Northfield-Warrensville Multimodal Connectivity Plan

a TLCI Study

Sponsored by:
Cuyahoga County Planning Commission

November 2018
Acknowledgements
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City of Warrensville Heights
Cuyahoga County Planning Commission
Greater Cleveland Regional Transit Authority
Northeast Ohio Areawide Coordinating Agency (NOACA)

Core Team (shown above)

Steering Committee
Bike Cleveland
City of Cleveland Planning Commission
Cleveland Clinic (South Pointe Hospital)
Cleveland Metroparks
Cuyahoga Community College
University Hospitals

Steering Committee
Ohio Department of Transportation
Warrensville Heights Area Chamber of Commerce
Core Team (shown above)

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Executive Summary
The Northfield-Warrensville Multimodal Connectivity Plan is a planning project that continues previous work in the study area, based on the combined interests and needs of the involved communities: Warrensville Heights, Shaker Heights, Highland Hills and North Randall. The focus of the plan is on providing and improving multimodal connectivity. Currently, the study area is auto-dominant with limited viable options for alternate mode travel. Incorporating multimodal connectivity with infrastructure that accommodates motorized vehicles, transit, bicycles and pedestrians within the existing roadway network, would transform the area. In addition to providing a variety of transportation options, a complete and viable multimodal network would support and enhance the area’s economic vitality.

Multimodal connectivity relies on a variety of infrastructure to accommodate the different travel modes, and it is typically achieved through a focus on complete streets concepts. Defined as balancing the configuration of a transportation corridor to accommodate multiple modes of travel, complete streets principles focus on moving people rather than moving vehicles. Typical treatments include walkable sidewalks with streetscape enhancements, bicycle facilities such as bike lanes or side paths, and transit enhancements such as bus rapid transit (BRT) service and enhancements to transit waiting environments (bus stops, stations). Often, an existing roadway is configured in a manner that prioritizes automobile travel. Re-examining a corridor and reconfiguring the infrastructure can better balance all travel modes. This is often accomplished by reducing vehicle capacity (i.e., fewer travel lanes) to provide space for the inclusion of bicycle and pedestrian facilities. The term “road diet” is often used to describe such rebalancing of resources within a defined transportation corridor. Provision of effective transit is also a consideration and with implementation of bus rapid transit (BRT) service, the corridor may be completely reconstructed to provide exclusive bus lanes.

The Northfield-Warrensville study area is auto-dominant. The primary roads are wide, bicycle facilities are not provided, and the existing sidewalks are utilitarian in nature and there are missing sidewalk links along some of the primary corridors. Transit service is provided but with its regional focus, it does not adequately meet the needs of the Northfield-Warrensville area. Commuters and residents are not able to effectively reach their desired destination via transit; these “last mile” connections need to be addressed.

As a result of the identified gaps, the involved communities have joined together to develop a plan that will enhance multimodal travel options and help connect people to places without having to rely on automobile travel. The ultimate objective is to develop a plan that details improvements that, when implemented, will create a complete multimodal network that will support economic health and development.

Led by the Cuyahoga County Planning Commission, the participating communities developed a plan to improve multimodal access throughout the study area. The plan addresses the anticipated needs of tomorrow as well as today, an important aspect given the rapid growth in parts of the study area and the potential for new development and redevelopment.
throughout the study area. Development of this plan represents a collaborative effort to implement complete streets, improve streetscapes, increase multimodal transportation options, promote Transit-Oriented Development (TOD), and link neighborhoods, employment centers, healthcare and education providers, and recreational facilities with a multi-purpose path and greenway system. This plan creates place-based actionable, strategies that support the recommendations of the Eastside Greenway TLCI Study and accompanying Health Impact Assessment (HIA), the Warrensville/Van Aken Transit-Oriented Development Plan, the GCRTA Blue Line Corridor Extension Study, and the Warrensville Center Road/Van Aken Roadway.

Project Vision, Purpose, Goals and Objectives

The primary purpose of this study is to recommend specific multimodal improvements that will support ongoing and future redevelopment in the study area. To its benefit, the study area includes a significant number of partners, both public and private, who are committed to the overall improvement of the Northfield-Warrensville area. The overall objective is to develop feasible concepts that, when implemented, will improve and enhance multimodal transportation throughout the study area. The project Vision, Goals and Objectives were developed by the Project Team with input from the Steering Committee, forming the framework that guided plan development.

Vision. Develop a multimodal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

Purpose. Drive economic development, reinvestment and job creation by improving multimodal access to enhance livability and quality of life throughout the study area and connecting to the surrounding region.

Goals and Objectives.

- Identify non-motorized enhancements to provide transportation options providing improved access and service.
- Support economic growth and job creation.
- Enhance transit connectivity and service.
- Link neighborhoods, employment, health, education, retail, entertainment and recreation.
- Integrate community health considerations into preferred multimodal network recommendations.
- Incorporate complete and green streets systems and strategies and green infrastructure into the recommendations.
- Complement plans and initiatives to encourage collaboration between regional and community partners.
- Create place-based actionable design strategies and concepts that value existing resources and build on existing plans and studies.
- Incorporate smart technologies that support multimodal transportation opportunities now and in the future.

Project Issues

The study area is characterized by traditional suburban style roads with disconnected land uses that rely on automobile travel for transportation access. This project presents a significant opportunity to retrofit the existing road network and to reimagine new development into a more multimodal, health-conscious, and equitable transportation network.

The intent of this plan is to improve health, as well as access to quality education and enhanced economic development opportunities but the existing transportation network presents barriers. Transportation challenges in the study area include:

- Lack of direct, frequent transit service for trips between the end of the existing Blue Line corridor and retail and job destinations throughout the study area.
- Insufficient station/stop and travel time amenities for both existing users of the Blue Line and bus service.
- Land-use patterns and densities that do not generally support transit.
- Major sections of Chagrin Boulevard, Northfield Road and Green Road and sections on Miles Road and Harvard Road that have partial sidewalks or are entirely missing sidewalks.
- Missing links to connect destinations via bicycle and pedestrian trail options.

**Planning Process**

Development of the plan was grounded in community engagement coupled with the existing and future conditions data as well as technical expertise and understanding of potential multimodal tools and strategies. Levels of engagement consisted of the Project Team, the Steering Committee, Stakeholders, and the general public.

**Existing Conditions**

Existing conditions data was obtained and analyzed to understand the many varied aspects of this diverse study area and the primary corridors that are points of focus for this study. Key information related to the areas listed below was used to inform concept development, along with information provided by the involved communities and key stakeholders:

- Land use
- Zoning
- Employment centers
- Areas of growth and development
- Commute travel patterns
- Destinations
- Population density and other demographic characteristics
- Natural features
- Transportation infrastructure features

The primary corridors in the study area are:

1. Van Aken District
2. Warrensville Heights Schools
3. JACK
   Thistledown Racino
4. Warrensville Heights Town Center
5. Tri-C Master Plan
6. Pinecrest
7. Highland Park Golf Course
8. Chagrin Highlands
9. Highland Hills
10. Randall Park Mall site

**Areas of Planned and Potential Change**
Northfield-Warrensville Multimodal Connectivity Plan

November 2018

Based upon information obtained during the early phases of the planning process, the Project Team mapped known (planned) change in the study area, along with other areas where change is anticipated at some point in the future; some will be sooner than others but the actual change in use and the nature of the future redevelopment is currently unknown. The results clearly show that the study area will experience significant changes in the near future, with the potential for even greater longer term changes that could potentially redefine the character and nature of the area. Understanding these possibilities was factored into the concept development process.

Traffic Operations

A traffic study was conducted to assess operational performance of the Emery Road and Northfield Road corridors, with the objective of understanding the feasibility of capacity reductions along the corridors for implementation of complete streets treatments. The results showed that capacity reduction along Emery Road is feasible between Northfield Road and Richmond Road; capacity reduction along Northfield Road is feasible between the Van Aken District and Emery Road.

Access management was also addressed. Access management refers to the regulation of interchanges, intersections, driveways and median openings to a roadway to help improve operational safety and reduce driver confusion. It is generally beneficial to control the number of driveways and, in some cases, turning movements that are allowed. Effective access management also benefits non-motorized travelers by helping to regulate driver behaviors and reduce the potential for conflicts. Access management is important throughout the study area and it is particularly critical in and around the former Randall Park Mall site.

In addition, site access and circulation for the Randall Park Mall site was assessed. Having been vacant for a number of years, this site represents the single biggest redevelopment opportunity in the study area. The nature of future development and the associated transportation access and circulation will have a significant impact on the surrounding roadway network. It is important that the site be developed in a manner that provides internal circulation and that external access intersections and driveways are retained but not increased, to minimize negative traffic impacts on the surrounding roadway network.

Traffic Study Intersections

Transit Operations

Transit service in greater Cleveland is provided by the Greater Cleveland Regional Transit Authority (RTA). Transit service covers the study area but it has a more regional focus and does not effectively meet the needs of those who travel within the study area. In addition, there are a number of potential markets and connections that are either not made or made inadequately by the existing service, most notably:
• A lack of direct, frequent transit service for trips from the end of the existing Blue Line corridor and retail and job destinations throughout the study area. Lack of express transit service from the I-271, I-480 East and US 422 to downtown Cleveland and University Circle.

• Lack of a direct transit connection to University Circle.

• Lack of circulation within the Northfield Road-Warrensville Road study area.

• Insufficient station/stop and travel time amenities for both Blue Line and bus users within the study area.

• In addition to lack of shelters and other passenger amenities, many parts of the study area lack adequate sidewalks and paved pedestrian connections from bus stops to adjacent development.

• There are many missing links in the study area’s bicycle and pedestrian/multi-use trail network, further confirming the car-dominant nature of the area and short-changes access to transit.

• Population and employment densities are generally below the level at which transit can serve areas efficiently.

Land Use and Economic Development

One of the primary objectives of the Northfield-Warrensville Multimodal Connectivity Plan is to support economic development through place-based transportation and land use recommendations, and to connect these recommendations with existing assets and investment opportunities within the Study area.

The study area’s place-based assets include residents and their skills; local infrastructure; academic, technical, and medical institutions; local and regional business and employment centers; cultural, natural, and artistic resources; and the overall quality of life. A key strategy to maintaining and supporting economic development is to integrate place-based community development strategies for housing, transportation, infrastructure, and other amenities with economic development strategies for business and workforce development to ensure the area’s continued success.

A set of guiding principles were developed to frame the economic development component. The principals are:

1. **Collaboration** among stakeholders to create favorable conditions for economic benefits within the study area and the adjacent impact areas.

2. **Integration** of planning and economic development tools, techniques and strategies to ensure a comprehensive approach to new development in the study area.

3. **Access** to a robust transportation system to aid workforce creation and expansion.

4. **Innovation** in emerging industries and technologies to broaden the economic development potential in the study area.

5. **Identification** and branding, with an understanding of the study area and its marketplace opportunities.

In addition, the economic development strategy targets the major industries and anchors within the study area and the adjacent areas that are impacted by and impact the study area. The strategy establishes a corridor-based framework to promote economic development. It establishes roadway corridor typologies, categorizing each corridor by its character and function, and considering the following attributes:

• Existing land uses and unique conditions

• Current role of the area within the study area (i.e., gateway, industrial corridor, commercial corridor, a new economic development project, etc.)

• Connectivity to surrounding areas

• Appearance and surroundings
• Best land uses for the area
• Shortfalls and limitations
• Development constraints

In consideration of character, function, and the above attributes, the framework defines four corridor typologies for economic development: Regional, Primary, Secondary and Scenic. Within these typologies, each corridor is further defined by its functional role as a Commuter route, Commercial route, Industrial route, or Neighborhood Link. The following section lists each corridor type, and includes those roadways that best fit the defined typology.

**Regional Corridors**

**Warrens ville Center Road**
Mainly residential, some office, commercial and light industry, institutional (Warrens ville Heights schools, police department); infill development potential.

**Richmond Road**
Retail, office and institutional uses, “Headquarters Highway” branding potential.

**Primary Corridor**

**Chagrin Boulevard**
Institutional, retail and office uses. Infill of underutilized or vacant commercial and industrial properties potential.

**Green Road**
Residential, office, recreation, cemetery, complementary commercial development potential.

**Miles Road**
Industrial and light industrial uses, some commercial manufacturers and retailers with high density residential. Infill of underutilized or vacant commercial and industrial properties potential.

**Secondary Corridor**

**Northfield Road**
Institutional, civic, commercial and some residential. New development potential.

**Emery Road**
Mixed use retail, commercial office and institutional. Local commercial business development potential.

**Scenic Corridor**

**Harvard Road**
Undeveloped sections include Chagrin Highlands, medical, office, some residential. Mixed Use development potential. Complementary to existing industries.

The information here highlights the existing features and characteristics, and that information can be used to help identify and understand what could be integrated into the communities in the future. The existing conditions will be used to effectively form a foundation for the future.

The intent is to use this information to develop basic strategies that the cities can use to help plan the future of their communities, and how their community relates to the adjacent communities. What should be promoted as a next step? However, future planning should not be limited to focusing on the corridors. Rather, future planning should also integrate relevant information from other parts of this plan. In addition to identified development opportunities, the planning could incorporate branding, gateways, and other elements to describe and define distinct areas within the study area.

**Recommendations**

Recommendations for the multiple aspects of the plan are summarized in the preceding sections. Non-motorized and transit recommendations are illustrated in the figures below. A consolidated summary of recommendations, shown by type of treatment or facility, is provided in **Table A**. In addition and for ease of understanding, recommendations for the study area corridors, summarized by corridor, is provided in **Table B**; note that this table only includes recommendations for the specific corridors; it is not a complete list of recommendations. In addition, economic development recommendations are summarized in **Table C**.
Recommendations for Non-Motorized Improvements
Existing & Proposed Transit Service and Amenities
Table A. Infrastructure Recommendations, Categorized by Type of Treatment

<table>
<thead>
<tr>
<th>Infrastructure Recommendation</th>
<th>Implementation</th>
<th>Justification</th>
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<tbody>
<tr>
<td><strong>Basic Pedestrian Treatments</strong></td>
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<tr>
<td>Refer to Table 11-1 for the list of Sidewalk Missing Links. Refer to section 11.3 for the comprehensive list of Pedestrian Recommendations.</td>
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<tr>
<td>Complete the sidewalk network within the study area. Construct sidewalks where there are currently missing links to provide sidewalk connectivity throughout the study area, as identified in Table 11-1.</td>
<td>Short Term</td>
<td>Completing the missing sidewalk links will improve pedestrian connectivity and multimodal access.</td>
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<td></td>
<td></td>
<td>Although not necessary for all corridors and sidewalks, multi-community partnerships will benefit implementation.</td>
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<td>Beachwood</td>
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<td>Highland Hills</td>
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<td>North Randall</td>
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<td>Shaker Heights</td>
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<td></td>
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<td>Warrensville Heights</td>
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<tr>
<td>Configure intersections on primary corridors to safely accommodate pedestrians.</td>
<td>Short Term</td>
<td>Provision of basic pedestrian accommodations (signal timing, countdown pedestrian signal heads, crosswalks) will facilitate multimodal access, enhance pedestrian connectivity, and improve operational safety for pedestrians by facilitating safe pedestrian crossings at intersections.</td>
</tr>
<tr>
<td>- Provide signal timing to safely allow pedestrians to walk across the street.</td>
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<tr>
<td>- Install countdown pedestrian signal heads. Refer to Section 10.7 for a list of intersections that are missing pedestrian signal heads and others that should be upgraded to countdown pedestrian signal heads.</td>
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<tr>
<td></td>
<td></td>
<td>Although not necessary for all intersections, multi-community partnerships will benefit implementation.</td>
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<td>Warrensville Heights</td>
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<tr>
<td><strong>Intersection &amp; Crossing Treatments</strong></td>
<td></td>
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</tr>
<tr>
<td>Refer to section 11.3 for the comprehensive list of Pedestrian Recommendations.</td>
<td></td>
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</tr>
<tr>
<td>Provide an enhanced pedestrian crossing (highly visible crosswalk, countdown pedestrian heads, etc.) at the Warrensville Center Road/Longbrook Road intersection.</td>
<td>Short Term</td>
<td>Provision of enhanced pedestrian crossings at this existing signalized intersection will improve pedestrian safety and facilitate access to the Warrensville Heights schools and at the JACK Thistledown Racino main entrance and the adjacent neighborhoods.</td>
</tr>
<tr>
<td></td>
<td>Multi-community partnership</td>
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<td></td>
<td>Cleveland</td>
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<td></td>
<td>Warrensville Heights</td>
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<tr>
<td>Infrastructure Recommendation</td>
<td>Implementation Time Frame and Community(ies)</td>
<td>Justification</td>
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<tr>
<td>Provide an enhanced pedestrian crossing (highly visible crosswalk, countdown pedestrian heads, etc.) at the Northfield Road/Ellicott Parkway-Clarkwood Parkway intersection.</td>
<td>Short Term</td>
<td>Provision of enhanced pedestrian crossings at this existing signalized intersection will improve pedestrian safety and facilitate access to the Warrensville Heights schools and the adjacent residential neighborhoods.</td>
</tr>
<tr>
<td>Relocate (or close) the driveways on Granada Boulevard, located immediately north of the Emery Road intersection, to minimize adverse impacts to intersection operations and safety.</td>
<td>Medium Term</td>
<td>Driveway relocation or closure will enhance intersection safety.</td>
</tr>
<tr>
<td>Provision of a mid-block crossing is recommended with the proposed greenway along Mill Creek to facilitate pedestrian crossings.</td>
<td>Short (or Medium) Term</td>
<td>Provision of a mid-block crossing at this location will support multi-modal access along the proposed Mill Creek Trail. This mid-block crossing should be installed to coincide with the construction of the new Mill Creek Trail.</td>
</tr>
<tr>
<td><strong>Intersection Geometrics</strong></td>
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<tr>
<td>Construct ADA compliant pedestrian treatments (curb ramps, crosswalks) at the Clarkwood Parkway/Granada Boulevard intersection.</td>
<td>Short term</td>
<td>Improve pedestrian access and safety.</td>
</tr>
<tr>
<td>Construct a westbound double left turn and an eastbound exclusive right turn lane at the Northfield Road/Miles Road intersection.</td>
<td>Long term</td>
<td>Improve intersection operational performance, efficiency and safety. Note: This will lengthen pedestrian crossing distances, making it more difficult to walk across the intersection so pedestrian enhancements should be included. However, all traffic recommendations located in or near the Randall Park Mall site must be revisited based on traffic impacts from Amazon facility prior to implementation.</td>
</tr>
<tr>
<td>Realign Granada Boulevard and Derbyshire Drive to a standard four-legged intersection at Emery Road, thereby eliminating the need to split-phase the north-south approaches.</td>
<td>Long term</td>
<td>Improve intersection operational performance and safety.</td>
</tr>
<tr>
<td>Infrastructure Recommendation</td>
<td>Implementation</td>
<td>Justification</td>
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</tr>
<tr>
<td>Reconfigure the Warrensville Center Road/Miles Road interchange to make it more pedestrian</td>
<td>Long term</td>
<td>Improve safety for pedestrians and vehicles.</td>
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<tr>
<td>friendly; realign the intersection approaches and shorten pedestrian crossing distances.</td>
<td>Multi-community partnership - North Randall - Warrensville Heights</td>
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<tr>
<td>This should be done with redevelopment of the Randall Park Mall site.</td>
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</table>

**Access Management**

Access management strategies should be implemented as part of the redevelopment plans throughout the study area, and particularly within and surrounding the Randall Park Mall site.

Integrate plans and studies for Amazon redevelopment to ensure safe and efficient operations, along with the potential for multimodal balance, as the new Amazon Fulfillment Center is built and begins operations.

Medium and Long Term

Although not needed for all corridors and driveway locations, multi-community partnerships will benefit implementation.

- Beachwood
- Highland Hills
- North Randall
- Shaker Heights
- Warrensville Heights

Access management demonstrates prioritization of considerations and accommodations for safe, comfortable bicycle and pedestrian mobility. In addition, access management improves operational safety within the roadway network.

Although information related to Amazon site operations and potential traffic impacts has not been shared, it is important that this new facility be appropriately integrated into the community as well as the surrounding roadway network.

**Signal Operations**

Optimize signal timing for the signalized intersections in the study area (all intersections).

Short term

Multi-community partnership - Beachwood - Highland Hills - North Randall - Warrensville Heights

Improve operational efficiency of roadway network.

Modify signal phasing at the two intersections listed below. Convert the existing northbound and southbound protected only left turns to protected/permissive left turns at both intersections:

- Northfield Road/Harvard Road
- Northfield Road/Ellacott Parkway-Clarkwood Parkway

Short term

Multi-community partnership - Highland Hills - Warrensville Heights

Improve operational efficiency of roadway network.
<table>
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<tr>
<th>Infrastructure Recommendation</th>
<th>Implementation</th>
<th>Justification</th>
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<tbody>
<tr>
<td>Provide signal interconnect and upgrade signal equipment, as needed, for implementation of a coordinated signal system and signal progression along the primary corridors in the study area. Consider GPS clocks as a low-cost alternative to signal interconnect.</td>
<td>Short term Multi-community partnership Beachwood Highland Hills North Randall Warrensville Heights</td>
<td>Improve operational efficiency and safety of roadway network.</td>
</tr>
<tr>
<td><strong>Complete Streets (Road Diets)</strong></td>
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<tr>
<td>Convert Northfield Road to a three-lane corridor between Harvard Road and Emery Road. The space vacated by each of the north-south the travel lanes would be converted to buffered bike lanes. To the north, Northfield should be converted to two-lanes and configured with buffered bike lanes on each side of the median or the travel lanes could be on the west side of the median and the east side could be converted to an exclusive bicycle facility.</td>
<td>Medium Term Multi-community partnership Highland Hills North Randall Shaker Heights Warrensville Heights</td>
<td>Incorporating dedicated bicycle infrastructure within the Northfield Road corridor will improve multimodal access opportunities for the Warrensville Heights schools, community center areas, businesses and health care facilities as well as access to the Van Aken District.</td>
</tr>
<tr>
<td>Convert Emery Road to a three-lane corridor between Northfield Road and Richmond Road. The space vacated by the travel lanes would be converted to buffered bike lanes.</td>
<td>Medium Term Multi-community partnership North Randall Warrensville Heights</td>
<td>Incorporating dedicated bicycle infrastructure along the Emery Road corridor will improve multimodal access opportunities and enhance residential access to community, school, commercial and business destinations.</td>
</tr>
<tr>
<td>Study the feasibility of reducing Richmond Road to a three-lane roadway south of the Miles Road intersection.</td>
<td>Short Term (study) Long Term (implementation) Multi-community partnership Bedford Heights Warrensville Heights</td>
<td>Capacity reduction along this section of Richmond Road could provide the potential for implementation of multimodal infrastructure enhancements.</td>
</tr>
<tr>
<td><strong>Bike Lanes</strong></td>
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<tr>
<td>Provide buffered bike lanes along Emery Road as part of the road diet conversion to a 3-lane corridor.</td>
<td>Medium Term Multi-community partnership North Randall Warrensville Heights</td>
<td>Incorporating bike lanes, as recommended, will have a positive impact on multimodal access along the Emery corridor.</td>
</tr>
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## Infrastructure Recommendation

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Justification</th>
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<tbody>
<tr>
<td><strong>Provide buffered bike lanes along Northfield Road as part of the road diet conversion to a 3-lane corridor.</strong>&lt;br&gt;Medium Term&lt;br&gt;Mult-community partnership&lt;br&gt;– Shaker Heights&lt;br&gt;– North Randall&lt;br&gt;– Warrensville Heights</td>
<td>Incorporating bike lanes, as recommended, will have a positive impact on multimodal access along the Northfield corridor.</td>
</tr>
</tbody>
</table>

### Multi-Use Trails

Construct multi-use trails along the corridors listed below. Refer to Section 11.4 for more information on location and limits along each corridor.<br>– Chagrin Boulevard<br>– Clarkwood Parkway<br>– Derbyshire Drive<br>– Ellacott Parkway<br>– Emery Road<br>– Granada Boulevard<br>– Green Road<br>– Harvard Road<br>– Millcreek Boulevard<br>– Northfield Road<br>– Richmond Road<br>– Warrensville Center Road<br>Medium and Long Term<br>Some trails will require coordination between communities and all trails will benefit if they are included as part of a multi-community plan. Community involvement varies by corridor. Incorporating multi-use trails, as recommended, will have a significant positive impact on multimodal access throughout the study area, enhancing access to the many and various destinations in and surrounding the study area.

- **Mill Creek Trail.** Create a trail through the woods along Mill Creek, connecting Millcreek Boulevard, across Northfield Road (recommended with a mid-block crossing), west along the creek and meeting up with the trail along Warrensville Center Road. Medium Term<br>– Highland Hills

- **Town Center Trail.** Construct a trail that provides direct, connected access between the high density residential neighborhood along the Clarkwood Parkway and Granada Boulevard corridors with the library, the YMCA, the future Warrensville Heights town center and other destinations that are accessible via Northfield Road. Medium Term<br>– Warrensville Heights

This trail will facilitate direct non-motorized access between health care facilities and other development along the Eastside Health Corridor.

This trail will facilitate direct access between a large, high-density residential development and community facilities on Northfield Road, making a trip that is not currently a walkable distance, a much shorter and very walkable distance.
### Infrastructure Recommendation

#### Grade-Separated Crossings

**Construct a grade-separated crossing for east-west travel along the proposed Harvard Road trail at the Richmond intersection.**

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<th>Implementation</th>
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<tbody>
<tr>
<td>Long Term</td>
<td>Provision of a grade-separated crossing for the trail along Harvard Road will facilitate safe pedestrian crossings at this very busy, auto-dominant intersection, enhancing multi-modal connectivity and providing viable access to popular destinations along the corridor.</td>
</tr>
<tr>
<td>Multi-community partnership - Beachwood - Warrensville Heights</td>
<td></td>
</tr>
</tbody>
</table>

**Construct a grade-separated crossing for north-south travel along the proposed Richmond Road trail at the Harvard intersection.**

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Term</td>
<td>Provision of a grade-separated crossing for the trail along Richmond Road will facilitate safe pedestrian crossings at this very busy, auto-dominant intersection, enhancing multi-modal connectivity and providing viable access to popular destinations along the corridor.</td>
</tr>
<tr>
<td>Multi-community partnership - Beachwood - Warrensville Heights</td>
<td></td>
</tr>
</tbody>
</table>

#### Transit

**Conduct a comprehensive analysis of transit service in the study area, potentially in the context of a comprehensive full system operational analysis to identify opportunities to improve service to the area.**

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Term</td>
<td>The current bus service in the study area reflects the consequences of RTA's incremental and piecemeal service reductions. A comprehensive review would evaluate these changes in the light of the existing and anticipated markets in the area, and would provide RTA with an opportunity to better align its service with the multi-faceted transit needs of this area, and to address regional transportation issues that affect this area, while avoiding negative impacts on GCRTA's larger regional transit network. Any proposed changes to transit service or facilities in the study area will require analysis by RTA.</td>
</tr>
<tr>
<td>Multi-community &amp; multi-agency partnership - Beachwood - Cleveland - Highland Hills - North Randall - Shaker Heights - Warrensville Heights - GCRTA</td>
<td></td>
</tr>
</tbody>
</table>

**Increase local and express bus service. Proposed improvements include additional (or modified) service through and to the study area that provide connections to and between employment and retail destinations, such as Eton, Pinecrest, and retail along Chagrin Boulevard; connections to and between employment and medical centers; and connections between hospitals and other medical and medical office facilities in the study area, such as connecting the various healthcare facilities along the Eastside Health Corridor with each other and to medical destinations in University Circle.**

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium &amp; Long Term</td>
<td>The current bus service in the study area reflects the consequences of RTA's incremental and piecemeal service reductions. Bus transportation does not meet the needs of people traveling within the study area.</td>
</tr>
<tr>
<td>Multi-community &amp; multi-agency partnership - Beachwood - Cleveland - Highland Hills - North Randall - Shaker Heights - Warrensville Heights - GCRTA</td>
<td></td>
</tr>
<tr>
<td>Infrastructure Recommendation</td>
<td>Implementation</td>
</tr>
<tr>
<td>------------------------------</td>
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</tr>
</tbody>
</table>
| Improve connections to study area destinations and complete “Last Mile” connections to Van Aken Station. | Medium & Long Term  
Multi-community & multi-agency partnership  
- Beachwood  
- Cleveland  
- Highland Hills  
- North Randall  
- Shaker Heights  
- Warrensville Heights  
- GCRTA | Currently, transit service does not provide viable connections to many popular destinations and employment centers in and near the study area. |
| Establish transit/transfer facility at Warrensville Center/ Harvard intersection. | Medium & Long Term  
Multi-community & multi-agency partnership  
- Beachwood  
- Cleveland  
- Highland Hills  
- North Randall  
- Shaker Heights  
- Warrensville Heights  
- GCRTA | A new transit transfer center at or near the Warrensville Center Road/Harvard Road intersection by South Pointe Hospital would facilitate transfers between bus routes. It should include amenities to transferring passengers of existing and proposed bus routes serving this intersection. |
| Establish transit/transfer facility and possible park-and-ride at Tri-C East (Richmond Road at Harvard Road). | Medium & Long Term  
Multi-community & multi-agency partnership  
- Beachwood  
- Cleveland  
- Highland Hills  
- North Randall  
- Shaker Heights  
- Warrensville Heights  
- GCRTA | Creation of a new facility that would provide amenities and facilitate transfers among bus routes and provide amenities to waiting and transferring passengers at Tri-C East would enhance transit travel. This facility could be coupled with a park-and-ride lot oriented to serving area commuters from the Harvard Road/I-271 Interchange, as recommended in the Blue Line Extension Project, facilitating transit connections to the study area destinations and University Circle, if service is established as recommended by that study. |
<table>
<thead>
<tr>
<th>Infrastructure Recommendation</th>
<th>Implementation</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish Transit/Transfer Facility at Warrensville Center Road and Emery Road.</td>
<td>Medium &amp; Long Term</td>
<td>A new transit transfer center at or near the Warrensville Center Road/Harvard Road intersection would facilitate transfers between bus routes in this growing area. Provide amenities to transferring passengers of existing and proposed bus routes serving this intersection.</td>
</tr>
<tr>
<td>Examine opportunities to use transit to address traffic congestion issues at I-271/Chagrin Boulevard interchange.</td>
<td>Short, Medium &amp; Long Term</td>
<td>A mode shift in this area, which could be generated by enhanced transit service, would likely have a positive impact on congestion along the Chagrin Boulevard corridor.</td>
</tr>
<tr>
<td>Broaden base of support for transit investment in the study area. Look for opportunities for stakeholders to support GCRTA in ways that would result in gains for their businesses and employees.</td>
<td>Short, Medium &amp; Long Term</td>
<td>The major businesses and institutions for several municipalities in the study area provide many potential investors to sponsor new transit facilities and to contribute to ongoing service improvements to offset a portion of the costs associated with improving RTA’s presence in the study area.</td>
</tr>
<tr>
<td>Infrastructure Recommendation</td>
<td>Implementation</td>
<td>Justification</td>
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<td>-----------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Additional</td>
<td></td>
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<tr>
<td>Shift and narrow the travel lanes on Richmond Road across the I-480 Bridge to provide a wider</td>
<td>Medium Term</td>
<td>Reconfiguration of the bridge deck would provide improve non-motorized infrastructure and enhance multimodal connectivity.</td>
</tr>
<tr>
<td>sidewalk.</td>
<td>– Warrensville Heights</td>
<td></td>
</tr>
<tr>
<td>Support expansion of the UH Bikes bike share program in the study area.</td>
<td>Short Term</td>
<td>This will provide the much-needed benefits associated with bike share programs along with an expanded network and connectivity options associated with the existing UH Bikes system. This will help address first/last mile connections within the study area.</td>
</tr>
<tr>
<td></td>
<td>– Beachwood</td>
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<td></td>
<td>– Highland Hills</td>
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<td></td>
<td>– North Randall</td>
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<td></td>
<td>– Shaker Heights</td>
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<td></td>
<td>– Warrensville Heights</td>
<td></td>
</tr>
<tr>
<td>Implement policies that support multimodal transportation, such as complete and green streets</td>
<td>Short Term</td>
<td>It is important that the communities that partnered to support this study implement policies that support the recommendations and outcomes.</td>
</tr>
<tr>
<td>policies to guide future infrastructure development, and appropriate changes to land use</td>
<td></td>
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<tr>
<td>policies to promote livability.</td>
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<tr>
<td></td>
<td>– Beachwood</td>
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<td>– Cleveland</td>
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<td></td>
<td>– Highland Hills</td>
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<td>– North Randall</td>
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<td></td>
<td>– Shaker Heights</td>
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<tr>
<td></td>
<td>– Warrensville Heights</td>
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</tr>
<tr>
<td>Multi-community and multi-agency collaboration</td>
<td>Short, Medium &amp; Long</td>
<td>Look for opportunities to work together and with other involved agencies to leverage opportunities maximize the potential for multimodal facilities and benefits. One specific example is working with the Western Reserve Land Conservancy to amend the conservation easements for the development of trails in the study area.</td>
</tr>
<tr>
<td></td>
<td>Term</td>
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<tr>
<td></td>
<td>– Beachwood</td>
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<td></td>
<td>– Cleveland</td>
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<td></td>
<td>– Highland Hills</td>
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<td></td>
<td>– North Randall</td>
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<td></td>
<td>– Shaker Heights</td>
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<tr>
<td></td>
<td>– Warrensville Heights</td>
<td></td>
</tr>
<tr>
<td>Chagrin Highlands</td>
<td>Short, Medium &amp; Long</td>
<td>Preserve and foster multimodal access around, through and within the Chagrin Highlands sites as they are developed to ensure continuity and connectivity with multimodal access throughout the area.</td>
</tr>
<tr>
<td></td>
<td>Term</td>
<td></td>
</tr>
</tbody>
</table>
### Table B. Corridor Recommendations

