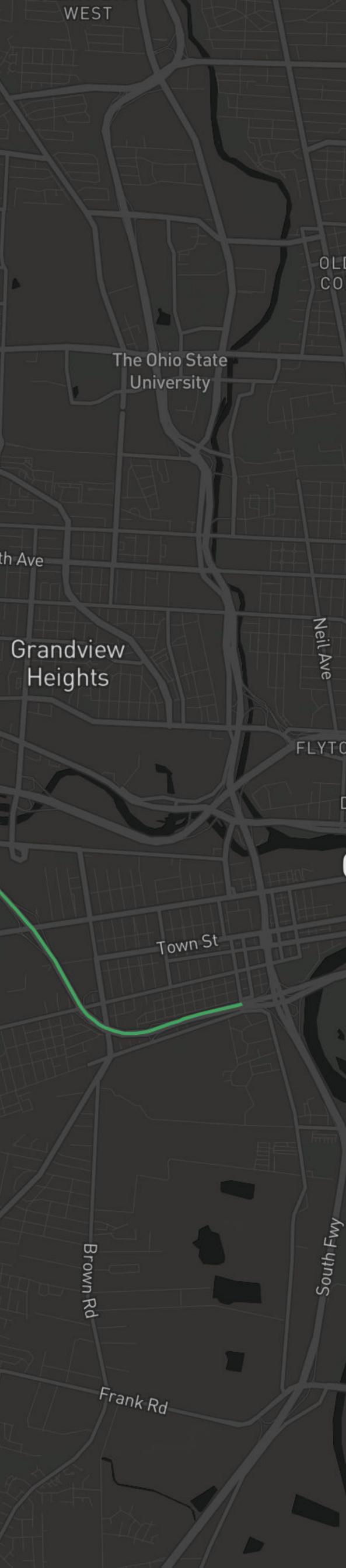


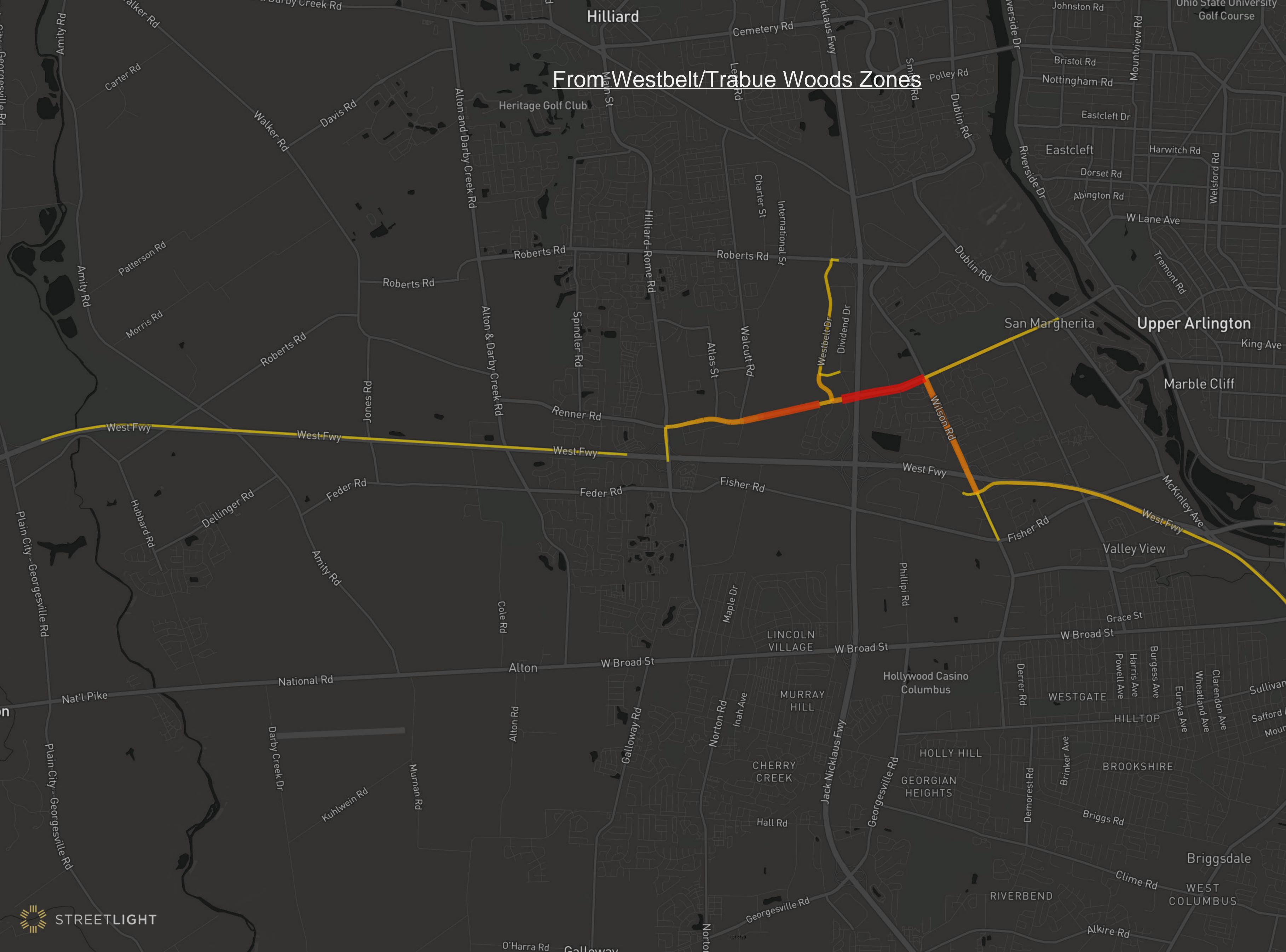
Zollinger Rd

d Rd

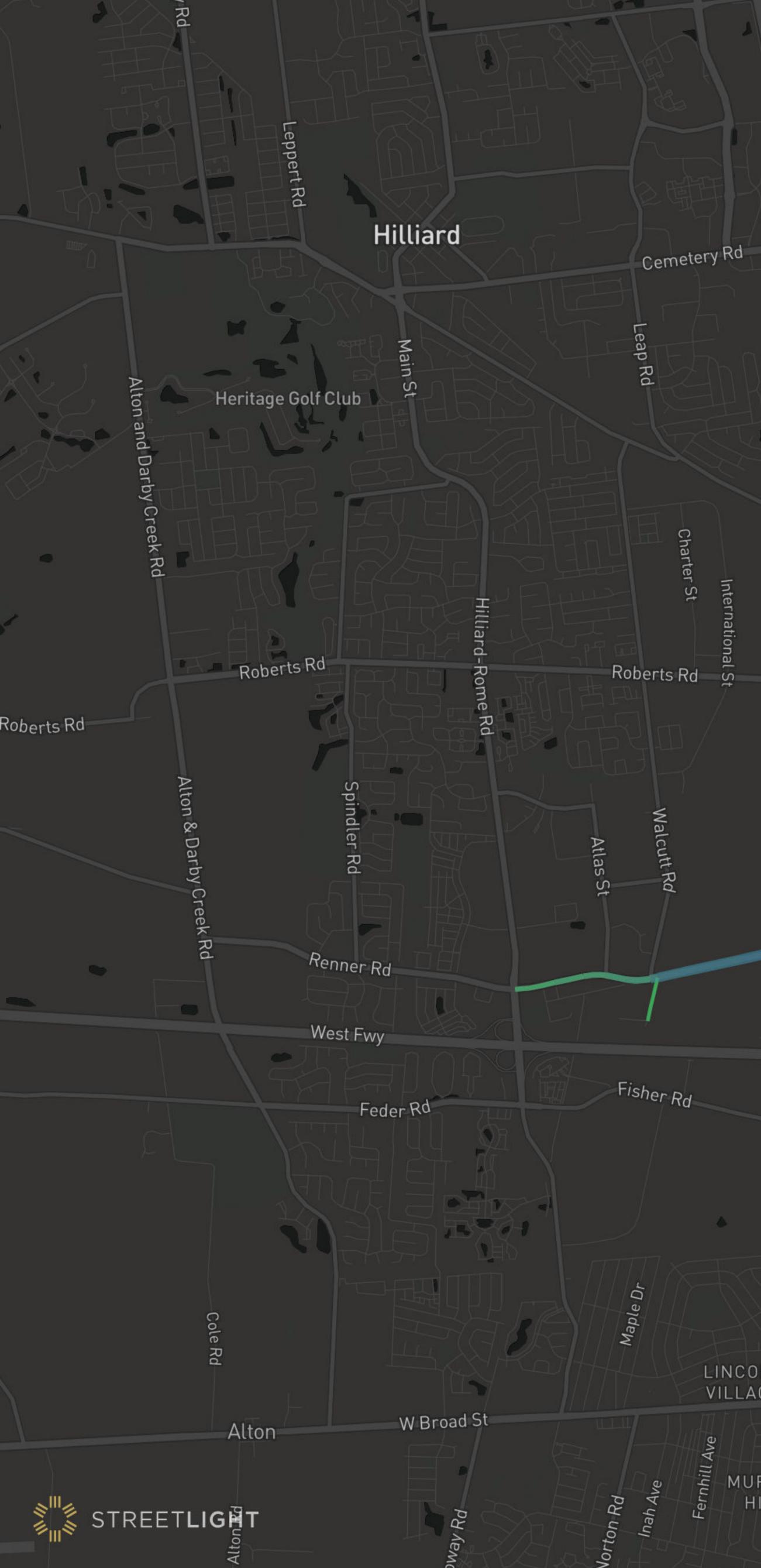
Upper Arlington San Margherita W 5th Ave Marble Cliff Fisher Rd W Broad St HILLTOP HOLLY HILL

Clime Rd





VVLJI **Riverside Methodist** Hospital ennyRo Seagrave Kinnear Rd Chambers Rd W 5th W 3rd Ave Grandview Heights *G<sub>oo</sub>dale* Blvd Dublin Rd McKinley Ave Scott St Broad St FRANKLINTON Bellows Ave Mound St Sullivant Ave Safford Ave Mound St 4 Hopkins Ave Richter Rd Hart Rd Frank Rd