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Community(ies)</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corridors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chagrin Boulevard</td>
<td>Beachwood</td>
<td>− Construct a multi-use trail along the south side of Chagrin Boulevard, connecting to the proposed trails on Green Road and Northfield Road. This will address the missing sidewalk link.</td>
</tr>
<tr>
<td></td>
<td>Shaker Heights</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Construct a multi-use trail along the north side of Clarkwood Parkway.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Construct ADA compliant pedestrian treatments (curb ramps, crosswalks) at the Clarkwood Parkway/Granada Boulevard intersection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Provide enhanced intersection crossing treatments at the Ellacott Parkway–Clarkwood Parkway/Northfield Road intersection to facilitate access to the Warrensville Heights High and Middle Schools.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Address missing sidewalk links.</td>
</tr>
<tr>
<td>Clarkwood Parkway</td>
<td>Warrensville Heights</td>
<td>− Construct a multi-use trail along either side of the Derbyshire Drive corridor, based upon stakeholder preferences. The trail should run along the north side of Miles Road to connect to the Northfield Road corridor.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Provide enhanced pedestrian crossing treatments at Emery intersection.</td>
</tr>
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<td></td>
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</tr>
<tr>
<td>Derbyshire Drive</td>
<td>North Randall</td>
<td>− Construct a multi-use trail along either side of Ellacott Parkway, based on public preference.</td>
</tr>
<tr>
<td></td>
<td>Warrensville Heights</td>
<td>− Provide enhanced intersection crossing treatments at the Ellacott Parkway–Clarkwood Parkway/Northfield Road intersection to facilitate access to the Warrensville Heights High and Middle Schools.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Address missing sidewalk links.</td>
</tr>
<tr>
<td>Ellacott Parkway</td>
<td>Warrensville Heights</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>Emery Road</td>
<td>North Randall</td>
<td>− Convert Emery to a 3-lane roadway between Northfield Road and Richmond Road and install buffered bike lanes. This will require consideration of traffic impacts from new Amazon facility and may no longer be feasible.</td>
</tr>
<tr>
<td></td>
<td>Warrensville Heights</td>
<td>− Construct a multi-use trail between Warrensville Center Road and Richmond Road.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Address missing sidewalk links.</td>
</tr>
<tr>
<td>Granada Boulevard</td>
<td>Warrensville Heights</td>
<td>− Construct multi-use trails along both sides of Granada Boulevard between Clarkwood Parkway and Emery Road.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Construct ADA compliant pedestrian treatments (curb ramps, crosswalks) at the Clarkwood Parkway/Granada Boulevard intersection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Provide enhanced pedestrian crossing treatments at Emery intersection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Address missing sidewalk links.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Relocate (or close) the driveways immediately north of the Emery Road intersection to minimize adverse impacts to intersection operations and safety.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Corridor</th>
<th>Community(ies)</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Road</td>
<td>Beachwood</td>
<td>- Construct a multi-use trail along west side of Green Road between Chagrin Boulevard and Lawrence Road-Clarkwood Parkway intersection then, due to driveways on the west side along with the park and the community center on the east side of Green Road, the trail should shift to the east side of the corridor and continue down the east side of Green Road to Miles Road.</td>
</tr>
<tr>
<td></td>
<td>Cleveland</td>
<td>- Provide enhanced pedestrian crossing treatments at the Green Road intersections with Harvard Road, Clarkwood Parkway-Lawrence Road and Emery Road.</td>
</tr>
<tr>
<td></td>
<td>Highland Hills</td>
<td>- Address missing sidewalk links.</td>
</tr>
<tr>
<td></td>
<td>Warrensville Heights</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beachwood</td>
<td>- Construct multi-use trail along Harvard Road; preliminary recommendation is the north side based on existing conditions and known features.</td>
</tr>
<tr>
<td></td>
<td>Highland Hills</td>
<td>- Enhanced at-grade trail crossings are recommended where Harvard Road intersects Warrensville Center Road, Northfield Road and Green Road.</td>
</tr>
<tr>
<td></td>
<td>Shaker Heights</td>
<td>- Construct grade-separated crossings for east-west travel along the Harvard Road trail at the Richmond intersection, and for north-south travel along Richmond.</td>
</tr>
<tr>
<td></td>
<td>Warrensville Heights</td>
<td>- Consolidate or bury overhead utilities, as possible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Address missing sidewalk links.</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>Millcreek Boulevard</td>
<td>Highland Hills</td>
<td>- Construct a multi-use trail along the west and south sides of Millcreek Boulevard to provide multimodal access as well as opportunities for scenic recreation. This trail would connect to the proposed Mill Creek Greenway Trail.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Address missing sidewalk links; include Mill Pond Drive.</td>
</tr>
<tr>
<td>Northfield Road</td>
<td>Highland Hills</td>
<td>- Chagrin Boulevard to Harvard Road</td>
</tr>
<tr>
<td>(continued on next page)</td>
<td></td>
<td>~ Construct a multi-use trail along the east side.</td>
</tr>
<tr>
<td></td>
<td>North Randall</td>
<td>~ Add buffered bike lanes to the roadway; as a possible alternative, it may be feasible to convert the southbound lanes to a two-way roadway and the northbound lanes to an exclusive bicycle facility. Transition at the Harvard Road intersection would need to be specifically addressed.</td>
</tr>
<tr>
<td></td>
<td>Shaker Heights</td>
<td>~ Convert Northfield Road to a single travel lane in each direction with buffered bike lanes. The configuration of the southbound approach to the Northfield Road/Emery Road intersection needs to retain its existing configuration based on capacity needs, transition to that intersection must occur to the north. This will require consideration of traffic impacts from new Amazon facility.</td>
</tr>
<tr>
<td></td>
<td>Warrensville Heights</td>
<td>~ Construct a multi-use trail along the east side, connecting with the Emery Road trail.</td>
</tr>
<tr>
<td>Corridor</td>
<td>Community(ies)</td>
<td>Recommendation</td>
</tr>
<tr>
<td>-----------------------------</td>
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<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Northfield Road (continued) | Highland Hills                              | − Emery Road to Miles Road  
− Retain existing travel lanes but remove exclusive right turn and trap lanes, as appropriate.  
− Construct a multi-use trail along the east side.  
− Implement access management strategies and controls to improve operational efficiency and reduce the potential for conflicts between non-motorized travelers on the trail and vehicles entering and exiting the properties along the corridor.  
− Provide enhanced pedestrian crossing treatments at Ellacott Parkway-Clarkwood Parkway/Northfield Road intersection to facilitate access to Warrensville Heights High and Middle Schools.  
− Provide enhanced pedestrian crossing treatments at the Harvard Road and Emery Road intersections.  
− Consider pedestrian improvements at the site access intersections to the former Randall Park Mall, as appropriate as it is redeveloped.  
− Address missing sidewalk links. |
|                             | North Randall                               |                                                                                                                                            |
|                             | Shaker Heights                              |                                                                                                                                            |
|                             | Warrensville Heights                        |                                                                                                                                            |
|                             | Highland Hills                              |                                                                                                                                            |
|                             | Beachwood                                   | − Construct a multi-use trail; preliminary recommendation is the west side due to topography, availability of right-of-way, adjacent development, and access to Tri-C East.  
− Construct grade-separated crossings for north-south travel along the Richmond Road trail at the Harvard intersection, and for east-west travel along Harvard.  
− Provide enhanced pedestrian crossing treatments at the Eaton-Auburn and Tri-C East-Harvard Park intersections.  
− Study the feasibility of reducing Richmond Road to a three-lane roadway south of the Miles Road intersection.  
− Shift and narrow the travel lanes on Richmond Road across the I-480 Bridge to provide a wider sidewalk. |
|                             | Highland Hills                              |                                                                                                                                            |
|                             | Warrensville Heights                        |                                                                                                                                            |
|                             | Warrensville Center Road                    | − Construct a multi-use trail along the east side of Warrensville Center Road, connecting with the planned Shaker Heights section of the trail at the north and continuing south to Miles Road.  
− Provide enhanced pedestrian crossing treatments at the Warrensville Center Road/Longbrook Road intersection to facilitate access to the Warrensville Heights High and Middle Schools.  
− Reconfigure the Warrensville Center Road/Miles Road interchange to make it more pedestrian friendly.  
− Address missing sidewalk links. |
|                             | Cleveland                                   |                                                                                                                                            |
|                             | North Randall                               |                                                                                                                                            |
|                             | Shaker Heights                              |                                                                                                                                            |
|                             | Warrensville Heights                        |                                                                                                                                            |
| Off-Corridor Improvements   | Highland Hills                              | Create a trail through the woods along Mill Creek, connecting Millcreek Boulevard, across Northfield Road (recommended with a mid-block crossing), west along the creek and meeting up with the trail along Warrensville Center Road. |
**Table C. Economic Development Recommendations**

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Community(ies)</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town Center Trail</td>
<td>Warrensville Heights</td>
<td>Construct a trail that provides direct, connected access between the high density residential neighborhood along the Clarkwood Parkway and Granada Boulevard corridors with the library, the YMCA, the future Warrensville Heights town center and other destinations that are accessible via Northfield Road.</td>
</tr>
</tbody>
</table>

**General**

Partner with major employers to create a Workforce Development Plan focused on major industries in the study area. Create partnerships and collaborative opportunities with and among key stakeholder organizations and agencies.

**Affected Area/Potential Partnership**

- University Hospitals’ Ahuja Medical Center and other facilities, Cleveland Clinic’s South Pointe Hospital, various industries along Miles Road, and Cuyahoga Community College
  - Beachwood
  - Cleveland
  - Highland Hills
  - North Randall
  - Shaker Heights
  - Warrensville Heights

**Guidance**

Improve the quality and availability of the existing workforce and create new workforce development and employment tools that benefit the entire Project Area. Specifically, develop tailored job-training programs to meet the needs of local businesses and to prepare workers for local jobs.

New development in the Green Road corridor should mimic the policies of the existing, proposed and targeted development that impacts Northfield and Harvard Roads. Set back requirements, where appropriate, should be instituted to maintain the same sense of openness and scenic aspects along the Green Road corridor as exist in the Northfield Road and Harvard Road corridors.

**Affected Area/Potential Partnership**

- Green Road
- Harvard Road
- Northfield Road
  - Beachwood
  - Cleveland
  - Highland Hills
  - Warrensville Heights

**Guidance**

Development of Chagrin Highlands that impacts Green, Harvard and Northfield Roads should focus on a mix of uses that maintain the aesthetic, environmental and multimodal aspects of the area. Development should maintain a sense of place.
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Affected Area/ Potential Partnership</th>
<th>Guidance</th>
</tr>
</thead>
</table>
| Encourage redevelopment of underutilized and vacant commercial and industrial  | Miles Road  
  - North Randall  
  - Warrensville Heights                                                                 | Take advantage of the opportunity for infill development and capacity building in available office and industrial parks along Miles Road and other locations.                                               |
| properties, particularly along Miles Road, Northfield Road, and Emery Road.     |                                                                                                      |                                                                                                                                                                                                        |
| Leverage existing industries in the area to spur additional opportunities for   | Miles Road  
  - North Randall  
  - Warrensville Heights                                                                 | There is a strong automotive and automotive-related industry in the area that could attract similar or related businesses and industries.                                                                       |
| development and job growth                                                      |                                                                                                      |                                                                                                                                                                                                        |
| Highlight areas with potential land use changes that will impact how the area   | Chagrin Highlands  
  Pinecrest  
  Randall Park Mall  
  Commerce Park  
  - Beachwood  
  - Cleveland  
  - Highland Hills  
  - North Randall  
  - Orange  
  - Warrensville Heights                                                                 | An analysis of the Randall Park Mall Site, Chagrin Highlands and Pinecrest are examples of projects that will impact how the area absorbs future development.                                             |
| absorbs future development;                                                     |                                                                                                      |                                                                                                                                                                                                        |
| Encourage training and educating the existing workforce in new and emerging     | Work with Cuyahoga Community College to develop a career resource center at Cuyahoga Community  
  technologies that will prepare them for new job in the area such as opportunities | Connecting local workers with nearby jobs would shorten commute times, increase housing demand, and improve quality of life for all workers. A career resource center at Cuyahoga Community College with a focus on the Project Area and its major industries. |
| in the light industries including logistics.                                    |  College with a focus on the Project Area and its major industries.  
  - Beachwood  
  - Cleveland  
  - Highland Hills  
  - North Randall  
  - Shaker Heights  
  - Warrensville Heights                                                                 |                                                                                                                                                                                                        |
| Implement access management controls and strategies in conjunction of the       | Improve access in and around the new Amazon Fulfillment Center site.  
  - North Randall  
  - Warrensville Heights                                                                 | Enhance site access and operational safety.                                                                                                                                                            |
<p>| redevelopment of the Randall Park Mall site into the new Amazon Fulfillment     |                                                                                                      |                                                                                                                                                                                                        |</p>
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Affected Area/ Potential Partnership</th>
<th>Guidance</th>
</tr>
</thead>
</table>
| Encourage multimodal access in, and around the new Amazon Fulfillment Center within the former Randall Park Mall site. This will benefit both existing and new developments. | Provide multimodal access to businesses along Warrensville Center Road generally and the new Amazon Fulfillment Center site specifically.  
  – North Randall  
  – Warrensville Heights | Create reliable travel options for workers and residents within the Warrensville Center Road corridor. The new Amazon Fulfillment Center is expected to generate additional demand for RTA’s Route 41, which could provide additional support for its potential conversion to BRT service. |
| Encourage redevelopment that supports the Cuyahoga Community College and Corporate College with implementation of their master plan. | Richmond Road  
Harvard Road  
Cuyahoga Community College Campus  
  – Beachwood  
  – Warrensville Heights | Provide more open access and connections between the residents and Tri-C. Provide access to green space and enhance the livability of the campus environment.                                                                 |
| Leverage existing office and commercial assets to spur additional or similar opportunities for job growth | Chagrin Road  
  – Beachwood  
  – Highland Hills  
  – Shaker Heights | Seek to enhance the quantity and quality of local office and commercial occupancy along Chagrin Road.                                                                                                    |
| Support opportunities for mixed-use redevelopment on Warrensville Center Road and the abandoned Northfield Road alignment, leveraging the anticipated economic engine that will be created by the Van Aken District redevelopment. | Warrensville Center Road  
  – Shaker Heights | Leverage existing office and commercial assets to spur additional or similar opportunities for job growth. Seek to enhance the quantity and quality of local office and commercial occupancy in this part of the study area. |
| Concentrate new development around institutional, nonprofit and retail uses that support the character of the study area. | Northfield Road  
Emery Road  
  – Highland Hills  
  – North Randall  
  – Shaker Heights  
  – Warrensville Heights | To attract local businesses that enhance the character of the various corridors and that supply demand for local amenities.                                                                                   |
| Recruit business that are local in nature that support the needs of nearby residents and proposed new jobs. | Emery Road  
  – North Randall  
  – Warrensville Heights | Improved local amenities                                                                                                                                                                                 |
Implementation & Funding Strategies

Implementation. The study Project Team and Stakeholder Committee worked seamlessly in the development of recommendations to improve multimodal mobility options within the study area. Bicycle and pedestrian considerations, transit, traffic analysis, access management, and complete street strategies were examined in depth to identify areas were improvements could be implemented to provide area residents, employees and visitors with a community that is both easily accessible and easy to circulate, whether on foot, on a bicycle, in a car or by bus. This toolbox of recommendations will assist the City of Warrensville Heights, the Village of North Randall and the Village of Highland Hills to enhance their communities as a whole.

The recommendations vary in extent, effort, level of difficulty, and significance of impact. There is no “right” order for implementation; each recommendation has independent utility and will add value whenever it is implemented. Due to the extent and nature of the recommendations, the communities should review and prioritize the recommendations based on their specific needs and priorities, then work together toward implementation.

Funding. The opportunities to fund the various projects identified as recommendations are varied, diverse and largely depend on the type of project being implemented. Unfortunately, there is no go-to funding source for all; thus, several funding sources are often identified and pursued to implement a single project. Broad-minded communities are open to a range of funding sources to plan and construct needed community facilities and improvements. Like most multimodal transportation projects, a variety of funding sources will likely need to be identified to fund the various recommendations. A list of potential funding sources is provided in Table 15-1 in the report.

Next Steps

This plan is intended to serve as a framework for the communities to guide future decision-making and implementation of infrastructure and programs to enhance multimodal access and circulation throughout the study area. The communities should work both individually and collectively to prioritize and pursue the recommendations and projects that reflect the greatest benefit to each community and the study area. The prioritized projects should connect and close gaps in the multimodal network, reflect the interests of the community(ies) and leverage partnerships within and between the involved communities. Prioritization guidelines and cost estimate guidelines are provided in the report to help guide the communities as they move forward toward implementation of the recommendations.
1. Introduction

The Northfield-Warrensville Multimodal Connectivity Plan is a project that continues previous work in the study area, based on the combined interests and needs of the involved communities: Warrensville Heights, Shaker Heights, Highland Hills and North Randall. The focus of the plan is on providing and improving multimodal connectivity. Development of this plan was sponsored by Cuyahoga County with funding from the Northeast Ohio Areawide Coordinating Agency (NOACA) Transportation for Livable Communities (TLCI) Program. The objectives of the NOACA TLCI Program are:

- Develop transportation projects that provide more travel options through complete streets and context sensitive solutions, increasing user safety and supporting positive public health impacts.
- Promote reinvestment in underutilized or vacant/abandoned properties through development concepts supported by multimodal transportation systems.
- Support economic development through place-based transportation and land use recommendations, and connect these proposals with existing assets and investments.
- Ensure that the benefits and burdens of growth, change and transportation projects are distributed equitably by integrating accessibility and environmental justice into projects.
- Enhance regional cohesion by supporting collaboration between regional and community partners.
- Provide people with safe and reliable transportation choices that enhance their quality of life.

With multimodal connectivity, a transportation network provides a variety of reliable and accessible means of transportation that accommodates motorized vehicles, transit, bicycles and pedestrians. Multimodal connectivity requires that transportation facilities connect to places and destinations that can be reached by a variety of travel modes.

Multimodal connectivity relies on a variety of methods to accommodate the different travel modes, and it is typically achieved through a focus on complete streets concepts. Complete Streets is defined as balancing the configuration of a transportation corridor to accommodate multiple modes of travel. This may include walkable sidewalks with streetscape...
enhancements, bicycle facilities such as bike lanes or side paths, and transit enhancements such as bus rapid transit (BRT) service and enhancements to transit waiting environments (bus stops, stations). Often, an existing roadway is configured in a manner that favors automobile travel over bus, bicycle and pedestrian travel. Viable complete streets enhancements may be able to reconfigure the roadway to balance travel modes by reducing motorized vehicle capacity (i.e., fewer travel lanes) to provide space for the inclusion of bicycle and pedestrian facilities. The term “road diet” is often used to describe such rebalancing of resources within a defined transportation corridor. With BRT, the corridor may be completely reconstructed to provide exclusive bus lanes.

The Northfield-Warrensville study area is auto-dominant. The primary roads are wide, bicycle facilities are not provided, and the existing sidewalks are utilitarian in nature and there are missing links along some of the primary corridors. Transit service is provided but it has a regional focus that does not adequately meet the needs of the Northfield-Warrensville area, particularly with recent and planned developments. As a result, the communities have joined together to develop a plan that will enhance multimodal travel options and help connect people to places without having to rely on automobile travel.

2. **Project Vision, Purpose, Goals and Objectives**

The project Vision, Goals and Objectives were developed by the Project Team with input from the Steering Committee, forming the framework that guided plan development.

2.1 **Vision**

Develop a multimodal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

2.2 **Purpose**

Drive economic development, reinvestment and job creation by improving multimodal access to enhance livability and quality of life throughout the study area and connecting to the surrounding region.

2.3 **Goals and Objectives:**

- Identify non-motorized enhancements to provide transportation options providing improved access and service.
- Support economic growth and job creation.
- Enhance transit connectivity and service.
- Link neighborhoods, employment, health, education, retail, entertainment and recreation.
- Integrate community health considerations into preferred multimodal network recommendations.
- Incorporate complete and green streets systems and strategies and green infrastructure into the recommendations.
- Complement plans and initiatives to encourage collaboration between regional and community partners.
- Create place-based actionable design strategies and concepts that value existing resources and build on existing plans and studies.
- Incorporate smart technologies that support multimodal transportation opportunities now and in the future.

3. **Background**

The Northfield-Warrensville Center TLCI Project Area includes North Randall, Highland Hills, Warrensville Heights, the Van Aken District of Shaker Heights, and the Chagrin Highlands area in Cleveland. As a whole, these communities have seen tremendous growth and development in and
around the Project Area by some of the region’s largest businesses and institutions. However, the current transportation infrastructure is very auto-dominant and lacks viable multimodal options.

The study area was developed with traditional suburban roads, disconnected land uses that are auto-dependent for transportation. This project presents a significant opportunity to retrofit existing road networks and to reimagine new development that are more multimodal, more health-conscious, and more equitable to nearby communities. The intent of this plan is to improve health, as well as access to quality education and enhanced economic development opportunities. Transportation challenges in the study area include:

- Lack of direct, frequent transit service for trips between the end of the existing Blue Line corridor and retail and job destinations throughout the study area.
- Insufficient station/stop and travel time amenities for both existing users of the Blue Line and bus service.
- Land-use patterns and densities that do not generally support transit.
- Major sections of Chagrin Boulevard, Northfield Road and Green Road and sections on Miles Road and Harvard Road that have partial sidewalks or are entirely missing sidewalks.
- Missing links to connect destinations via bicycle and pedestrian trail options.

As concerns over healthy living become more prevalent, the benefits of access to good nutrition and physical activity are essential to community planning efforts. Providing a multimodal transportation network is a key component, and one of the County’s guiding principles for designing a place-based development strategy and embracing a health and wellness culture. The central part of the study area was identified as a Food Desert Focus Area that would benefit from more reliable transportation options to access fresh food. Although several grocery stores exist within a short driving distance, few healthy food sources are available to those people who do not have access to cars. Creating a regional network of complete streets is just one component of this integrated work. Improving multimodal transportation options within the study area will allow residents and visitors more transportation choices including walking, bicycling, public transit, or driving as they go about their daily lives.

Development of this plan represents a collaborative effort to implement complete streets, improve streetscapes, increase multimodal transportation options, promote Transit-Oriented Development (TOD), and link neighborhoods, employment centers, healthcare and education providers, and recreational facilities with a multi-purpose path and greenway system. This plan creates place-based actionable, strategies that support the recommendations of the Eastside Greenway TLCI Study and accompanying Health Impact Assessment (HIA), the Warrensville/Van Aken Transit-Oriented Development Plan, the GCRTA Blue Line Corridor Extension Study, and the Warrensville Center Road/Van Aken Roadway.

The primary purpose of this study is to recommend specific multimodal improvements that will support ongoing and future redevelopment in the study area. To its benefit, the study area includes a significant number of partners, both public and private, who are committed to the overall improvement of the Northfield-Warrensville area. The overall objective is to develop feasible concepts that, when implemented, will improve and enhance multimodal transportation throughout the study area.

### 3.1 Eastside Greenway Plan

The Northfield Warrensville Multimodal Connectivity Plan is an outcome of, and builds upon the recommendations of the Eastside Greenway Plan (ESG). The ESG was a comprehensive planning study completed in 2015 that encompassed the eastern third
of Cuyahoga County, Ohio, including the project limits of this planning study.

The ESG examined existing and potential greenways across the region that could better connect residents to jobs, recreation, services, commercial centers, and natural resources through enhanced multimodal facilities. It provided specific recommendations for Warrensville Center Road, Northfield Road, Harvard Avenue and Miles Road, which are located within or adjacent to the study area.

This plan incorporates recommendations from the ESG, including the identification of two priority corridors, Warrensville Center Road and Harvard Road.

1. The ESG plan identified **Warrensville Center Road** as a priority transformative corridor; it is significant to the study area and the region. Transformative corridors are defined as major, regionally important routes that connect to existing facilities but will be challenging long-term projects to implement, expecting to take 10 years or more to implement and most will involve coordination and collaboration between multiple communities and agencies.

2. The ESG plan identified **Harvard Road** as a priority near term corridor. Such corridors are located along major corridors and are vital to interconnect a greenway system as a network. They are relatively easier to implement than transformative corridors due to lower traffic volumes, land use intensities, and/or wider rights-of-way. Near term corridors take two to five years to implement due to necessary coordination and collaboration between multiple communities and agencies.
3.2 **Collaboration of Communities**

Coordination and collaboration between the study area communities and the Cuyahoga County Planning Commission was an essential component of this planning study. Representatives were included on the Project Team, which guided plan development. Additional organizations and representatives were included on the Steering Committee. All were instrumental in providing vital information from their respective communities on current and future land uses and developments and all contributed to the plan dialogue representing the needs and desires of their constituents creating a unified vision for the project area.
4. **Study Area & Demographics**

The study area includes the Cities of Warrensville Heights, Shaker Heights (in part) and Cleveland (discrete areas) and the Villages of North Randall and Highland Hills. The area is diverse in nature, population and land use. Warrensville Heights is primarily residential, while North Randall is primarily commercial and includes JACK Thistledown Racino and the distressed former Randall Park Mall site. Highland Hills has major educational and medical resources, and the Van Aken District has undergone major redevelopment and roadway infrastructure improvements. In addition, there are undeveloped greenfield areas along the Harvard Road, Northfield Road and Green Road corridors.

The total project area population, according to the 2010 U.S. Census Bureau is estimated at 15,000, with an estimated 58,000 in the area immediately adjacent to the project area. The daytime population swells significantly with commuter traffic. The area boasts 48,000 jobs and is anchored by several major institutions including Cuyahoga Community College (Eastern Campus/Corporate College), University Hospitals (Ahuja Medical Center/Rehabilitation Facility/Customer Service Center), Cleveland Clinic (South Point Hospital), Eaton Corporation, Warrensville Heights City School District, JACK...
5. Plan Development Process

The plan development process for this study was designed to build from work done previously, investigate existing conditions, conduct analyses, develop concepts to address the project purpose, vision, goals and objectives, solicit public input, and develop recommendations to provide a plan to the involved communities with concrete, feasible strategies to improve multimodal access and livability within the study area. The process included three distinct phases, each with a level of community engagement designed to help inform and shape the plan.

- Phase 1 – Define the Vision
- Phase 2 – Concept Development
- Phase 3 – Plan Development

The planning process incorporated extensive one-on-one collaboration with numerous stakeholders in and near the study area to understand their current operations and future plans, along with traditional public outreach which included administration of an interactive online survey.

The Project Team coordinated with the communities within and adjacent to the project study area to gather planning level documents including the ESG plan, the Cuyahoga County Health Impact Assessment, the Greater Cleveland Regional Transit Authority (GCRTA) Blue Line Extension Study and the Warrensville/Van Aken Transit Oriented Development (TOD) Plan which included recent roadway reconstruction and the RMS Investments redevelopment plans for the Van Aken District. It was important to integrate previous and ongoing projects into the planning process for this study, to help shape a feasible plan.

6. Community Engagement

Community engagement is crucial for the success of any public infrastructure project – it builds support by providing information about the project and incorporating public input into the plan. Development of the plan involved multiple levels of engagement, with the Project Team, Steering Committee, Stakeholders and the general public. In total, more than two dozen project related meetings were held. Meeting documentation is provided in the Appendix.

6.1 Project Team

The Project Team was responsible for managing and developing the Plan. Meetings were held regularly with the project team to guide and form development of the plan.

Project Sponsors
- Cuyahoga County Planning Commission
- NOACA

Advisory Members
- City of Shaker Heights
- City of Warrensville Heights
- GCRTA
- Village of Highland Hills
- Village of North Randall

Consultant Team
- WSP
- SmithGroupJJR
6.3 Public & Pop-Up Meetings

A public meeting was held during the corridor identification and evaluation phase to get input on public preferences as well as an understanding of levels of interest in the project and other related subjects. Understanding that people who live and/or work in the study area may not be able to attend the traditional public meetings that were held for this project, and in an effort to reach as many people as possible, project information was taken to several locations within the project study area throughout the month of August 2016, including the online survey. Project information boards were displayed and laptops were provided so people could complete the online survey. Pop-up meeting locations included JACK Thistledown Racino, Cuyahoga Community College, University Hospitals Ahuja Hospital and the Warrensville Heights community festival.

6.4 Public Engagement Online Survey

As part of the public engagement plan for the projects development, an interactive online survey was developed to gather public input and to foster support for the project recommendations. The survey ran from July 11, 2016 through October 3, 2016. Complete survey results with graphics are provided in the Appendix.

6.5 Stakeholders

In addition to the project meetings and public outreach, meetings were held with numerous stakeholders to gain an understanding of their operations, including employee and visitor access as well as the potential need for improved multimodal access.

- City of Beachwood, Ohio (4/18/16)
- Eaton Corporation (4/19/16)
- Jacobs Group (4/22/2016)
- Cuyahoga Community College East (Tri-C East)(4/22/16)
- Tri-City Chamber of Commerce (4/22/16)
- University Hospital (4/22/16)
- South Pointe Hospital (4/22/16)
- JACK Thistledown Racino (4/26/16)
- Warrensville Heights (5/9/16)
- GCRTA (5/12/16)
- Power Sports Institute (6/23/16)
7. Existing Conditions

7.1 Study Area Corridors

The primary transportation corridors within the study area are described below. Other important corridors that contribute to multimodal access opportunities are included. Average Daily Traffic (ADT) volumes, where available, are provided by ODOT Transportation Data Management System data.

**Clarkwood Parkway**
Clarkwood Parkway is a two lane, east-west residential collector roadway that serves Warrensville Heights’ high density neighborhood bounded by Northfield Road, Green Road and Emery Road. It provides a direct connection to Northfield Road and Green Road, and access to Warrensville Heights High School. Clarkwood carries RTA’s Route 15. There are sidewalks on both sides of the street.

**Chagrin Boulevard**
Chagrin Boulevard (US-422) is a busy, auto-dominant corridor that is not conducive to walking or bicycling. It is a four-lane, predominantly commercial arterial that provides east-west regional connectivity along the north edge of the study area. It carries an ADT of approximately 19,500 vehicles per day (vpd) east of Warrensville Center Road. Chagrin Boulevard carries RTA’s Route 5 and connects to the multimodal center at the terminus of the Blue Line Light Rail at Warrensville Station. There is a sidewalk on the north side of the street; the south side has a sidewalk between Warrensville Center Road and the western border of Highland Park Cemetery. NOACA classifies Chagrin as a priority corridor in the 2013 Regional Bicycle Plan.

**Derbyshire Drive**
Derbyshire Drive is a two-lane, north-south residential roadway that runs between Emery Road and Miles Road. Derbyshire Drive carries RTA’s Route 15. Sidewalks are provided on both sides of the street.

**Ellacott Parkway**
Ellacott Parkway is a two-lane, east-west residential roadway that that connects a high density residential area with Warrensville Center Road and Northfield Road. It also provides circulation opportunities between Warrensville Heights High School and Middle School. Although not readily available, traffic volumes are expected to be fairly low. Sidewalks are present on the north side of the street and the eastern half of the south side of the street.

**Emery Road**
Emery Road is a busy east-west corridor that traverses the heart of Warrensville Heights and North Randall, linking Warrensville Center Road to the west with Richmond Road to the east. At the west end, it borders JACK Thistledown Racino and the Randall Park Mall site, transitioning to strip commercial then residential as the corridor heads east. Emery Road is a five-lane roadway between Warrensville Center Road and Granada Boulevard-Derbyshire Drive, tapering to a four-lane roadway to the east. It carries an ADT of approximately 12,100 vehicles per day (vpd) to the east of Green Road. East of Derbyshire Drive, Emery Road carries RTA’s Route 15. Sidewalks are provided on both sides of the street throughout the study area.

**Granada Boulevard**
Granada Boulevard is a two-lane, north-south roadway that functions as a residential connector providing access from Emery to Warrensville Heights’ high density neighborhood bounded by Northfield Road, Green Road and Emery Road. Granada Boulevard is served by transit. Sidewalks are provided on the west side of the street and most of the east side of the street but there are missing links along sections of the corridor and they affect access to transit.

**Green Road**
Green Road is an arterial that provides regional north-south connectivity. Green Road, as it traverses the study area, is a four-lane road with turn lanes at intersections throughout the northern half of the study area (Chagrin Boulevard to Emery Road). It transitions to a two-lane road south of Green. RTA recently eliminated bus transit service along Green Road within the study area. It carries an ADT of approximately 11,100 vpd south of the Beachwood Post Office. NOACA classifies Green Road as a priority corridor in the 2013 Regional Bicycle Plan. Sidewalks are provided on the east side of the street and
portions of the west side; sidewalk is missing along Highland Park Golf Course and Cleveland Memorial Gardens Cemetery.

**Harvard Road**
Harvard Road is a busy auto-dominant corridor. It is an arterial that provides east-west regional connectivity. Harvard Road has an ADT of approximately 24,700 vpd to the east of the Richmond Road intersection. Bus services is provided along Harvard Road, including Routes 15 and 41F. The Harvard Road corridor is fairly densely developed west of Northfield Road and transitions to more open, suburban style development east of Northfield Road, with large areas of undeveloped land. Harvard Road is this spine within the Eastside Health Corridor, connecting multiple health care facilities between Cleveland Clinic’s South Pointe Hospital to the west and University Hospitals Medical Center to the east. In addition, it provides access to Chagrin Highlands, Tri-C East, and shopping destinations in and around Harvard Park. Although has Harvard Road sidewalks for much of its length, there is evidence of pedestrian demand in the sections that are missing sidewalks, with visibly worn paths in the grass along the roadway edge which have been formed by pedestrians traveling along the corridor, indicating a clear desire for sidewalks to fill the missing links.

**Millcreek Boulevard**
Millcreek Boulevard is an internal circulator roadway that provides access to properties (and currently undeveloped land) south of Harvard Road between the UH customer service facility on Northfield Road to Green Road. Traffic volume data is not available but is expected to be low.

**North Miles Road**
North Miles Road is an arterial that runs generally east-west and provides regional connectivity. It runs along the south side of the former Randall Park Mall site in the western portion of the study area, and it is generally the southern edge of the study area. North Miles Road has an ADT of approximately 13,210 vpd to the east of the Warrensville Center Road interchange. RTA’s Route 19 runs on North Miles. There are multiple gaps in the sidewalk and no sidewalks are provided west of the Northfield Road intersection.

**Northfield Road**
Northfield Road (SR-8) runs north-south through the study area. Northfield Road has changed in function and traffic volume with the reconstruction of the Warrensville Center Road/Chagrin Boulevard intersection in Shaker Heights. Northfield Road’s northern terminus was recently realigned with the Van Aken District reconstruction project in Shaker Heights. This affected the direct regional connectivity and observations indicate a corresponding shift in traffic off Northfield Road and an associated drop in traffic volumes north of Harvard Road. However, Northfield Road continues to provide connectivity and circulation through Highland Hills, North Randall and Warrensville Heights. Northfield Road has an ADT of 11,200 south of Harvard Road and 16,400 between Emery Road and North Miles Road. There is no RTA bus service along Northfield Road. NOACA classifies Northfield Road as a priority corridor in the 2013 Regional Bicycle Plan. There are long stretches without sidewalks on the east and west sides of the street.

**Richmond Road**
Richmond Road is a busy, auto-dominant corridor with multiple destinations that would benefit from improved multimodal access. Richmond Road is an arterial that provides regional north-south connectivity. It is a four-lane road with turn lanes at intersections in the vicinity of the study area. Although Richmond Road just touches the eastern border of the study area, its inclusion is important due to its function, particularly with respect to its impact on multimodal transportation. Richmond Road has an ADT of approximately 18,200 vpd to the north of the Chagrin Boulevard intersection, 12,300 vpd at the Tri-C intersection south of Harvard Road, 19,100 vpd north of Emery Road, and 17,000 vpd south of Emery Road. There is limited bus service on Richmond Road, carrying short stretches of Routes 5, 15 and 94. In spite of its current characteristics, NOACA classifies Richmond Road as a priority corridor in the 2013 Regional Bicycle Plan. Currently, there is very limited pedestrian travel along the corridor and they do not want to cross the street because of the size and nature of the intersections. The Richmond Road/Harvard Road intersection is particularly problematic.
Warrensville Center Road
Warrensville Center Road is a busy arterial that provides regional north-south connectivity throughout the eastern part of the greater Cleveland region. It is a primary transit corridor, carrying RTA’s busy Route 41. RTA has identified Warrensville Center Road as a priority corridor and the agency is considering implementation of BRT service along the Warrensville Center corridor due to the significant and growing transit demand. Additionally, the Eastside Greenway Plan identified Warrensville Center Road as a transformational corridor that should incorporate an off-road trail facility for regional multimodal mobility. Warrensville Center Road has an ADT of 15,000 vpd at the north border of Warrensville Heights and 32,900 to the south of the North Miles Road/I-480 interchange.

7.2 Study Area Features & Characteristics
The study area is diverse in demographics, land use, and infrastructure. In an effort to capture the dynamics of the area and to effectively understand and assess the community needs, an extensive inventory of the existing conditions was conducted. The inventory was completed through the assemblage of existing plans and their recommendations, compilation of relevant GIS data, and mapping of infrastructure, transit, and natural areas, land use, demographics and destinations.

Figure 7-1. Existing Land Uses
Comparison of existing land use and current zoning within the study area illustrates a distinct difference between land uses that currently occupy the study area and potential future land uses based on the designated zoning. Currently, the area consists of a mixed variety of uses with the largest being residential, government, and educational. Commercial areas are located in the vicinity of the former Randall Park Mall site, along Northfield Road and near the intersection of Richmond Road and Harvard Road. Office,
industrial and entertainment uses comprise the majority of the remainder of the land uses in the study area. Small concentrations of industrial uses are located near I-480, I-271 and near the intersection of Chagrin Boulevard and Green Road. Although the area has a large amount of undeveloped forested land, a public golf course, Camp George Forbes, and two cemeteries; there is limited open green space reserved for parks and recreation for general public use.

Based upon the designated zoning within the study area, many areas are currently developed with uses that do not coincide with the designated zoning. If future development and/or redevelopment occurs in accordance with the currently designated zoning, the character of the study area would change. Potential future land uses include more residential and mixed use categories, along with the potential for substantial industrial redevelopment on and around the former Randall Park Mall site replacing a significant amount of the current general commercial land use.

Other than South Pointe Hospital and a few other employment centers located along Harvard Road, most of the significant employment centers in the general area are located predominately just outside of the study area limits. Employment centers include the Van Aken District, Chagrin Highlands and the industrial area to the southeast, located near the junction of I-480, I-271 and Miles Road.

Areas that are being redeveloped or show near term potential for economic development include the Van Aken District, the Harvard Road corridor (termed the “Eastside Health Corridor), the former Randall Park Mall site and the JACK Thistledown Racino complex. Understanding existing and designated land uses and zoning, coupled with opportunities for development and

Figure 7-2. Study Area Zoning
redevelopment in the study area, will help inform the planning process with respect to current and anticipated demand for multimodal facilities and enhancements.

Figure 7-3. Employment Centers in the Project Area
Figure 7-4. Anticipated Areas of Growth and Development

1. Eastside Health Corridor
2. Former Randall Park Mall Site (industrial)
3. Van Aken District
4. JACK Thistledown Racino
According to 2014 census data, approximately 8,100 people commute into the project area for work, 4,100 people commute out of the project area for work, and 200 people live and work in the project area. Expanding the study area by a relatively small amount, just squaring off the study area, yields significant difference in travel patterns, with approximately 33,100 people commuting into the area, 9,900 commuting out of the area, and 1,300 that live and work in the area.

This identification of commute patterns in and near the project area indicate that it is important to consider the developments immediately adjacent to the study area, as people traveling to and from those locations travel through the study area and would benefit from the recommendations and outcomes identified by this study to provide multimodal enhancements. As such, the plan considers and incorporates multimodal strategies that extend into areas adjacent to the study area.
Important destinations in the study area are broken down by general land use type and are illustrated in Figures 7-6 through 7-8. Destination types include schools and libraries, open space and recreation, office and industrial, health care, shopping and mixed use, and entertainment and cultural.

**Schools/Libraries**
A. Cuyahoga Community College (Eastern Campus)
B. Cuyahoga County Library (Warrensville Heights)
C. Cuyahoga County Library (Garfield Heights)
D. Warrensville Heights High School
E. John Dewey Elementary
F. Corporate College
G. Cuyahoga Hills Boys School

**Open Space & Recreational**
1. Green Road Park
2. Camp George Forbes
3. Cleveland Memorial Gardens Cemetery
4. Highland Park Golf Course
5. Highland Park Cemetery
6. Mill Creek
7. Warrenville Heights YMCA

Figure 7-6. Open Space & Recreation and Schools/Libraries
Figure 7-7. Health Care Facilities and Office/Industrial Uses

Health Care Facilities
1. Cleveland Clinic South Pointe Hospital
2. University Hospital Rehab
3. University Hospital Ahuja Medical Center
4. University Hospital. Admin Offices
5. University Hospital Medical Offices
6. University Hospital Customer Service
7. Suburban Pavilion Nursing Home
8. Highland Hills Behavioral Health Hospital

Office / Industrial
A. Commerce Park
B. Eaton Headquarters
C. Enterprise Park
D. Former Randall Park Mall site
E. Metropolitan Plaza (Titan Insurance)
F. PNC Bank
G. East Ohio Gas Services
H. Green Road National Guard Armory
Shopping & Mixed-Use Districts
A. Van Aken District
B. Pavilion Shopping Center
C. Village Square
D. Shops of Eton
E. Harvard Park
F. Chagrin Highlands
G. Thornton Park
H. Pinecrest Development

Entertainment / Cultural
1. JACK Thistledown Racino

Figure 7-8. Shopping and Mixed Use District and Entertainment/Cultural Uses
The study area in general has a relatively low population density. There are pockets of residential development surrounded by other types of uses. According to 2010 census data, approximately 15,000 people reside in the study area. Understanding the population densities in and around the study area provides useful information for concept development, particularly when combined with the identified and potential destinations shown in previous figures.

Figure 7-9. Population Density
As shown in Figure 7-10, the annual income throughout the vast majority of the study area is quite low, particularly as compared to residences immediately adjacent to the study area in Shaker Heights, Beachwood and Orange. As the graphic shows, study area incomes are the highest in and near the Van Aken District in Shaker Heights.

Annual income is an indicator of the importance of multimodal travel options for the study area. Good transit service is particularly important in the lower income areas. This is reinforced by car ownership rates, which further demonstrate the need for transportation options beyond the automobile.
Figure 7-11. Car Ownership Rates
Figure 7-12 provides an indication of transportation mobility access in the study area. The graphic shows locations where residents have access (or no access) to transit stops, bike facilities, and park space within a ¼ mile distance of their residence. The graphic is heat-map coded so the darker red color indicates a higher number of residences without easy access. Note that the areas shown in light blue do not have any homes. The information in this graphic shows a clear and distinct need for improvements in multimodal transportation options and access to green space.

Figure 7-12. Mobility Access Analysis
Crime rate data, shown in Figure 7-13, shows a low incidence of crime throughout the study area and its borders. However, as demonstrated by the Eastside Greenway Health Impact Assessment, perception of crime is just as important as actual statistical evidence of crime when related to the public’s willingness to be in a particular area. Fear of crime is a powerful deterrent. As such, it is important to design and build facilities such as trails in a manner that feel safe, with adequate lighting, clear lines of sight, and other features that will encourage use through implementation of Crime Prevention Through Environmental Design (CPTED).

Figure 7-13. Crime Rate
The land cover data illustrated in the Figure 7-14 and Figure 7-15 graphics show that there are large, undeveloped areas within and adjacent to the study area as well as significant habitat restoration areas (particularly along the Harvard corridor), providing opportunities for new connectivity through the creation of new off road trails. Reinforcement of that potential is reflected by another indicator, property exempt status as shown in Figure 7-16. The public and quasi-public lands in and adjacent to the study area highlight potential properties that could be candidates for accommodating and incorporating non-motorized trails and facilities.
Figure 7-15. Potential for Habitat Restoration
Figure 7-16. Tax Exempt Status Properties
The next series of figures show distinguishing characteristics of the existing transportation infrastructure in the study area. This data indicates where infrastructure is missing and substandard for bicycle and pedestrian travel as well as opportunities to create non-motorized facilities.

**Figure 7-17** shows the presence and absence of sidewalk facilities. There are long stretches of busy roads in the study area that are missing sidewalks on one or both sides of the street. There are critical gaps along Harvard Road and Miles Road and partial sidewalks (gaps and/or one side) on Northfield Road, Green Road, Chagrin Boulevard and Emery Road.
Figure 7-18 shows existing corridor pavement widths.
Figures 7-19 and 7-20 provide right-of-way information, differentiating between total corridor right-of-way and right-of-way beyond the paved areas. The second figure provides insights into the potential to do something else with the spaces outside of the existing paved areas.

Typical ROW widths are 80 feet for the primary corridors. The available unpaved ROW could potentially be made available for off road pedestrian and bicycle facilities. Generally, approximately 15 feet per side is desirable for sidewalks and the amenity zone (or buffer). Note that Northfield Road has a median between Chagrin Boulevard and Emery Road, so some of that corridor’s unpaved area is the median.
Figure 7-20. Unpaved Corridor Rights-of-Way
Figure 7-21 shows the number of travel lanes, traffic volumes (Annual Average Daily Traffic, AADT) and a comparison of the number of lanes versus traffic volume. In combination. The information contained in these figures gives an idea of corridors within the study area that may have excess capacity, available right-of-way (or both) which could be re-designated to enhance multimodal travel options. Additionally, road diet candidates are indicated; these corridors have 4-5 travel lanes with AADT of less than 15,000 vehicles per day, indicating the potential for excess capacity on the roadway.
Current data relevant to bikeway planning are provided in Figure 7-22 and Figure 7-23.

The NOACA Regional Priority Bikeway Network is based on a combination of factors including population density, access to multimodal transportation options, and other factors. NOACA has determined a medium bikeway demand throughout the study area.
The Bicycle and Multi-Use Facility information shows that although some facilities are recommended, there are no existing bikeways within the study area. There are some planned bikeways near the study area including the Van Aken Boulevard bikeway designation and the side paths in Orange. The Eastside Greenway Plan identified bikeways along Miles Road, Warrensville Center Road and Harvard Road. Additionally, NOACA Priority Routes include Northfield Road, Miles Road, Chagrin Boulevard and Green Road, indicating a desire for bikeways along these corridors.

Figure 7-23. Non-Motorized Facilities, Types & Status
Other recent planning efforts have termed the Harvard Road corridor the Eastside Health Corridor because it links multiple healthcare facilities, including those run by University Hospitals, the Cleveland Clinic and others. Despite the facilities being located in relatively close proximity to each other, employees rely on automobiles to travel between the facilities throughout the day.

Transit service is provided by the Greater Cleveland Regional Transit Authority (RTA). Due to funding constraints, RTA has recently implemented service cuts that have affected mobility in and around the study area. RTA’s current system map is shown in Figure 7-24. Transit service is discussed in greater detail later in this report.

Figure 7-24. Eastside Health Corridor
8. Concept Development

Concept development for the study area brought together the various plan components into a cohesive process. The traffic analysis was completed to understand the possibilities with respect to potential modifications of the roadway network. The transit, bicycle and pedestrian aspects were analyzed individually and as a system to work together as a complete and integrated active transportation and complete streets system, with consideration given to maximizing opportunities provided by the existing green spaces and waterways. The concepts were developed in a series of project team workshops, informed by the information gained from the numerous meetings with the stakeholder agencies and organizations. Social equity and universal access was an important consideration throughout the planning process.

The initial concepts were presented to the community through the public meetings and via an interactive online survey. The survey was administered at a series of “pop-up events”, meeting people where they were and talking about the project with them. The public was able to provide their input using laptop computers to record their survey input. In addition, feedback was sought in the more traditional manner at public meetings. The public input was reviewed and incorporated into the planning process.

The ultimate recommendations reflect Project Team, stakeholder and public input on needs and preferences for transportation-related improvement alternatives to enhance multimodal transportation options within the study area.

9. Community Input

Public and stakeholder participation was an important component of the planning process. Key elements that informed plan development are outlined below.

9.1 Survey Results

A summary of survey data and responses pertinent to the study goals and objectives are provided below.

Demographics

- 587 people visited the survey site with a total of 345 (59%) providing responses.
  - A broad cross-section of ages responded, with the majority (94%) being typical working age (ages 20-65).
  - The majority of respondents were women (75%); men were under-represented.
  - Survey respondents live throughout the greater Cleveland region, with a majority living in or very near the study area.

Travel Behavior & Preferences

- Transportation options: (multiple responses permitted)
  - 47% have access to a car (which means 53% do not).
  - 27% have access to a bicycle.
  - 27% have access to transit.

- Transportation choice responses indicate that although most people typically travel by car, they would like to be able to decrease car trips and increase travel by transit, bicycling and walking.

- Half of the respondents do not ride a bicycle and very few (less than 10 percent) identify themselves as cyclists who are comfortable riding in the road.

- The vast majority of respondents (86%) prefer to ride on a bicycle facility that provides a designated space for bicycles; multiuse trails are the preferred facility type for almost half of the respondents.

Destinations

- Destinations are fairly well-distributed by type, which included home, school-work, shopping-entertainment, healthcare, parks-recreation and other. Destinations within and around the study area are clustered by type, which
corresponds with existing land uses in the study area.

- Respondents are in the study area for:  
  (multiple responses permitted)
  - 43% for work/school
  - 21% for shopping/entertainment
  - 20% residents
  - 17% for healthcare
  - 15% for recreation
  - 4% other

**Transit**
- Survey respondents prefer and prioritized transit amenities as follows:
  - Most important: Shelters, real time bus information
  - Next in importance: Seating, emergency call phones
  - Also important: Lighting, Wi-Fi, trash bins, electric outlets
  - Fairly important: Bike racks, recycling bins, solar power

**Corridors**
- Harvard Road, Warrensville Center Road and Chagrin Boulevard are all viewed as important corridors for conversion to complete streets, where accommodations for non-motorized and motorized travel achieve balance.
- Northfield Road, Green Road and Emery Road were also viewed as important, but to a slightly lower degree.

**Figure 9-1. Destinations (from survey responses)**

**Land Use**
- Land use that includes park/green space/trails is preferred (60%) and mixed-use development is also favored (30%).
- There was little support for high density residential or low density office/industrial park developments.
9.2 Stakeholders
The Project Team received information from the sponsoring communities regarding current projects and future plans that are expected to influence land use and mobility within the study area. In addition, members of the Project Team met with significant organizations within and near the study area whose plans and access influence the study area. Specific discussions focused on land use, employees, transportation, future plans, connectivity and access.

City of Warrensville Heights
Warrensville Heights is located entirely within and occupies a significant part of the study area. It also is home to the most residents in the study area. Multimodal access is of significant concern to the city and its residents, particularly as reflected in the demographics which reflect a clear need for transportation options.

Active projects in Warrensville Heights include:
- Heinen’s (60 KSF food production facility)
- Lifebanc (20.8 KSF addition to their existing facility)
- Allen Renzi/ORG Mgt (20 KSF new gymnastics academy)
- JACK Thistledown Racino (15 KSF horse barn)
- Residential projects (Cinema Park, Chateaux of Emery Woods)

- Redevelopment of former car dealership site (Bass Chevrolet)

Planned initiatives include a new town center; development has been initiated with construction of the new Warrensville Heights Branch of the Cuyahoga County Library and the new YMCA. In addition, the Warrensville Heights School District plans to invest in their students with a significant schools program consisting of a new flagship High School, reconstruction of the existing High School as a new Middle School, and consolidation of elementary schools with a new Pre-K through Grade 5 elementary school.

City of Shaker Heights
The Van Aken District of Shaker Heights is undergoing transformation with the redevelopment of the district into a new town center comprised of mixed-use...
development and centered on the transit hub located at the end of RTA’s Blue Line light rail transit and served by three bus routes. With the reconstruction of the Chagrin/Warrensville intersection and its sidewalk-lined streets The Van Aken District is increasingly walkable as well as being well-served by transit. Although dedicated bicycle facilities are not present in the district, Shaker Heights is in the process of creating a trail along Warrensville Center Road, implementing the transformational facility that was identified and recommended by the Eastside Greenway Plan.

**City of Cleveland**
Although Cleveland does not have any residents in the study area, the city does own land and is one of the Chagrin Highlands development partners. City assets include the Highland Park Golf Course, Camp George Forbes, Cleveland House of Corrections, Cleveland Memorial Gardens Cemetery, and Chagrin Highlands.

**Village of North Randall**
North Randall, wrapped by Warrensville Heights, is home to JACK Thistledown Racino, Ohio Technical College’s Power Sports Institute, and the former Randall Park Mall site. When it is redeveloped, the mall will have a significant impact on the study area. Redevelopment, when it occurs, must align with community objectives and be done in a thoughtful manner that is integrated into the neighborhood as well as being financially viable.

**Village of Highland Hills**
Development within Highland Hills is centered along the Harvard Road corridor, with current and planned developments that, to date, are predominantly office and related business uses with auto-centric development patterns. Highland Hills is also home to Highland Park Cemetery and Cleveland’s Highland Park Golf Course. The golf course, with 36 holes and 6,740 yards of golf, has the potential for redevelopment should the golf course be downsized.

**City of Beachwood**
The City stated they have purchased the property at 23456 Mercantile Road within Commerce Park to provide a connection from Commerce Park to the two University Hospital facilities located on Harvard Road. The connector will help reinvigorate Commerce Park as well as foster new opportunities for development. Commerce Park is located southeast of the Green Road/Chagrin Boulevard intersection. The future connector road is on the city’s 20 year horizon. The industrial park was also rezoned to allow for The Vue, a multi-story, high density residential development at the
corner of Chagrin Boulevard and Green Road; however, it can allow other uses in Commerce Park. The anticipated land uses with the development will be mixed-use and light industrial with some wholesale/retail. The new connector road from Commerce Park is to be a Complete and Green street and all roads within Commerce Park are to be upgraded in the future to Complete and Green streets. This information is documented in the Beachwood 2015 Master Plan. A new trail connection is planned along the south side of Chagrin Boulevard. The property located at 24950 Chagrin Boulevard (First Catholic Slovak Ladies property) is a possible area of development. The Appendix contains graphics representing the City of Beachwood proposed plans.

- Beachwood plans to build a connector road between Mercantile Road and Harvard Road (west of Eaton Corporation headquarters).
- Commerce Park will be rezoned to allow for mixed use development, light industrial and wholesale/retail.

**Chagrin Highlands (Jacobs Group)**
Jacobs Group is the managing developer for the Chagrin Highlands development that started in the early 1990’s. Jacobs Group joined the development in the mid 1990’s. The development is 600+ acres located in four communities (Orange, Beachwood, Highland Hills, and Warrensville Heights). Jacobs wants to ensure that infrastructure is in place to maximize the development potential; however it is driven by need. They are cautious to build infrastructure until land use/development is known as to not inhibit future development. Conservation easements are part of the original permitting of the property. The easements are held by the Western Reserve Land Conservancy. Stream corridors (Tinker Creek) in the easement do not allow for trail development. The development is owned by the City of Cleveland. It was felt that amending the uses allowed within the property would be difficult.
- Development of Chagrin Highlands land is contingent upon user-based interests.
- To date, developments are auto-centric.
- Sites within Chagrin Highlands are internally focused; consideration is not given for non-motorized trails or other active transportation facilities to connect within and between Chagrin Highlands’ properties.
- Trail connections within undeveloped Chagrin Highlands’ land are not favored due to potential impacts to end users when land is developed in the future.

**Cleveland Clinic South Pointe Hospital**
The hospital stated the majority of their patients rely on transit. Approximately 50 to 100 appointments are cancelled per week because of transportation related issues resulting in a no show rate of approximately 26 percent. In addition, service workers rely on transit to get to and from their jobs at South Pointe.

The Ohio University Heritage College Osteopathic University is affiliated with South Pointe Hospital. It opened July 2015 and approximately 50 students per class are enrolled. Students live off campus and most have long commutes based on lack of availability of affordable, local student housing opportunities.
- Patients and employees would benefit from improved transit service.
- Medical students would benefit from affordable student housing in or near the study area.

**Cuyahoga Community College East (Tri-C East)**
Tri-C serves more than 55,000 credit and non-credit students annually. The Tri-C East campus sits on approximately 200 acres and the student population is largely dependent on transit for access to the campus. Tri-C-East leadership feels that GCRTA services are key to their connectivity. Development plans include a new 400-bed on-campus housing facility, additional parking, walking trails, and recreational fields. Tri-C East views and operates the campus as a community resource and would like to make the Campus more walkable. The school would like to connect beyond its physical boundaries to
facilitate access to campus facilities by nearby businesses and residents.

- Good transit service is essential.
- Non-motorized facilities (trails, etc.) that connect the Tri-C East campus to the surrounding community are welcomed and will be supported.

**Eaton Corporation**

Eaton Corporation owns 53 acres in the Chagrin Highlands development. Their headquarters facility currently occupies approximately half of their site. The long range plan is to double the size of their current facility, mirroring the building that was recently completed. Eaton has 900 employees, including contractors and service workers. The facility is designed to be self-contained, serving employee needs without their having to leave the property. The numerous walking trails circle the property but do not connect to external destinations.

Eaton has experienced challenges in hiring staff, particularly millennials, due to the auto-dominant nature of the area and the lack of contiguous transit service. Downtown residents can easily get to the Van Aken District in Shaker Heights by transit, but the “last mile” connection is missing. RTA bus route #15 serves Eaton, but the route is circuitous and requires long travel times so it is not well-used. Eaton would like to see effective transit connections to the Van Aken District and other area destinations.

- Effective transit that connects Eaton with RTA’s rail service is needed.
- Eaton would benefit from non-motorized access to nearby shopping, dining and healthcare destinations.

**Greater Cleveland Regional Transit Agency (RTA)**

RTA would like to bring regional transit service to the Van Aken District Station from other nearby transit agencies, specifically Akron Metro and Laketran. RTA completed a study to extend the Blue Line to park-and-ride lots located near I-480 and I-271, however, there is no current plan to move forward with the proposed Blue Line Extension (BRT) project due to fiscal constraints. RTA recently implemented service cuts which affected transit service and travel in the study area. RTA supports vanpools but due to operational inconvenience, participation by companies in and around the study area is very low.

- RTA would like to improve transit service in and around the study area. However, fiscal constraints affecting both capital and operations and maintenance (providing reliable daily transit service) have a significant impact on their ability to improve transit service within their service area.

**JACK Thistledown Racino**

ThistleDown was purchased in 2010 by Harrah’s Entertainment and was subsequently acquired by Rock Gaming in 2015. In 2016, the company and its casinos rebranded under the JACK name. JACK Thistledown Racino (casino) is under continued improvement, growth and development. Recent work includes construction of a parking deck and a change in access, relocating the main entrance from Emery Road to Warrensville Center Road. The Emery Road entrance may be converted to valet service. Their future plans include activation of exterior spaces; they are considering adding a Starbucks near the Warrensville Center Road/Emery Road intersection. They would like to have a hotel nearby. If one is not built off-site, they plan to build one on-site, with a time horizon of five to seven years. As a caveat, parking demand must be balanced with future development plans.

JACK has a $70 million incremental capital investment and they will be affected by redevelopment of the Randall Park Mall site. JACK supports the development of non-motorized facilities to improve multimodal to and around their facility. JACK leadership believes it would benefit from improved transit service to accommodate their clients as well as their employees. Lack of good, connected transit service has made it difficult for JACK to fill jobs, in spite of their stable industry and jobs with good pay and benefits.
JACK employees and clientele would benefit from improved, connected transit service.

JACK will be significantly affected by the future redevelopment of the Randall Park Mall site.

JACK supports development of non-motorized facilities to improve multimodal access to and around their facility.

**Power Sports Institute (PSI)**
Located in a former department store on the Randall Park Mall site, PSI is a branch campus of Ohio Technical College that provides training to mechanics for motorcycles and other equipment and machines in the power sport industry (snowmobiles, jet skis, all-terrain vehicles, etc.). Students come to PSI from across the nation. PSI has local contacts to help students find housing in the region. Although students typically have access to motorized travel, they would benefit from improved transit service as well as local sources for appropriate student housing.

- Students would benefit from appropriate housing within or near the study area.
- Students and employees would benefit from improved transit service.

**Tri-City Chamber of Commerce**
With approximately 100 members, the Chamber is comprised of businesses from Warrensville Heights, North Randall and Highland Hills, with member organizations representing primarily small and medium-sized companies. Chamber leadership expressed interest in this plan and would like to see a focus on job creation, workforce development and livability.

- Provide better connectivity to the areas employment centers.

**University Hospitals**
University Hospitals has multiple healthcare and administrative facilities in and near the study area. Employees frequently travel between facilities during the day, particularly the Management Services Center (administrative headquarters) in the Van Aken District and the nearby customer service center near the Northfield Road/Harvard Road intersection in Warrensville Heights, as well as the numerous healthcare facilities, including Ahuja Medical Center located on Richmond Road near Harvard Road in Beachwood. Due to the auto-dominant nature of the transportation network, these trips are made by car in spite of the relatively short distances between facilities. In addition, employees and patients/UH customers drive to other nearby shopping and dining destinations due to the lack of safe, comfortable and convenient transportation alternatives. For example, employees reported driving between Ahuja and the numerous stores and restaurants Harvard Park even though they are on opposite sides of the same street because it does not feel safe or even possible to walk across the Richmond Road/Harvard Road intersection.

As the branded, named supporter of Cleveland’s bike share program, UH Bikes, University Hospitals is a strong supporter of active transportation and alternate mode travel as well as recreation and physical activities as part of their overall focus on wellness and health.

- UH employees and patients would benefit from improved transit service.
- UH would support the introduction of bike share for travel in, around and near the study area.
- UH supports the development of an active transportation network within the study area, with particular interest to linking their facilities with each other and with other popular shopping and dining destinations within and near the study area.

Based upon information obtained during the early phases of the planning process, the Project Team mapped known (planned) change in the study area, along with other areas where change is anticipated at some point in the future; some will be sooner than others but the actual change in use and the nature of the future redevelopment is currently unknown. The results, as illustrated in Figure 9-4, clearly show that the study area will experience significant
changes in the near future, with the potential for even greater longer term changes that could potentially redefine the character and nature of the area. Understanding these possibilities was factored into the concept development process.

10. **Traffic & Complete Streets**

There is potential for growth in vibrancy and economic viability in the study area and focusing on improving livability will play an important role in shaping the future of the area in a very positive manner. Currently, the existing transportation network within the study area is auto-dominant and not aligned with livability concepts that emphasize the importance of comfortable multimodal travel, including bicycling, walking and transit travel. The primary roadways that provide access and circulation through the study area are large, with multiple lanes and large intersections that do not favor bicycle and pedestrian travel. Although the project area includes major roadways, some of the transportation corridors could be better balanced to accommodate the needs of all users. The transportation network should be treated holistically; all roads cannot be all things for all users, yet the system as a whole must work for everyone traveling in the area, whether in a car, bus or on foot or a bicycle.

A traffic study was conducted to analyze the existing roadway network and determine what modifications could be implemented to improve network performance and better accommodate bicyclists and pedestrians and develop a complete streets initiative. To accomplish this for a complete streets initiative, it is necessary to understand traffic operations. In undertaking the development of a complete streets plan and network, it is important to understand this distinction: Each corridor does not have to be all things for all users. The entire network must accommodate all users in a comfortable, safe and balanced manner. However, the network will likely perform better if the primary and secondary users for each of the

![Figure 9-4. Areas of Planned and Potential Change](image-url)
corridors are identified. Once that balance is established, the corridors would then be configured to best accommodate the prioritized users. That is not to say that other users are ignored because obviously connections have to be made within and across the project area, merely that some corridors will be more comfortable than others, depending on the user group. The traffic study analysis helps to clarify and understand traffic operations on the selected corridors.

The Northfield Road and Emery Road corridors were evaluated for potential reconfiguration as complete streets corridors within the study area, where reduction in vehicle capacity may be feasible. NOACA identifies Northfield Road as a priority bikeway. NOACA also identifies Miles Road as a priority bikeway, not Emery Road. However, Emery Road is analyzed because of its dense concentration of residential areas to the east of Northfield Road and Green Road, as compared to the predominantly commercial and industrial uses on Miles Road. Warrensville Center Road and Harvard Road are important corridors for multimodal travel, but capacity reduction on these corridors is not feasible so bicycle and pedestrian accommodations would be developed outside of the roadway. Transit considerations are incorporated for the primary corridors within the study area as part of the overall plan development process.

The traffic study evaluated key intersections along the Northfield and Emery corridors, listed below.

1. Northfield Road/Harvard Road
2. Northfield Road/Ellacott Parkway-Clarkwood Parkway
3. Northfield Road/Emery Road
4. Northfield Road/Miles Road
5. Emery Road/Warrensville Center Road
6. Emery Road/Green Road
7. Emery Road/Richmond Road

The corridor evaluation consisted of assessment of the scenarios listed below, with specific evaluation of morning (AM) and evening (PM) peak

*Figure 10-1. Traffic Study Intersections*
hour operations. Traffic volume data was collected in February 2016.

- **Existing Conditions**: Analysis of the study intersections based on their existing configurations and signal timing plans.
- **Existing Optimized**: Analysis of the study area intersections with optimized signal timing and phasing for the existing intersection configurations (retained the same intersection approach and departure lanes as existing).
- **Proposed Conditions**: Analysis of potential capacity reductions along the two corridors, including modifications in travel lanes and configuration of the intersections along with optimized signal timing and phasing to accompany the potential reconfiguration.

### 10.1 Existing Conditions Analysis

The Existing Conditions traffic analysis examined operational performance of the identified study intersections based on their existing configurations and current signal timing plans, which were provided by the agencies controlling each of the signals. The signals in the study area operate individually; they are not part of a coordinated signal system. Additionally, the Emery Road intersections at Granada Boulevard-Derbyshire Drive and Green Road are run on a pre-timed schedule. In general, the existing conditions analysis shows some specific movements and approaches with more delay than the other intersection approaches, like the westbound approach at the Northfield Road/Harvard Road intersection. These results indicate possible issues with signal timing and phasing, since the overall intersection operations are acceptable.

#### Northfield Road Corridor

The Northfield Road corridor operates at acceptable intersection levels of service during the AM peak. The corridor intersections all experience more delay during the PM peak, with conditions that are at or over capacity at the Emery Road and Miles Road intersections. Examination of intersection performance by approach and by approach movement shows that there are some operational performance issues at those levels, as exhibited by poor delay and levels of service. Some improvements in performance may be possible with signal timing and phasing adjustments.

#### Emery Road Corridor

The Emery Road corridor operates at acceptable intersection levels of service during the AM peak. The corridor intersections all experience more delay during the PM peak, with conditions that are at capacity at the Northfield Road intersection. Examination of intersection performance by approach and by approach movement shows that there are some operational performance issues at those levels, as exhibited by poor delay and levels of service. Some improvements in performance may be possible with signal timing and phasing adjustments.

### 10.2 Existing Optimized Analysis

The Existing Optimized traffic analysis examined performance of the identified study intersections with potential improvements to improve operational efficiency through implementation of changes in signal timing and phasing. No changes were made to intersection geometry; the approach and departure lane configurations remained the same as existing. The results clearly demonstrate that significant benefits in operational efficiency can be gained by optimizing the signal timing and phasing; delay was reduced at all intersections. At some locations, the timing and phasing changes will require modification of the signal equipment, but it will not require changes to the roadway configuration.

#### Northfield Road Corridor

Based on the corridor traffic volumes, analysis and field observations, the Northfield Road corridor intersections were analyzed using the same cycle length to allow for potential signal coordination and corridor progression. Additionally, the left turn phases at the Northfield Road intersections with Harvard Road and Ellacott Parkway-Clarkwood Parkway were changed...
from protected only to protected/permitted phases. Signal timing was then optimized at each of the corridor intersections, incorporating the changes in cycle length and phasing. These changes result in improved operational efficiency.

**Emery Road Corridor**

The Emery Road intersections with Granada Boulevard-Derby Drive and Green Road were converted from pre-timed signals to semi-actuated signals to improve operational efficiency. The same cycle length used for the Northfield Road corridor was used for the Emery Road corridor to retain consistency throughout the network. Signal timing was optimized at each of the corridor intersections, incorporating the changes in cycle length and phasing. These changes result in improved operational efficiency.

**10.3 Potential Future Conditions Analysis (Road Diet)**

The Potential Future Conditions traffic analysis examined operational performance of the identified study intersections with potential changes to the intersections to reduce travel lanes that would enhance complete streets opportunities as well as optimize intersection operations through signal timing and phasing modifications. The purpose of this analysis scenario is to assess the feasibility of complete streets along the Northfield Road and Emery Road corridors.

The phasing changes from the Existing Optimized analysis were retained.

**Northfield Road Corridor**

The Potential Future Conditions analysis examines the feasibility of removing one travel lane in each direction from Northfield Road.

**Emery Road Corridor**

The Potential Future Conditions examines the feasibility of reducing the capacity of Emery Road to a three lane road (two travel lanes plus center turn lane).

**10.4 Road Diet Feasibility**

Analysis shows that capacity reductions on Northfield Road and Emery Road are generally feasible, with some additional intersection modifications. The current and proposed intersection approach configurations are illustrated in Figure 10-2. However, there will be growth in traffic volumes, potentially significant, with the inevitable future redevelopment of the Randall Park Mall site, with ongoing development of the JACK Thistledown Casino, and with other planned and potential redevelopment in and near the study area. Land use and potential redevelopment within the study area is discussed in greater detail elsewhere, but ultimately, it is important to retain flexibility with roadway capacity for the roadway network along with incorporating multimodal accommodations. With the recent addition of the Amazon Fulfillment Center, a road diets may not be feasible.

**10.5 Access Management**

Access management refers to the regulation of interchanges, intersections, driveways and median openings to a roadway to help improve operational safety and reduce driver confusion. It is generally beneficial to control the number of driveways and, in some cases, turning movements that are allowed.

There are multiple driveways along the western half of Emery Road (west of Green Road) and the southern portion of Northfield Road (south of Emery Road). The right turn trap lanes that were implemented to accommodate the old mall coupled with multiple driveways to each parcel along the corridor make safe driving along the corridor a challenge. Walking or bicycling along the corridor does not feel safe or pleasant, it feels scary and almost impossible. As plans are advanced for the potential future redevelopment of Randall Park Mall, access management strategies should be implemented as part of the redevelopment plans; considerations and accommodations for safe, comfortable bicycle and pedestrian should be prioritized. These strategies should also be implemented elsewhere throughout the study area as development and redevelopment initiatives move forward.
Figure 10-2. Existing & Proposed Intersection Configurations
10.6 Randall Park Mall Site

The former Randall Park Mall site is extensive, roughly ½ mile or more along the main roads around the site. Given its sheer size, Redevelopment of the mall has the potential to have a profound impact on the entire study area and beyond. As such, it is important to consider the transportation network, traffic volumes and patterns, site access, transit and non-motorized impacts and other transportation-related factors as plans to redevelop the site evolve. Economic impacts and related considerations are addressed later in this report.

To preserve mobility, mitigate potential congestion, and minimize negative impacts to traffic safety, additional points of access to the former mall site should not be permitted and traffic circulation within the site should be retained or improved. Driveways for the site and for the retail properties adjacent to the site should be consolidated, as possible, and unnecessary turn lanes should be removed.

A recent announcement disclosed plans to redevelop a portion of the site as the future home of an Amazon Fulfillment Center. This new 855,000 square foot development will occupy 69 acres of the former mall site and is expected to generate 1,200 new jobs. The development will face Emery Road, splitting the former mall site roughly in half, leaving potential out parcels along Northfield and Miles Roads for future redevelopment. This redevelopment is underway and to the degree possible, should incorporate access management strategies along with any other actions taken to accommodate traffic demands that will be generated by the Amazon facility.

Figure 10-3 illustrates a concept that creates a grid network to facilitate access and circulation within the site. Grids could be combined for end users desiring larger parcels, but retaining a basic grid network would maximize site access while minimizing excessive traffic impacts to the surrounding roadway network. This concept incorporates the elements listed below. A similarly scaled image of the Van Aken District site is included to illustrate the size of the former mall site and as an indication of the redevelopment potential of the site.
• Existing signalized intersections are retained to provide full movement access to the site and properties on the other side of the street.

• Unsignalized access to the site is retained. Depending on operational characteristics and anticipated traffic volumes, it may be beneficial to restrict left turn movements in and/or out of the site.

• Create hierarchy of streets to organize traffic and provide circulation within the site. This will help minimize negative impacts to traffic operations and safety.

• Conversion of the surrounding roadways (Emery Road, Northfield Road, Warrensville Center Road and Miles Road) to median-divided roadways will improve the character of the bordering corridors and reinforce turn restrictions to site access roads and driveways located between the signalized intersections.

10.7 Traffic Study Recommendations

Based upon the analysis, results and discussion contained above, the following improvements and modifications are recommended.

Operational Improvements

• Optimize signal timing for the signalized intersections in the study area.

• Modify signal phasing to improve operational efficiency.
  – Northfield Road/Harvard Road: Convert the existing northbound and southbound protected only left turns to protected/permissive left turns.
  – Northfield Road/Ellacott Parkway-Clarkwood Parkway: Convert the existing northbound and southbound protected only left turns to protected/permissive left turns.

• Provide signal interconnect and upgrade signal equipment, as needed, for implementation of a coordinated signal system and signal progression along the primary corridors in the study area. Consider GPS-based clocks as a low cost alternative to signal interconnect.

• Provide count down pedestrian heads to facilitate pedestrian crossings at signalized intersections in the study area. Pedestrian heads are currently not installed at these locations:
  – Emery Road/Merrygold Boulevard
  – Emery Road/Green Road
  – Emery Road/Grenada Boulevard-Derbyshire Drive
  – Northfield Road/Harvard Road (north, south and east legs)
  – Northfield Road/Township Parkway
  – Northfield Road/Ellacott Parkway-Clarkwood Parkway (east, west and south legs)

• Replace existing pedestrian heads with pedestrian heads with countdown timers to facilitate pedestrian crossings. These locations have older pedestrian heads:
  – Northfield Road/Harvard Road (west leg)
  – Northfield Road/Ellacott Parkway-Clarkwood Parkway (north leg)
  – Northfield Road/Emery Road
  – Northfield Road/Randall Park Mall Entrance
  – Northfield Road/Miles Road
  – Emery Road/Walford Road
  – Emery Road/JACK Thistledown Racino entrance
  – Emery Road/Warrensville Center Road (west and south legs)

• Construct a westbound double left turn and an eastbound exclusive right turn lane at the Northfield Road/Miles Road intersection to improve performance.