# To Wilson Zones

Middlesex Rd Johnston Rd

Bristol Rd Shrewsbury Rd

Eastcleft Dr

Eastcleft

Dorset Rd

Abington Rd

San Margherita

West Fwy

Polley Rd

Dublin Rd

Dublin Rd

LINCOLN VILLAGE W Broad St

stbelt Dr

Divid

MURRAY HILL

Rd

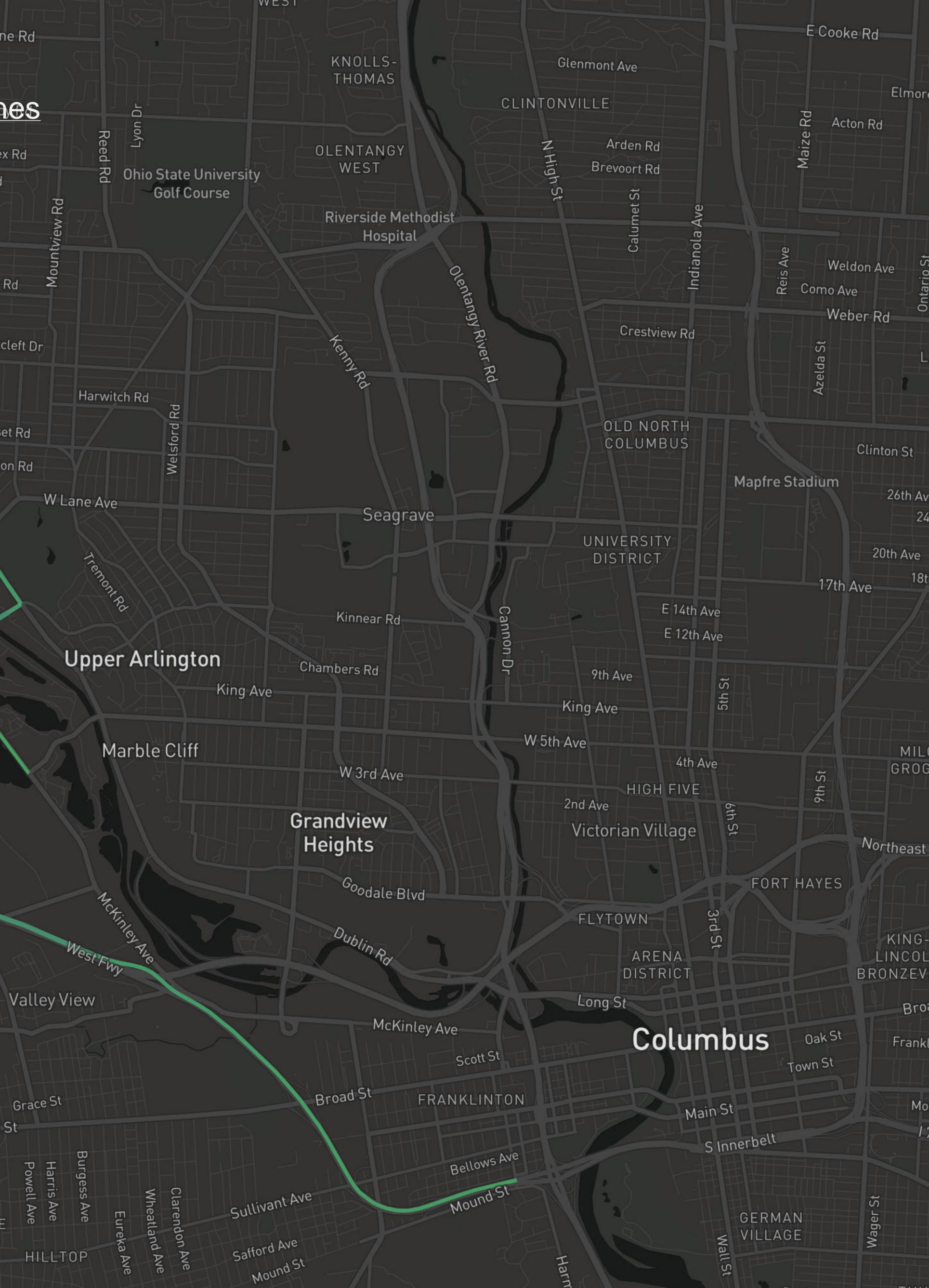
Fish

WESTGATE

W Broad St

U T

Grace St

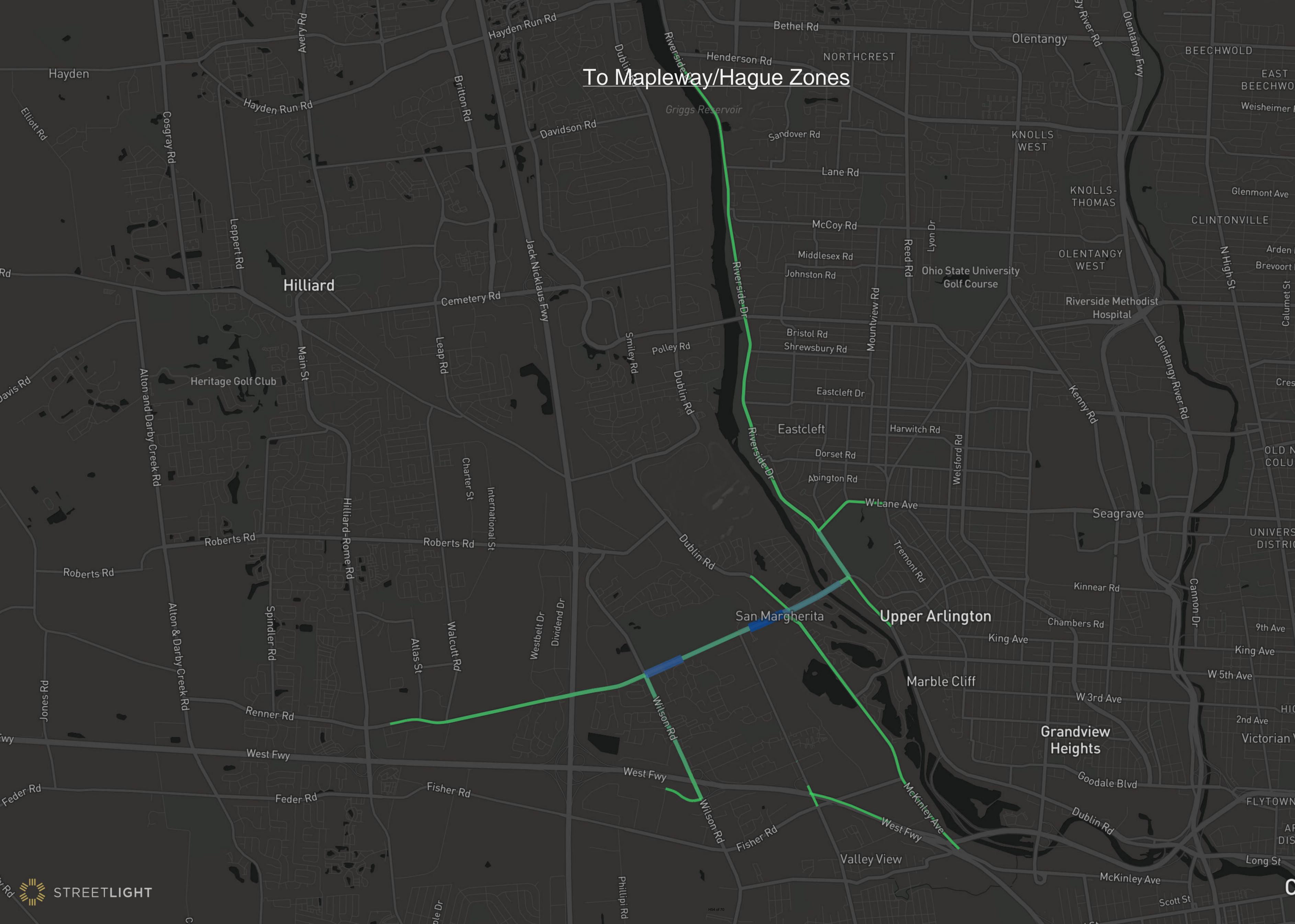


Deshler A