Complete Streets (Road Diet)

• Convert Northfield Road to the proposed three-lane corridor from the northern
terminus to Harvard Road. This conversion is clearly supported by the results of the traffic study. Extending the three-lane section south to Emery Road is possible; it would improve multimodal opportunities for the Warrensville Heights schools and community center areas. Conversion of this segment of Northfield Road is feasible based on current traffic volumes and with the signal modifications included in the analysis. The space vacated by the travel lanes would be converted to buffered bike lanes. The three-lane section may need to be terminated north of Emery Road, depending on future redevelopment to the south. Northfield Road south of Emery Road should not be modified at this time, due to the unknown redevelopment of the Randall Park Mall site.

- Convert Emery Road to the proposed three-lane corridor between Northfield Road and Richmond Road. The space vacated by the travel lanes could be converted to buffered bike lanes.

**Access Management**

- Access management strategies should be implemented as part of the redevelopment plans throughout the study area, and particularly within and surrounding the former Randall Park Mall site. This will demonstrate prioritization of considerations and
accommodations for safe, comfortable bicycle and pedestrian mobility.

- Integrate plans and studies for Amazon redevelopment to ensure safe and efficient operations, along with the potential for multimodal balance, as the new Amazon Fulfillment Center is built and begins operations. Although information related to site operations and potential traffic impacts has not been shared, it is important that this new facility be appropriately integrated into the community as well as the surrounding roadway network.

11. Pedestrian and Bicycle Facilities & Enhancements

As documented by the existing conditions information, there are no bicycle facilities in the study area and there are numerous areas where primary corridors are missing sidewalks on one of both sides of the street. Incorporating effective multimodal transportation options within the study area will rely heavily on provision of infrastructure that safely and comfortably accommodates bicycles and pedestrians, connecting people with destinations along routes and corridors that are useful and appropriate. Because the off-road component of non-motorized infrastructure will be used by bicyclists and pedestrians, these two modes are combined in developing the concepts and recommendations.

Social equity is a focus that permeated plan development throughout the process. Understanding the demographics of residents and those who work, go to school, receive healthcare, and shop in the area was an integral component that influenced decision-making around non-motorized access and infrastructure recommendations in the study area.

11.1 Pedestrian Considerations

The information and maps included in 6.0 Existing Conditions identifies missing sidewalk links in the study area, along with multiple other features and characteristics. In addition, survey respondents indicated that they would like to walk more and improve the walkability of the study area. They also indicated a desire to make more trips by transit and access to transit is, by necessity, provided by a complete and connected sidewalk network. Compliance with Americans with Disabilities Act (ADA) regulations is required for sidewalk infrastructure, governing sidewalk design including provision of curb ramps and other features, as well as specific requirements for signalized and unsignalized intersections. Detached sidewalks are the preferred sidewalk configuration because they provide greater separation between pedestrians and the roadway, resulting in a more comfortable and safe walking experience. In addition to their functionality for pedestrians, sidewalks can provide the opportunities for streetscape and other amenities that enhance the livability along with the walkability of a corridor.

The missing sidewalk links for the primary corridors in the study area are identified in Table 11-1.

11.2 Bicycle Considerations

The existing conditions data together with the information shown in Figure 11-1 clearly indicate a lack of bicycle infrastructure within the study area. Given the desires of the communities coupled with the need expressed through the survey data and the stakeholder interviews, there is a distinct need for the creation of bicycle facilities and a preference for off-road facilities. In addition to providing the capacity for multimodal travel and recreation, bicycle connections will also enlarge the capture area for transit. The typical walking capture area for a transit stop is ¼ to ½ mile and the bicycle capture area is three miles. Implementation of connected bicycle infrastructure has the potential to significantly improve multimodal options in the study area.
### Table 11-1. Sidewalk Missing Links

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Estimated Length (miles)</th>
<th>Side</th>
<th>Between _______ and _______ (North to South or West to East)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chagrin Boulevard</td>
<td>0.8</td>
<td>South</td>
<td>±275 ft east of Colton Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Green Road</td>
</tr>
<tr>
<td>Clarkwood Parkway</td>
<td>0.3</td>
<td>South</td>
<td>±330 ft east of Granada Boulevard</td>
</tr>
<tr>
<td></td>
<td>0.1</td>
<td>South</td>
<td>+1700 ft east of Northfield Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Green Road</td>
</tr>
<tr>
<td>Ellacott Parkway</td>
<td>0.3</td>
<td>South</td>
<td>+790 ft west of Northfield Road</td>
</tr>
<tr>
<td>Emery Road</td>
<td>0.3</td>
<td>South</td>
<td>+750 ft west of Northfield Road</td>
</tr>
<tr>
<td>Granada Boulevard</td>
<td>0.1</td>
<td>East</td>
<td>+630 ft north of Emery Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>+175 ft north of Emery Road</td>
</tr>
<tr>
<td>Green Road</td>
<td>0.9</td>
<td>West</td>
<td>Chagrín Boulevard</td>
</tr>
<tr>
<td></td>
<td>0.3</td>
<td>West</td>
<td>Cemetery border, south</td>
</tr>
<tr>
<td>Harvard Road</td>
<td>1.0</td>
<td>North</td>
<td>Northfield Road</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>North</td>
<td>Camp George Forbes entrance</td>
</tr>
<tr>
<td></td>
<td>0.3</td>
<td>South</td>
<td>Millcreek Boulevard</td>
</tr>
<tr>
<td></td>
<td>0.1</td>
<td>South</td>
<td>+625 ft east of Mill Pond Drive</td>
</tr>
<tr>
<td>Millcreek Boulevard</td>
<td>0.7</td>
<td>North</td>
<td>Harvard Road</td>
</tr>
<tr>
<td></td>
<td>0.7</td>
<td>South</td>
<td>Harvard Road</td>
</tr>
<tr>
<td>Mill Pond Drive</td>
<td>0.1</td>
<td>East</td>
<td>+290 ft north of Mill Pond Drive</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>West</td>
<td>+550 ft north of Mill Pond Drive</td>
</tr>
<tr>
<td>Northfield Road</td>
<td>1.0</td>
<td>East</td>
<td>Chagrín Boulevard</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>East</td>
<td>Township Parkway</td>
</tr>
<tr>
<td></td>
<td>0.4</td>
<td>West</td>
<td>+650 ft south of Emery Road</td>
</tr>
<tr>
<td>Warrensville Center Road</td>
<td>0.2</td>
<td>East</td>
<td>Norwood Road</td>
</tr>
</tbody>
</table>

Concept development considered priority bicycle routes identified in NOACA’s 2013 Regional Bicycle Plan (Chagrin Boulevard, Green Road, Miles Road, Northfield Road and Richmond Road) and the Eastside Greenway Plan recommendations which identified Warrensville Center Road as a Priority Transformative Corridor and Harvard Road as a Priority Near-Term Corridor.

Creation of new multi-use trails also aligns well with Cleveland Metroparks’ greenway strategy, as presented in their 2011 Strategic Plan. Cleveland Metroparks identified the expansion of its trail network along Mill Creek and Tinkers Creek, highlighting the abundance of vacant land existing along both stream corridors for trail development. The plan identifies opportunities to address gaps and missing links in the existing greenway network through the development of multi-purpose trail segments for the identified priority corridors to connect key destinations in the study area. Furthermore, existing and potential future land uses were important considerations in the development of concepts for potential bicycle infrastructure. As previously
discussed, the study area has the potential for development/redevelopment that could significantly alter the characteristics of the area, including traffic volume demand and travel patterns. It is important that multimodal recommendations in this study do not compromise future transportation network needs. Understanding this, and considering the public’s expressed desire and preference for trails, the proposed bikeways emphasize a reliance on off-road road facilities wherever possible. Creation of trails for recreation and transportation is expected to attract more people to non-motorized travel options and recreation, particularly those who are not comfortable riding bicycles in the road.

11.3 Pedestrian Recommendations

Sidewalks
Complete the missing links in the sidewalk network to provide sidewalk connectivity throughout the study area. Construct multi-use trails, as identified below, and detached sidewalk wherever possible for the remaining missing links. Ensure compliance with ADA standards for all new construction.

Mid-Block Crossings
Provision of a mid-block crossing is recommended with the proposed greenway along Mill Creek to facilitate pedestrian crossings. Although this mid-block crossing will benefit from the pedestrian refuge offered by the existing raised median, it should be clearly designated with a marked crosswalk and signs with flashing beacons that are activated by pedestrians who want to cross Northfield Road.

Given the general nature of the primary corridors in the study area, provision of additional mid-block crossings is not recommended at this time. However, with the inevitable future developments that will occur in the study area, implementation of mid-block crossings may be appropriate, depending on the nature of the developments and the pedestrian travel patterns to access them.

Intersection Treatments
Intersections along primary corridors should be configured to accommodate pedestrians. This should include the following:

- Signal timing to safely allow pedestrians to walk across the street
- Countdown pedestrian signal heads
- Crosswalks across all signalized intersection approaches and all stop-controlled intersection approaches.

Signalized intersections that are missing crosswalks on all approaches include:

- Granada Boulevard/Clarkwood Parkway
- Granada Boulevard-Derbyshire Parkway/Emery Road
- Green Road/Clarkwood Parkway-Lawrence Road
- Green Road/Harvard Road
- JACK Thistledown Racino entrance/Emery Road
- Merrygold Boulevard/Emery Road
- Northfield Road/Ellacott Parkway-Clarkwood Parkway
- Northfield Road/Harvard Road
- Northfield Road/Miles Road
- Northfield Road/New Northfield Road (roundabout)
- Northfield Road/Randall Park Mall site east entrance
- Northfield Road/Warrensville Heights Town Center (library & YMCA)
- Richmond Road/Eaton Boulevard-Auburn Drive
- Richmond Road/Ahuja Emergency Room entrance
- Richmond Road/Harvard Park
- Richmond Road/Tri-C East-Harvard Park
- Richmond Road/Corporate College entrance-I-271 S off ramp
- Warrensville Center Road/New Northfield Road
- Warrensville Center Road/Norwood Road
- Warrensville Center Road/Gladstone Road
- Warrensville Center Road/Ellacott Parkway
- Warrensville Center Road/JACK Thistledown Racino main entrance
11.4 Non-Motorized Recommendations

Recommendations for non-motorized improvements are outlined below, including corridors, grade-separated crossings, greenway connections not adjacent to a roadway, and other recommendations. Figure 11-3 shows a consolidated image with the recommendations.

ROADWAY CORRIDORS

Chagrin Boulevard
A multi-use trail is recommended along the south side of Chagrin Boulevard, connecting to the recommended trails along Green Road to the east and Northfield Road to the west. This trail would run along Highland Park Cemetery and Highland Park Golf Course for much of its length.

Clarkwood Parkway
A multi-use trail is recommended along the north side of Clarkwood Parkway. This location would complete a missing link and it would provide cohesive access between the residential development and the Warrensville Heights Middle and High Schools. It would also connect to the neighborhood on the east side of Green Road, also facilitating their access to the schools. In addition, crosswalks and ADA-compliant curb ramps should be added to the Clarkwood Parkway/Granada Boulevard intersection. This is necessary and appropriate given the volume of pedestrians within the neighborhood and to provide safe mobility through this intersection that is central to this neighborhood.

Derbyshire Drive
Derbyshire Drive is a neighborhood road, providing residents with access to the Emery and Miles corridors. Construct a multi-use trail along either side of the Derbyshire Drive corridor, based on stakeholder input. The trail should run along the north side of Miles to connect to the Northfield corridor.

Ellacott Parkway
A multi-use trail is proposed for Ellacott Parkway. Locating the trail along the south side would remedy an existing missing link in the sidewalk network. A trail on the south side would cross fewer driveways but a north side trail would provide immediate access to more residents, without having to cross the street. The stakeholders should be engaged to determine trail alignment.

Emery Road
The traffic study indicated that a road diet would be feasible. However, given the unknown future associated with the Randall Park Mall site and its potential transportation needs, this study recommends initiating the 4-lane to 3-lane roadway conversion for Emery Road between Northfield Road and Richmond Road. The road diet treatment would include two travel lanes with bike lanes and a center turn lane. With the recent addition of the new Amazon Fulfillment Center within the former Randall Park Mall site, this potential road diet conversion will require consideration of traffic impacts associated with the Amazon facility.

In addition, provision of a multi-use trail along the north side of Emery Road is recommended for the entire length of the corridor between Warrensville Center Road and Richmond Road. This trail will accommodate pedestrians and recreational cyclists who are not comfortable riding in the road. Based on the survey results and public input, coupled with the corridor’s location the heart of the study area, a multi-use trail is appropriate and justified. It would provide a central non-motorized spine that helps link neighborhoods with commercial and retail destinations, and the Northfield Road improvements that connect to the schools, library, YMCA, and the future Warrensville Heights town center. A low retaining wall may be needed west of Northfield Road due to the topography along the roadway. Given the constrained width of the bridge to the west of the Richmond Road intersection, the trail would originate at Interchange Corp Center Road with ultimate extension to Richmond Road when the bridge deck is replaced.

Granada Boulevard
Considering missing links in the sidewalk network, bus stops at the south end of the corridor, and pedestrian volumes in the neighborhood, multi-use trails are
recommended on both east and west sides of Granada Boulevard. If only one trail can be built, it should be on the east side to facilitate access to transit; the current worn dirt trail demonstrates the existing demand for an improved pedestrian connection. If possible, relocate (or close) the driveways immediately north of the Emery Road intersection to minimize adverse impacts to intersection operations and safety.

**Green Road**
A multi-use trail is recommended on the west side of Green Road between Chagrin Boulevard and the Lawrence Road-Clarkwood Parkway intersection, then shift to the east side and continue to Miles Road, due to the driveways on the west side along with the park and the community center on the east side of Green Road.

**Harvard Road**
Much of the corridor is undeveloped (in the study area), offering an opportunity for an off road trail on either the north or south side. The preliminary recommendation is the north side based on grade considerations as well as the lack of sidewalk and types of existing development. To the west of Northfield Road, a north side trail is expected to be easier to implement due to the retaining wall on the south side of the street. This segment of the trail could connect through to the Warrensville Heights-Cleveland city boundary. The north side is also preferred toward the eastern end of the corridor, providing easy access to Ahuja Medical Center and Pinecrest and a safer crossing opportunity through the I-271 interchange area. Enhanced at-grade trail crossings are recommended where Harvard Road intersects Warrensville Center Road, Northfield Road and Green Road. A grade separated crossing is recommended at the Harvard Road/Richmond Road intersection. If possible, consolidate overhead utilities on one side of the street.

**Millcreek Boulevard**
A multi-use trail is recommended along the west and south sides of Millcreek Boulevard to provide multimodal access as well as opportunities for scenic recreation. This trail would connect to the proposed Mill Creek Greenway Trail.

**Northfield Road**
Multimodal recommendations for Northfield Road vary along the corridor:

- **Chagrin Boulevard to Harvard Road:** Construct a multi-use trail along the east side and add buffered bike lanes to the roadway in accordance with the traffic study results that illustrate the feasibility of a roadway capacity reduction. As a possible alternative, it may be feasible to convert the southbound lanes to a two-way roadway and the northbound lanes to an exclusive bicycle facility. Transition at the Harvard Road intersection would need to be specifically addressed.

- **Harvard Road to Emery Road:** Convert the roadway to a single travel lane in each direction with buffered bike lanes in accordance with the traffic study results that illustrate the feasibility of a roadway capacity reduction. Parking would not be permitted to avoid impeding the buffered bike lanes. Since the configuration of the southbound approach to the Northfield Road/Emery Road intersection needs to retain its existing configuration based on capacity needs, transition to that intersection must occur to the north. Continue the multi-use trail from Harvard Road to Emery Road, connecting with the Emery Road multi-use trail.

- **Emery-Miles:** Retain existing travel lanes but remove exclusive right turn lanes and trap lanes, as appropriate. Continue the multi-use trail along the east side of Northfield Road between Emery Road and Miles Road. Implement access management strategies and controls to improve operational efficiency and reduce the potential for conflicts between non-motorized travelers on the trail to vehicles entering and exiting the properties along the corridor.

In addition, enhanced intersection crossing treatments should be provided at the Ellacott Parkway-Clarkwood Parkway/Northfield Road intersection to facilitate access to the Warrensville Heights High and Middle Schools.
Richmond Road
Non-motorized improvements along this corridor could have a significant impact on multimodal travel. Construction of a multi-use trail is recommended. During concept development, the west side of Richmond was recommended due to topography, availability of right-of-way, adjacent development, and access to Tri-C East. Based on the corridor’s auto-dominant character and the desire to facilitate non-motorized mobility, grade-separated crossings are recommended at the Richmond Road/Harvard Road intersection. At-grade crossings should be facilitated at the Eaton Boulevard-Auburn Drive intersection, the Ahuja Emergency Room entrance intersection, and the Tri-C East-Harvard Park intersection.

Additional recommendations were discussed during the planning process. Although beyond the study area limits, these measures could be considered:
- Reduce Richmond Road to three lanes south of the Miles Road intersection.
- Shift and narrow the travel lanes on Richmond Road across the I-480 Bridge to provide a wider sidewalk

Warrensville Center Road
The Eastside Greenway Plan identified Warrensville Center Road as a transformational corridor that should incorporate an off-road trail facility for regional multimodal mobility. Consistent with this recommendation, a multi-use trail is recommended along the Warrensville Center Road corridor. It would connect with the trail segment that is being developed in Shaker Heights Van Aken District to the north and continue south through the study area.

Enhanced at-grade pedestrian crossings on Warrensville Center Road should be provided at the Longbrook Road intersection to facilitate access to the Warrensville Heights schools and at the JACK Thistledown Racino main entrance. In addition, it may be valuable to enhance crossing treatments at the Chagrin intersection beyond the improvements completed with the Van Aken District redevelopment, given the importance of the transit transfer area and the anticipated pedestrian volumes associated with the new Van Aken District.

With redevelopment of the Randall Park Mall site, reconfiguration of the Warrensville Center Road/Miles Road interchange should be reconfigured to make it more pedestrian friendly. The Miles Road ramps should be converted to perpendicular intersections (single point intersections on Warrensville Center Road) to shorten the pedestrian crossing distances, reduce pedestrian exposure, reduce the pedestrian-vehicular conflict area and calm traffic. The existing Yield condition should be assessed for potential conversion to Stop control.

GRADE SEPARATED CROSSINGS
Grade separated crossings are recommended at two locations along the Richmond Road corridor to facilitate non-motorized access along and across Richmond Road. One or both crossings could be implemented; the Harvard Road/Richmond Road crossing is more important due to the value of the connection coupled with the intersection size and traffic volumes.

Figure 11-1. Towpath Trail Bridges along Canal Road
Figure 11-2. Recommended Grade-Separated Trail Crossing Concept at the Richmond/Harvard Intersection
Figure 11-3. Recommendations for Non-Motorized Improvements
Richmond Road/Harvard Road Crossing
Currently, Richmond Road is a very auto-dominant corridor, as is Harvard Road. There are multiple destinations on all sides of the very large, signalized intersection. Although there are crosswalks, walking across the intersection does not feel safe. As part of the public involvement process, there were reports of Ahuja employees driving across the street to get to the Harvard Park shopping center and Eaton employees do not walk past Piada (west side of Richmond Road) because they do not feel safe crossing Richmond Road. A grade-separated crossing that facilitates non-motorized travel across both Richmond Road and Harvard Road would be of significant benefit and regional value. Crossings on the west and north sides of the intersection are believed to be appropriate given the topography and to maintain the flow of the trails that are recommended along the west side of Richmond Road and north side of Harvard Road. Modeled after the Towpath Trail bridges along Canal Road (Figure 11-2) the general concept is illustrated in Figure 11-3.

GREENWAYS

Mill Creek Trail
Create a trail through the woods along Mill Creek, connecting Millcreek Boulevard, across Northfield Road (recommended with a mid-block crossing), west along the creek and meeting up with the trail along Warrensville Center Road. This trail will facilitate direct non-motorized access to South Pointe Hospital.

Town Center Trail
Construct a trail that provides direct, connected access between the high density residential neighborhood along the Clarkwood Parkway and Granada Boulevard corridors with the library, the YMCA, the future Warrensville Heights town center and other destinations that are accessible via Northfield Road. This proposed trail would need to be coordinated with the affected property owner(s). There will be a stream crossing and there will likely be impacts to the garages and parking lot circulation. Establishing the trail may provide an opportunity to improve upon the existing parking lot layout.

11.5 Additional Recommendations and Considerations

Bike Share
Communities and organizations within the study area should consider supporting expansion of the UH Bikes bike share program in the study area. This will provide the much-needed benefits associated with bike share programs along with an expanded network and connectivity options associated with the existing UH Bikes system. This will be particularly beneficial for trips between the study area and University Circle.

Although the UH Bikes program is currently sponsored by University Hospitals, there would likely be opportunities to get other organizations and agencies to sponsor and help fund bike share stations at locations that would be of particular benefit based on proximity and other considerations.

Public Spaces
As mentioned, there are limited parks and green spaces in the study area that are available for general public use. In addition, survey input conveyed a desire to create parks and green spaces with development and redevelopment opportunities. Furthermore, the Eastside Greenway Health Impact Assessment reported on cultural variations in recreation, with some demographics viewing multi-use trails as recreation opportunities while other demographics view multi-use trails as a means to access parks for recreation, socialization, and connecting communities. As such, the sponsoring communities should look for opportunities to create additional parks and green spaces in the study area. As a minimum, features and amenities such as benches, areas of respite, outdoor activity areas, places to be as well as ways to connect should be incorporated into the proposed greenways and multi-use trails.

Policies
It is important that the study’s community partners implement policies that support the recommendations and outcomes.
• Implement complete and green streets policies to guide future infrastructure development.
• Incorporate appropriate changes to land use policies to promote livability.

**Collaboration**
As an outcome of this study, participating communities should look for opportunities to work together and with other involved agencies to leverage opportunities maximize the potential for multimodal facilities and benefits. One specific example raised is the importance of working with the Western Reserve Land Conservancy to amend the conservation easements for the development of trails in the study area.

**Chagrin Highlands**
To the extent possible with the agreement that is in place, preserve and foster multimodal access around, through and within the sites as they are developed. Provide multi-use trails that preserve connectivity through and between sites (not just within each site), and the surrounding multimodal transportation network, as the sites are developed to adjacent parcels.

As multi-use trails are developed, be sensitive to slopes, drainage, non-motorized access along natural features.

**12. Transit Service & Enhancements**

**12.1 Existing Conditions**
Current RTA operations and facilities in the general area within and around the study area are illustrated in Figure 12-1. Rail service consists of the Blue Line, with the eastern terminus (Van Aken & Warrensville Station) in the Van Aken District which is located in the northwest corner of the study area. Bus service includes Route 14 and Route 5 on Chagrin Boulevard, Route 41 on Warrensville Center Road, Route 15 that circulates through the study area, Route 19 along Miles Road, and Route 94 centered along the Richmond Road Corridor. The 41F provides service to Solon but does not stop in the study area.

![Figure 12-1. Existing Greater Cleveland RTA Bus and Rail Service in the Study Area](image)
12.2 Issues with Existing Transit Service

The Northfield Road-Warrensville Road study area, in many respects, has an admirably high level of transit service. Two major east-west routes providing half-hourly, 24 hour service connect the area to east side neighborhoods and downtown Cleveland. Several significant north-south crosstown routes connect the area to destinations in eastern suburbs north and south of the study area. The Blue Line Rapid, which provides fast, frequent service to downtown Cleveland, lies at the edge of the study area.

In spite of this high level of transit service, there are a number of potential markets and connections that are either not made or made inadequately by the existing service.

- A lack of direct, frequent transit service for trips from the end of the existing Blue Line corridor and retail and job destinations throughout the study area. Lack of express transit service from the I-271, I-480 East and US 422 to downtown Cleveland and University Circle.
- Lack of a direct transit connection to University Circle.
- Lack of circulation within the Northfield Road-Warrensville Road study area.
- Insufficient station/stop and travel time amenities for both Blue Line and bus users within the study area.
- In addition to lack of shelters and other passenger amenities, many parts of the study area lack adequate sidewalks and paved pedestrian connections from bus stops to adjacent development.
- There are many missing links in the study area’s bicycle and pedestrian/multi-use trail network, further confirming the car-dominant nature of the area and short-changes access to transit.
- Population and employment densities are generally below the level at which transit can serve areas efficiently.

12.3 Recommendations

Recommendations to improve transit service in and near the Northfield Road-Warrensville Road study area are listed below. They are...
outcomes of the plan development process, incorporating assessment of existing transit service together with stakeholder and public input. The recommendations are shown in Figure 12-2.

Conduct Comprehensive Analysis of Transit Service
The study recommends a comprehensive analysis of transit service in the study area, potentially in the context of a comprehensive full system operational analysis to identify opportunities to improve service to the area. The current bus service in the study area reflects the consequences of RTA’s incremental and piecemeal service reductions. A comprehensive review would evaluate these changes in the light of the existing and anticipated markets in the area, and would provide RTA with an opportunity to better align its service with the multifaceted transit needs of this area, and to address regional transportation issues that affect this area, while avoiding negative impacts on GCRTA’s larger regional transit network. Obviously, any proposed changes to transit service or facilities in the study area will require analysis by RTA.

Increase Local and Express Bus Service
Proposed improvements to local and express bus service include additional (or modified) service through and to the study area with:

- Connections to and between employment and retail destinations, such as Eton, Pinecrest, and retail along Chagrin Boulevard.
- Connections to and between employment and medical centers.
- Connections between hospitals and other medical and medical office facilities in the study area, such as connecting the various healthcare facilities along the Eastside Health Corridor with each other and to medical destinations in University Circle.

Improve Connections to Study Area Destinations & Complete Last Mile Connections to Van Aken Station
Reconfigure the Blue Line extension BRT plan (UCX), extending the route eastward to Lander Road and north to Chagrin Boulevard to connect with or create a loop route combined with Route 5. This new and reconfigured route would provide the connection to University Circle identified in the Blue Line Extension Project along with providing frequent connecting service among numerous destinations within and near the study area to each other, including linkages to the Blue Line at Warrensville Station and to University Circle-medical and other area destinations.

Establish Transit/Transfer Facility at Warrensville Center/Harvard Intersection
Establish a new transit transfer center at or near the Warrensville Center Road/Harvard Road intersection by South Pointe Hospital to facilitate transfers between bus routes. Provide amenities to transferring passengers of existing and proposed bus routes serving this intersection.

Establish Transit/Transfer Facility and Possible Park-and-Ride at Tri-C East (Richmond Road at Harvard Road)
Create a new facility to provide amenities that facilitate transfers among bus routes and provide amenities to waiting and transferring passengers at Tri-C East. This facility could be coupled with a park-and-ride lot oriented to serving area commuters from the Harvard Road/I-271 Interchange, as recommended in the Blue Line Extension Project, facilitating transit connections to the study area destinations and University Circle, if service is established as recommended.

Establish Transit/Transfer Facility at Warrensville Center Road and Emery Road
Establish a new transit transfer center at or near the Warrensville Center Road/Harvard Road intersection facilitate transfers between bus routes in this growing area. Provide amenities to transferring passengers
of existing and proposed bus routes serving this intersection.

**Examine Opportunities to Use Transit to Address Traffic Congestion Issues at I-271/Chagrin Boulevard Interchange**

Congestion along Chagrin Boulevard is expected to worsen with continued development. Improved transit service that provides frequent connections to area destinations could provide more travel options for and increased capacity in this congested area. The recommended development of a UCX/Route 5 transit loop that connects the Harvard Road and Chagrin Boulevard Corridors via Lander Road and links them to the Van Aken District transit hub is one of perhaps several possible changes to address this issue.

**Broaden Base of Support for Transit Investment in the Study Area**

RTA is charged with providing public transit throughout Cuyahoga County, balancing the transit needs and desires of every community and each area of the county against the needs and desires of all the others throughout their service area. Despite funding constraints, RTA has developed a number of services, like the HealthLine and CSU BRT lines and downtown Trolley network, as well as numerous bus and rail passenger facilities that rise far above the level of basic transit service. Fast, frequent and reliable service and comfortable, safe and attractive vehicles and facilities have attracted many non-transit dependent users to RTA’s services. These improvements often have been made better, and implemented faster, due to the support and, often, financial commitments of local municipalities, other governmental agencies and private businesses, organizations and institutions.

The major businesses and institutions for several municipalities in the study area provide many potential investors to sponsor new transit facilities and to contribute to ongoing service improvements to offset a portion of the costs associated with improving RTA’s presence in the study area. There may be opportunities for branding the proposed UCX BRT Line, like RTA’s other sponsored BRT services which include the HealthLine, the CSU Line and the MetroHealth Line.

Operation of services and development of facilities by entities other than RTA, like the operation of private shuttle routes or the development of transfer centers and passenger waiting facilities, provide additional opportunities to involve local municipalities, other governmental agencies and private entities in improving transit service in the study area.
13. Land Use and Economic Development

13.1 Introduction
New models of economic development have shifted from the traditional focus on specific sites for proposed commercial developments, to a focus on Economic Development Corridors and Innovation Districts to view economic development from a more holistic vantage point (Jim Damicis. Growing Economic Development Corridors & Districts with an Eye Toward Innovation, October 20, 2016). The goal is to integrate place-based community development strategies for housing, transportation, infrastructure, and other amenities with economic development strategies for business and workforce development within defined geographic areas rather than defined sites (Bruce Katz and Julie Wagner. The Rise of Innovation Districts: A New Geography of Innovation in America, Metropolitan Policy Program at Brookings Institute, May 2014). Economic Development Corridors and Innovation Districts are defined as geographic areas where leading-edge anchor institutions and companies cluster, connect and collaborate with start-ups, business incubators, nonprofits, governments and educational institutions. The emphasis then is placed on building upon existing community assets and taking incremental actions to strengthen and build long-term value that will attract new investments.

This chapter examines land use and potential development and redevelopment within the study area to ensure ongoing success by cultivating the area’s competitive advantage and by using its unique assets to attract new investments, and to support existing businesses and industries. These place-based assets center around residents and their skills; local infrastructure; academic, technical, and medical institutions; local and regional business and employment concentrations; cultural, natural, and artistic resources; and the general quality of life in the study area. Note: Variations of the terms and phrases “smart growth economic development strategies” and “place-based economic approaches” are used interchangeably.

Development Principals
The guiding principles for economic development include collaboration, integration, access, innovation and identification.

Collaboration among stakeholders is essential to successfully identifying study area assets and opportunities that will create the conditions for economic prosperity, and establish a platform that allows all stakeholders and communities to work together on the most important projects, needs and issues.

Integration and understanding of all the components, market and industry trends, housing, transportation and infrastructure needs, as well as open space, lifestyle amenities, and labor and workforce are important to ensure a comprehensive approach to the area’s overall economic development.

Access to a robust multi-modal transportation system for workers, residents and commuters is also essential for thriving economic development corridors.

Innovation is key for encouraging growth in emerging industries and technologies within the study area’s economic development corridors. Small and large businesses, think-tanks, nonprofits, and educational institutions all have a role to play in the study area’s endeavors.

Identification and branding of the specific corridors within the study area should take full advantage of an understanding of the place, its strengths, challenges and marketplace opportunities.

Development Objectives
In addition to the development principals, the economic development objectives for the study area should ensure that potential future development opportunities:
• Conduct a market analysis to verify high growth potential business sectors and industries within the study area;

• Fosters and supports collaborations with education, health care and high tech businesses to develop, maintain and expand the workforce;

• Identifies opportunities for job creation, enhancement and retention;

• Examines opportunities for branding the corridors, business sectors and industries within the study area;

• Collaborates with, and assists existing and new businesses and entrepreneurs to help ensure their development, growth and sustainability;

• Identifies viable development sites and business expansion opportunities;

• Ensures that infrastructure expansion is planned to meet development needs and/or job creation demands;

• Considers all modes of transportation and multimodal access when locating new business developments;

• Encourages regional connections and inter-modal hubs for goods and services;

• Develops brand identities around corridor assets and amenities to attract and retain residents;

• Considers the existing character of the adjacent neighborhood and corridors when locating new development;

• Encourages development at a scale, character and intensity appropriate to each site, the surrounding corridors and the community;

• Creates a database of vacant and available properties within each corridor;

• Develops growth and development plans for each of the identified corridors within the study area; and

• Protects the region’s natural environment and significant views and encourage mixed use environments that support multi-modal connectivity as well as green space and recreation.

13.2 Existing Conditions and Opportunities

The Northfield-Warrensville study area is a place of regional significance. As an employment center, there are approximately 12,400 existing jobs within the study area itself, which includes all or parts of Warrensville Heights, Highland Hills, and North Randall. Expanding that area to include the adjacent communities of Beachwood, Bedford, Garfield Heights, Maple Heights, Orange and Shaker Heights, expands the number of existing jobs to 52,000. A commute drive time analysis using the Randall Park Mall Site as the destination shows 126,000 existing jobs within a 15-minute drive (Figure 13-1). This shows the importance of the Northfield-Warrenville study area and indicates its potential as a regional force poised to become the third largest employment center in Cuyahoga County, behind downtown Cleveland and University Circle. By comparison, the reach of the Northfield-Warrensville study area rivals that of some metropolitan core areas with more than 805,000 existing jobs within a 30-minute commute. Refer to Table 13-1 for additional information on area population characteristics associated with 15 and 30 minute commutes. Figure 13-2 shows a heat map of job density and number of jobs by census block group within the study area.

Approximately 54% of workers in the study area are between the age of 30 and 54. The educational level indicates that 29% of workers have a High School Diploma or GED, 29% have Some College or Associates Degree, and 30% have a Bachelor’s degree, Master’s degree or higher.
Located northwest of the convergence of I-271 and I-480. The study area is part of the “Headquarters Highway” area, as dubbed by the Cuyahoga County Planning Commission (Cuyahoga County Planning Commission. Economic Development Plan Year IV Strategy Book: A Component of the Cuyahoga County Economic Development Plan, December 23, 2014). Headquarters Highway runs from the southern limits of the study area at Miles Road to the Cuyahoga County to the east and Lake County border to the north. Headquarters Highway is home to the regional and national headquarters of several major health, science and technology corporations, industrial manufacturers and commercial retailers. In addition, the study area is anchored by numerous retail, restaurant and entertainment venues.

Figure 13-1. Area Commute Drive Times
**Table 13-1. Area Commute Profile**

<table>
<thead>
<tr>
<th>Commute</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>185,608</td>
<td>1,364,600</td>
</tr>
<tr>
<td>Male</td>
<td>84,738</td>
<td>648,119</td>
</tr>
<tr>
<td>Female</td>
<td>100,870</td>
<td>716,481</td>
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</table>

<table>
<thead>
<tr>
<th>Age of Population</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children (Under 20)</td>
<td>47,042</td>
<td>259,152</td>
</tr>
<tr>
<td>Millennial (20 to 34)</td>
<td>30,622</td>
<td>255,291</td>
</tr>
<tr>
<td>Working Age (35 to 64)</td>
<td>73,859</td>
<td>552,329</td>
</tr>
<tr>
<td>Senior (65 and Over)</td>
<td>34,085</td>
<td>277,828</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Attainment</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Age 25 and over</td>
<td>128,166</td>
<td>938,891</td>
</tr>
<tr>
<td>Less than High School Diploma</td>
<td>11,060</td>
<td>109,755</td>
</tr>
<tr>
<td>High School or GED</td>
<td>37,241</td>
<td>274,452</td>
</tr>
<tr>
<td>Some College or Associates Degree</td>
<td>38,256</td>
<td>271,472</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>20,645</td>
<td>169,353</td>
</tr>
<tr>
<td>Master’s degree or higher</td>
<td>17,964</td>
<td>144,049</td>
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</table>

<table>
<thead>
<tr>
<th>Home Ownership</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupied Housing Units</td>
<td>76,581</td>
<td>571,792</td>
</tr>
<tr>
<td>Owner</td>
<td>48,950</td>
<td>353,736</td>
</tr>
<tr>
<td>Renter</td>
<td>27,631</td>
<td>218,056</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aggregate Income</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate Income</td>
<td>$546 B</td>
<td>$3760 B</td>
</tr>
<tr>
<td>Average Household Income</td>
<td>$7133 D</td>
<td>$65755</td>
</tr>
<tr>
<td>Per Capita Income</td>
<td>$29422</td>
<td>$27553</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Household Income Ranges</th>
<th>15-Minute</th>
<th>30-Minute</th>
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</thead>
<tbody>
<tr>
<td>Under $25,000</td>
<td>219,70</td>
<td>165,928</td>
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<tr>
<td>$25,000 to $49,999</td>
<td>138,54</td>
<td>140,786</td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td>128,61</td>
<td>97,064</td>
</tr>
<tr>
<td>$75,000 to 99,999</td>
<td>78,78</td>
<td>62,471</td>
</tr>
<tr>
<td>$100,000 to $149,999</td>
<td>42,90</td>
<td>37,898</td>
</tr>
<tr>
<td>$25,000 or Higher</td>
<td>9,731</td>
<td>67,645</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Jobs by Age</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 or younger</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>30 to 54</td>
<td>55%</td>
<td>55%</td>
</tr>
<tr>
<td>55 or older</td>
<td>23%</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Workers by Age</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 or younger</td>
<td>23%</td>
<td>23%</td>
</tr>
<tr>
<td>30 to 54</td>
<td>54%</td>
<td>54%</td>
</tr>
<tr>
<td>55 or older</td>
<td>23%</td>
<td>24%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jobs by Income</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1250 per month or less</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>$1251 to $3333 per month</td>
<td>36%</td>
<td>34%</td>
</tr>
<tr>
<td>Greater than $3333 per month</td>
<td>39%</td>
<td>42%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Workers by Income</th>
<th>15-Minute</th>
<th>30-Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1250 per month or less</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>$1251 to $3333 per month</td>
<td>36%</td>
<td>36%</td>
</tr>
<tr>
<td>Greater than $3333 per month</td>
<td>39%</td>
<td>39%</td>
</tr>
</tbody>
</table>

**Target Industries & Major Anchors**

There are four major target industries primed for potential redevelopment, planned investments and targeted recruitment and marketing within the study area. They are logistics and entertainment, healthcare and education, office and technology, retail and manufacturing.

The major industries located within a 15-minute drive of the study area are evenly distributed with 32% of jobs in education, healthcare, leisure and hospitality; 27% of jobs in professional and business services and finance; 25% of jobs in goods production, wholesale trade, and transportation; and 11% of jobs in retail trade. Refer to Table 13-2 for area employment data, differentiated by 15 and 30 minute commutes.

Although the Northfield-Warrensville study area is not a central city core, it includes characteristics and destinations that add to the appeal of its location and support or help cultivate its economic development potential, as demonstrated by the significant land uses and destinations that are summarized in the sections below.
Figure 13-2 Project Area Job Concentrations
### Table 13.2. Area Employment Profile

#### Jobs by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>15 Minute</th>
<th>30 Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Jobs</td>
<td>25,574</td>
<td>805,328</td>
</tr>
<tr>
<td>Natural Resources, Mining, Utilities</td>
<td>380</td>
<td>4,389</td>
</tr>
<tr>
<td>Goods Production</td>
<td>12,441</td>
<td>123,831</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>12,569</td>
<td>71,936</td>
</tr>
<tr>
<td>Wholesale Trade, Transportation</td>
<td>12,208</td>
<td>71,566</td>
</tr>
<tr>
<td>Information</td>
<td>1,525</td>
<td>7,732</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>12,057</td>
<td>56,089</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>23,907</td>
<td>179,547</td>
</tr>
<tr>
<td>Education and Health Service</td>
<td>27,005</td>
<td>209,808</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>12,485</td>
<td>77,684</td>
</tr>
<tr>
<td>Other Services</td>
<td>3,420</td>
<td>24,068</td>
</tr>
<tr>
<td>Public Administration</td>
<td>2,577</td>
<td>28,291</td>
</tr>
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</table>

#### Workers by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>15 Minute</th>
<th>30 Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Workers</td>
<td>83,506</td>
<td>617,915</td>
</tr>
<tr>
<td>Natural Resources, Mining, Utilities</td>
<td>510</td>
<td>4,320</td>
</tr>
<tr>
<td>Goods Production</td>
<td>9,595</td>
<td>82,657</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>7,784</td>
<td>63,960</td>
</tr>
<tr>
<td>Wholesale Trade, Transportation</td>
<td>6,094</td>
<td>48,557</td>
</tr>
<tr>
<td>Information</td>
<td>1,507</td>
<td>11,924</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>10,057</td>
<td>56,089</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>12,382</td>
<td>94,039</td>
</tr>
<tr>
<td>Education and Health Service</td>
<td>26,509</td>
<td>170,316</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>8,172</td>
<td>63,412</td>
</tr>
<tr>
<td>Other Services</td>
<td>2,404</td>
<td>3,360</td>
</tr>
<tr>
<td>Public Administration</td>
<td>2,577</td>
<td>22,769</td>
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</table>

#### Jobs in the Primary Project Area

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Warrensville Hts.</th>
<th>Highland Hills</th>
<th>North Randall</th>
<th>Total PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>8,357</td>
<td>2,321</td>
<td>1,759</td>
<td>12,437</td>
</tr>
<tr>
<td>Male</td>
<td>4,274</td>
<td>956</td>
<td>1,000</td>
<td>6,221</td>
</tr>
<tr>
<td>Female</td>
<td>4,083</td>
<td>1,365</td>
<td>759</td>
<td>4,448</td>
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</table>

#### Jobs in the Secondary Project Area (Neighboring Cities)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>22,004</td>
<td>4,887</td>
<td>11,075</td>
<td>5,788</td>
<td>605</td>
<td>6,932</td>
<td>52,212</td>
</tr>
<tr>
<td>Male</td>
<td>8,133</td>
<td>2,665</td>
<td>5,213</td>
<td>2,936</td>
<td>620</td>
<td>2,351</td>
<td>21,918</td>
</tr>
<tr>
<td>Female</td>
<td>13,751</td>
<td>2,222</td>
<td>5,862</td>
<td>2,802</td>
<td>985</td>
<td>4,581</td>
<td>30,203</td>
</tr>
</tbody>
</table>

#### Workers Living in the Primary Project Area

<table>
<thead>
<tr>
<th>Municipalities</th>
<th>Warrensville Hts.</th>
<th>Highland Hills</th>
<th>North Randall</th>
<th>Total PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>5,731</td>
<td>255</td>
<td>450</td>
<td>6,436</td>
</tr>
<tr>
<td>Male</td>
<td>2,243</td>
<td>109</td>
<td>205</td>
<td>2,557</td>
</tr>
<tr>
<td>Female</td>
<td>3,488</td>
<td>146</td>
<td>245</td>
<td>3,879</td>
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#### Workers living in the Secondary Project Area (Neighboring Cities)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>5,040</td>
<td>6,027</td>
<td>13,014</td>
<td>10,117</td>
<td>1,505</td>
<td>12,444</td>
<td>48,347</td>
</tr>
<tr>
<td>Male</td>
<td>2,485</td>
<td>2,747</td>
<td>5,979</td>
<td>4,380</td>
<td>765</td>
<td>5,701</td>
<td>22,084</td>
</tr>
<tr>
<td>Female</td>
<td>2,555</td>
<td>3,253</td>
<td>7,035</td>
<td>5,717</td>
<td>740</td>
<td>6,743</td>
<td>26,063</td>
</tr>
</tbody>
</table>
Cuyahoga Community College and Cuyahoga Corporate College
The eastern campuses of Cuyahoga Community College (Tri-C) and Cuyahoga Corporate College are located on Richmond Road between Harvard and Emery Roads. In addition to an institution of higher education, Tri-C serves as a community resource, providing workforce development and training, continuing education, career counseling, and leadership development programs. In addition, Tri-C is a human service provider of health and wellness programs such as women in transition, tax clinics, and faith-based initiatives.

Tri-C serves over 55,000 students annually. In addition to academic and skilled training programs, the Tri-C master plan outlines initiatives to add multi-use trails and recreational fields that connect to surrounding neighborhoods and will become part of the Mill Creek trail network. In addition, Tri-C plans to add community spaces and on-campus housing.

JACK Thistledown Racino
JACK Thistledown Racino is a 57,000-square foot gaming focused entertainment venue located along Emery Road between Warrensville Center Road and Northfield Road, on the site of the Thistledown Race Track and just north of the former Randall Park Mall. In addition to gaming, the facilities include six eateries and restaurants, three bars, and all genres of live musical entertainment. JACK Thistledown Racino also holds community events and activities like line dancing and karaoke.

JACK Entertainment employs over 7,000 workers. The Racino’s immediate development plans include $70 million in incremental capital investments to build a hotel and Starbucks on site.

Randall Park Mall Site
The former Randall Park Mall site represents a significant opportunity for reinvestment and economic development. This site is roughly ½ mile along each of the four main perimeter roads and more than three times the area of the nearby Van Aken District redevelopment project in Shaker Heights that is expected to have a transformativ impact on the region. The sheer size of the former Randall Park Mall site conveys its importance to the study area and the region as a potential economic engine.

A recent announcement disclosed plans to redevelop a portion of the site as the future home of an Amazon Fulfillment Center. This new 855,000 square foot development will occupy 69 acres of the former mall site and is expected to generate 1,200 new jobs. Complying with the light industry/office zoning, the Amazon Fulfillment Center development will face Emery Road and split the former mall site roughly in half, leaving potential out parcels along Northfield and Miles Roads for future redevelopment.

Highland Park Golf Course
The Highland Park Golf Course provides a recreational and aesthetic amenity in the study area, with its golf course greens and wooded areas. Adjacent to the scenic Highland Park Cemetery, Highland Park Golf Course is a 36-hole course with 6,740 yards of play. Located within Highland Hills, the golf course has been rezoned for residential land use, with the expectation that at some point in the future it will have the potential for redevelopment of at least a portion of the property as mixed-use residential.

Harvard Park
Harvard Park is a shopping center within the Chagrin Highlands development, located on the southwest quadrant of the Richmond Road/Harvard Road intersection and adjacent to the Harvard Road interchange on I-271. Harvard Park is across the street from Tri-C East and University Hospitals’ Ahuja Medical Center and near LifeTime Fitness, Eaton Corporation, OMNOVA Solutions, ALOFT. The site includes a Marriott Hotel, several restaurants, and approximately fifteen retailers of home goods furniture, office supplies and shoes.

Cleveland Clinic
As Cleveland Clinic’s primary medical facility in the study area, South Pointe Hospital is a teaching hospital with a strong affiliation to the Ohio University Heritage College of Osteopathic Medicine. South Pointe is also recognized in Gastroenterology and
Gastrointestinal Surgery, Neurology & Neurosurgery and major Heart Conditions.

**University Hospitals**
University Hospitals’ facilities have a significant presence in the study area. Ahuja Medical Center is located on the northeast quadrant of the Richmond Road/Harvard Road intersection and adjacent to the Harvard Road interchange on I-271. Ahuja Medical Center creates a vital link to University Hospitals tertiary care services, offering a concierge model of care. Ahuja has four facilities within the study area including the hospital. Ahuja Medical Center itself is a sustainably designed hospital practicing green building principals. Other University Hospitals facilities in the study area include the administrative center on Warrensville Center Road and the customer service center located at the Harvard Road/Northfield Road intersection. University Hospitals supports multimodal transportation as the branded, named sponsor of UH Bikes, Cleveland’s Bike Share Program.

**Eastside Health Corridor**
The prevalence of healthcare facilities within the study area have led to the identification of the Harvard Road corridor as the Eastside Health Corridor. This area provides a significant number of jobs in the study area as well as tremendous community support.

**Warrensville Heights Town Center**
A key component to creating multimodal connectivity that adds to economic development is its impact on overall quality of life for residents, employers and workers. A priority for the City of Warrensville Heights is the development of a new Warrensville Heights town center which will serve as a community gathering place. This effort is underway, with the fairly recent construction of the Warrensville Heights’ branch of the Cuyahoga County Public Library and the YMCA. Progress will continue with plans for a new City Hall at this location.

In addition, Warrensville Heights is developing a plan to consolidate their schools adjacent to the town center, with a new flagship high school and reconstruction of the existing high school as the new middle school on the existing collocated school site, along with a new K-5 elementary school. Although the plan is not yet funded, it is an important part of the city’s future plans.

**Chagrin Highlands**
The 630-acre Chagrin Highlands is significant because of its eventual development will impact travel and connectivity within and throughout the study area. The properties are owned by the City of Cleveland and controlled by Jacobs Real Estate Services, LLC and occupy multiple areas in the study area as well as the neighboring communities of Orange and Beachwood. As noted in the Existing Conditions Section, conservation easements are a part of the original Chagrin Highlands permitting. These easements are held by the Western Reserve Land Conservancy and do not allow for the development of trails. Based on the natural green infrastructure within the Chagrin Highlands properties, it would be beneficial for future development to incorporate trails and other green infrastructure as an amenity to new development and enhancing multimodal connectivity within the study area. However, specific development of the Chagrin Highlands lands is controlled by the Chagrin Highlands Partnership and led by Jacobs.

**13.3 Character Framework**
To help define the economic development character and potential of the Northfield-Warrensville study area, each of the significant roadway corridors has been assigned a type and function. The economic development corridor types reflect the land use along the roadways, and the corridor function highlights the look and feel of the corridor. It is important to note that the economic development types do not reflect the ODOT highway classification. Factors considered in establishing the corridor type and function include the following:

- Existing land uses and unique conditions
- Current role of the corridor within the study area (i.e., gateway, industrial corridor, commercial corridor, new or potential major economic engine, etc.)

69
Connectivity to surrounding areas
Appearance and surroundings
Best land uses for the area
Shortfalls and limitations
Development constraints

ECONOMIC DEVELOPMENT CORRIDOR TYPES
Four economic development corridor types are identified: Regional, Primary, Secondary and Scenic. The characteristics of the corridors are assessed beyond the specific study area limits to ensure appropriate classification of each of corridor.

Regional Corridor
Regional Corridors are defined as major roadways that connect across the region and carrying significant volumes of traffic. These corridors typically include large concentrations of retail and commercial uses such as big box retailers, medical centers, restaurants and grocery stores that attract patrons from beyond the immediate area, from neighboring cities, or from travelers on the highways. Regional Corridors serve as community gateways and they should be accessible by multiple transportation modes. Regional Corridors in the study area are:
- Warrensville Center Road
- Richmond Road
- Harvard Road

Primary Corridor
Primary Corridors are defined as major roadways that are characterized by a mix of land uses; they provide direct access to destinations and connect to other major transportation routes, but not as large or as significant as Regional Corridors. Primary Corridors typically carry commuter traffic and as such, should offer multimodal commuting opportunities including transit, bicycle and walking. Primary Corridors in the study area are:
- Chagrin Road
- Green Road
- Miles Roads

Secondary Corridor
Secondary Corridors are roads that provide access to residents and connect to commercial areas and other types of local destinations. These corridors are characterized by lower volumes of traffic traveling at lower speeds. Secondary Corridors should accommodate bicycle and pedestrian traffic as well as automobile traffic, and they should incorporate effective access management and streetscape amenities to enhance multimodal travel. Secondary Corridors in the study area are:
- Northfield Road
- Emery Road

Scenic Corridor
Scenic Corridors are attractive roadways with adjacent natural features, and/or aesthetic views that have a greenway character. These corridors may be hybrids, reflecting characteristics of more than one economic development corridor type in the way they look, feel and function. For example, Harvard Road exhibits both Regional and Scenic corridor characteristics and Northfield Road exhibits both Secondary and Scenic Corridor characteristics within the study area.
- Harvard Road

FUNCTIONAL CHARACTERISTICS
In addition to corridor types, the corridors can be assigned a functional characteristic to reflect the "personality" of each corridor. The functional characteristics are:

Commuter Route
Commuter Routes provide direct access to destinations and/or connections to other major transportation routes. Commuter Routes are characterized by mixed land uses.

Neighborhood Link
Neighborhood Links serve local users and adjacent residential land uses.

Commercial/Institution Route
Commercial/Institution Routes are characterized by a concentration and distribution of retail, commercial and institutional uses.
Industrial Route
Industrial Routes are characterized by industrial uses and substantial truck traffic.

13.4 Application
As previously stated, it is important to note that the overall character, corridor type and function described herein do not reflect or alter the roadway’s highway classifications or related traffic management terminology. Rather, the economic development corridor types are designed to frame and inform discussions and decision making regarding economic development to include the topics of land use patterns, business and workforce development, sense of place, site access, and transportation options. The study area corridors and their identified categories are shown in Figure 13-3 and further detailed in Table 13-3.

In many cases, application of the corridor type and function reflect the existing as well as the preferred direction of development for the corridor in terms of desired future land use, development, redevelopment and transportation options.

The information developed in this section is intended to guide future conversations between the Cuyahoga County Planning Commission and the involved communities to help establish and/or refine land use and zoning policies and other factors that will influence the future development and economic health of the communities. Understanding the corridor characteristics as a reflection of the community and land use patterns will allow the communities to use that information to frame development plans for the future and determine what makes sense.

The information here highlights the existing features and characteristics, and that information can be used to help identify and understand what could be integrated into the communities in the future. The existing conditions will be used to effectively form a foundation for the future.

The intent is to use this information to develop basic strategies that the cities can use to help plan the future of their communities, and how their community relates to the adjacent communities. What should be promoted as a next step? However, future planning should not be limited to focusing on the corridors. Rather, future planning should also integrate relevant information from other parts of this plan. In addition to identified development opportunities, the planning could incorporate branding, gateways, and other elements to describe and define distinct areas within the study area.

Identified as the largest contiguous site that stands ready for redevelopment, and owned by an outside agency, redevelopment of the former Randall Park Mall site is of substantial concern for the study area. This site has the potential to significantly influence the study area, in an either positive or negative manner, depending on the redevelopment plan. Of immediate concern is the upcoming implementation of the Amazon Fulfillment Center on a portion of the site. This new use will require integration and support from the surrounding area for it to function well within the immediate impact area of the Randall Park Mall site as well as its function within the community, the study area and the greater region. Given the transportation-centric nature of this Amazon distribution center, traffic impacts should be analyzed and addressed, along with access management. In addition, support services including transit access and adjacent businesses that serve employees should be considered.
Figure 13-3. Corridor Character Map
Table 13-3. Corridor Character, Features and Recommendations

<table>
<thead>
<tr>
<th>REGIONAL CORRIDOR</th>
<th>CORRIDOR</th>
<th>LAND USE</th>
<th>MOBILITY</th>
<th>ECONOMIC DEVELOPMENT POTENTIAL</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richmond Road</td>
<td>Warrensville Center Road</td>
<td>A regional commuter corridor that is mainly residential, but has large office, commercial and light industrial uses.</td>
<td>Provides good access for major employers and residents in the corridor, and through travel for commuters going to neighboring communities by car or on the primary RTA bus routes in the corridor: Routes 41, 41F and 76 with a connection to RTA Route 90.</td>
<td>This area is primed for infill development and redevelopment around the planned Amazon Fulfillment Center. There are several out parcels that remain around the new Fulfillment Center. In addition, there are several existing major employers along Warrensville Center Road including South Pointe Hospital, Sherwin Williams Automotive Finishes World Headquarters, Warrensville Heights Board of Education, and JACK Thistledown Racino (casino).</td>
<td>(1) Implement access management controls and strategies in conjunction of the redevelopment of the new Amazon Fulfillment Center site; (2) Encourage multimodal access in, and around the new Amazon Fulfillment Center site; (3) Partner with major employers to create a Workforce Development Plan focused on major industries in the corridor; (4) Construct a multi-use trail along the east side of Warrensville Center Road, connecting with the planned trail in Shaker Heights; and (5) Improve the pedestrian experience at intersections along Warrensville Center Road and Miles Road.</td>
</tr>
</tbody>
</table>

(1) Ensure redevelopment that supports the Cuyahoga Community College and Corporate College Master Plans; (2) Recruit businesses and industries that supplement and/or support the area’s thriving industries; and (3) Construct a multi-use trail where appropriate to provide access to the Tri-C campuses; (4) Construct a grade-separated trail crossings at the intersection of Richmond and Harvard Roads; and (5) Improve roadway and/or shift travel lanes along Richmond Road to improve safety and provide multimodal access across the bridge over I-480.
<table>
<thead>
<tr>
<th>PRIMARY CORRIDOR</th>
<th>LAND USE</th>
<th>MOBILITY</th>
<th>ECONOMIC DEVELOPMENT POTENTIAL</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chagrin Boulevard</td>
<td>A primary commercial corridor with residential, institutional, retail and office uses.</td>
<td>Chagrin Road is auto-dominated and has missing sidewalks. RTA Transit Route 5 connects from the Van Aken Rapid Station to Lander Circle with connections to several other routes.</td>
<td>The corridor features the Highland Park Golf Course to the east, and just outside the Project Area to the west in the City of Beachwood is the Giant Eagle retail center and the new Vue luxury townhomes. There is long term potential for new residential development on Chagrin Boulevard and Northfield Road as Highland Hills has rezoned a portion of the golf course property to residential.</td>
<td>(1) Encourage redevelopment of underutilized and vacant commercial and retail properties; (2) Leverage existing office and commercial assets to spur additional or similar opportunities for job growth; (3) Construct a multi-use trail along the south side of Chagrin Boulevard, connecting to the proposed trails on Green and Northfield Roads providing bicycling as a transportation travel mode option; and (4) Optimize signalization and sidewalks along Chagrin Boulevard to provide better travel conditions for walkers and transit users.</td>
</tr>
<tr>
<td>Green Road</td>
<td>A mixed-use primary commuter corridor with residential, greenway, office and institutional uses. There are also commercial, retail and industrial uses.</td>
<td>The Green Road corridor connects north to other suburban municipalities, and south at Miles Road to I-480 and I-271. There is limited RTA Route 15 service along Green Road between Harvard Road and Granada Boulevard. Due to recent RTA service cuts, Route 34 service is no longer provided on Green Road south of Shaker Boulevard.</td>
<td>There are several institutional and commercial campuses along green including PNC Bank, the Greater Cleveland National Guard Career Center, the Warrensville Heights Civic and Senior Center, the Warrensville Developmental Center, and CEOGC Head Start. The commercial district on the east side of Green Road at Chagrin is a part of the Mercantile Road and Commerce Park commercial and retail districts just outside the study area in the City of Beachwood. Green Road has greenway characteristics and features south of Harvard to complement those of the Harvard Road and Northfield Road corridors. The remainder of the corridor offers several tree lined neighborhood links that connect the internal neighborhood streets to Green Road. There are several opportunities for development along Green Road that could complement or support a targeted development strategy for Chagrin Highlands.</td>
<td>(1) Set back requirements, where appropriate, should be implemented to maintain the same sense of openness and scenic aspects along the Green Road corridor as exist in the Northfield Road and Harvard Road Corridors; (2) Enhance the connections to Green Road from the adjacent neighborhoods; (3) Improve walkability and multimodal access in the adjacent residential neighborhoods; and (4) New development in the Green Road Commuter Corridor should mimic the policies of the existing, proposed and targeted development that impacts Northfield and Harvard Roads.</td>
</tr>
<tr>
<td>CORRIDOR</td>
<td>LAND USE</td>
<td>MOBILITY</td>
<td>ECONOMIC DEVELOPMENT POTENTIAL</td>
<td>RECOMMENDATIONS</td>
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<tr>
<td><strong>PRIMARY CORRIDOR</strong></td>
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<tr>
<td>Miles Road</td>
<td>A primary Industrial corridor with industrial and light industrial uses, and some commercial manufacturers and retailers. There are also high density residential communities just off Miles Road on Derbyshire and Carolyn Drives and Banbury Court.</td>
<td>Travel lanes go from 3-5 lanes with no median. Sidewalks are missing between Northfield and Warrensville Center Roads. There are no bicycle facilities. RTA bus services consists of Route 19 which runs between Warrensville Center Road and Fargo Road.</td>
<td>The major entities in the area include Coca-Cola Bottling Company, Ferguson Enterprise and Alcorn Technology. In addition, there are several industrial parks along Miles Road situated in the cities of Warrensville Heights and Bedford Heights, including Galaxy Parkway, Eastlawn, Westlawn, and developments on Northland Roads, and Taylor and Corbin Drives. The strong automotive and automotive-related industry presence in the area includes Car Max, Vintage Motor Cars and several other auto parts, restoration, finishing and repair retailers; this creates an opportunity to attract similar industries to this area.</td>
<td>(1) Encourage redevelopment of underutilized and vacant commercial and industrial properties; (2) Leverage existing Industries in the area to spur additional opportunities for development and job growth; (3) Highlight areas with potential land use changes that will impact how the area absorbs future development; and (4) Encourage training and educating the existing workforce in new and emerging technologies that will prepare them for new opportunities in light industries and logistics.</td>
</tr>
<tr>
<td><strong>SECONDARY CORRIDOR</strong></td>
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<tr>
<td>Northfield Road</td>
<td>A secondary greenway and neighborhood link.</td>
<td>There is currently no public transit service along Northfield Road.</td>
<td>The green character of the corridor between the traffic circle and Harvard Road offers an opportunity to develop a civic greenway connecting to the residential neighborhoods, schools, parks, the library and YMCA as well as Warrensville Heights' proposed new City Center.</td>
<td>(1) Set back requirements, where appropriate, should be instituted to maintain the sense of openness and scenic aspects along the corridor; (2) Enhance connections to the greenway, and improve internal walkability in the adjacent neighborhoods. (3) Concentrate new development around institutional, nonprofit and retail uses that support the area as a Civic Center; and 4) Consider the feasibility of adding public transit along Northfield Road in the future.</td>
</tr>
<tr>
<td>Emery Road</td>
<td>A neighborhood link with adjoining residential streets. A pocket of retail, commercial, office and institutional uses are located near Northfield Road with light industry and commercial uses to the west.</td>
<td>RTA bus service consists of Route 15.</td>
<td>There are small strip centers with businesses, nonprofit regional offices, national chain discount retailers, and national chains including KFC, Burger King, Subway, CVS Pharmacy, Save-A-Lot, Roses Discount Stores, Salvation Army, Angie’s Soul Food, Frederick’s Restaurant, and Emery &amp; Green Dental. There are several vacant parcels between Northfield and Emery that provide good commercial and retail options which could be supported by prospective new jobs in the area.</td>
<td>(1) Recruitment of business that are local in nature that support the needs of nearby residents; (2) Implement a road diet, and convert Emery to three lanes to add buffered bike lanes; and (3) Improve pedestrian amenities and better walkability for residents to access nearby parks, recreation amenities, commercial districts and public transit.</td>
</tr>
</tbody>
</table>
### CORRIDOR

**Harvard Boulevard**

- **LAND USE**
  - Harvard Road is largely undeveloped to the east between Northfield Road and Eaton/Robert Bishop Road; the area to the west encompasses parts of Chagrin Highlands.

- **MOBILITY**
  - Direct access to I-271. There is also direct access to Cuyahoga Community College on RTA Route 94; RTA bus service along Harvard Road consists of Route 15 and 41F.

- **ECONOMIC DEVELOPMENT POTENTIAL**
  - Part of the area dubbed “Headquarters Highway” with University Hospital’s Ahuja Medical Center northeast of Harvard at Richmond Road, and Cleveland Clinic’s South Pointe Hospital to the southwest. There are several other University Hospitals facilities and other hospital-related facilities and medical services in the area including University Hospitals’ Connor Integrative, and University Premier Pediatrics. These assets can be used to recruit and attract similar, supplemental or complementary uses.

<table>
<thead>
<tr>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Require larger setback to maintain the greenway character and protect viewsheds where possible;</td>
</tr>
<tr>
<td>(2) Focus on complementary development that includes mixed-use housing and specialty retail for Cuyahoga Community College in keeping with their Master Plan;</td>
</tr>
<tr>
<td>(3) Construct a multi-use trail along Harvard Road with a separated crossing at the Richmond Road intersection, and along Millcreek Boulevard to provide multimodal opportunities for scenic recreation; and</td>
</tr>
<tr>
<td>(4) Encourage specialized training to educate the existing workforce in new and emerging technologies in healthcare and related industries.</td>
</tr>
</tbody>
</table>
1. Van Aken & Warrensville Rapid Transit Station

2. Sherwin Williams Automotive Finishes World Headquarters

3. JACK Thistledown Racino

4. University Hospital’s Management Services Center

5. Residences along Warrensville Center Road

6. Rendering of Amazon Fulfillment Center

Figure 13-4. Warrensville Center Road – Regional Corridor
Figure 13-6. Richmond Road Regional Corridor
Figure 13-7. Chagrin Boulevard – Primary Corridor
Figure 13-5. Green Road Primary Corridor

1. PNC Bank

2. Residences and Greenway along Green Road

3. Warrensville Developmental Center
Figure 13-8. Miles Road - Primary Corridor
Figure 13-9. Northfield Road Secondary Greenway and Neighborhood Link
1. Emery Green Plaza
2. Retail at Green and Emery Roads
3. John Dewey Elementary School
4. Townhomes Merrygold Blvd. and Emery Rd

Figure 13-10. Emery Road - Secondary Neighborhood Link
Figure 13-11. Harvard Road - Scenic Corridor
14. Recommendations

Recommendations for the multiple aspects of the plan are summarized in the preceding sections. A consolidated summary of recommendations, shown by type of infrastructure treatment or facility, is provided in Table 14-1. Short, Medium and Long Term classifications represents a qualitative assessment of the amount of effort, time and funding that would be required for implementation.

Refer to the relevant report sections for more detail on the recommendations. In addition, and for ease of understanding by the involved communities, recommendations for each of the study area corridors are provided in Table 14-2. Please note that this table only includes corridor recommendations; it is not a complete list of recommendations.

In addition, Table 14-3 summarizes recommendations supporting cohesive economic development strategies. Finally, multimodal recommendations for non-motorized improvements for bicyclists and pedestrians are illustrated in Figure 14-1. Similarly, multimodal recommendations for transit improvements are illustrated in Figure 14-2.

<table>
<thead>
<tr>
<th>Infrastructure Recommendation</th>
<th>Implementation</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Pedestrian Treatments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Refer to Table 11-1 for the list of Sidewalk Missing Links.  
Refer to section 11.3 for the comprehensive list of Pedestrian Recommendations. |                |               |
| Complete the sidewalk network within the study area.  
Construct sidewalks where there are currently missing links to provide sidewalk connectivity throughout the study area, as identified in Table 11-1. | Short Term  
Although not necessary for all corridors and sidewalks, multi-community partnerships will benefit implementation.  
– Beachwood  
– Highland Hills  
– North Randall  
– Shaker Heights  
– Warrensville Heights | Completing the missing sidewalk links will improve pedestrian connectivity and multimodal access. |
### Infrastructure Recommendation

**Configure intersections on primary corridors to safely accommodate pedestrians.**  
- Provide signal timing to safely allow pedestrians to walk across the street.  
- Install countdown pedestrian signal heads. Refer to Section 10.7 for a list of intersections that are missing pedestrian signal heads and others that should be upgraded to countdown pedestrian signal heads.  
- Install crosswalks on all signalized intersection approaches and all stop-controlled intersection approaches. Refer to Section 11.3 for a list of intersections that are missing crosswalks on one or more approaches.

**Implementation**  
**Time Frame and Community(ies)**
- **Short Term**

**Justification**
Provision of basic pedestrian accommodations (signal timing, countdown pedestrian signal heads, crosswalks) will facilitate multimodal access, enhance pedestrian connectivity, and improve operational safety for pedestrians by facilitating safe pedestrian crossings at intersections.

### Intersection & Crossing Treatments

Refer to section 11.3 for the comprehensive list of Pedestrian Recommendations.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Implementation</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provide an enhanced pedestrian crossing (highly visible crosswalk, countdown pedestrian heads, etc.) at the Warrensville Center Road/Longbrook Road intersection.</strong></td>
<td><strong>Short Term</strong></td>
<td>Provision of enhanced pedestrian crossings at this existing signalized intersection will improve pedestrian safety and facilitate access to the Warrensville Heights schools and the adjacent neighborhoods.</td>
</tr>
<tr>
<td><strong>Provide an enhanced pedestrian crossing (highly visible crosswalk, countdown pedestrian heads, etc.) at the Northfield Road/Ellacott Parkway-Clarkwood Parkway intersection.</strong></td>
<td><strong>Short Term</strong></td>
<td>Provision of enhanced pedestrian crossings at this existing signalized intersection will improve pedestrian safety and facilitate access to the Warrensville Heights schools and the adjacent residential neighborhoods.</td>
</tr>
<tr>
<td><strong>Relocate (or close) the driveways on Granada Boulevard, located immediately north of the Emery Road intersection, to minimize adverse impacts to intersection operations and safety.</strong></td>
<td><strong>Medium Term</strong></td>
<td>Driveway relocation or closure will enhance intersection safety.</td>
</tr>
<tr>
<td><strong>Provision of a mid-block crossing is recommended with the proposed greenway along Mill Creek to facilitate pedestrian crossings.</strong></td>
<td><strong>Short (or Medium) Term</strong></td>
<td>Provision of a mid-block crossing at this location will support multi-modal access along the proposed Mill Creek Trail. This mid-block crossing should be installed to coincide with the construction of the new Mill Creek Trail.</td>
</tr>
<tr>
<td>Infrastructure Recommendation</td>
<td>Implementation</td>
<td>Justification</td>
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<tr>
<td><strong>Intersection Geometrics</strong></td>
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<tr>
<td>Construct ADA compliant pedestrian treatments (curb ramps, crosswalks) at the Clarkwood Parkway/Granada Boulevard intersection.</td>
<td>Short term</td>
<td>Improve pedestrian access and safety.</td>
</tr>
<tr>
<td></td>
<td>- Warrensville Heights</td>
<td></td>
</tr>
<tr>
<td>Construct a westbound double left turn and an eastbound exclusive right turn lane at the Northfield Road/Miles Road intersection.</td>
<td>Long term</td>
<td>Improve intersection operational performance, efficiency and safety.</td>
</tr>
<tr>
<td></td>
<td>- North Randall</td>
<td>Note: This will lengthen pedestrian crossing distances, making it more difficult to walk across the intersection so pedestrian enhancements should be included. However, all traffic recommendations located in or near the Randall Park Mall site must be revisited based on traffic impacts from Amazon facility prior to implementation.</td>
</tr>
<tr>
<td>Realign Granada Boulevard and Derbyshire Drive to a standard four-legged intersection at Emery Road, thereby eliminating the need to split-phase the north-south approaches.</td>
<td>Long term</td>
<td>Improve intersection operational performance and safety.</td>
</tr>
<tr>
<td></td>
<td>Multi-community partnership</td>
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</tr>
<tr>
<td></td>
<td>- North Randall</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Warrensville Heights</td>
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</tr>
<tr>
<td>Reconfigure the Warrensville Center Road/Miles Road interchange to make it more pedestrian friendly; realign the intersection approaches and shorten pedestrian crossing distances. This should be done with redevelopment of the Randall Park Mall site.</td>
<td>Long term</td>
<td>Improve safety for pedestrians by reducing crossing distance and exposure to vehicles.</td>
</tr>
<tr>
<td></td>
<td>Multi-community partnership</td>
<td></td>
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<tr>
<td></td>
<td>- North Randall</td>
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<td></td>
<td>- Warrensville Heights</td>
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</tbody>
</table>
## Infrastructure Recommendation

### Access Management

Access management strategies should be implemented as part of the redevelopment plans throughout the study area, and particularly within and surrounding the Randall Park Mall site.

Integrate plans and studies for Amazon redevelopment to ensure safe and efficient operations, along with the potential for multimodal balance, as the new Amazon Fulfillment Center is built and begins operations.

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium and Long Term</td>
<td>Access management demonstrates prioritization of considerations and accommodations for safe, comfortable bicycle and pedestrian mobility. In addition, access management improves operational safety within the roadway network.</td>
</tr>
<tr>
<td>Although not needed for all corridors and driveway locations, multi-community partnerships will benefit implementation.</td>
<td></td>
</tr>
<tr>
<td>− Beachwood</td>
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<tr>
<td>− Highland Hills</td>
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<td>− North Randall</td>
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<td>− Shaker Heights</td>
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<tr>
<td>− Warrensville Heights</td>
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</tbody>
</table>

### Signal Operations

Optimize signal timing for the signalized intersections in the study area (all intersections).