THU



Richter Rd



Columbus OakS

3rd

St

Long St

FLYTOWN

ARENA DISTRICT

2nd Ave Victorian Village

4th Ave HIGH FIVE

King Ave

E 12th Ave 9th Ave

E 14th Ave

5th St

6th

FORT HAYES

Town St

UNIVERSITY DISTRICT

**Mapfre Stadium** 

17t

OLD NORTH

COLUMBUS

Crestview Rd

Arden Rd

Brevoort Rd

Weisheimer Rd

EAST

BEECHWOLD

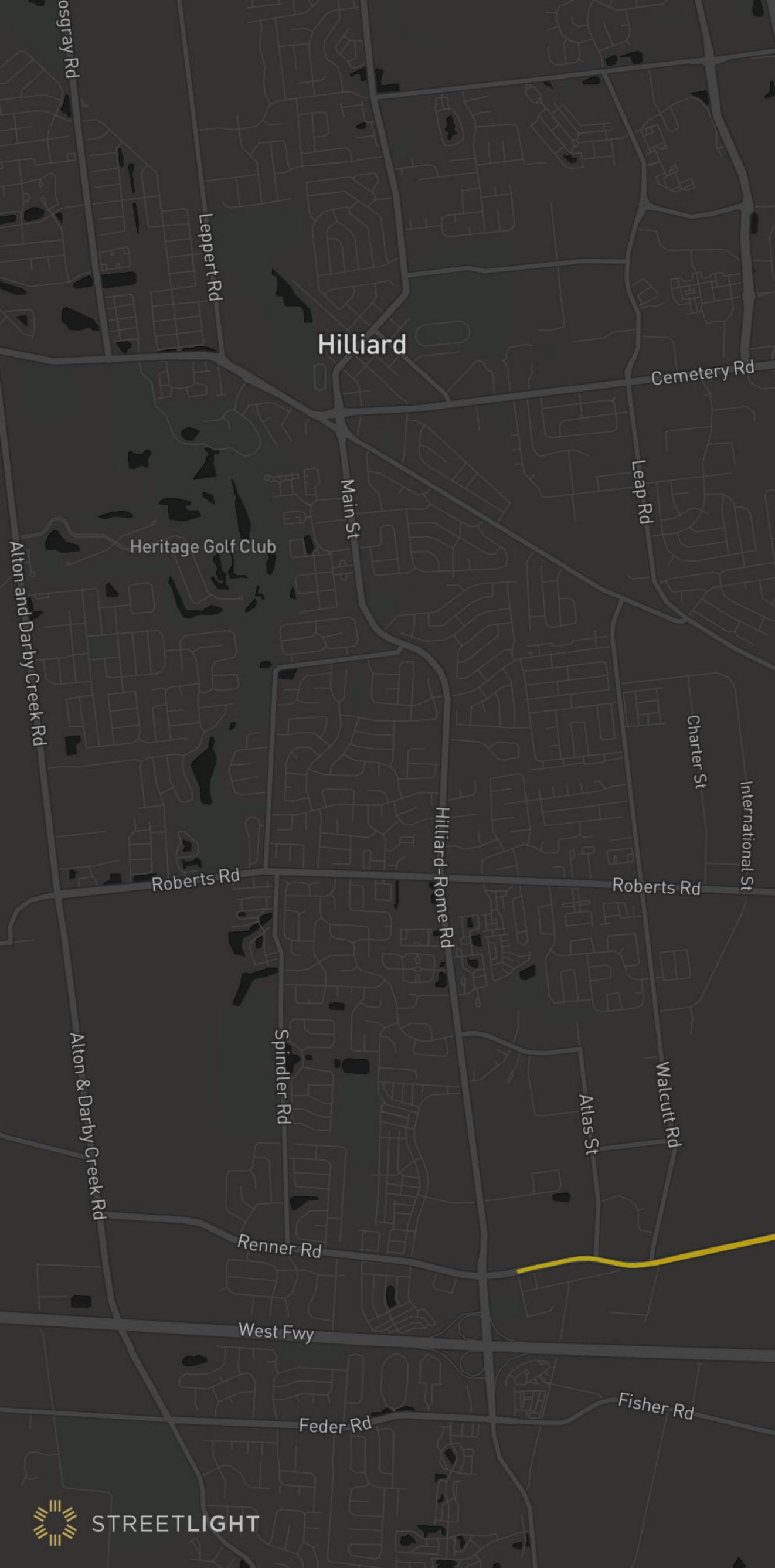
4th St