Modify signal phasing at the two intersections listed below. Convert the existing northbound and southbound protected only left turns to protected/permissive left turns at both intersections:

− Northfield Road/Harvard Road
− Northfield Road/Ellacott Parkway-Clarkwood Parkway

Provide signal interconnect and upgrade signal equipment, as needed, for implementation of a coordinated signal system and signal progression along the primary corridors in the study area. Consider GPS clocks as a low-cost alternative to signal interconnect.

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Justification</th>
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<tbody>
<tr>
<td>Short term</td>
<td>Improve operational efficiency of roadway network.</td>
</tr>
<tr>
<td>Multi-community partnership</td>
<td></td>
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<tr>
<td>− Beachwood</td>
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<td>− Highland Hills</td>
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<td>− North Randall</td>
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<td>− Warrensville Heights</td>
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<tr>
<td>Short term</td>
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<td>− Warrensville Heights</td>
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<tr>
<td>Short term</td>
<td>Improve operational efficiency and safety of roadway network.</td>
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<td>Multi-community partnership</td>
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<td>− Beachwood</td>
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<td>− North Randall</td>
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<td>− Warrensville Heights</td>
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<tr>
<td><strong>Infrastructure Recommendation</strong></td>
<td><strong>Implementation</strong></td>
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</tr>
<tr>
<td>Complete Streets (Road Diets)</td>
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<tr>
<td>Convert Northfield Road to a three-lane corridor between Harvard Road and Emery Road. The space vacated by each of the north-south travel lanes would be converted to buffered bike lanes. To the north, Northfield should be converted to two-lanes and configured with buffered bike lanes on each side of the median or the travel lanes could be on the west side of the median and the east side could be converted to an exclusive bicycle facility.</td>
<td>Medium Term Multi-community partnership − Highland Hills − North Randall − Shaker Heights − Warrensville Heights</td>
</tr>
<tr>
<td>Convert Emery Road to a three-lane corridor between Northfield Road and Richmond Road. The space vacated by the travel lanes would be converted to buffered bike lanes.</td>
<td>Medium Term Multi-community partnership − North Randall − Warrensville Heights</td>
</tr>
<tr>
<td>Study the feasibility of reducing Richmond Road to a three-lane roadway south of the Miles Road intersection.</td>
<td>Short Term (study) Long Term (implementation) Multi-community partnership − Bedford Heights − Warrensville Heights</td>
</tr>
<tr>
<td>Bike Lanes</td>
<td></td>
</tr>
<tr>
<td>Provide buffered bike lanes along Emery Road as part of the road diet conversion to a 3-lane corridor.</td>
<td>Medium Term Multi-community partnership − North Randall − Warrensville Heights</td>
</tr>
<tr>
<td>Provide buffered bike lanes along Northfield Road as part of the road diet conversion to a 3-lane corridor.</td>
<td>Medium Term Multi-community partnership − Shaker Heights − North Randall − Warrensville Heights</td>
</tr>
</tbody>
</table>
### Multi-Use Trails

Construct multi-use trails along the corridors listed below. Refer to Section 11.4 for more information on location and limits along each corridor.

- Chagrin Boulevard
- Clarkwood Parkway
- Derbyshire Drive
- Ellacott Parkway
- Emery Road
- Granada Boulevard
- Green Road
- Harvard Road
- Millcreek Boulevard
- Northfield Road
- Richmond Road
- Warrensville Center Road

**Implementation**

<table>
<thead>
<tr>
<th>Time Frame and Community(ies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium and Long Term</td>
</tr>
</tbody>
</table>

Some trails will require coordination between communities and all trails will benefit if they are included as part of a multi-community plan. Community involvement varies by corridor.

**Justification**

Incorporating multi-use trails, as recommended, will have a significant positive impact on multimodal access throughout the study area, enhancing access to the many and various destinations in and surrounding the study area.

---

### Mill Creek Trail

Create a trail through the woods along Mill Creek, connecting Millcreek Boulevard, across Northfield Road (recommended with a mid-block crossing), west along the creek and meeting up with the trail along Warrensville Center Road.

**Implementation**

<table>
<thead>
<tr>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium Term</td>
</tr>
</tbody>
</table>

- Highland Hills

**Justification**

This trail will facilitate direct non-motorized access between health care facilities and other development along the Eastside Health Corridor.

---

### Town Center Trail

Construct a trail that provides direct, connected access between the high density residential neighborhood along the Clarkwood Parkway and Granada Boulevard corridors with the library, the YMCA, the future Warrensville Heights town center and other destinations that are accessible via Northfield Road.

**Implementation**

<table>
<thead>
<tr>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium Term</td>
</tr>
</tbody>
</table>

- Warrensville Heights

**Justification**

This trail will facilitate direct access between a large, high-density residential development and community facilities on Northfield Road, making a trip that is not currently a walkable distance, a much shorter and very walkable distance.

---

### Grade-Separated Crossings

Construct a grade-separated crossing for east-west travel along the proposed Harvard Road trail at the Richmond intersection.

**Implementation**

<table>
<thead>
<tr>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Term</td>
</tr>
</tbody>
</table>

- Multi-community partnership
  - Beachwood
  - Warrensville Heights

**Justification**

Provision of a grade-separated crossing for the trail along Harvard Road will facilitate safe pedestrian crossings at this very busy, auto-dominant intersection, enhancing multi-modal connectivity and providing viable access to popular destinations along the corridor.
<table>
<thead>
<tr>
<th>Infrastructure Recommendation</th>
<th>Implementation</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct a grade-separated crossing for north-south travel along the proposed Richmond Road</td>
<td></td>
<td>Provision of a grade-separated crossing for the trail along Richmond Road will facilitate safe pedestrian crossings at this very busy, auto-dominant</td>
</tr>
<tr>
<td>trail at the Harvard intersection.</td>
<td>Long Term</td>
<td>auto-dominant intersection, enhancing multi-modal connectivity and providing viable access to popular destinations along the corridor.</td>
</tr>
<tr>
<td></td>
<td>Multi-community partnership</td>
<td></td>
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<tr>
<td></td>
<td>Beachwood</td>
<td></td>
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<tr>
<td></td>
<td>Warrensville Heights</td>
<td></td>
</tr>
<tr>
<td><strong>Transit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct a comprehensive analysis of transit service in the study area, potentially in the context</td>
<td></td>
<td>The current bus service in the study area reflects the consequences of RTA’s incremental and piecemeal service reductions. A comprehensive review would evaluate these changes in the light of the existing and anticipated markets in the area, and would provide RTA with an opportunity to better align its service with the multi-faceted transit needs of this area, and to address regional transportation issues that affect this area, while avoiding negative impacts on GCRTA’s larger regional transit network. Any proposed changes to transit service or facilities in the study area will require analysis by RTA.</td>
</tr>
<tr>
<td>of a comprehensive full system operational analysis to identify opportunities to improve service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to the area.</td>
<td>Short Term</td>
<td>The current bus service in the study area reflects the consequences of RTA’s incremental and piecemeal service reductions. A comprehensive review would evaluate these changes in the light of the existing and anticipated markets in the area, and would provide RTA with an opportunity to better align its service with the multi-faceted transit needs of this area, and to address regional transportation issues that affect this area, while avoiding negative impacts on GCRTA’s larger regional transit network. Any proposed changes to transit service or facilities in the study area will require analysis by RTA.</td>
</tr>
<tr>
<td></td>
<td>Multi-community &amp; multi-agency partnership</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beachwood</td>
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</tr>
<tr>
<td></td>
<td>Cleveland</td>
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<tr>
<td></td>
<td>Highland Hills</td>
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<td></td>
<td>North Randall</td>
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<td></td>
<td>Shaker Heights</td>
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<td></td>
<td>Warrensville Heights</td>
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<tr>
<td></td>
<td>GCRTA</td>
<td></td>
</tr>
<tr>
<td>Increase local and express bus service. Proposed improvements include additional (or modified)</td>
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<tr>
<td>service through and to the study area that provide connections to and between employment and</td>
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<tr>
<td>retail destinations, such as Eton, Pinecrest, and retail along Chagrin Boulevard; connections to</td>
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</tr>
<tr>
<td>and between employment and medical centers; and connections between hospitals and other medical</td>
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<td></td>
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<tr>
<td>and medical office facilities in the study area, such as connecting the various healthcare</td>
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<td></td>
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<tr>
<td>facilities along the Eastside Health Corridor with each other and to medical destinations in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Circle.</td>
<td>Medium &amp; Long Term</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multi-community &amp; multi-agency partnership</td>
<td></td>
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<tr>
<td></td>
<td>Beachwood</td>
<td></td>
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<tr>
<td></td>
<td>Cleveland</td>
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<td></td>
<td>Highland Hills</td>
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<td></td>
<td>North Randall</td>
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<td></td>
<td>Shaker Heights</td>
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<td></td>
<td>Warrensville Heights</td>
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<td></td>
<td>GCRTA</td>
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<tr>
<td>Infrastructure Recommendation</td>
<td>Implementation</td>
<td>Justification</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Improve connections to study area destinations and complete “Last Mile” connections to Van Aken Station.</td>
<td>Medium &amp; Long Term Multi-community &amp; multi-agency partnership − Beachwood − Cleveland − Highland Hills − North Randall − Shaker Heights − Warrensville Heights − GCRTA</td>
<td>Currently, transit service does not provide viable connections to many popular destinations and employment centers in and near the study area.</td>
</tr>
<tr>
<td>Establish transit/transfer facility at Warrensville Center/ Harvard intersection.</td>
<td>Medium &amp; Long Term Multi-community &amp; multi-agency partnership − Beachwood − Cleveland − Highland Hills − North Randall − Shaker Heights − Warrensville Heights − GCRTA</td>
<td>A new transit transfer center at or near the Warrensville Center Road/Harvard Road intersection by South Pointe Hospital would facilitate transfers between bus routes. It should include amenities to transferring passengers of existing and proposed bus routes serving this intersection.</td>
</tr>
<tr>
<td>Establish transit/transfer facility and possible park-and-ride at Tri-C East (Richmond Road at Harvard Road).</td>
<td>Medium &amp; Long Term Multi-community &amp; multi-agency partnership − Beachwood − Cleveland − Highland Hills − North Randall − Shaker Heights − Warrensville Heights − GCRTA</td>
<td>Creation of a new facility that would provide amenities and facilitate transfers among bus routes and provide amenities to waiting and transferring passengers at Tri-C East would enhance transit travel. This facility could be coupled with a park-and-ride lot oriented to serving area commuters from the Harvard Road/I-271 Interchange, as recommended in the Blue Line Extension Project, facilitating transit connections to the study area destinations and University Circle, if service is established as recommended by that study.</td>
</tr>
<tr>
<td>Infrastructure Recommendation</td>
<td>Implementation</td>
<td>Justification</td>
</tr>
<tr>
<td>-------------------------------</td>
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<td>---------------</td>
</tr>
<tr>
<td>Establish Transit/Transfer Facility at Warrensville Center Road and Emery Road.</td>
<td>Medium &amp; Long Term</td>
<td>A new transit transfer center at or near the Warrensville Center Road/Harvard Road intersection would facilitate transfers between bus routes in this growing area. Provide amenities to transferring passengers of existing and proposed bus routes serving this intersection.</td>
</tr>
<tr>
<td>Examine opportunities to use transit to address traffic congestion issues at I-271/Chagrin Boulevard interchange.</td>
<td>Short, Medium &amp; Long Term</td>
<td>A mode shift in this area, which could be generated by enhanced transit service, would likely have a positive impact on congestion along the Chagrin Boulevard corridor.</td>
</tr>
<tr>
<td>Broaden base of support for transit investment in the study area. Look for opportunities for stakeholders to support GCRTA in ways that would result in gains for their businesses and employees.</td>
<td>Short, Medium &amp; Long Term</td>
<td>The major businesses and institutions for several municipalities in the study area provide many potential investors to sponsor new transit facilities and to contribute to ongoing service improvements to offset a portion of the costs associated with improving RTA’s presence in the study area.</td>
</tr>
<tr>
<td>Infrastructure Recommendation</td>
<td>Implementation Time Frame and Community(ies)</td>
<td>Justification</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Additional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift and narrow the travel lanes on Richmond Road across the I-480 Bridge to provide a wider sidewalk.</td>
<td>Medium Term</td>
<td>Reconfiguration of the bridge deck would provide improve non-motorized infrastructure and enhance multimodal connectivity.</td>
</tr>
<tr>
<td>Support expansion of the UH Bikes bike share program in the study area.</td>
<td>Short Term</td>
<td>This will provide the much-needed benefits associated with bike share programs along with an expanded network and connectivity options associated with the existing UH Bikes system. This will help address first/last mile connections within the study area.</td>
</tr>
<tr>
<td>Implement policies that support multimodal transportation, such as complete and green streets policies to guide future infrastructure development, and appropriate changes to land use policies to promote livability.</td>
<td>Short Term</td>
<td>It is important that the communities that partnered to support this study implement policies that support the recommendations and outcomes.</td>
</tr>
<tr>
<td>Multi-community and multi-agency collaboration</td>
<td>Short, Medium &amp; Long Term</td>
<td>Look for opportunities to work together and with other involved agencies to leverage opportunities maximize the potential for multimodal facilities and benefits. One specific example is working with the Western Reserve Land Conservancy to amend the conservation easements for the development of trails in the study area.</td>
</tr>
<tr>
<td>Chagrin Highlands</td>
<td>Short, Medium &amp; Long Term</td>
<td>Preserve and foster multimodal access around, through and within the Chagrin Highlands sites as they are developed to ensure continuity and connectivity with multimodal access throughout the area.</td>
</tr>
</tbody>
</table>
### Table 14-2. Corridor Recommendations

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Community(ies)</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corridors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chagrin Boulevard</td>
<td>Beachwood, Shaker</td>
<td>− Construct a multi-use trail along the south side of Chagrin Boulevard, connecting to the proposed trails on Green Road and Northfield Road. This will address the missing sidewalk link.</td>
</tr>
<tr>
<td></td>
<td>Heights</td>
<td></td>
</tr>
<tr>
<td>Clarkwood Parkway</td>
<td>Warrensville Heights</td>
<td>− Construct a multi-use trail along the north side of Clarkwood Parkway.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Construct ADA compliant pedestrian treatments (curb ramps, crosswalks) at the Clarkwood Parkway/Granada Boulevard intersection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Provide enhanced intersection crossing treatments at the Ellacott ParkwayClarkwood Parkway/Northfield Road intersection to facilitate access to the Warrensville Heights High and Middle Schools.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Address missing sidewalk links.</td>
</tr>
<tr>
<td>Derbyshire Drive</td>
<td>North Randall,</td>
<td>− Construct a multi-use trail along either side of the Derbyshire Drive corridor, based upon stakeholder preferences. The trail should run along the north side of Miles Road to connect to the Northfield Road corridor.</td>
</tr>
<tr>
<td></td>
<td>Warrensville Heights</td>
<td>− Provide enhanced pedestrian crossing treatments at Emery intersection.</td>
</tr>
<tr>
<td>Ellacott Parkway</td>
<td>Warrensville Heights</td>
<td>− Construct a multi-use trail along either side of Ellacott Parkway, based on public preference.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Provide enhanced intersection crossing treatments at the Ellacott ParkwayClarkwood Parkway/Northfield Road intersection to facilitate access to the Warrensville Heights High and Middle Schools.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Address missing sidewalk links.</td>
</tr>
<tr>
<td>Emery Road</td>
<td>North Randall,</td>
<td>− Convert Emery to a 3-lane roadway between Northfield Road and Richmond Road and install buffered bike lanes. This will require consideration of traffic impacts from new Amazon facility and may no longer be feasible.</td>
</tr>
<tr>
<td></td>
<td>Warrensville Heights</td>
<td>− Construct a multi-use trail between Warrensville Center Road and Richmond Road.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Address missing sidewalk links.</td>
</tr>
<tr>
<td>Granada Boulevard</td>
<td>Warrensville Heights</td>
<td>− Construct multi-use trails along both sides of Granada Boulevard between Clarkwood Parkway and Emery Road.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Construct ADA compliant pedestrian treatments (curb ramps, crosswalks) at the Clarkwood Parkway/Granada Boulevard intersection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Provide enhanced pedestrian crossing treatments at Emery intersection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Address missing sidewalk links.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>− Relocate (or close) the driveways immediately north of the Emery Road intersection to minimize adverse impacts to intersection operations and safety.</td>
</tr>
<tr>
<td>Corridor</td>
<td>Community(ies)</td>
<td>Recommendation</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Green Road          | Beachwood  
Cleveland  
Highland Hills  
Warrensville Heights | • Construct a multi-use trail along west side of Green Road between Chagrin Boulevard and Lawrence Road-Clarkwood Parkway intersection then, due to driveways on the west side along with the park and the community center on the east side of Green Road, the trail should shift to the east side of the corridor and continue down the east side of Green Road to Miles Road.  
• Provide enhanced pedestrian crossing treatments at the Green Road intersections with Harvard Road, Clarkwood Parkway-Lawrence Road and Emery Road.  
• Address missing sidewalk links. |
| Harvard Road        | Beachwood  
Highland Hills  
Shaker Heights  
Warrensville Heights | • Construct multi-use trail along Harvard Road; preliminary recommendation is the north side based on existing conditions and known features.  
• Enhanced at-grade trail crossings are recommended where Harvard Road intersects Warrensville Center Road, Northfield Road and Green Road.  
• Construct grade-separated crossings for east-west travel along the Harvard Road trail at the Richmond intersection, and for north-south travel along Richmond.  
• Consolidate or bury overhead utilities, as possible.  
• Address missing sidewalk links. |
| Millcreek Boulevard | Highland Hills                                     | • Construct a multi-use trail along the west and south sides of Millcreek Boulevard to provide multimodal access as well as opportunities for scenic recreation. This trail would connect to the proposed Mill Creek Greenway Trail.  
• Address missing sidewalk links; include Mill Pond Drive. |
| Northfield Road     | Highland Hills  
North Randall  
Shaker Heights  
Warrensville Heights | • Chagrin Boulevard to Harvard Road  
  ~ Construct a multi-use trail along the east side.  
  ~ Add buffered bike lanes to the roadway; as a possible alternative, it may be feasible to convert the southbound lanes to a two-way roadway and the northbound lanes to an exclusive bicycle facility. Transition at the Harvard Road intersection would need to be specifically addressed.  
• Harvard Road to Emery Road  
  ~ Convert Northfield Road to a single travel lane in each direction with buffered bike lanes. The configuration of the southbound approach to the Northfield Road/Emery Road intersection needs to retain its existing configuration based on capacity needs, transition to that intersection must occur to the north. This will require consideration of traffic impacts from new Amazon facility.  
  ~ Construct a multi-use trail along the east side, connecting with the Emery Road trail. |
<table>
<thead>
<tr>
<th>Corridor</th>
<th>Community(ies)</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| Northfield Road (continued)      | Highland Hills North Randall Shaker Heights Warrensville Heights               | − Emery Road to Miles Road  
~ Retain existing travel lanes but remove exclusive right turn and trap lanes, as appropriate.  
~ Construct a multi-use trail along the east side.  
~ Implement access management strategies and controls to improve operational efficiency and reduce the potential for conflicts between non-motorized travelers on the trail and vehicles entering and exiting the properties along the corridor.  
~ Provide enhanced pedestrian crossing treatments at Ellacott Parkway-Clarkwood Parkway/Northfield Road intersection to facilitate access to Warrensville Heights High and Middle Schools.  
~ Provide enhanced pedestrian crossing treatments at the Harvard Road and Emery Road intersections.  
~ Consider pedestrian improvements at the site access intersections to the former Randall Park Mall, as appropriate as it is redeveloped.  
~ Address missing sidewalk links. |
| Richmond Road                    | Beachwood Highland Hills Warrensville Heights                                | − Construct a multi-use trail; preliminary recommendation is the west side due to topography, availability of right-of-way, adjacent development, and access to Tri-C East.  
− Construct grade-separated crossings for north-south travel along the Richmond Road trail at the Harvard intersection, and for east-west travel along Harvard.  
− Provide enhanced pedestrian crossing treatments at the Eaton-Auburn and Tri-C East-Harvard Park intersections.  
− Study the feasibility of reducing Richmond Road to a three-lane roadway south of the Miles Road intersection.  
− Shift and narrow the travel lanes on Richmond Road across the I-480 Bridge to provide a wider sidewalk. |
| Warrensville Center Road         | Cleveland North Randall Shaker Heights Warrensville Heights                  | − Construct a multi-use trail along the east side of Warrensville Center Road, connecting with the planned Shaker Heights section of the trail at the north and continuing south to Miles Road.  
− Provide enhanced pedestrian crossing treatments at the Warrensville Center Road/Longbrook Road intersection to facilitate access to the Warrensville Heights High and Middle Schools.  
− Reconfigure the Warrensville Center Road/Miles Road interchange to make it more pedestrian friendly.  
− Address missing sidewalk links. |
| **Off-Corridor Improvements**    |                                                                               |                                                                                                                                                                                                               |
| Millcreek Greenway Trail         | Highland Hills                                                                | Create a trail through the woods along Mill Creek, connecting Millcreek Boulevard, across Northfield Road (recommended with a mid-block crossing), west along the creek and meeting up with the trail along Warrensville Center Road. |
Table 14-3. Economic Development Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Affected Area/Potential Partnership</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>University Hospitals’ Ahuja Medical Center and other facilities, Cleveland Clinic’s South Pointe Hospital, various industries along Miles Road, and Cuyahoga Community College</td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Beachwood</td>
<td>Improve the quality and availability of the existing workforce and create new workforce development and employment tools that benefit the entire Project Area. Specifically, develop tailored job-training programs to meet the needs of local businesses and to prepare workers for local jobs.</td>
</tr>
<tr>
<td></td>
<td>– Cleveland</td>
<td></td>
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<tr>
<td></td>
<td>– Highland Hills</td>
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<tr>
<td></td>
<td>– North Randall</td>
<td></td>
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<tr>
<td></td>
<td>– Shaker Heights</td>
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<tr>
<td></td>
<td>– Warrensville Heights</td>
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</tr>
<tr>
<td>New development in the Green Road corridor should mimic the policies of the existing, proposed and targeted development that impacts Northfield and Harvard Roads. Set back requirements, where appropriate, should be instituted to maintain the same sense of openness and scenic aspects along the Green Road corridor as exist in the Northfield Road and Harvard Road corridors.</td>
<td>Green Road</td>
<td>Development of Chagrin Highlands that impacts Green, Harvard and Northfield Roads should focus on a mix of uses that maintain the aesthetic, environmental and multimodal aspects of the area. Development should maintain a sense of place.</td>
</tr>
<tr>
<td></td>
<td>Harvard Road</td>
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<tr>
<td></td>
<td>Northfield Road</td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Beachwood</td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Cleveland</td>
<td></td>
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<tr>
<td></td>
<td>– Highland Hills</td>
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<td></td>
<td>– Warrensville Heights</td>
<td></td>
</tr>
<tr>
<td><strong>Recommendation</strong></td>
<td><strong>Affected Area/ Potential Partnership</strong></td>
<td><strong>Guidance</strong></td>
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</tbody>
</table>
| Encourage redevelopment of underutilized and vacant commercial and industrial properties, particularly along Miles Road, Northfield Road, and Emery Road. | Miles Road  
  – North Randall  
  – Warrensville Heights | Take advantage of the opportunity for infill development and capacity building in available office and industrial parks along Miles Road and other locations. |
| Leverage existing industries in the area to spur additional opportunities for development and job growth | Miles Road  
  – North Randall  
  – Warrensville Heights | There is a strong automotive and automotive-related industry in the area that could attract similar or related businesses and industries. |
| Highlight areas with potential land use changes that will impact how the area absorbs future development; | Chagrin Highlands  
  Pinecrest  
  Randall Park Mall  
  Commerce Park  
  – Beachwood  
  – Cleveland  
  – Highland Hills  
  – North Randall  
  – Orange  
  – Warrensville Heights | An analysis of the Randall Park Mall Site, Chagrin Highlands and Pinecrest are examples of projects that will impact how the area absorbs future development. |
| Encourage training and educating the existing workforce in new and emerging technologies that will prepare them for new job in the area such as opportunities in the light industries including logistics. | Work with Cuyahoga Community College to develop a career resource center at Cuyahoga Community College with a focus on the Project Area and its major industries.  
  – Beachwood  
  – Cleveland  
  – Highland Hills  
  – North Randall  
  – Shaker Heights  
  – Warrensville Heights | Connecting local workers with nearby jobs would shorten commute times, increase housing demand, and improve quality of life for all workers. A career resource center at Cuyahoga Community College with a focus on the Project Area and its major industries. |
| Implement access management controls and strategies in conjunction of the redevelopment of the Randall Park Mall site into the new Amazon Fulfillment Center. | Improve access in and around the new Amazon Fulfillment Center site.  
  – North Randall  
  – Warrensville Heights | Enhance site access and operational safety. |
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Affected Area/ Potential Partnership</th>
<th>Guidance</th>
</tr>
</thead>
</table>
| Encourage multimodal access in, and around the new Amazon Fulfillment Center within the former Randall Park Mall site. This will benefit both existing and new developments. | Provide multimodal access to businesses along Warrensville Center Road generally and the new Amazon Fulfillment Center site specifically.  
- North Randall  
- Warrensville Heights | Create reliable travel options for workers and residents within the Warrensville Center Road corridor. The new Amazon Fulfillment Center is expected to generate additional demand for RTA’s Route 41, which could provide additional support for its potential conversion to BRT service. |
| Encourage redevelopment that supports the Cuyahoga Community College and Corporate College with implementation of their master plan.                      | Richmond Road  
Harvard Road  
Cuyahoga Community College Campus  
- Beachwood  
- Warrensville Heights | Provide more open access and connections between the residents and Tri-C. Provide access to green space and enhance the livability of the campus environment.                                                   |
| Leverage existing office and commercial assets to spur additional or similar opportunities for job growth                                   | Chagrin Road  
- Beachwood  
- Highland Hills  
- Shaker Heights | Seek to enhance the quantity and quality of local office and commercial occupancy along Chagrin Road.                                                                                                         |
| Support opportunities for mixed-use redevelopment on Warrensville Center Road and the abandoned Northfield Road alignment, leveraging the anticipated economic engine that will be created by the Van Aken District redevelopment. | Warrensville Center Road  
- Shaker Heights | Leverage existing office and commercial assets to spur additional or similar opportunities for job growth. Seek to enhance the quantity and quality of local office and commercial occupancy in this part of the study area. |
| Concentrate new development around institutional, nonprofit and retail uses that support the character of the study area.                     | Northfield Road  
Emery Road  
- Highland Hills  
- North Randall  
- Shaker Heights  
- Warrensville Heights | To attract local businesses that enhance the character of the various corridors and that supply demand for local amenities.                                                                                     |
| Recruit business that are local in nature that support the needs of nearby residents and proposed new jobs.                                 | Emery Road  
- North Randall  
- Warrensville Heights | Improved local amenities                                                                                                                                                                               |
Figure 14-1. Recommendations for Non-Motorized Improvements
Figure 14-2. Existing and Proposed Transit Service and Amenities
15. Implementation & Funding Strategies

15.1 Implementation

The study Project Team and Stakeholder Committee worked seamlessly in the development of recommendations to improve multimodal mobility options within the study area. Bicycle and pedestrian considerations, transit, traffic analysis, access management, and complete street strategies were examined in depth to identify areas where improvements could be implemented to provide area residents, employees and visitors with a community that is both easily accessible and easy to circulate, whether on foot, on a bicycle, in a car or by bus. This tool box of recommendations will assist the City of Warrensville Heights, the Village of North Randall and the Village of Highland Hills to enhance their communities as a whole.

The recommendations provided will need to be coordinated holistically in order to not only provide mobility in the study area, but also to enhance job creation and attract employees. As discussed throughout this study, multi-community and multi-agency collaboration will be critical to moving forward with the study’s recommendations. The governments of each community will not only need to work together closely, but they will also need to work with the project stakeholders, Cuyahoga County Planning, GCRTA, ODOT, NOACA, area stakeholders, the City of Cleveland and others to realize the vision set forth by this study and its recommendations. Implementation of the individual projects will need to be evaluated and prioritized based on each community’s needs and funding strategized identified. Through close collaboration and careful consideration among all, the Northfield Warrensville Multimodal Connectivity Plan can be realized and the project area transformed into a vibrant, economically viable, destination place.

The recommendations vary in extend, effort, level of difficulty, and significance of impact. There is no “right” order for implementation; each recommendation has independent utility and will add value whenever it is implemented. Due to the extent and nature of the recommendations, the communities should review and prioritize the recommendations based on their specific needs and priorities, then work toward implementation, as appropriate based on the specific elements of each recommendation. Some recommendations can be done by individual communities with involvement of appropriate stake holder agencies while others will benefit from multi-community collaboration.

15.2 Funding

Funding opportunities are varied, diverse and largely depend on the type of project being implemented. Unfortunately, there is no go-to funding source for all; thus, several funding sources are often identified and pursued to implement a single project. Broad-minded communities are open to a range of funding sources to plan and construct needed community facilities and improvements.

As this study identified the need for improved multimodal transportation facilities to encourage economic development, multiple external funding options could be utilized from several federal, state and philanthropic organizations including, but not limited to, the Ohio Department of Transportation, the U.S. Departments of Housing and Urban Development and Economic Development, the Eaton Corporation and Quicken Loans. Table 15-1 provides potential funding sources with numerous grant and loan programs. Partnerships with these organizations as well as with community stakeholders will be vital for the success of this plan. Many of the funding sources have stipulations that could disqualify one community, but not another (i.e. low to moderate income requirements or population totals). For this reason, collaboration between the study area governmental agencies and stakeholders is encouraged.
### Table 15-1. Potential Funding Sources