Ur

ECo

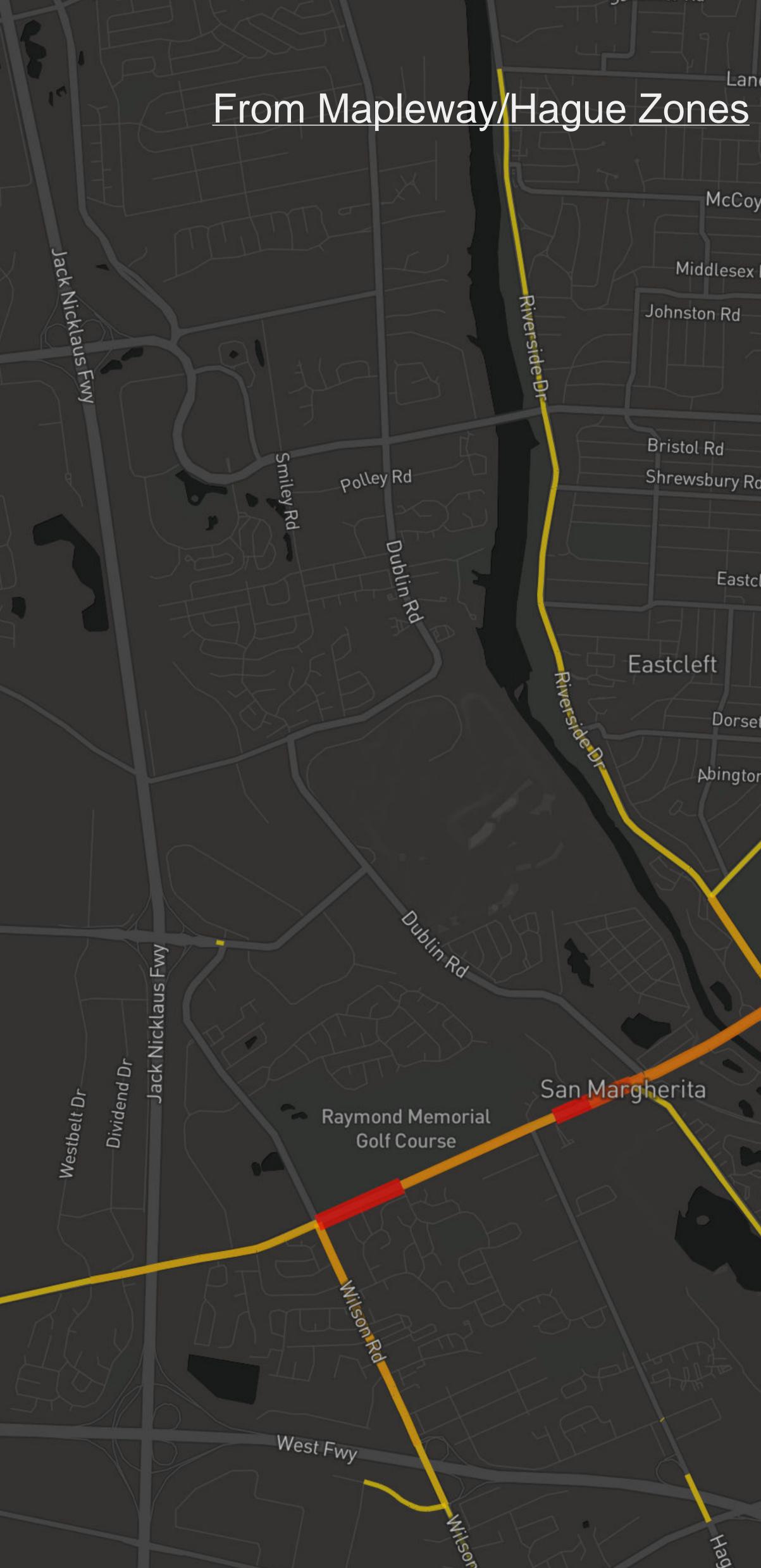
laize Rd

a Como

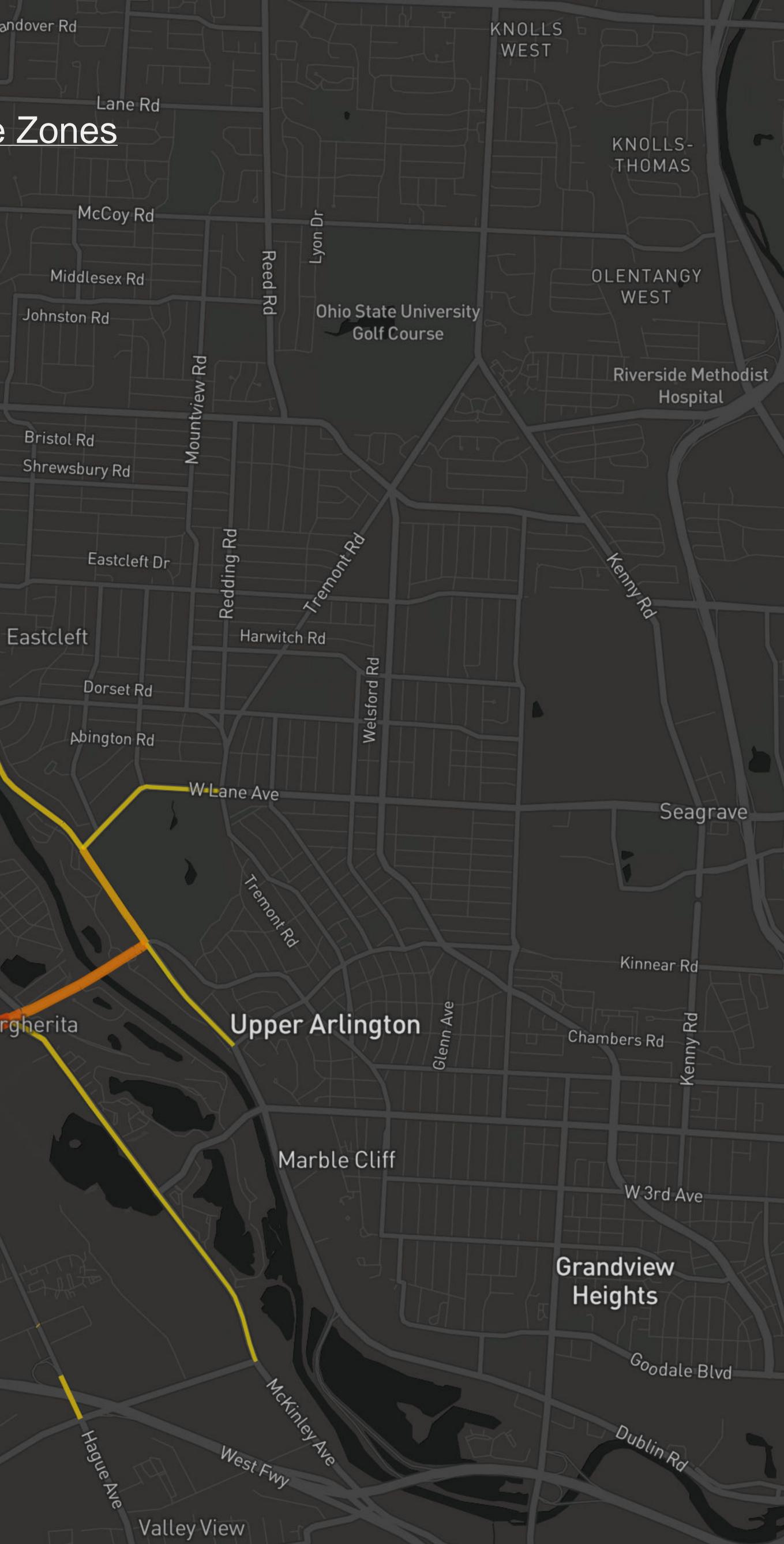




Sandover Rd



St



Glenmont Ave Blenheim CLINTONVILLE Chatham Richard Arden R

High

Olentangy

Ca

Innon Dr

Brevoort R

OLD N COLUN

Cres

UNIVERSI DISTRIC

9th Ave

King Ave

W 5th Ave 륀 HIC 2nd Ave

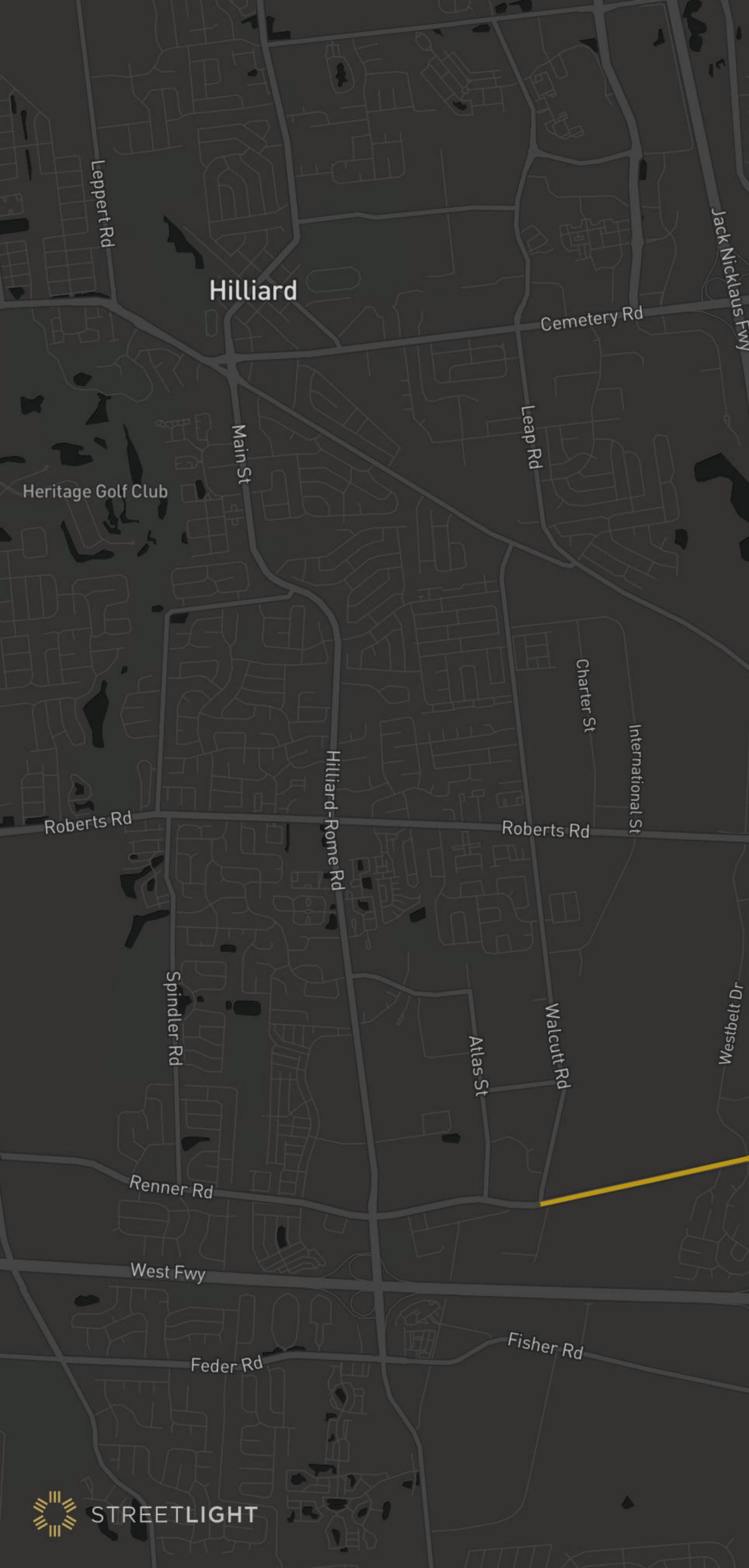
Victorian V

FLYTOWN