<table>
<thead>
<tr>
<th>Description &amp; Link</th>
<th>Eligible Applicants</th>
<th>Categories</th>
<th>Match</th>
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<tbody>
<tr>
<td><strong>Advanced Transportation and Congestion Management Technologies Deployment Initiative</strong></td>
<td>Counties, Metroparks, Municipalities, Port Authorities, Sewer Districts, Transit Agencies</td>
<td>Communications Equipment, Computer Hardware/Software, Intelligent Transportation Systems, Mobility Management, Safety, Transit, Transit Capital</td>
<td>50%</td>
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<tr>
<td>This program provides funding to develop model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment. These model deployments are expected to provide benefits in the form of: reduced traffic-related fatalities and injuries, reduced traffic congestion and improved travel time reliability, reduced transportation-related emissions, optimized multimodal system performance, improved access to transportation alternatives, including for underserved populations, public access to real time integrated traffic, transit, and multimodal transportation information to make informed travel decisions, cost savings to transportation agencies, businesses, and the traveling public; or other benefits to transportation users and the general public.</td>
<td><a href="https://www.grants.gov/custom/viewOppDetails.jsp?oppId=282433">https://www.grants.gov/custom/viewOppDetails.jsp?oppId=282433</a></td>
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<tr>
<td><strong>BUILD (formerly TIGER)</strong></td>
<td>Counties, Municipalities, Port Authorities, Transit Agencies</td>
<td>Bike/Pedestrian, Bikeways, Bridge, Pedestrian, Road, Road/Bridge, Transit, Transit Capital, Transit Center Facility</td>
<td>20%</td>
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<tr>
<td>The Better Utilizing Investments to Leverage Development (BUILD) Transportation Grant Program (formerly TIGER or Transportation Investment Generating Economic Recovery) provides funding for innovative, multi-modal and multi-jurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, a region, or the nation.</td>
<td><a href="https://www.transit.dot.gov/funding/grants/better-utilizing-investments-leverage-development-build-transportation-grants-program">https://www.transit.dot.gov/funding/grants/better-utilizing-investments-leverage-development-build-transportation-grants-program</a></td>
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<tr>
<td><strong>Transportation Alternatives</strong></td>
<td>Counties, Metroparks, Municipalities, Port Authorities, Sewer Districts, Transit Agencies</td>
<td>Bike/Pedestrian, Bikeways, Congestion, Environmental, Intelligent Transportation Systems, Mobility Management, Natural Habitat Preservation and Restoration, Pedestrian, Planning, Road, Road/Bridge, Safety, Storm Water Improvements, Traffic Signal Upgrades, Transit, Transit Capital, Transit Center Facility</td>
<td>0%-20%</td>
</tr>
<tr>
<td>NOACA’s Transportation Alternatives Set-Aside authorizes funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities such as historic preservation and vegetation management, and environmental mitigation related to storm water and habitat connectivity; recreational trail projects; Safe Routes to School projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former divided highways.</td>
<td><a href="http://www.noaca.org/index.aspx?page=131">http://www.noaca.org/index.aspx?page=131</a></td>
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<tr>
<td>Description &amp; Link</td>
<td>Eligible Applicants</td>
<td>Categories</td>
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<tr>
<td>Transportation for Livable Communities Initiative</td>
<td>Counties, Metroparks, Municipalities, Port Authorities, Sewer Districts, Transit Agencies</td>
<td>Bike/Pedestrian, Bikeways, Pedestrian, Planning, Safety, Transit, Transit Capital, Transit Center Facility</td>
<td>0%-20%</td>
</tr>
<tr>
<td>FY 2016 - FY 2019 EDA Planning Program and Local Technical Assistance Program</td>
<td>Non Profits, Institutions of higher education, County governments, City or township governments, State governments</td>
<td>Economic Development</td>
<td>Not Provided</td>
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<td>Funding Opportunity No. EDA-HHQ-TA-HHQ-2016-2001759</td>
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<td>Under the Planning program EDA assists eligible recipients in creating regional economic development plans designed to build capacity and guide the economic prosperity and resiliency of an area or region. As part of this program, EDA supports Partnership Planning investments to facilitate the development, implementation, revision, or replacement of Comprehensive Economic Development Strategies (CEDS), which articulate and prioritize the strategic economic goals of recipients’ respective regions.</td>
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<tr>
<td>FY 2017 Economic Development Assistance Programs - Application submission and program requirements for EDA’s Public Works and Economic Adjustment Assistance programs. Funding Opportunity No. EDAP-2017</td>
<td>County governments, Non-Profits, City or township governments, Special district governments, State governments Public and State controlled institutions of higher education</td>
<td>Economic Development</td>
<td>Not Provided</td>
</tr>
<tr>
<td>The Economic Development Administration's (EDA's) mission is to lead the Federal economic development agenda by promoting innovation and competitiveness, preparing American regions for economic growth and success in the worldwide economy. EDA fulfills this mission through strategic investments and partnerships that create the regional economic ecosystems required to foster globally competitive regions throughout the United States. EDA supports development in economically distressed areas of the United States by fostering job creation and attracting private investment. Specifically, under the Economic Development Assistance programs (EDAP) Notice of Funding Availability (NOFA), EDA will make construction, non-construction, and revolving loan fund investments under the Public Works and Economic Adjustment Assistance (EAA) Programs. Through this NOFA, EDA will also designate a portion of its EAA funding to support communities and regions that have been negatively impacted by changes in the coal economy (Assistance to Coal Communities, or ACC 2017). Grants made under these programs will leverage regional assets to support the implementation of regional economic development strategies designed to create jobs, leverage private capital, encourage economic development, and strengthen America’s ability to compete in the global marketplace. Through the EDAP NOFA, EDA solicits applications from rural and urban communities to develop initiatives that advance new ideas and creative approaches to address rapidly evolving economic conditions.</td>
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<td>Description &amp; Link</td>
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<td><strong>Surface Transportation Block Grant Program</strong>&lt;br&gt;The Surface Transportation Block Grant program (STBG) provides flexible funding that may be used by states and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.&lt;br&gt;<a href="http://www.noaca.org/index.aspx?page=131">http://www.noaca.org/index.aspx?page=131</a></td>
<td>Counties, Municipalities</td>
<td>Includes road and bridge projects, transit projects, bikeways and planning, as listed on NOACA’s website</td>
<td>0%-20%</td>
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<tr>
<td><strong>Building Blocks for Sustainable Communities</strong>&lt;br&gt;Many communities around the country are asking for tools to help them achieve their desired development goals, improve quality of life, and become more economically and environmentally sustainable. In response to this demand, EPA developed the Building Blocks for Sustainable Communities Program in 2011. Building Blocks for Sustainable Communities provides quick, targeted technical assistance to selected communities using a variety of tools that have demonstrated results and widespread application.&lt;br&gt;[<a href="https://www.epa.gov/smartgrowth/building-blocks-sustainable-communities">https://www.epa.gov/smartgrowth/building-blocks-sustainable-communities</a>]</td>
<td>Local, county, or tribal governments, or nonprofit organizations that have the support of the local government on whose behalf they are applying.</td>
<td>Sustainable Communities</td>
<td>Not Provided</td>
</tr>
<tr>
<td><strong>Capital Investment Grant (5309)</strong>&lt;br&gt;FTA’s primary grant program for funding major transit capital investments along separate corridor lines, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. It requires steps over several years to be eligible.&lt;br&gt;[<a href="https://www.transit.dot.gov/funding/grants/capital-investment-grants-5309">https://www.transit.dot.gov/funding/grants/capital-investment-grants-5309</a>]</td>
<td>Counties, Municipalities, Port Authorities, Transit Agencies</td>
<td>Transit, Transit Capital, Transit Center Facility, Vehicles</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Community Development Block Grant State Administered CDBG and the Neighborhood Stabilization Program</strong>&lt;br&gt;Federal funding through Housing and Urban Development (HUD) for public facilities: road resurfacing, crosswalks, street lights, traffic/pedestrian signals, barrier removal for handicap accessibility (e.g., sidewalks, curb ramps), and street furniture. The annual CDBG appropriation is allocated between states and local jurisdictions called “non-entitlement” and “entitlement” communities respectively. Entitlement communities are comprised of central cities of Metropolitan Statistical Areas (MSAs); metropolitan cities with populations of at least 50,000; and qualified urban counties with a population of 200,000 or more (excluding the populations of entitlement cities). States distribute CDBG funds to non-entitlement localities not qualified as entitlement communities. Check HUD’s, County’s, or City’s website to see if funding is eligible in your location.&lt;br&gt;[[<a href="https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/community">https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/community</a> development/programs](<a href="https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/community">https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/community</a> development/programs)]</td>
<td>Counties, Municipalities</td>
<td>Bike/Pedestrian, Bikeways, Bridge, Pedestrian, Road, Road/Bridge, Safety</td>
<td>Varies</td>
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<tr>
<td>Description &amp; Link</td>
<td>Eligible Applicants</td>
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<tr>
<td><strong>Congestion Mitigation and Air Quality Improvement Program</strong></td>
<td>Counties, Metroparks, Municipalities, Port Authorities, Transit Agencies</td>
<td>Bike/Pedestrian, Bikeways, Communications Equipment, Computer Hardware/Software, Congestion, Intelligent Transportation Systems, Pedestrian, Road, Road/Bridge Safety, Traffic Signal Upgrade, Transit Capital, Transit Center Facility, Vehicles</td>
<td>0%-20%</td>
</tr>
<tr>
<td>NOACA’s Congestion Mitigation and Air Quality (CMAQ) funds can only be used for projects that help reduce traffic congestion and improve air quality. In the NOACA region, these funds may be used for bike facilities, bus replacements, intelligent transportation system improvements, traffic signal upgrade projects, transit center and Park-N-Ride construction, etc. – and for conducting NOACA’s Air Quality Program. <a href="http://www.noaca.org/index.aspx?page=4430">http://www.noaca.org/index.aspx?page=4430</a> <a href="https://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/2013_guidance/">https://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/2013_guidance/</a></td>
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<td><strong>Mobility on Demand Sandbox Program</strong></td>
<td>Non Profits, Transit Agencies</td>
<td>Communications Equipment, Computer Hardware/Software, Intelligent Transportation Systems, Mobility Management, Planning, Transit, Transit Capital</td>
<td>20%</td>
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<tr>
<td>This program provides funding for new service options in combination with available technologies that allow for greater individual mobility. <a href="https://www.transit.dot.gov/research-innovation/mobility-demand-mod-sandbox-program.html">https://www.transit.dot.gov/research-innovation/mobility-demand-mod-sandbox-program.html</a></td>
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<tr>
<td><strong>Economic Development Loan and Public Infrastructure Grant Program</strong></td>
<td>Counties, Municipalities</td>
<td>Bike/Pedestrian, Bikeways, Bridge, Community Water System Improvements, Environmental, Pedestrian, Road, Road/Bridge, Sewer Construction, Storm Water Improvements, Wastewater Treatment Plant Improvements</td>
<td>Not Provided</td>
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<tr>
<td>Economic Development Loan and Public Infrastructure Grant Program funds are granted to local government applicants by the Ohio Development Services Agency for both economic development loan and public infrastructure projects. Public off-site infrastructure funds are retained as a grant by the local government. In the case of a loan, the local government grantee loans the funds to the beneficiary business for fixed asset financing projects and the funds are repaid to the local government Revolving Loan Fund. <a href="https://development.ohio.gov/cs/cs_edl.htm">https://development.ohio.gov/cs/cs_edl.htm</a></td>
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<tr>
<td><strong>Jobs &amp; Commerce</strong></td>
<td>Counties, Municipalities</td>
<td>Bike/Pedestrian, Pedestrian, Road, Road/Bridge</td>
<td>Not Provided</td>
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<tr>
<td>Businesses, with a sponsoring local government, can request grant funding for infrastructure improvement and access projects that help create and/or retain jobs. <a href="https://www.dot.state.oh.us/Divisions/JobsAndCommerce/Pages/default.aspx">https://www.dot.state.oh.us/Divisions/JobsAndCommerce/Pages/default.aspx</a></td>
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<tr>
<td><strong>Safety Program</strong></td>
<td>Municipalities</td>
<td>Bike Safety Program, Bike/Pedestrian, Bikeways, Safety</td>
<td>10%</td>
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<tr>
<td>This program is funded at approximately $100 million annually. ODOT will provide up to 90% of the eligible costs for preliminary engineering, detailed design, right-of-way, or construction. Local projects may be on a city street, or county or township road. Priority is given to those projects with recommended activities/countermeasures that improve safety at roadway locations with a high frequency and/or severity of crashes. Contact ODOT District Planning and Engineering Administrator for more information. <a href="http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ProgramResourceGuide.pdf">http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ProgramResourceGuide.pdf</a></td>
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<tr>
<td><strong>Small Government Program</strong></td>
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<td>The program provides grants and loans to villages and townships with populations in the unincorporated areas of less than 5,000 in population. <a href="http://www.pwc.state.oh.us/OPWCOverview.html?m=">http://www.pwc.state.oh.us/OPWCOverview.html?m=</a></td>
<td>Municipalities</td>
<td>Bike/Pedestrian, Bikeways, Bridge, Community Water System Improvements, Environmental, Pedestrian, Road, Road/Bridge, Sewer Construction, Wastewater Treatment Plant Improvements</td>
<td>N/A</td>
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<tr>
<td><strong>State Capital Improvement Program-District 1 (Cuyahoga County)</strong></td>
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<tr>
<td>The State Capital Improvement Program (SCIP) assists local communities in financing local public infrastructure improvements. Eligible applicants are counties, cities, villages, townships, and water and sanitary districts. Eligible projects are for improvements to roads, bridges, culverts, water supply systems, wastewater systems, storm water collection systems, and solid waste disposal facilities. <a href="http://www.countyplanning.us/services/grant-programs/state-capital-improvement-program/">http://www.countyplanning.us/services/grant-programs/state-capital-improvement-program/</a></td>
<td>Counties, Municipalities, Sewer Districts</td>
<td>Bridge, Community Water System Improvements, Road, Road/Bridge, Sewer Construction, Storm Water Improvements, Wastewater Treatment Plant Improvements</td>
<td>0%-50%</td>
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<tr>
<td><strong>Amish Buggy Program</strong></td>
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<td>Provides funding for transportation improvement projects on priority state routes and off-road trails adjacent to priority state routes that improve safety for motorists and horse drawn vehicles. The priority state routes were identified and selected based on ODOT buggy/motorized vehicle crash data. <a href="http://www.dot.state.oh.us/Divisions/Planning/ProgramManagement/MajorPrograms/Pages/AmishBuggy.aspx">http://www.dot.state.oh.us/Divisions/Planning/ProgramManagement/MajorPrograms/Pages/AmishBuggy.aspx</a></td>
<td>Counties, Municipalities</td>
<td>Bike/Pedestrian, Bikeways, Road, Road/Bridge Safety</td>
<td>20%</td>
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<tr>
<td><strong>County Highway Safety Program</strong></td>
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<td>The County Safety Program provides funds to counties, through the County Engineers, for safety related improvements, on county maintained roadways. The County Engineers Association of Ohio (CEAO) serves as program manager for project selection and administration. <a href="http://www.ceao.org/aws/CEAO/pt/sp/home_page">http://www.ceao.org/aws/CEAO/pt/sp/home_page</a></td>
<td>Counties</td>
<td>Congestion, Planning, Safety, Traffic Signal Upgrade</td>
<td>20%</td>
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<tr>
<td><strong>Clean Ohio Green Space Conservation Fund</strong></td>
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<td>This program is dedicated to environmental conservation including acquisition of green space and the protection and enhancement of river and stream corridors. Grant recipients agree to maintain the properties in perpetuity so that they can be enjoyed and cherished for generations to come. <a href="http://www.pwc.state.oh.us/GSCdefault.html?m=">http://www.pwc.state.oh.us/GSCdefault.html?m=</a></td>
<td>Counties, Metroparks, Municipalities, Non Profits, Port Authorities, Sewer Districts, Transit Agencies</td>
<td>Bike/Pedestrian, Bikeways, Environmental, Natural Habitat Preservation and Restoration, Pedestrian, Resilience Efforts, Storm Water Improvements</td>
<td>Varies</td>
</tr>
<tr>
<td>Description &amp; Link</td>
<td>Eligible Applicants</td>
<td>Categories</td>
<td>Match</td>
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<tr>
<td><strong>Safe Routes to School Program</strong></td>
<td>Municipalities, Non Profits, School Districts</td>
<td>Bike Safety Program, Bike/Pedestrian, Bikeways, Helmets, Pedestrian, Pedestrian Safety, Program Planning, Road, Road/Bridge, Safety</td>
<td>0%</td>
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<tr>
<td>The purpose of Safe Routes to School is to encourage and enable students in grades k-8 to walk or ride their bicycle to school. Projects can be either engineering (improved crossings, sidewalks, etc.) or non-engineering (education and encouragement programs). The responsibility of a safe route to school is ultimately shared by the user, government agencies, elected officials, schools, and safety advocates. <a href="http://www.dot.state.oh.us/Divisions/Planning/ProgramManagement/HighwaySafety/ActiveTransportation/Pages/SRTS.aspx">http://www.dot.state.oh.us/Divisions/Planning/ProgramManagement/HighwaySafety/ActiveTransportation/Pages/SRTS.aspx</a></td>
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<tr>
<td><strong>State Infrastructure Bank Loan and Bond Programs</strong></td>
<td>Any public entity, such as counties, cities, villages, townships, boards or commissions, regional transit and port authorities</td>
<td>Any transportation related project eligible under Federal Title 23, including highway and transit, as well as aviation, rail, and intermodal facilities.</td>
<td>N/A</td>
</tr>
<tr>
<td>The revolving loan program makes direct loans to any public entity. The program assists with all levels and modes of transportation projects within the state. <a href="http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ProgramResourceGuide.pdf">http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ProgramResourceGuide.pdf</a></td>
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<tr>
<td><strong>Economic Development Loan and Public Infrastructure Grant Program</strong></td>
<td>Counties must apply on behalf of villages and townships; counties may also apply on behalf of cities within their jurisdiction.</td>
<td>Economic development loan and public infrastructure projects</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Eligible activities include provision of financial assistance, through eligible units of general local government, for public off-site infrastructure improvements and fixed asset financing for land, building, machinery and site preparation directly and primarily related to the creation, expansion or retention of a particular business that results in job creation and retention for persons of low- and moderate-income. <a href="https://development.ohio.gov/cs/cs_edl.htm">https://development.ohio.gov/cs/cs_edl.htm</a></td>
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<tr>
<td><strong>ODNR Land and Water Conservation Fund</strong></td>
<td>Counties, Metroparks, Municipalities, Port Authorities</td>
<td>Bike/Pedestrian, Bikeways, Environmental, Natural Habitat Preservation and Restoration, Pedestrian</td>
<td>50%</td>
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<tr>
<td>This program provides funding for acquisition, development, and rehabilitation of recreational areas. <a href="http://realestate.ohiodnr.gov/outdoor-recreation-facility-grants">http://realestate.ohiodnr.gov/outdoor-recreation-facility-grants</a></td>
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<td><strong>ODNR Natureworks Grants</strong></td>
<td>Counties, Municipalities</td>
<td>Bike/Pedestrian, Bikeways, Environmental, Natural Habitat Preservation and Restoration, Pedestrian, Resilience Efforts</td>
<td>25%</td>
</tr>
<tr>
<td>This program provides funding for acquisition, development, and rehabilitation of recreational areas. <a href="http://realestate.ohiodnr.gov/outdoor-recreation-facility-grants">http://realestate.ohiodnr.gov/outdoor-recreation-facility-grants</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description &amp; Link</td>
<td>Eligible Applicants</td>
<td>Categories</td>
<td>Match</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>ODNR Recreational Trails Program</strong></td>
<td>Counties, Metroparks, Municipalities, Non Profits, Port Authorities</td>
<td>Bike Safety Program, Bike/Pedestrian, Bikeways, Pedestrian, Pedestrian Safety Program</td>
<td>20%</td>
</tr>
<tr>
<td>Includes development of urban trail linkages, trailhead &amp; trailside facilities, acquisition of easements &amp; property, development and construction of new trails. <a href="https://development.ohio.gov/cleanohio/RecreationalTrails/">https://development.ohio.gov/cleanohio/RecreationalTrails/</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ohio State Infrastructure Bank (SIB)</strong></td>
<td>Counties, Municipalities, Port Authorities, Transit Agencies</td>
<td>Bike/Pedestrian, Bikeways, Bridge, Congestion, Freight, Pedestrian, Road, Road/Bridge, Safety, Traffic Signal Upgrade, Transit, Transit Capital, Transit Center Facility, Vehicles</td>
<td>N/A</td>
</tr>
<tr>
<td>The Ohio State Infrastructure Bank provides loans to fund highway, rail, transit, intermodal, and other transportation facilities and projects which produce revenue to amortize debt while contributing to the connectivity of Ohio’s transportation system and further the goals such as corridor completion, economic development, competitiveness in a global economy, and quality of life. <a href="http://www.dot.state.oh.us/Divisions/Finance/Pages/StateInfrastructureBank.aspx">http://www.dot.state.oh.us/Divisions/Finance/Pages/StateInfrastructureBank.aspx</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Urban Paving Program</strong></td>
<td>Counties, Municipalities</td>
<td>Bridge, Road, Road/Bridge</td>
<td>20%</td>
</tr>
<tr>
<td>The ODOT Urban Paving Program provides funds to cities for surface treatment and resurfacing projects located on State and U.S. Routes within city corporation limits. Eligible projects are those that have a Pavement Condition Rating (PCR) of 55 or worse according to ODOT’s Pavement Condition Rating System. <a href="http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ProgramResourceGuide.pdf">http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ProgramResourceGuide.pdf</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clean Ohio Trails Fund</strong></td>
<td>Counties, Metroparks, Municipalities, Non Profits, Port Authorities</td>
<td>Bike/Pedestrian, Bikeways, Environmental, Natural Habitat Preservation and Restoration, Pedestrian</td>
<td>25%</td>
</tr>
<tr>
<td>This program improves outdoor recreational opportunities by funding trails for outdoor pursuits including land acquisition for a trail, trail development, trailhead facilities, engineering and design. <a href="https://development.ohio.gov/cleanohio/">https://development.ohio.gov/cleanohio/</a></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Eaton Corporation Charitable Fund</strong></td>
<td>Communities within where the company operates.</td>
<td>Arts and culture, education, health, cancer, housing, disaster relief, human services, and community development. Special emphasis is directed toward organizations with which employees of Eaton are involved.</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Description &amp; Link</td>
<td>Eligible Applicants</td>
<td>Categories</td>
<td>Match</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><strong>Quicken Loans Foundation In the Community</strong></td>
<td>Detroit, MI; Cleveland, OH; Phoenix, AZ; and Charlotte, NC.</td>
<td>Neighborhood Stabilization, Improving Public Safety, Activate and animate the City, Develop Transformational Sites, Support Local Entrepreneurs, Support Human Services, Improve Education for all</td>
<td>Not Provided</td>
</tr>
<tr>
<td><strong>The Rockefeller Foundation Grants</strong></td>
<td>Counties, Metroparks, Municipalities, Non Profits, Port Authorities, School Districts, Sewer Districts, Transit Agencies</td>
<td>Bike Safety Program, Bike/Pedestrian, Bikeways, Community Water System Improvements, Environmental, Helmets, Intelligent Transportation Systems, Mobility Management, Pedestrian, Pedestrian Safety Program, Planning, Resilience Efforts, Storm Water Improvement, Transit, Transit Center Facility</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>The George Gund Foundation</strong></td>
<td>Counties, Metroparks, Non Profits, Port Authorities, School Districts, Sewer Districts, Transit Agencies</td>
<td>Bike Safety Program, Bike/Pedestrian, Bikeways, Environmental, Helmets, Natural Habitat Preservation and Restoration, Nutrient Reduction, Pedestrian, Planning, Resilience Efforts, Storm Water Improvement</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>The People For Bikes Community Grant Program</strong></td>
<td>Counties, Metroparks, Municipalities, Non Profits, Port Authorities, Sewer Districts, Transit Agencies</td>
<td>Bike/Pedestrian, Bikeways, Bridge, Road, Road/Bridge</td>
<td>50%</td>
</tr>
</tbody>
</table>
### Description & Link

**State Farm Insurance Good Neighbor Citizenship® Company Grants**

Strong neighborhoods are the foundation of a strong society. State Farm is committed to maintaining the vibrancy of our communities by assisting nonprofits that support: affordable housing, first time homeowners, neighborhood revitalization, financial literacy, job training, and small business development. Through community outreach and community development grants and investments, State Farm gives back to the neighborhoods it serves and helps develop stronger neighborhoods by reinvesting in the community.


<table>
<thead>
<tr>
<th>Eligible Applicants</th>
<th>Categories</th>
<th>Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs conducted by Municipal, county, state or federal government entities that align with State Farm’s charitable focus.</td>
<td>Affordable Housing, Job training, Neighborhood Revitalization, Financial Literacy, First Time Homeownership</td>
<td>Not Provided</td>
</tr>
</tbody>
</table>

### 16. Next Steps

This plan is intended to serve as a framework for the communities to guide future decision-making and implementation of infrastructure and programs to enhance multimodal access and circulation throughout the study area. The communities should work both individually and collectively to prioritize and pursue the recommendations and projects that reflect the greatest benefit to each community and the study area. The prioritized projects should connect and close gaps in the multimodal network, reflect the interests of the community(ies) and leverage partnerships within and between the involved communities. Key considerations for each community are summarized below, reflection discussions during the final Steering Committee meeting which covered a discussion of the final plan and recommendations.

**Warrensville Heights**

- Support enhanced transit service to effectively serve the study area.
- Support non-motorized access to the new town center and schools.
- Support neighborhood walkability and walkable access to nearby destinations; this is particularly important in the Clarkwood-Grenada neighborhood due to the population density and demographics.

**Shaker Heights**

- Support and enhance First/Last Mile connections to and from the Van Aken District.
- Provide bikeway connections.
  - Warrensville Center Road
  - Northfield Road
- Support expansion of the UH Bikes bike share program to serve the study area.
North Randall
• Encourage sound land development, multimodal facilities, and access management with redevelopment of Randall Park Mall site, working in partnership with Warrensville Heights.
• Support expanded transit service.

Highland Hills
• Provide multimodal connectivity along Harvard.
  – Support expanded transit services and extension of RTA’s Blue Line.
  – Multi-use trails along Harvard and Mill Creek.
• Encourage sound land development and access management with new developments in Chagrin Highlands.
• Partner with Tri-C East for implementation of their master plan vision.
• Support expansion of the UH Bikes bike share program to serve the study area.

16.1 Prioritization Guidelines
Given the volume of recommendations contained it will be important for the involved communities to prioritize the projects that they can implement themselves as well as the other projects that will benefit from multi-community collaboration. During the final Steering Committee meeting, the communities agreed to meet on a regular schedule to understand all that is going on within and near the study area. This is important and beneficial, considering all the new development that is currently in progress and the future developments that are currently being planned.

The following general guidelines can be used to help the communities prioritize the recommendations:
• Connect/close existing gaps in the non-motorized networks.
• Understand and focus on community interests and priorities.
• Partner with neighboring communities and stakeholder organizations to maximize leveraging of opportunities.
• Work with RTA and neighboring communities to support transit improvements.
• Take advantage of ‘low-hanging fruit’ (do easy, low cost projects first).
  – Optimize signal operations (timing, phasing, GPS clocks).
  – Install pedestrian enhancements at intersections (countdown pedestrian heads, curb ramps).
• Work toward transformational elements. The big projects will require more effort and resources, but if planning is begun then it will be possible to capitalize on funding opportunities when they arise.

16.2 Cost Estimate Guidelines
The estimated unit price cost information is provided below as a courtesy to help develop general order of magnitude, planning level cost estimates for the recommendations identified in the plan. The estimated unit price costs are based on current year information (2018) and reflect typical, standard costs associated with each treatment, however, the amounts provided are not all-inclusive. Site-specific elements and issues associated with each project need to be considered and incorporated together with verification of projected construction year cost information, as appropriate.

Bike Lane
$8,500 per mile
This estimate includes provision of edge lines and bike symbols and arrows (placed every 500 ft). It does not include any pavement or other roadway-related work.

Buffered Bike Lane
$24,000 per mile
This estimate includes provision of edge lines, bike symbols and arrows placed every 500 ft, transverse lines placed at 12 ft intervals, and an assumed 3 ft for buffer width. The estimate does not include any pavement or other roadway-related work. It does not include provision of any sort of physical barrier.
Multi-Use (Off-Road) Trail
10 ft paved in 15 ft ROW
$400,000 per mile

This estimate is for a 10 ft wide asphalt path within 15 ft of right-of-way. It includes minimal clearing/grading, 3 in. HMA (hot mix asphalt) pavement on 8 in. aggregate base, pavement marking, signage (regulatory and route markers) and limited revegetation. The estimate does not include property acquisition, security, lighting, fencing, road crossings or utilities.

Pedestrian Enhancements at Intersections
$25,000 per intersection

This estimate is based on the provision of 8 ADA ramps and 8 countdown pedestrian heads. It does not include pedestrian push buttons, conduit, wiring, or other signal or roadway related work. In addition, it includes provision of continental style (high visibility) crosswalks with an assumed total crosswalk distance of 350 ft per intersection.

Sidewalk
$300,000 per mile

This estimate is based on provision of a 5 ft sidewalk along a curbed roadway without right-of-way constraints, driveways, and/or removal of existing sidewalk. It includes general provisions for embankment and guardrail, manholes adjusted to grade, and limited tree removal.

Signal Operations

Operational efficiency at several intersections in the study area can be improved by simply adjusting the timing to align with the optimized timing plans included in the Traffic Report (Appendix 17.1). Others may require signal head replacement, but that is typically low cost, provided the existing signal structure can bear any additional weight.

Transit Waiting Environment
$50,000-100,000 per TWE at single stop/direction

This estimate is based on experience from recent RTA TWE projects that provide significant upgrades from basic RTA shelters, and on estimates developed in 2017 for the City of Cleveland’s Thrive 105 project, which proposes bus rapid transit (BRT) stations of various sizes along E. 93rd and E. 105th Streets in Cleveland. Improvements at the lower end of the range would include shelter pad and limited sidewalk extension or replacement, upgraded shelter, lighting, lighted totem sign with way-finding map and static bus route information and trash receptacle. The higher end of the range would add additional sidewalk improvements and an expanded pad for a larger shelter and supplemental bench outside the shelter, additional lighting, bicycle rack, and real-time bus information on the lighted totem sign. The estimate does not include environmental permitting, design, construction management, right-of-way acquisition, or any improvements in the roadway including concrete bus stop pads.

Grade-Separated Trail Crossing
$3-7 million per crossing

This estimate includes both overpass and underpass grade separated crossings for the Harvard Road/Richmond Road intersection, as recommended in this plan. The cost range is based on the use of a simple prefabricated structure for a bridge or tunnel with minimal landscaping or other enhancements; it does not include drainage pumps for a tunnel. Costs for a grade-separated crossing could be significantly higher for a custom bridge or tunnel design.

Mid-Block Crossing
(Rectangular Rapid Flash Beacon)
$95,000 per crossing

The estimate is based on the provision of a mid-block crossing on Northfield Rd with 55 ft of pavement, 20 ft of sidewalk across the median, 8 ft of sidewalk to the existing west sidewalk, four rectangular rapid flash beacons (RRFBs) signs with flashers, power service, four curb ramps, and subsequent design and surveying fees.
17. Appendix

17.1 Project Team and Steering Committee

17.2 Traffic Report

17.3 Transit Report

17.4 Meetings

17.5 Survey Questions and Results
17.1 Project Team and Steering Committee
Project Team

City of Shaker Heights
  Joyce Braverman, Director of Planning
  Ann Klavora, Principal Planner

City of Warrensville Heights
  The Honorable Bradley D. Sellers, Mayor
  Jerome DuVal, Economic Development Director
  Carletta Fellows, Strategic Initiatives Director
  Don Jolly, Superintendent of Schools
  Andrea Mitchell, Councilwoman
  Matthew Howard, Councilman

Cuyahoga County Planning Commission
  Glenn Coyne, Director
  Jim Sonnhalter, Planning Manager
  Marionette Richardson-Scott, Project Manager

Greater Cleveland Regional Transit Authority
  Marybeth Feke, Director of Planning and Programming
  Amy Snell, Planning Leader

Northeast Ohio Areawide Coordinating Agency (NOACA)
  Ryan Noles
  Alison Wasserman
  Pam Davis

Village of Highland Hills
  Larry Finch, Community Development Director Susan Hamilton

Village of North Randall
  The Honorable David Smith, Mayor
  Larry Finch, Community Development Director

WSP
  Nancy Lyon-Stadler, PE, PTOE
  Tim Rosenberger, AICP
  Scarlett Sharpe, ENV-SP

SmithGroup
  Neal Billetdeaux, RLA, ASLA, LEED BD+C
  Oliver Kiley

Steering Committee

Bike Cleveland
  Jacob VanSickle, Executive Director

City of Cleveland Planning Commission
  Freddy L. Collier Jr., Director
  Donn Angus, Chief City Planner

Cleveland Clinic (South Pointe Hospital)
  Brian Monter

Cleveland Metroparks
  Kelly Coffman

Cuyahoga Community College
  Greg Malone, Program Manager
  Claire Rosacco, VP Community Outreach

University Hospitals
  Sarah O’Keefe

Ohio Department of Transportation
  Melinda Bartizal
  John Motl

Warrensville Heights Area Chamber of Commerce
  Steve Petti, President

Project Team (shown above)
17.2 Traffic Report
Traffic Study

1.0 Introduction & Background

A traffic study was conducted to analyze the existing roadway network and determine what modifications could be implemented to improve network performance and better accommodate bicyclists and pedestrians and develop a complete streets initiative for the Northfield-Warrensville study area. Although the project area includes major roadways, some of the transportation corridors could be re-balanced to better accommodate the needs of multimodal users. The Northfield Road and Emery Road corridors were evaluated for potential reconfiguration as complete streets corridors within the study area, where reduction in vehicle capacity may be feasible. The traffic study evaluated key intersections along the Northfield

Road and Emery Road corridors, listed below.

1. Northfield Road/Harvard Road
2. Northfield Road/Ellacott Parkway-Clarkwood Parkway
3. Northfield Road/Emery Road
4. Northfield Road/Miles Road
5. Emery Road/Warrensville Center Road
6. Emery Road/Green Road
7. Emery Road/Richmond Road

The corridor evaluation consisted of assessment of the scenarios listed below, with specific evaluation of morning (AM) and evening (PM) peak hour operations. Traffic volume data was collected in February 2016.

- Existing Conditions: Analysis of the study intersections based on their existing configurations and signal timing plans.
- Existing Optimized: Analysis of the study area intersections with optimized signal timing and phasing for the existing intersection configurations (retained the same intersection approach and departure lanes as existing).
• Proposed Conditions: Analysis of potential capacity reductions along the two corridors, including modifications in travel lanes and configuration of the intersections along with optimized signal timing and phasing to accompany the potential reconfiguration.

Traffic analysis was completed using Synchro version 9.1, a microsimulation computer traffic model. Analysis of the three scenarios examined operational capacity, looking specifically at level of service (LOS), delay and volume/capacity (V/C) ratios. The thresholds for delay associated with each level of service are shown in Table 1. In urban areas like this study area, LOS D is considered the threshold for acceptable operational efficiency. Intersections with performance below LOS D for the existing conditions are summarized in Table 2.

Intersection traffic volumes are provided in Table 3. The results from the existing conditions analysis were used as a baseline for comparison of the other two analysis scenarios. The results of the three analysis scenarios are summarized in the sections below.

### Table 1. Level of Service Criteria for Signalized Intersections

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Average Control Delay (sec/veh)</th>
<th>General Description of LOS for Signalized Intersections</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≤ 10</td>
<td>Free Flow</td>
</tr>
<tr>
<td>B</td>
<td>&gt; 10 - 20</td>
<td>Stable Flow (slight delays)</td>
</tr>
<tr>
<td>C</td>
<td>&gt; 20 - 35</td>
<td>Stable flow (acceptable delays)</td>
</tr>
<tr>
<td>D</td>
<td>&gt; 35 - 55</td>
<td>Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)</td>
</tr>
<tr>
<td>E</td>
<td>&gt; 55 - 80</td>
<td>Unstable flow (intolerable delay)</td>
</tr>
<tr>
<td>F</td>
<td>&gt; 80</td>
<td>Forced flow (jammed)</td>
</tr>
</tbody>
</table>

Source: Highway Capacity Manual
Table 2. Traffic Volume Counts

<table>
<thead>
<tr>
<th>Peak</th>
<th>Eastbound</th>
<th></th>
<th></th>
<th>Westbound</th>
<th></th>
<th></th>
<th>Northbound</th>
<th></th>
<th></th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Left</td>
<td>Thru</td>
<td>Right</td>
<td>Left</td>
<td>Thru</td>
<td>Right</td>
<td>Left</td>
<td>Thru</td>
<td>Right</td>
<td>Left</td>
</tr>
<tr>
<td>Northfield Road / Harvard Road</td>
<td>AM</td>
<td>10</td>
<td>480</td>
<td>120</td>
<td>30</td>
<td>240</td>
<td>140</td>
<td>90</td>
<td>315</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>5</td>
<td>435</td>
<td>200</td>
<td>55</td>
<td>480</td>
<td>150</td>
<td>145</td>
<td>360</td>
<td>45</td>
</tr>
<tr>
<td>Northfield Road / Ellacott Parkway-Clarkwood Parkway</td>
<td>AM</td>
<td>35</td>
<td>40</td>
<td>30</td>
<td>30</td>
<td>50</td>
<td>85</td>
<td>35</td>
<td>455</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>20</td>
<td>65</td>
<td>60</td>
<td>55</td>
<td>65</td>
<td>55</td>
<td>60</td>
<td>435</td>
<td>30</td>
</tr>
<tr>
<td>Northfield Road / Emery Road</td>
<td>AM</td>
<td>35</td>
<td>235</td>
<td>45</td>
<td>50</td>
<td>170</td>
<td>70</td>
<td>95</td>
<td>480</td>
<td>160</td>
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<tr>
<td></td>
<td>PM</td>
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<td>415</td>
<td>105</td>
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<tr>
<td>Northfield Road / Miles Road</td>
<td>AM</td>
<td>35</td>
<td>335</td>
<td>140</td>
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<td>415</td>
<td>545</td>
<td>100</td>
<td>255</td>
<td>640</td>
<td>275</td>
</tr>
<tr>
<td>Emery Road / Warrensville Center Road</td>
<td>AM</td>
<td>25</td>
<td>85</td>
<td>10</td>
<td>105</td>
<td>90</td>
<td>105</td>
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<td>PM</td>
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<td>25</td>
<td>335</td>
<td>170</td>
<td>120</td>
<td>30</td>
<td>810</td>
<td>235</td>
</tr>
<tr>
<td>Emery Road / Granada Boulevard-Derbyshire Drive</td>
<td>AM</td>
<td>30</td>
<td>470</td>
<td>5</td>
<td>5</td>
<td>320</td>
<td>20</td>
<td>5</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>PM</td>
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<td>5</td>
<td>15</td>
<td>805</td>
<td>35</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Emery Road / Green Road</td>
<td>AM</td>
<td>185</td>
<td>290</td>
<td>35</td>
<td>40</td>
<td>235</td>
<td>105</td>
<td>35</td>
<td>300</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>115</td>
<td>390</td>
<td>70</td>
<td>70</td>
<td>395</td>
<td>90</td>
<td>80</td>
<td>170</td>
<td>65</td>
</tr>
</tbody>
</table>

2.0 Existing Conditions

The Existing Conditions analysis examined operations based on existing intersection configurations and current signal timing plans, which were provided by the agencies controlling each of the signals. The signals in the study area operate individually; they are not part of a coordinated signal system. Additionally, the Emery Road intersections at Granada Boulevard-Derbyshire Drive and Green Road are run on a pre-timed schedule.

Analysis shows some specific movements and approaches with more delay than the other intersection approaches, like the westbound approach at Northfield Road/Harvard Road. These results indicate possible issues with signal timing and phasing, since the overall intersection operations are acceptable.

Northfield Road Corridor

The Northfield Road corridor operates at acceptable intersection levels of service during the AM peak. The corridor
intersections all experience more delay during the PM peak, with conditions that are at or over capacity at the Emery Road and Miles Road intersections. Examination of intersection performance by approach and by approach movement shows that there are some operational performance issues at those levels, as exhibited by poor delay and levels of service. Some improvements in performance may be possible with signal timing and phasing adjustments.

- **Northfield Road / Harvard Road**
  There are operational inefficiencies associated with cycle length, duration of north-south green compared to east-west green, and the protected only north-south left turn phase.

  There is a fairly high volume of westbound through traffic during the PM peak hour which is impeded by left turning traffic because there is no dedicated left turn lane or left turn phase. This results in over-capacity conditions due to queueing of traffic in the left lane.

- **Northfield Road / Ellacott Parkway-Clarkwood Parkway**
  There are operational inefficiencies associated with cycle length, duration of north-south green compared to east-west green, and the protected only north-south left turn phase.

  - **Northfield Road / Emery Road**
    The westbound movement operates at LOS F during the PM peak due to the heavy westbound left turn volume. The queue does not clear during the protected only left turn signal phase. Similar left turn capacity issues are exhibited on the other approaches, all of which are controlled by protected only left turn phasing.

  - **Northfield Road / Miles Road**
    During the PM peak, heavy westbound and northbound left turn movements contribute to eastbound and westbound LOS F and northbound LOS D.

    The westbound left turn volume exceeds the storage and spillback area during both peaks. As configured, the existing left turn lane is not long enough to accommodate the left turning vehicles and the queue does not clear with the left turn phase.

  - **Emery Road Corridor**
    The Emery Road corridor operates at acceptable intersection levels of service during the AM peak. The corridor intersections all experience more delay during the PM peak, with conditions that are at capacity at the Northfield Road intersection. Examination of intersection performance by approach and by approach movement shows that there are some operational performance issues at those levels, as exhibited by poor delay and levels of service. Some improvements in performance may be possible with signal timing and phasing adjustments.

- **Emery Road / Warrensville Center Road**
  The protected/permitted left turns on all approaches operate effectively for both peaks.

- **Emery Road / Northfield Road**
  The westbound movement operates at LOS F during the PM peak due to the heavy westbound left turns. The queue does not clear during the protected only left turn signal phase. Similar left turn capacity issues exist on the other approaches, all of which are controlled by protected only left turn phasing.

- **Emery Road / Granada Boulevard-Derbyshire Drive**
  The north-south approaches are controlled with split phasing due to the offset configuration. This causes operational inefficiencies, particularly considering the very low volume of northbound traffic.