Long St

AR DIS





Lane Rd

# From Trabue & McKinley Zones

McCoy Rd

Middlesex Rd

Johnston Rd

Bristol Rd Shrewsbury Rd

Eastcleft Dr

Eastcleft

San Margherita

Dorset Rd

Abington Rd

Raymond Memorial Golf Course

Rd

Oublin Rd

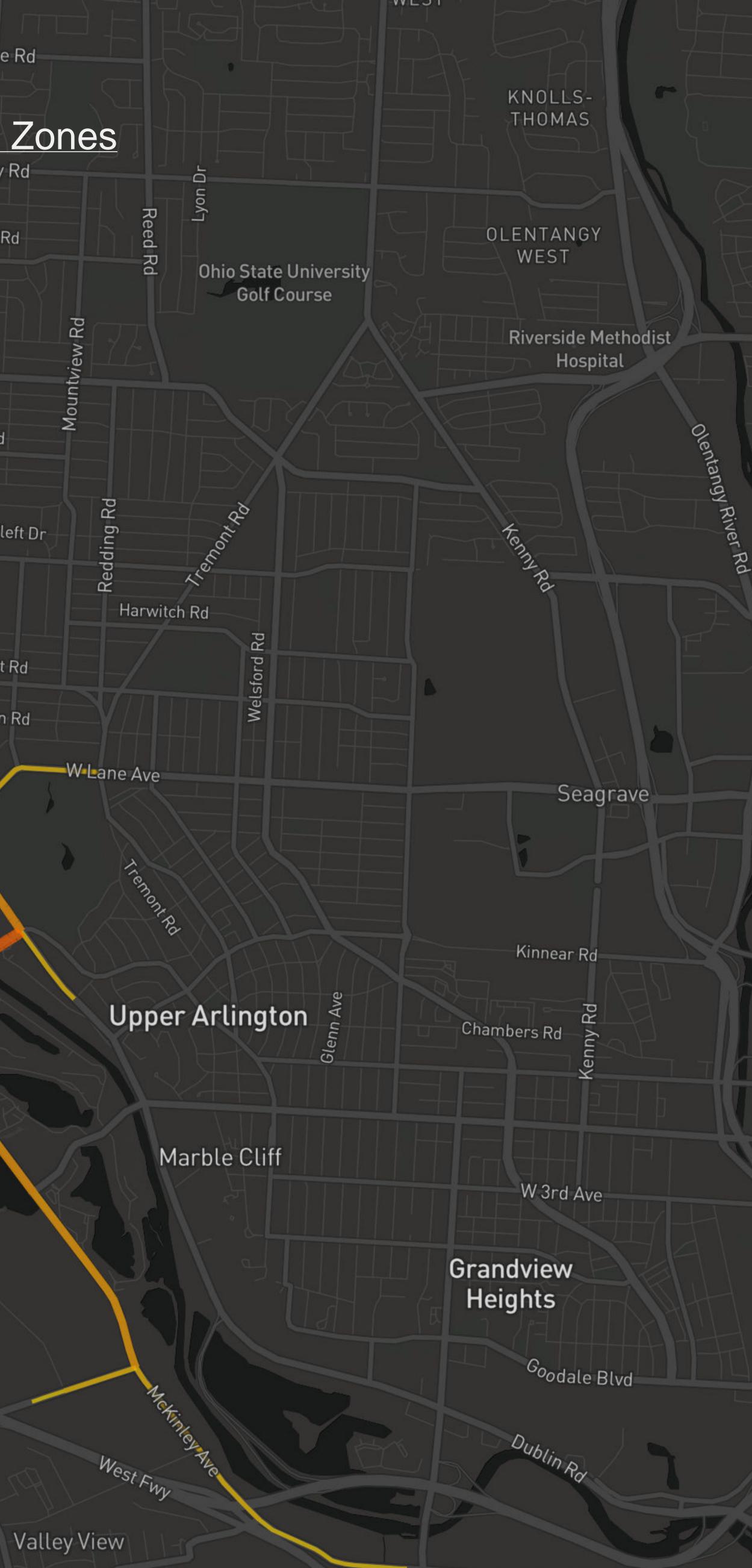
West Fwy

Divide

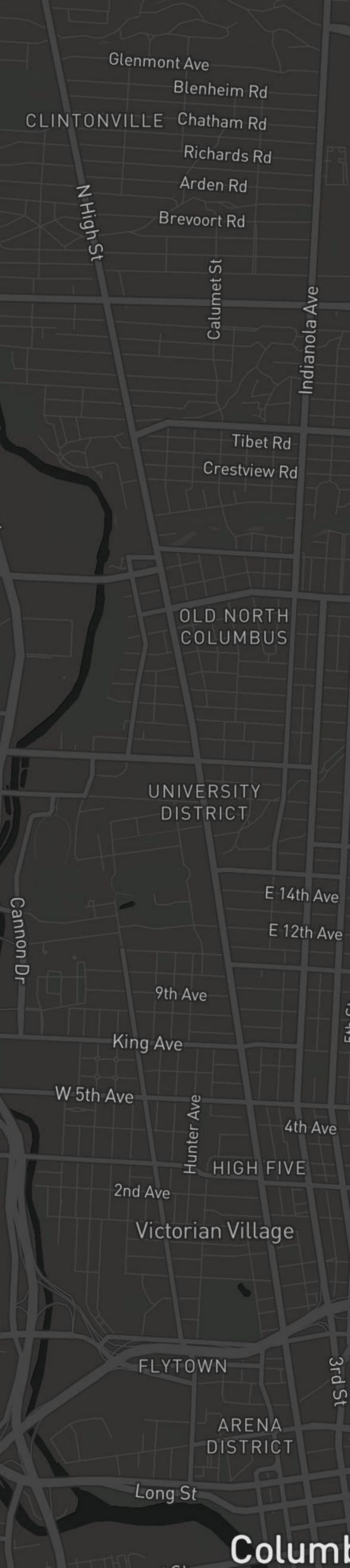
miley Rd

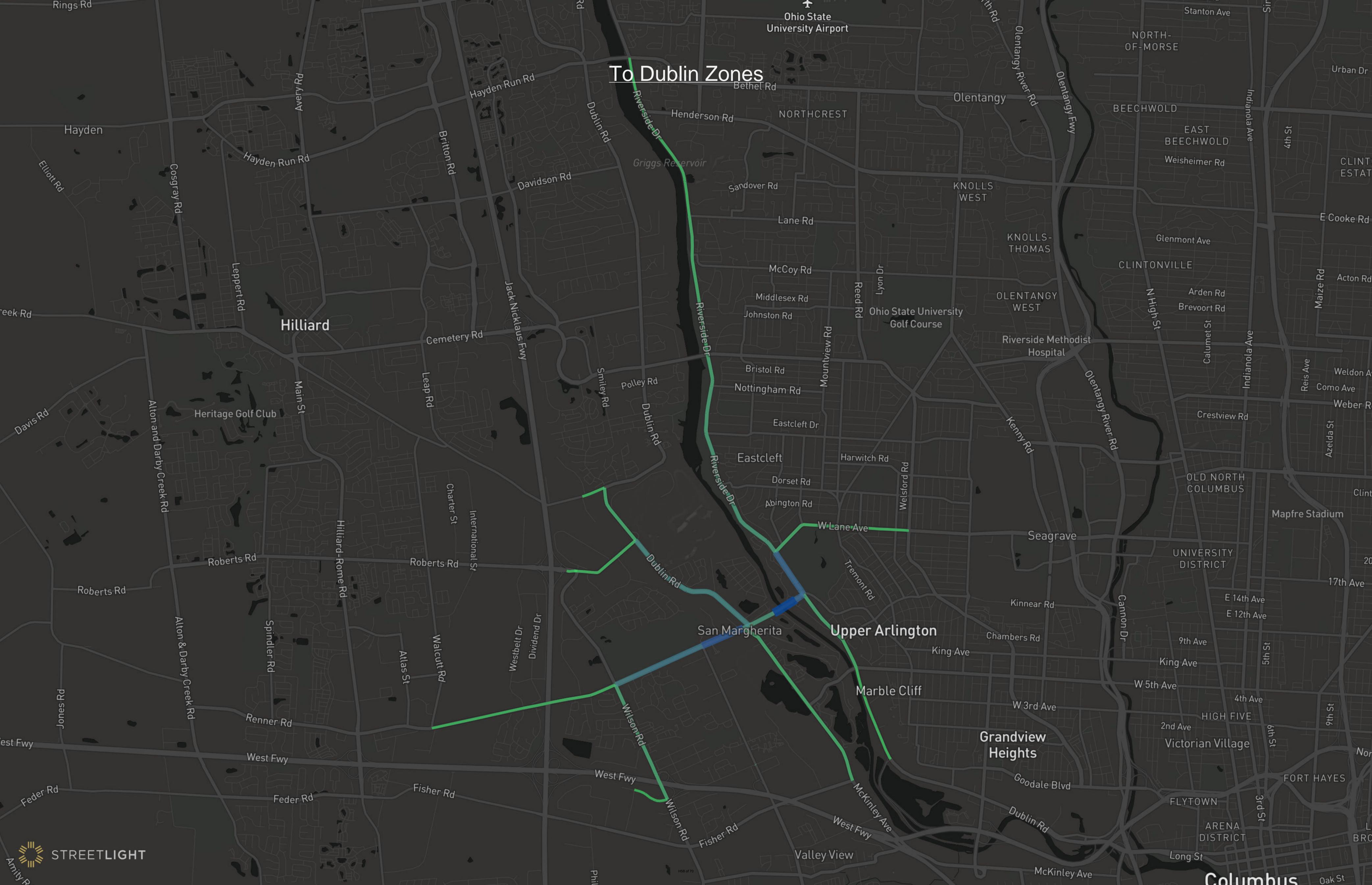
Polley Rd

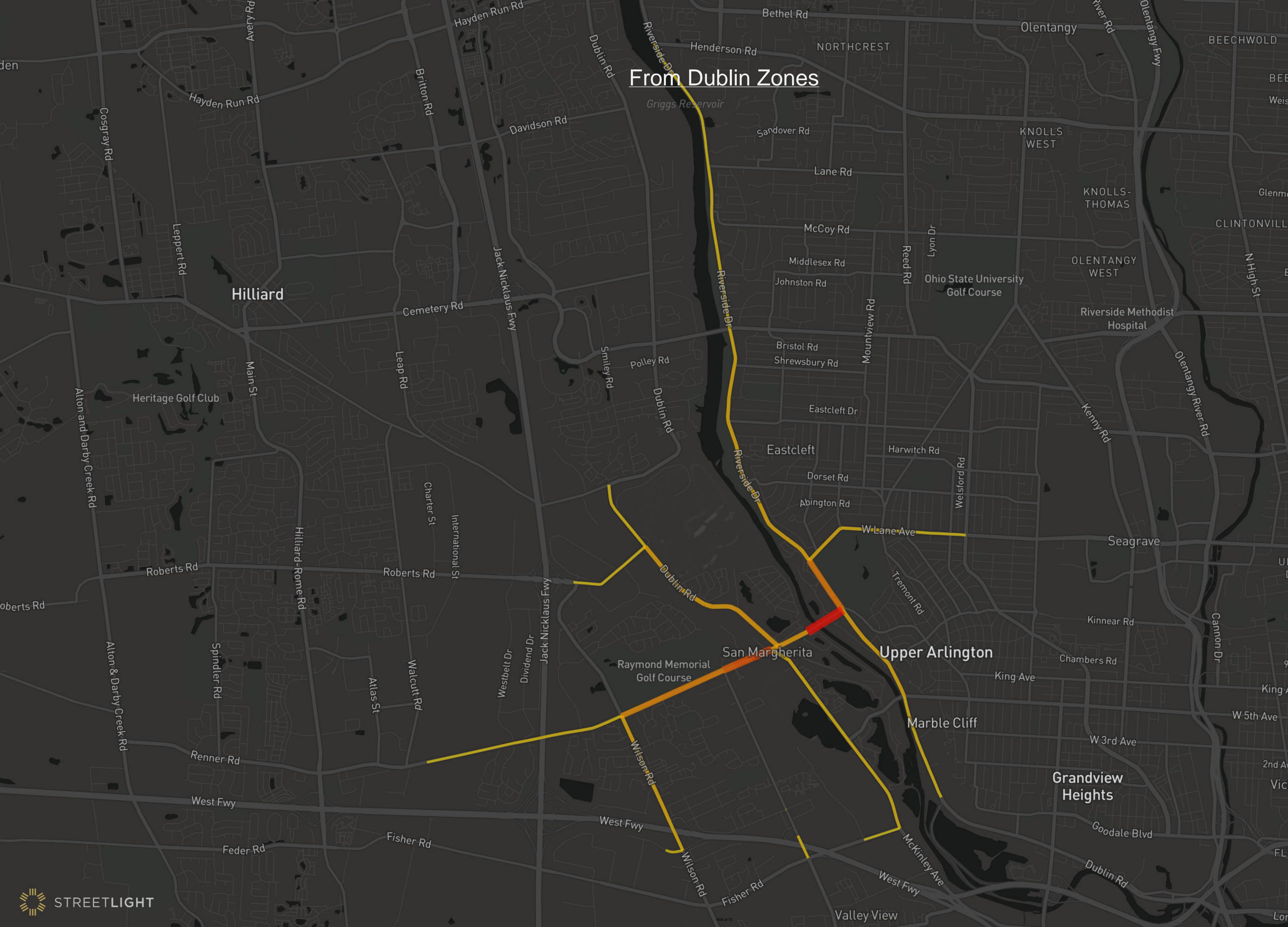
Dublin Rd



McKinley Ave







Morse Rd

EAST BEECHWOLD Weisheimer Rd

Glenmont Ave

CLINTONVILLE

Arden Rd Brevoort Rd

St

C

Tibet Rd Crestview Rd

OLD NORTH COLUMBUS

Mapfre Sta

FORT H

Rei

St

4th

UNIVERSITY DISTRICT

E 14th Ave E 12th Ave

9th Ave

King Ave

2nd Ave

5th St

4th Ave

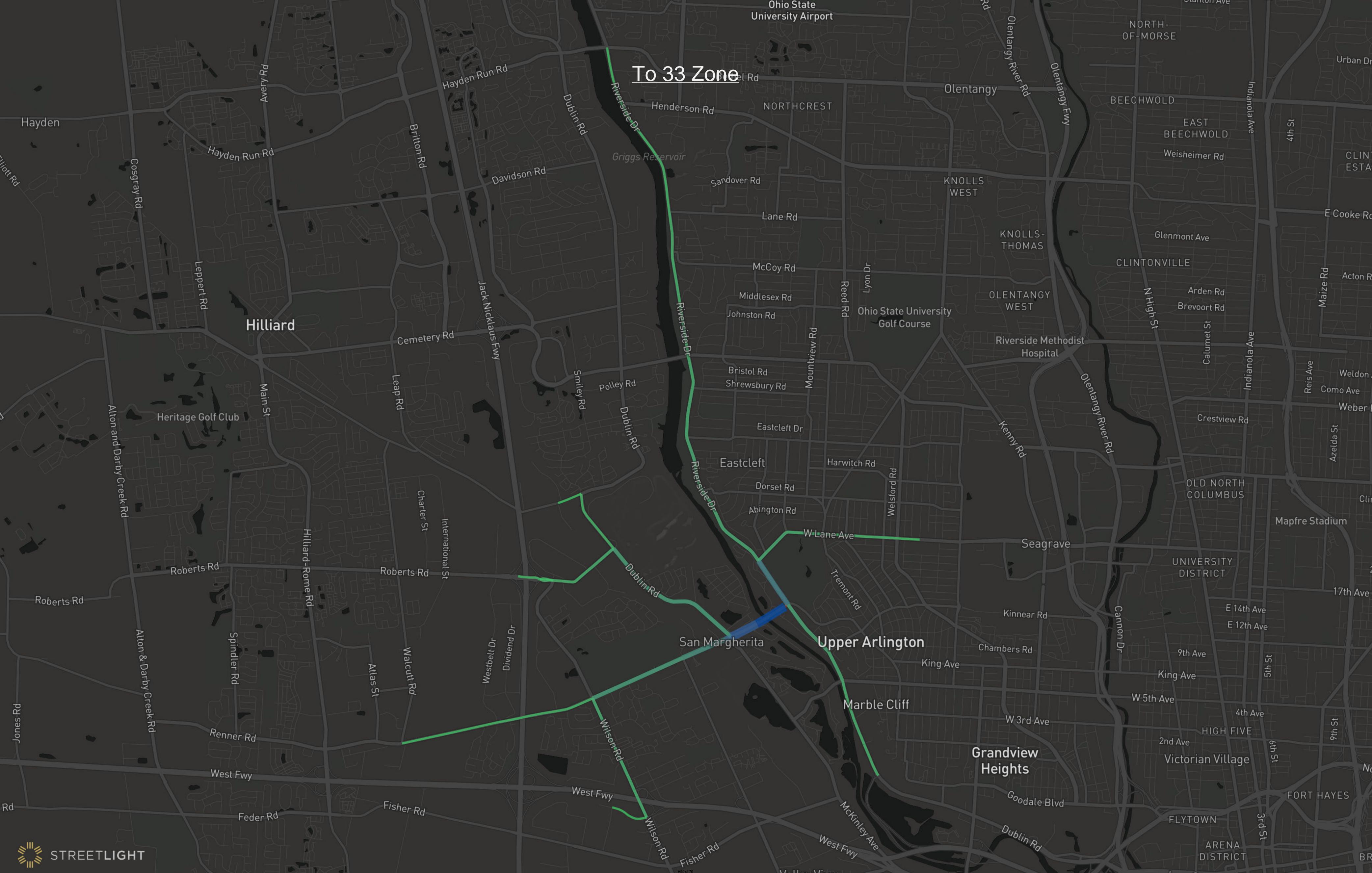
HIGH FIVE

6th St Victorian Village

FLYTOWN

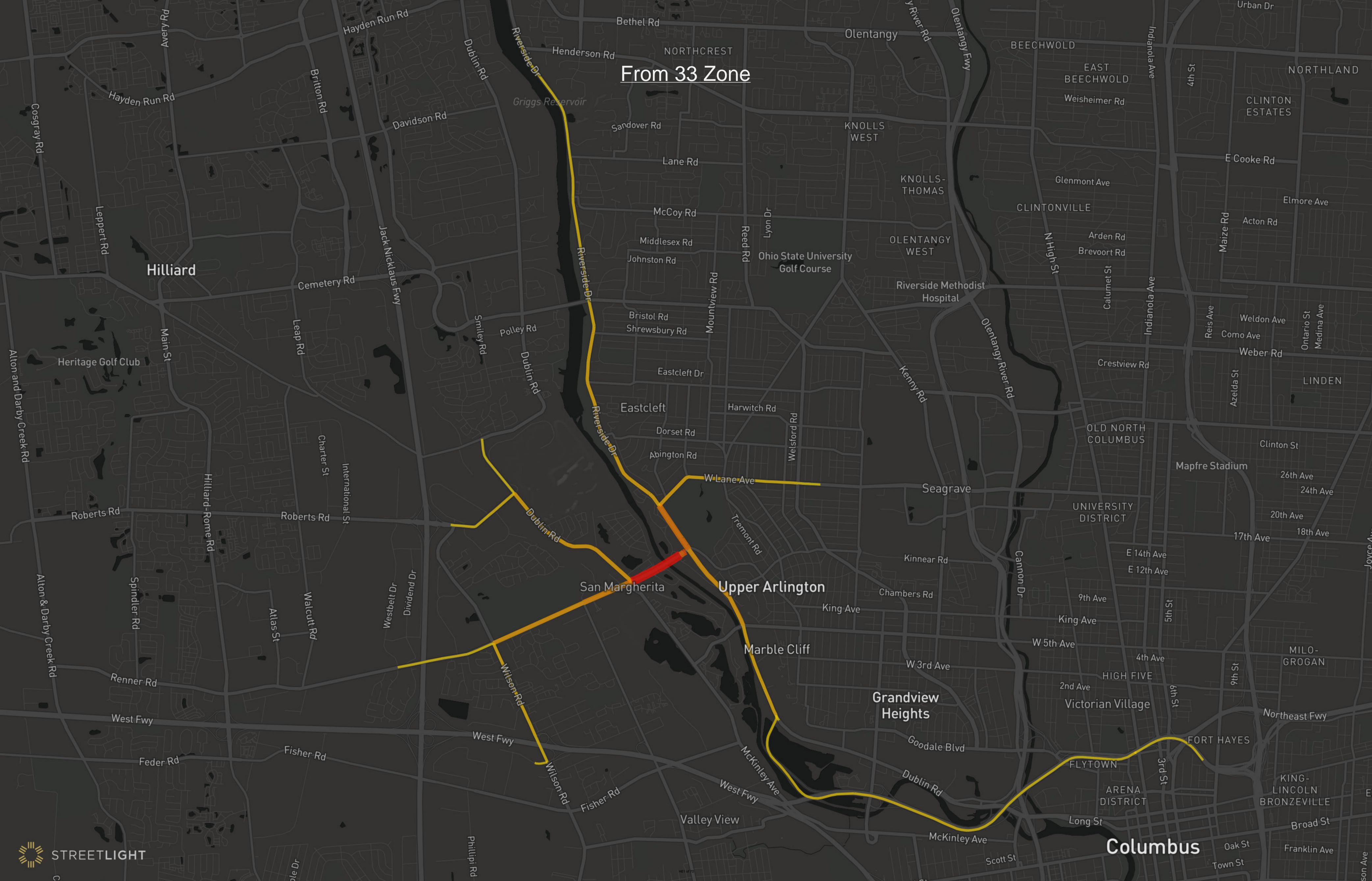
ARENA DISTRICT

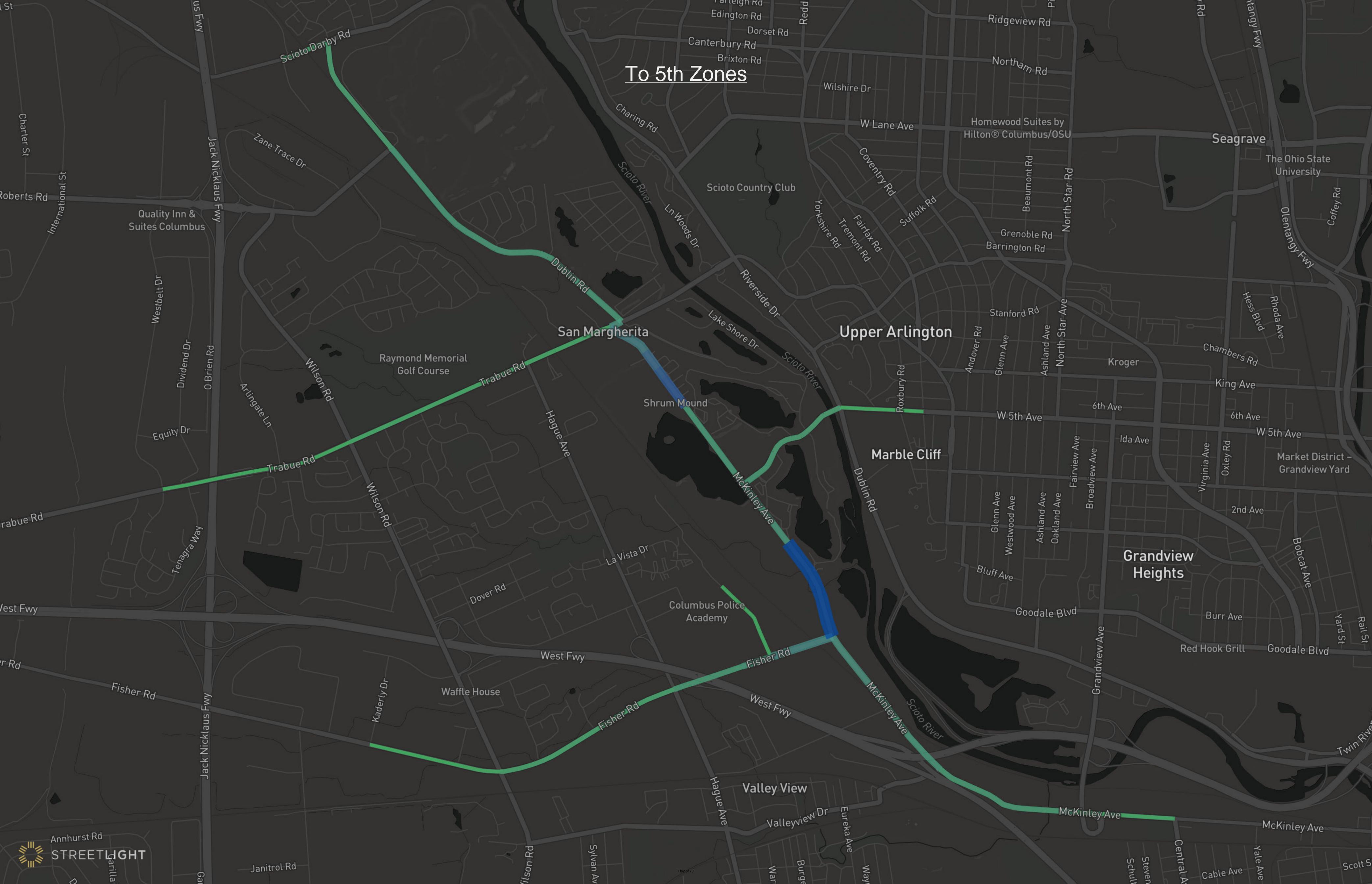
Long St



Valley View

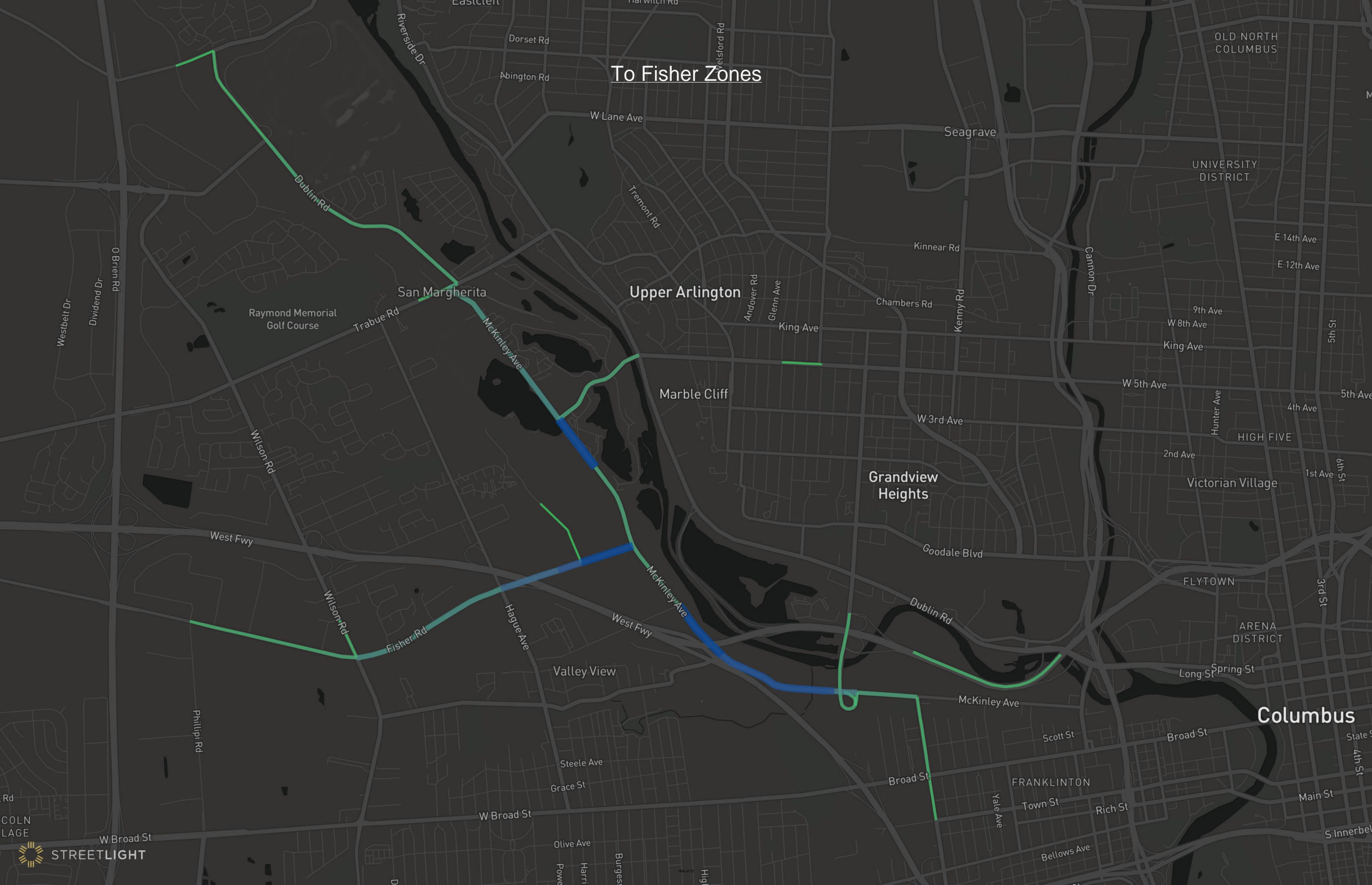
Long St



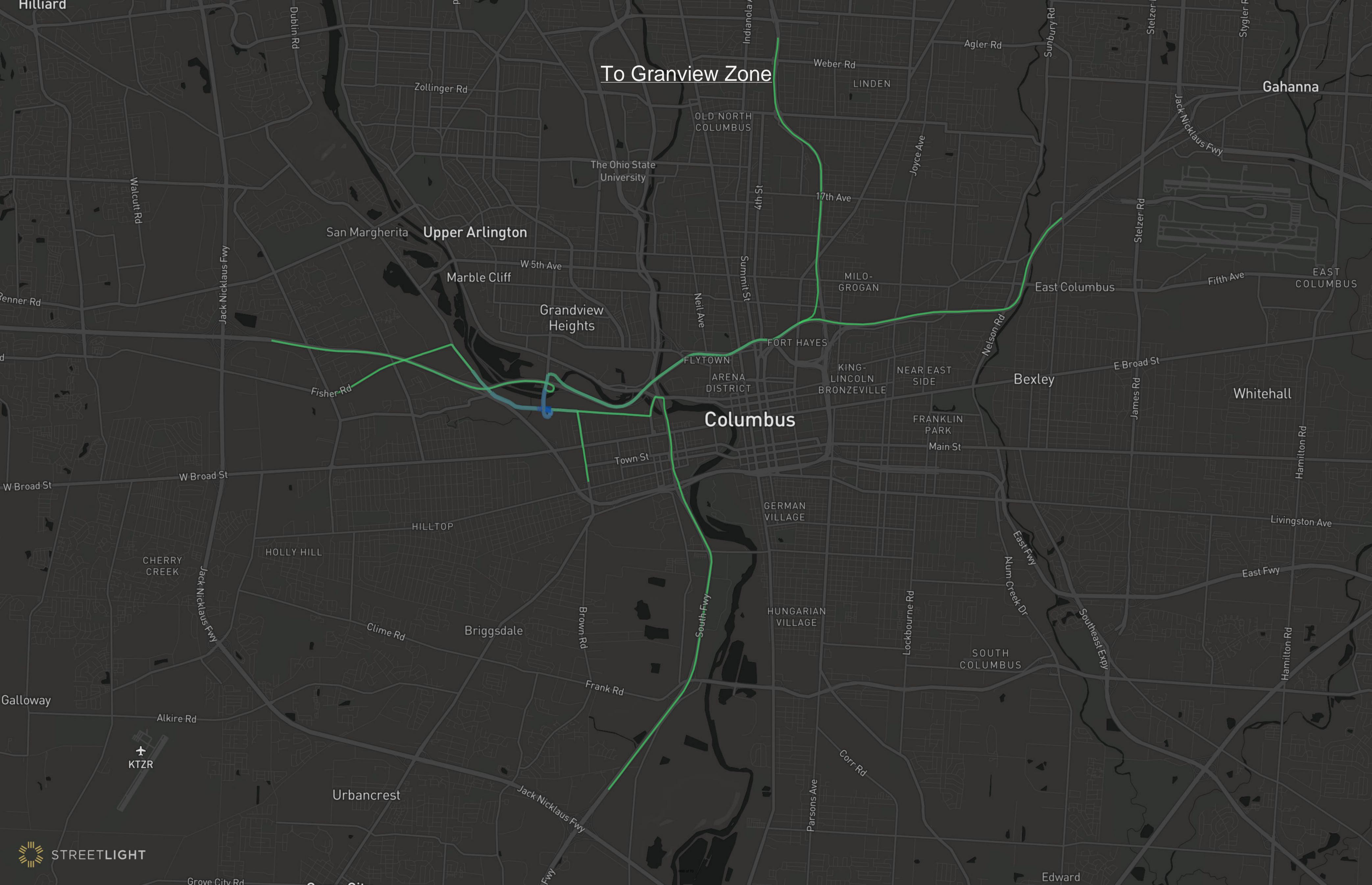


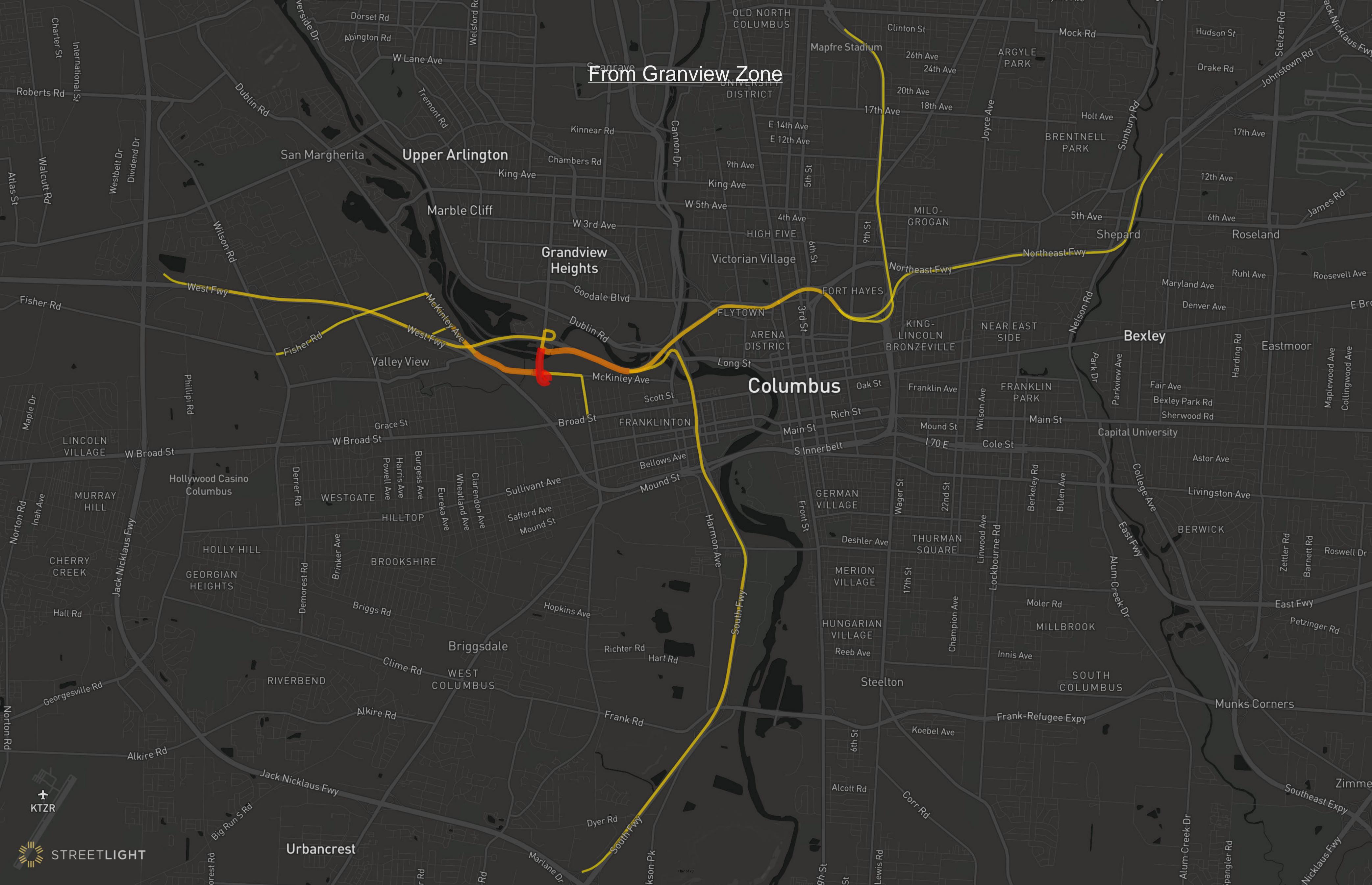




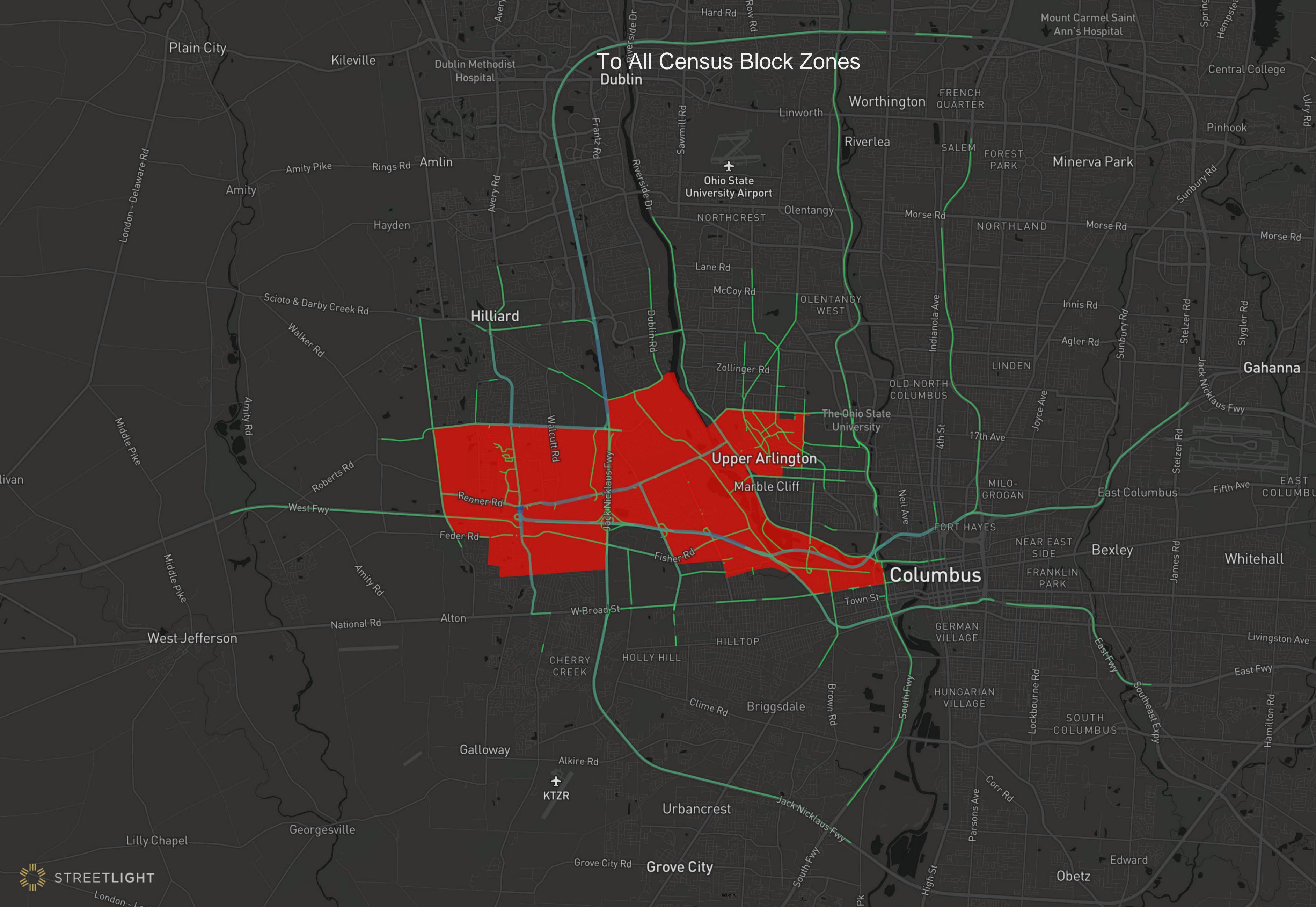








## Census Block Top Routes



Morse Rd

Ulry

Gahanna

EAST COLUMBUS

Mount Carmel East Hospital

Reynol

East Fwy

Brice

Winch

Bla

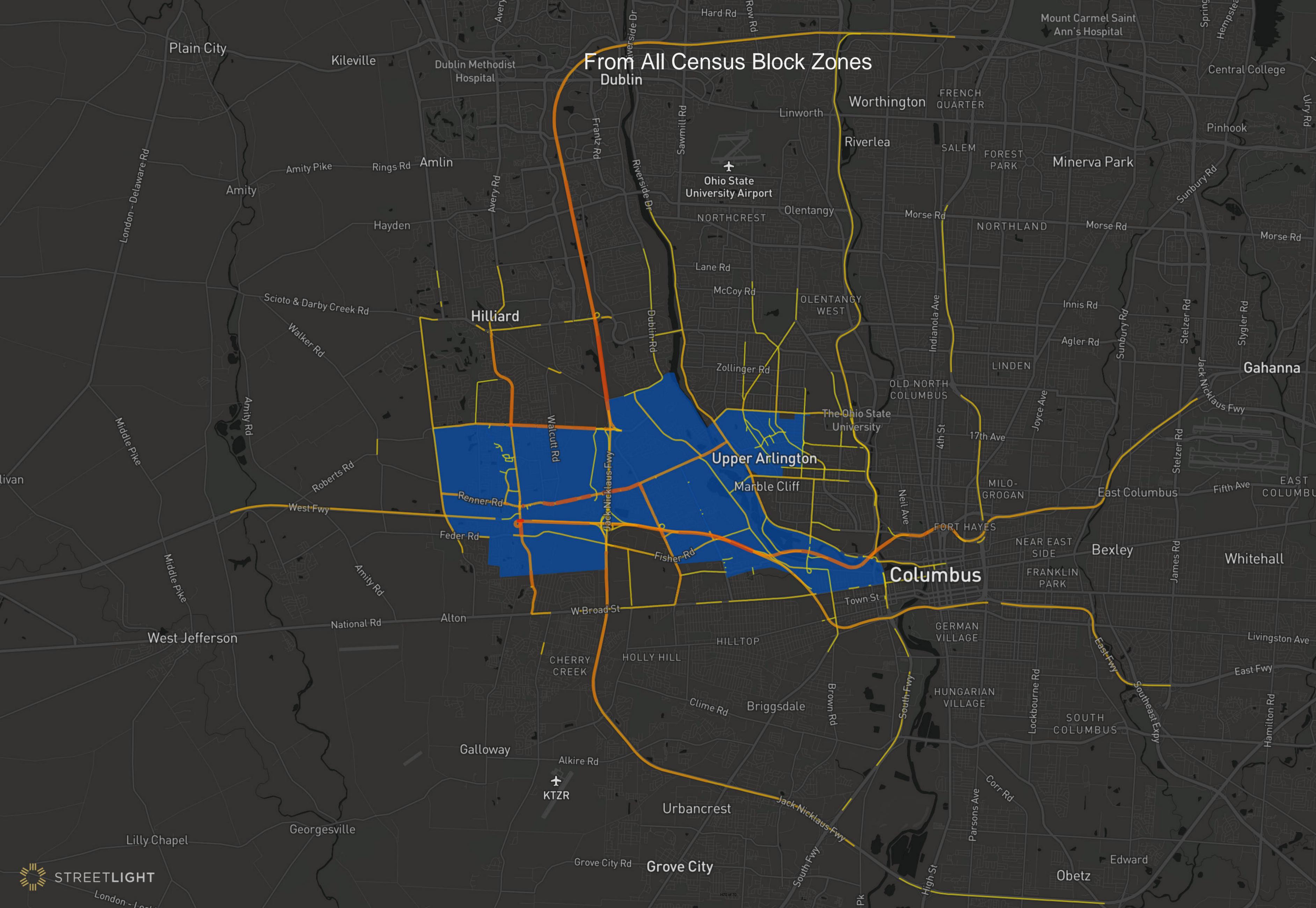
Taylor Rd

Morse Rd

New

Warner Rd New Albany Byp

Walnut St



Morse Rd

Ulry

EAST COLUMBUS

Mount Carmel East Hospital

Reynol

East Fwy

Brice

Winch

Bla

Taylor Rd

Morse Rd

New

Walnut St

Warner Rd New Albany Byp