- **Emery Road / Green Road**
  This intersection functions efficiently during both peaks, even with the heavy southbound and westbound left turn volumes.

  Left turns are controlled with protected-permitted phasing on all approaches.
## Existing Conditions - Northfield Road Corridor

### Traffic - 5

<table>
<thead>
<tr>
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### Existing Conditions – Emery Road Corridor

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Traffic - 6
3.0 Existing Optimized

The Existing Optimized traffic analysis examined performance of the identified study intersections with potential improvements to improve operational efficiency through implementation of changes in signal timing and phasing. No changes were made to intersection geometry; the approach and departure lane configurations remained the same as existing. The results table clearly demonstrates that significant benefits in operational efficiency can be gained by optimizing the signal timing and phasing; delay was reduced at all intersections. At some locations, the timing and phasing changes will require modification of the signal equipment, but it will not require changes to the roadway configuration.

Northfield Road Corridor

Based on the corridor traffic volumes, analysis and field observations, the Northfield Road corridor intersections were analyzed using the same cycle length to allow for potential signal coordination and corridor progression. This changes the existing cycle lengths which were different at each of the corridor intersections. Additionally, the left turn phases at the Northfield Road intersections with Harvard Road and Ellacott Parkway-Clarkwood Parkway were changed from protected only to protected/permitted phases. Signal timing was optimized at each intersection, incorporating changes in cycle length and phasing. The associated impacts on intersection operations are:

- **Northfield Road / Harvard Road**
  Intersection operations are improved, with a significant reduction in average delay and an improvement from LOS D to LOS C in intersection operations for both peaks.
  All movements that operated at or over capacity (LOS E/F) under the existing conditions have improved to LOS D or better for both peaks, with most at LOS C or better.

- **Northfield Road / Ellacott Parkway-Clarkwood Parkway**
  Although intersection operations retain the same LOS B/C for the AM/PM peaks, over-capacity approach movements are mitigated.

- **Northfield Road / Emery Road**
  Intersection operations are improved, with a significant reduction in average delay and an improvement from LOS E to LOS D in intersection operations for the PM peak.
  All approach movements that operated at LOS F under the existing conditions have improved to LOS E and all approaches and movements see a general reduction in delay.

- **Northfield Road / Miles Road**
  Intersection operations are improved, with a significant reduction in average delay and an improvement from LOS F to LOS E in intersection operations for the PM peak.
  Several approaches and movements that had been operating at LOS E/F during the AM and/or PM peaks have improved in performance and most have moved up by one level of service category.
  The westbound left turn volume exceeds 300 vph so additional improvements in intersection operations are not likely without an additional left turn lane (double left).

Emery Road Corridor

The Emery Road intersections with Granada Boulevard-Derby Drive and Green Road were converted from pre-timed signals to semi-actuated signals to improve operational efficiency. The same cycle length used for the Northfield Road corridor intersections was used for the Emery Road intersections due to the overlap at Northfield Road/Emery Road and to retain consistency throughout the network. Signal timing was then optimized at each of the corridor intersections, incorporating the changes in cycle length and phasing. The impacts of these changes on intersection operations are summarized below.
## Optimized Conditions – Northfield Road Corridor

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| WB   | 31.7         | C        | L / Th   | 31.6 | C     |
| NB   | 11.9         | B        | Th / R   | 12.6 | B     |
| SB   | 10.9         | B        | Th / R   | 11.5 | B     |
| EB   | 25.7         | C        | L / Th   | 25.5 | C     |
| WB   | 29.7         | C        | L / Th   | 32.3 | C     |
| NB   | 31.8         | C        | Th / R   | 24.5 | C     |
| SB   | 31.7         | C        | Th / R   | 28.0 | C     |
| EB   | 39.2         | D        | L        | 39.1 | D     |
| WB   | 44.2         | D        | L / Th / R | 44.2 | D     |
| NB   | 7.8          | A        | Th / R   | 8.0  | A     |
| SB   | 6.7          | A        | Th / R   | 7.0  | A     |
| EB   | 36.6         | D        | L        | 33.0 | C     |
| WB   | 47.1         | D        | L / Th / R | 47.1 | D     |
| NB   | 16.5         | B        | Th / R   | 12.3 | B     |
| SB   | 19.4         | B        | Th / R   | 12.7 | B     |
| EB   | 44.9         | D        | L        | 50.7 | D     |
| WB   | 43.6         | D        | L        | 51.6 | D     |
| NB   | 17.9         | B        | Th / R   | 12.4 | B     |
| SB   | 20.6         | C        | Th / R   | 12.1 | B     |
| EB   | 55.0         | E        | Th / R   | 56.2 | E     |
| WB   | 38.7         | D        | L        | 64.1 | E     |
| NB   | 35.0         | C        | Th / R   | 27.0 | C     |
| SB   | 40.6         | D        | L        | 55.6 | E     |
| EB   | 48.4         | D        | L        | 55.0 | D     |
| WB   | 37.3         | D        | L        | 54.6 | D     |
| NB   | 25.2         | C        | Th / R   | 19.1 | B     |
| SB   | 26.4         | C        | L        | 58.4 | E     |
| EB   | 113.7        | F        | Th / R   | 55.8 | E     |
| WB   | 53.1         | D        | L        | 98.7 | F     |
| NB   | 58.0         | E        | Th / R   | 25.1 | C     |
| SB   | 79.8         | E        | L        | 82.1 | F     |

Traffic - 8
### Optimized Conditions – Emery Road Corridor

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Traffic - 10
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Emery Road / Warrensville Center Road
There is virtually no change in performance during both peaks; the protected/permitted left turns on all approaches operate effectively.

Emery Road / Northfield Road
Intersection operations are improved, with a significant reduction in average delay and an improvement from LOS E to LOS D in intersection operations for the PM peak.

All approach movements that operated at LOS F under the existing conditions have improved to LOS E and all approaches and movements see a general reduction in delay.

Emery Road / Granada Boulevard-Derbyshire Drive
Intersection operations and all approaches and movements experience measurable reductions in delay during both peaks.

Emery Road / Green Road
Intersection operations and all approaches and movements experience a reduction in delay during both peaks.

4.0 Potential Future Conditions (Road Diet)
The Potential Future Conditions traffic analysis examined operational performance of the identified study intersections with potential changes to the intersections to reduce travel lanes that would enhance complete streets opportunities as well as optimize intersection operations through signal timing and phasing modifications. The purpose of this analysis scenario is to assess the feasibility of complete streets along the Northfield Road and Emery Road corridors. The phasing changes from the Existing Optimized analysis were retained.

Northfield Road Corridor
Northfield Road is currently configured as a four lane roadway with turn lanes at intersections north of Emery Road. The configuration of Northfield Road south of Emery Road transitions from four lanes to six lanes with a center turn lane and a number of northbound and southbound right turn trap lanes. The Potential Future Conditions analysis examines the feasibility of removing one travel lane in each direction from Northfield Road.

Northfield Road / Harvard Road
Intersection operations are acceptable, performing at LOS C. All approaches and movements will operate at LOS D or better, with most at LOS C or better, for both peaks.

Northfield Road / Ellacott Parkway-Clarkwood Parkway
Intersection operations are acceptable, performing at LOS B. All approaches and movements will operate at LOS D or better, with most at LOS B or better, for both peaks.

Northfield Road / Emery Road
Intersection operations are acceptable, performing at LOS C/D during the AM/PM peaks. One approach and several approach movements are expected to operate at LOS E.

Northfield Road / Miles Road
Intersection operations are acceptable, performing at LOS C/D during the AM/PM peaks. The northbound left is expected to operate at LOS F during the PM peak (it is just over the 80 sec delay threshold) and four approach movements are expected to operate at LOS E. Creating a westbound double left turn and an eastbound exclusive right turn lane will improve intersection operations.

Emery Road Corridor
Emery Road is configured as a four lane road with a left turn lane between Warrensville Center Road and Green Road. Emery Road transitions to a four lane road with two
travel lanes in each direction east of Green Road. The Potential Future Conditions examines the feasibility of reducing the capacity of Emery to a three lane road (two travel lanes plus center turn lane).

- **Emery Road / Warrensville Center Road**
  Intersection operations are acceptable, performing at LOS C. All approaches and movements will operate at LOS D or better.

- **Emery Road / Northfield Road**
  Intersection operations are acceptable, performing at LOS C/D during the AM/PM peaks. One approach and several approach movements are expected to operate at LOS E.

- **Emery Road / Granada Boulevard-Derbyshire Drive**
  Intersection operations are acceptable, performing at LOS B/A during the AM/PM peaks. The northbound approach operates at LOS E, which is not unreasonable given the low northbound traffic volume.

- **Emery Road / Green Road**
  Intersection operations and all approaches and movements operate at acceptable levels.

### 5.0 Road Diet Feasibility

The analysis shows that capacity reductions on both Northfield Road and Emery Road are generally feasible, with some additional intersection modifications. However, there will be growth in traffic volumes, potentially significant, with the inevitable future redevelopment of the Randall Park Mall site, with ongoing development of the JACK Thistledown Racino, and with other planned and potential redevelopment in and near the study area. Land use and potential redevelopment within the study area is discussed in greater detail elsewhere, but ultimately, it is important to retain flexibility with roadway capacity for the roadway network along with incorporating multimodal accommodations. As such, the current and proposed intersection approach configurations are illustrated below.

### 6.0 Traffic Study Recommendations

Based upon the analysis, results and discussion, the following improvements and modifications are recommended.

**Operational Improvements**

- Optimize signal timing for the signalized intersections in the study area.
- Modify signal phasing to improve operational efficiency.
  - Northfield Road/Harvard Road: Convert the existing northbound and southbound protected only left turns to protected/permissive left turns.
  - Northfield Road/Ellacott Parkway-Clarkwood Parkway: Convert the existing northbound and southbound protected only left turns to protected/permissive left turns.
- Provide signal interconnect and upgrade signal equipment, as needed, for implementation of a coordinated signal system and signal progression along the primary corridors in the study area.
- Provide count down pedestrian heads to facilitate pedestrian crossings at signalized intersections in the study area. Pedestrian heads are currently not installed at these locations:
  - Emery Road/Merrygold Boulevard
  - Emery Road/Green Road
  - Emery Road/Granada Boulevard-Derbyshire Drive
  - Northfield Road/Harvard Road (north, south and east legs)
  - Northfield Road/Township Parkway
  - Northfield Road/Ellacott Parkway-Clarkwood Parkway (east, west and south legs)
  - Emery Road/Warrensville Center Road (east and north legs)
Existing & Proposed Intersection Configurations
• Replace existing pedestrian heads with pedestrian heads with countdown timers to facilitate pedestrian crossings. These locations have older pedestrian heads:
  - Northfield Road/Harvard Road (west leg)
  - Northfield Road/Ellacott Parkway-Clarkwood Parkway (north leg)
  - Northfield Road/Emery Road
  - Northfield Road/Randall Park Mall Entrance
  - Northfield Road/Miles Road
  - Emery Road/Walford Road
  - Emery Road/JACK Thistledown Racino entrance
  - Emery Road/Warrensville Center Road (west and south legs)
• Construct a westbound double left turn and an eastbound exclusive right turn lane at the Northfield Road/Miles Road intersection to improve performance.
• Realign Granada Boulevard and Derbyshire Drive to a standard four-legged intersection where they meet at Emery Road. This would eliminate the need to split-phase the north-south approaches and improve operational efficiency.

**Complete Streets (Road Diet)**

Convert Northfield Road to the proposed three-lane corridor from the northern terminus to Harvard Road. This is clearly feasible based on the traffic analysis. Extending the three-lane section south to Emery Road is possible and it would improve multimodal opportunities for the Warrensville Heights schools and community center areas. Conversion of this segment would be feasible based on current traffic volumes and with the signal modifications included in the analysis. The three-lane section may need to be terminated north of Emery Road, depending on future redevelopment to the south and anticipated intersection operations at Emery Road. Northfield Road south of Emery Road should not be modified at this time, due to the unknown redevelopment of the Randall Park Mall site.

The space vacated by the travel lanes along Northfield Road would be converted to buffered bike lanes.

• Convert Emery Road to the proposed three-lane corridor between Northfield Road and Richmond Road. The space vacated by the travel lanes could be converted to buffered bike lanes.

Potential road diet concepts for Northfield Road and Emery Road are illustrated below. Northfield Road shows the possibility of bike lanes along the median as one of multiple options. Emery Road shows the standard road diet conversion of a four-lane road to a three-lane road with two travel lanes and a center turn lane plus bike lanes.
Potential Road Diet, Northfield Road

Potential Road Diet, Emery Road
17.3 Transit Report
1.0 Existing Conditions

Transit service in the greater Cleveland region is provided by the Greater Cleveland Regional Transit Authority (RTA) and includes bus and rail transit service which is available to the general public. Current RTA operations and facilities in the general area within and around the study area are shown in the figure to the right. Rail service consists of the Blue Line, with the eastern terminus (Van Aken & Warrensville Station) located in the Van Aken District which is in the northwest corner of the study area. Bus service includes Route 14 and Route 5 on Chagrin, Route 41 on Warrensville Center, Route 15 that circulates through the study area, Route 19 along Miles, and Route 94 centered along the Richmond Corridor. The 41F provides service to Solon but does not stop in the study area.

Route 5 Chagrin Boulevard connects the Van Aken & Warrensville rapid station east to Lander Circle via Chagrin Boulevard, with a short route diversion on Richmond Road and...
Park East Drive to the south of Chagrin, serving businesses in the southwestern quadrant of the Chagrin-I-271 interchange.

Route 5 operates from 5:25 AM to 12:01 AM on weekdays, with similar span on Saturdays, Sundays and Holidays. The route provides 30 minute headway service during peak periods and 60 minute headways during weekday mid-day and evening periods and all day on weekends.

Route 15 Union-Harvard connects the Chagrin Highlands area to Public Square in downtown Cleveland through a complicated alignment that uses long segments of Harvard Road, Union and Broadway Avenues. Alternating trips originate at Tri-C East Campus and Eaton Corporate Headquarters at Richmond and Harvard in Highland Hills, and at the Country Lane Apartments in Orange Village. The two alignments converge at Granada Road and Clarkwood Parkway, south of Harvard and just west of Green Road. Several early morning inbound and afternoon outbound trips use an alternate alignment between East 177th and East 116th Streets to serve an employment destination in that area. The alignment is shown in Figure 47.

Route 15 operates from 3:55 to 2:14 AM Monday through Friday, a span of more than 22 hours. Saturday span is from 5:01 to 1:42 AM, with a similar span on Mondays and Holidays. The route provides half-hourly
service on the trunk portion of the route (from Granada Road and Clarkwood Parkway to downtown), with hourly service from each of the two branching ends, throughout its service day on both weekdays and weekends.

Route 19 connects the southern portion of the study area to Public Square, originating at a layover point at the end of Fargo Road, east of Richmond Road and south of Miles Road. The route connects to Miles via Richmond and continues west on Miles and Broadway to downtown Cleveland. About half of all trips during the daytime period operate as a short-turn originating at Miles Loop, south of Miles on East 131st Street, east of the project study area. The alignment is shown in Figure 48.

Route 19 operates 24 hours a day, seven days a week. However, the first trip that extends beyond East 131st Street does not begin service until 4:00 AM on weekdays and after 4:40 on Saturdays, Sundays and Holidays. The last trip of the day arrives at and leaves Fargo at about 1:00 AM on weekdays and weekends. All trips operate to and from Fargo Road from 7:00 PM to 1:00 AM. The route operates a 15 minute average headway from 5:00 to 9:00 AM and 2:00 to 7:00 PM, with half of the trips continuing to the Fargo Terminus to provide a half hour headway in the study area. The route operates a half-hour headway on the trunk portion during the peak period, with hourly service continuing to the study area. The route operates half hourly service between Fargo and downtown from 7:00 PM to Midnight, with hourly service to and from Fargo until 1 and then hourly service between downtown and East 131st Street until 4:00 AM.

Route 41 is a crosstown route (not connected to downtown Cleveland) that operates from Glenwillow to Windermere Rapid Station, mostly on Warrensville Center Road. The route originates on Emerald Valley Parkway in Glenwillow and serves businesses on Cochran, Solon and Aurora Roads before connecting to the Southgate Transit Center. From Southgate, the route runs north on Warrensville Center Road through the study area, continuing on Noble Road north of Mayfield before terminating at Windermere. 41F trips, of which there are only two during each peak period, operate as a “freeway flyer” express route that bypasses the portion of the route between Harvard Road and the intersection of Aurora Road and Harper. In that segment, the route deviates from Aurora Road at Harper Road, traveling north on Harper, US 422 and I-271 and exiting at Harvard, from where it continues west to rejoin the regular route alignment at Warrensville Center. The alignment is shown in Figure 49.

Route 41 operates 24 hours a day, seven days a week, in the portion of the route from Southgate to Windermere, operating from before 5:00 AM to 1:00 AM Monday through Friday and until around midnight on weekends and holidays on the portion extending to Glenwillow. The route operates half-hourly service from before 5:00 AM to 2:00 AM, with hourly service overnight and after 7:00 PM from Southgate to Glenwillow. On Saturdays service is hourly from 2:00 to 7:00 AM and all day in the segment from Southgate to Glenwillow. Sunday and Holiday service is hourly, with no service east of Southgate between midnight and 7:00 AM.

Route 94 is a crosstown route that connects the Tri-C East Campus at Richmond and...
Harvard to Euclid Hospital via an alignment that mainly uses Richmond Road and Lakeshore Boulevard. Beginning at the southern terminus at Tri-C East, the route travels north on Richmond Road to Chagrin Boulevard, where it deviates through Science Park business park, returning to Richmond from South Woodland. The Route continues north on Richmond to Shaker Boulevard, where it makes a one way loop using the two sides of Shaker to connect to the Green Line Rapid Station at Green Road before returning to Richmond via Fairmont. The route continues north on Richmond to George Zeller Drive, circulating around Beachwood Place before returning to Richmond at Cedar Road. Travelling north, the route makes additional deviations to serve Richmond Park Apartments and the Cuyahoga County Airport before continuing north to E. 260th Street via Chardon and Brush Roads. The route continues north on E. 260th Street to Lakeshore, turning west on Lakeshore to Euclid Hospital.

Route 94 operates hourly service on weekdays from before 5:00 AM to after 9:00 PM. Service operates hourly from 6:00 AM to before 9:00 PM on Saturdays and from 8:00 AM to before 7:00 PM on Sundays and Holidays.

2.0 Recent Transit Plans and Proposed Changes

A number of plans and studies focused on transit service and facilities improvements in the study area have been completed since 2009. These include the Warrensville/Van Aken Intermodal Transit Center Program Plan, completed in 2009; the Blue Line Extension Study, completed in 2012, and the Warrensville/Van Aken Station Area Plan, completed in 2015.

The Warrensville-Van Aken Intermodal Transit Center Program Plan focused on the potential relocation of the end station of the Blue Line Rapid from its present location in the northeast quadrant of the Warrensville Center-Chagrin intersection to a new location in the southeast quadrant of the intersection, to allow for a larger redevelopment footprint in the northwestern quadrant. The idea of relocating the station, which would require extending the Blue Line Rapid rail tracks by more than 1,200 feet and diagonally across the Warrensville Center-Chagrin intersection, was first proposed in an earlier Transit-Oriented Development (TOD) plan developed by the City of Shaker Heights in 2008 (refer to Figure 46).

The Intermodal Transit Center Program Plan advanced and refined the plan developed in the Transit Oriented Development plan, based on both technical analysis and further input from the Van Aken District developer. The Program Plan analyzed the issues and opportunities associated with relocating the station from a variety of perspectives: bus and rail operations, rail infrastructure, station design, transit markets, and station joint development potential. The plan was developed in close coordination with RTA and included extensive public and stakeholder input.

The program plan again proposed relocating the station to an intermodal transit center
facility in the southern quadrant of the intersection within the alignment of Northfield Road which, together with Van Aken Boulevard, would be abandoned and closed to through traffic. (These two roads were closed to through traffic at this location in 2014). The additional space would allow the center to provide improved passenger amenities with safer and convenient bus-to-bus and bus-to-rail interfaces. The new location included a parking structure for park-and-ride activity as well as parking for surrounding development. It would include space for private joint development that would be integrated within the intermodal center for good access to transit with improved pedestrian connectivity to adjacent development. Station relocation and closure of the diagonal crossing of the Van Aken-Northfield legs of the intersection would reduce intersection size, shorten crosswalks and provide other pedestrian-oriented improvements. It would also promote development north and south of Chagrin. Station relocation would also set the stage for a potential longer extension of the Blue Line Rapid rail line, or the extension of connecting BRT service down Northfield or Warrensville Center Road. This potential extension of high capacity transit service to the south and east was to be the subject of the subsequent Blue Line Extension Project.

The Blue Line Extension Project, conducted by RTA and completed in 2012, was an alternatives analysis under FTA’s 5309 New Starts program, analyzing potential high capacity transit improvements in the area south and east of the Van Aken Blue Line Rapid Station. A high capacity transit extension of the Blue Line into the Chagrin Highlands area and to the Harvard and Northfield highway interchanges was recommended in RTA’s Strategic Master Plan, completed in 2010, which identified these potential extensions as priority transit corridors. RTA completed a previous alternatives analysis of potential Blue Line extensions in 2002. That study selected as its preferred alternative a light rail extension of the Blue Line along a Northfield-Harvard alignment to I-271. RTA did not pursue further development of this alternative at the time due to lack of development in the Chagrin Highlands area, funding constraints, and an organizational focus on completing the Euclid Corridor (HealthLine) BRT project. The Shaker Heights projects, new development in Chagrin Highlands including
Eaton’s new corporate Headquarters and University Hospitals’ planned Ahuja Medical Center, as well as the inclusion of the area as a priority corridor in the Strategic Master Plan, led to RTA updating the alternatives analysis beginning in 2010.

The Blue Line Extension Project performed a detailed analysis of potential light rail and BRT extensions of the Blue Line using various alignments including Warrensville Center, Northfield and Harvard Roads and Chagrin Boulevard. The study generated ridership and detailed capital and operating cost estimates for various alternatives and considered both their potential transportation and development benefits.

These analyses were shared with project stakeholders from throughout the corridor, including the Cities of Beachwood, Highland Hills, Shaker Heights, Warrensville Heights, and the City of Cleveland (a major property owner in the Chagrin Highlands and a party to the Chagrin Highlands development agreement) and in three rounds of public input. Alternatives that included extension of the rail line beyond the south side of Warrensville-Chagrin intersection.

Warrensville-Van Aken Transit Oriented Development Plan (2008)
Shows development of an intermodal station on the southeastern quadrant of the Warrensville-Chagrin intersection.
Chagrin Boulevard, and BRT alternatives that included dedicated right of way, were eliminated from consideration because the additional ridership generated did not justify the high capital cost. The analysis focused on developing improvements that would cost-effectively serve the unmet transportation needs in the study area while supporting existing development and promoting transit-supportive development throughout the corridor.

The Blue Line Extension Project recommended as its locally preferred alternative a hybrid rail-BRT alternative that included the Intermodal Transit Center on the southeastern quadrant of the Warrensville-Chagrin Intersection and a roughly 1,500 foot extension (including tail track) of the Blue Line Rapid across Warrensville Center and Chagrin to connect to the center. The preferred alternative further included a “BRT light” extension of the Blue line that would extend south from the Intermodal Transit Center along Northfield Road, with the service branching at Harvard to extend to park-and-ride lots at the Harvard-I-271 and Northfield-I-480 interchanges to serve commuters traveling from the south and east via I-271, I-480 East and I-271. BRT buses would serve the park-and-ride lots and several stations along Northfield and Harvard before making a timed transfer to the Blue Line trains at the Intermodal Transit Center. From there, the buses would continue north and west along Van Aken to Shaker Square and then north to University Circle, providing the first express bus and park-and-ride service oriented to serving the growing Clinic and University Circle area. The BRT vehicles would circulate through the Clinic and University Circle area before returning to Shaker Square and Van Aken. The estimated capital cost of the locally preferred alternative was $44.1 million in 2012 dollars. This cost includes the rail extension and intermodal hub facility, the park-and-ride lots, BRT stations and BRT vehicles.

The Blue Line Extension Project report was accepted by both RTA and NOACA, and an application to enter into the FTA New Starts program was submitted to FTA in 2012, but the Locally Preferred Alternative was not adopted by NOACA nor included in their Long Range Transportation Plan, and RTA did not proceed with design of the project due to agency funding issues, changing agency priorities, and changes to the development plan for the Warrensville Center-Van Aken intersection area. These changes were the subject of the Warrensville/Van Aken Station Area Plan in 2015. This plan, developed by the City of Shaker Heights in cooperation with RTA, was in response to a new mixed-use development concept put forward by the developer of the land adjacent to the existing station on the northwestern quadrant of the Warrensville-Chagrin intersection (refer to Figure 54). Under this concept, rather than extending the Blue Line across Chagrin Boulevard to remove the station from the development site on the northeastern quadrant, the plan proposed truncating the rapid tracks at a point slightly north of the existing terminus and developing a new rapid station and bus interface facility in the northwest of the development site near Farnsleigh Road. This new station would replace both the existing Blue Line terminal station at Van Aken and the Farnsleigh Station located north and west of Farnsleigh Road. This configuration would allow for a large footprint building to occupy the northwest corner of Chagrin-and Warrensville Center, which the developer and the City considered critical to the success of the development. It also would allow for development of a dense street network that will create a walkable, vibrant, urban atmosphere.

The developer’s architects, together with City of Shaker Heights, RTA engineering, bus and rail operations staff, and transit and traffic engineering consultants evaluated dozens of potential station configurations in a series of design charrettes, balancing the developer’s vision with the rail and bus operational needs, traffic, and pedestrian and bicycle considerations, before settling on the preferred design concept, shown in Figure 55. Relocation of the electrical substation is critical to the plan. In its current location at the end of the tracks, the substation would block a proposed roadway.
right of way, compromising the layout of the development. RTA agreed to the relocation of this substation, which is nearing the end of its useful life, and will move the substation as part of the redevelopment effort, portions of which have been constructed or are under construction as of 2017.

During 2016 and 2017, RTA reduced service levels and made other changes to its routes due to budget issues. This resulted in some changes to route alignments, service span and schedule for some of the bus routes serving the corridor. The above route descriptions represent the routes as they operate in June 2017. Several of the routes received slight reductions in service frequency and/or span, and route alignment changes that lie outside the Northfield-Warrensville project study area.

Route 41, which above, connects the Windermere (Red Line) Rapid Station in East

Van Aken District Redevelopment Plan

During 2016 and 2017, RTA reduced service levels and made other changes to its routes due to budget issues. This resulted in some changes to route alignments, service span and schedule for some of the bus routes serving the corridor. The above route descriptions represent the routes as they operate in June 2017. Several of the routes received slight reductions in service frequency and/or span, and route alignment changes that lie outside the Northfield-Warrensville project study area.

Route 41, which above, connects the Windermere (Red Line) Rapid Station in East
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RTA’s Priority Transit Corridor Network

Cleveland to Southgate Transit Center via an alignment that primarily uses Warrensville Center Road, has seen significant ridership increases since completion of the Blue Line Extension Project in 2012. As a result, the portion of the alignment using Warrensville Center Road was added to the Blue Line extension corridor identified in RTA’s priority corridor network in 2015.

RTA’s Priority Corridor network consists of existing and proposed transit corridors with a strong potential for transit ridership growth based on existing transit ridership, development conditions that are favorable to transit service, locations of major regional destinations, and other factors. Figure 56 shows RTA’s current priority corridor network. The Red, Blue, and Green Line rapid transit corridors as well as the HealthLine BRT are corridors where improvements are already in place, while the Blue Line extension corridor is among 11 new corridors that were originally identified as part of RTA’s Strategic Master Plan in 2010 and amended in 2015. The Cleveland State Line (Clifton Boulevard) corridor, which opened as a BRT line in 2015, was the first of these new corridors to see service improvements fully implemented. In addition to the Blue Line Corridor analysis discussed above, the HealthLine extension, West 25th Street (MetroHealth Line) and East 105th-East 93rd Street corridors are currently being analyzed for possible opportunities for service improvements. Priority corridors could receive a range of service and infrastructure improvements ranging from increased bus service frequency, consolidation of bus stops and development of amenities at remaining stops, and branding of bus service, to part or full-time dedicated lanes or higher level BRT service improvements in the corridor.
3.0 Issues with Existing Transit Service
The Northfield-Warrensville area, in many respects, has an admirably high level of transit service. Two major east-west routes providing half-hourly, 24 hour service connect the area to east side neighborhoods and downtown Cleveland. Several significant north-south crosstown routes connect the area to destinations in eastern suburbs north and south of the study area. Not least, the Blue Line Rapid, which provides fast, frequent service to downtown Cleveland, lies at the edge of the study area.

In spite of this high level of transit service, there are a number of potential markets and connections that are either not made or made inadequately by the existing service. Some of these have been identified in the various studies and projects that have evaluated transit service in the area and recommended improvements. Others have been observed by area officials, planners, transportation officials and stakeholders, or provided by members of the public through the outreach process conducted as part of the Northfield Warrensville study. These issues include

- **A lack of direct, frequent transit service for trips from the end of the existing Blue Line corridor and retail and job destinations throughout the study area.** This lack of connectivity, noted in The Blue Line Extension Project and in other studies of the area, limits access for lower income and transit dependent residents of the region to the growing number of jobs in Warrensville Heights and Highland Hills, and limits their access to Tri-C East, one of the region’s most important educational facilities. From the standpoint of employers, this lack of connectivity limits the availability of workers. Improved connections from the Blue Line rapid to the study area would improve the viability of many of the businesses and institutions in the area while providing additional economic opportunity to area residents. Throughout the community engagement process, several stakeholders and the public identified a need to be able to effectively complete the “Last mile” connections between Van Aken Station (end of the Blue Line) and destinations within and near the study area.

- **Lack of express transit service from the I-271, I-480 East and US 422 to downtown Cleveland and University Circle.** The I-271, I-480 and US 422 corridors saw significant suburban development between 1980 and 2008, and is seeing some resumption of development activity since the end of the recession. The lack of a freeway connection to downtown Cleveland between I-480 and I-90 means that travelers from these corridors to downtown Cleveland must use I-480 and I-77 or State Route 176, all of which experience severe traffic congestion during the morning and evening rush hour periods. Travelers to University Circle from these corridors have an even more circuitous route using various combinations of arterial roadways. Express bus routes connecting park-and-ride lots at highway interchanges in the Northfield-Warrensville area to the Blue Line and University Circle offer an alternative to driving in congested conditions and would reduce vehicle travel and parking demand in both downtown Cleveland and University Circle.

- **Lack of a direct transit connection to University Circle.** The two north-south crosstown routes operating in the study area, routes 41 and 94, terminate at their northern ends at Windermere Rapid Station and Euclid Hospital, respectively. No existing bus route provides a direct connection from this area to the University Circle–Cleveland Clinic area, which is the region’s fastest growing employment center and, at its current growth rate, will soon rival downtown Cleveland as an employment destination. Current options for reaching University Circle from the study area all require traveling north on Route 41 and then transferring at least once to another bus route or rail line to complete the trip. A direct bus route...
from the area to University Circle would extend greater employment, educational, health care, cultural, and shopping opportunities to area residents, while providing University Circle institutions and businesses with access to the potential employees, visitors and customers who live in the study area.

- **Lack of circulation within the Northfield-Warrensville study area.** Existing RTA bus routes serving the area work well for supporting regional travel patterns, such as connecting travelers from the study area to downtown Cleveland, east side suburbs and Cleveland neighborhoods. However, the strict north-south and east-west orientation of bus routes and their extension out of and through the study area provides little benefit to those whose travel needs are primarily within the corridor. A community-based route providing frequent service connecting destinations in the study area would provide those living in the area with greater access to jobs and educational opportunities within the study area, while offering both workers and residents greater access to the area’s amenities.

- **Insufficient station/stop and travel time amenities for both Blue Line and bus users within the study area.** The current Blue Line rapid station provides minimal amenities for rail or bus passengers, a bus interface that requires customers to cross the paths of buses, and poor “last mile” pedestrian connections to nearby development and surrounding neighborhoods. Many of these issues will be resolved with the construction of the new Van Aken station, currently in development. However, bus stops in the study area are generally unimproved, with few shelters, no benches or other seating aside from shelters, and in many cases no paved waiting areas.

- **In addition to lack of shelters and other passenger amenities, many parts of the study area lack adequate sidewalks and paved pedestrian connections from bus stops to adjacent development.** Public transit customers are always pedestrians at the beginning and end of each trip, so a lack of a complete network of attractive, well-maintained and safe pedestrian facilities not only discourages walking, but transit use. Some roads that are served by bus routes, including Chagrin Boulevard, Green and Miles roads, lack complete sidewalks. Portions of Miles and Harvard have no sidewalks at all. It is also common for private and institutional developments in the corridor to have no designated pedestrian path to buildings from either the street or from adjacent bus stops.

- **There are many missing links in the study area’s bicycle and pedestrian/multi-use trail network, further confirming the car-dominant nature of the area and short-changes access to transit.**

- **Population and employment densities are generally below the level at which transit can serve areas efficiently.** This car-dominant character that prevails in the study area is fundamentally due to the zoning and land use regulations governing the area and the resulting development pattern, which, other than in some older sections of Warrensville Heights, is dominated by low density developed configured in a suburban pattern. The land use in the area features strict separation of uses, deep building setbacks, high parking requirements, and the placement of large parking lots and landscaped buffers along the roadway. These features result in the study area ranging from non-transit supportive to actively hostile to public transit, walking or cycling. Unfortunately, within the Chagrin Highlands area, these features are written into the Chagrin Highlands Development Agreement, which was formalized in the 1980s among the developers of the area and the cities of Beachwood, Highland Hills, Warrensville Heights, and Cleveland (a major property owner), to govern the development of the area and to apportion shares of the taxes generated by businesses and

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employees that locate there. The parties to this agreement are reluctant to propose changes to the land use elements of the agreement because doing so would require mutual agreement among all parties, and could open other aspects of the agreement to renegotiation, which the parties do not want to occur.

Most destinations within and near the study area are within reasonable proximity to existing transit service (the east-west and north-south oriented local buses that pass through the area). While many of the existing routes provide workhorse local bus service that operates 24 hours per day, their relatively low service frequency (usually 30 minute headways throughout the day) is insufficient to promote transit ridership and to serve the needs of a growing number of very significant regional destinations. For example, Tri-C East, a major regional educational institution with a high proportion of lower-income students and significant dependence on transit, receives only hourly service via two local bus routes, one of which is a crosstown. South Pointe Hospital, which benefits from half-hourly service on routes 15 and 41, reports that patients often blame their late or non-arrival for appointments on problems with bus service. The new JACK Thistledown Racino, a regional destination for visitors and major employers, receives only thirty minute local bus service from two routes, one a crosstown.

RTA’s board has identified serving public housing as a priority for the agency, but both public and lower-income private housing in the study area generally receives only half-hourly local bus service.

South Pointe Hospital has a need for frequent and reliable transit service. The two main groups that utilize transit to get to the hospital are employee service workers and patients trying to get to appointments. There is a significant no-show rate for appointments due to inconsistent transit service. The UH facilities have similar concerns, in addition to the need to be able to circulate between their facilities.

University Hospitals has numerous facilities in the study area in addition to Ahuja Medical Center on Richmond Road, including its management services building at Chagrin and Warrensville Center, customer service center at Northfield and Harvard, a rehabilitation hospital on Harvard east of Green, its Foley Elder Health Center on Park East Drive south of Chagrin, and several facilities near Richmond and Emery. These UH facilities have no single bus service that connects more than two facilities within and near the study area, let alone that connects these facilities to its main campus in University Circle. The elevation of Route 41 to BRT service and the addition of the University Circle Express routes proposed in the Blue Line Extension Project would rectify some of these issues, though others would remain to be addressed by locally focused services and other changes to the transit network.

New popular destinations in the area include the University Hospitals and Cleveland Clinic facilities within the Eastside Health Corridor area along Harvard Road, JACK Thistledown Racino, and the planned Pinecrest Development which is under construction on Harvard Road east of I-271.

4.0 Recommendations

As a result of the analysis of the transit system and incorporating input from stakeholders and the public at meetings and through surveys, the study recommends the improvements to transit service listed below. The figure below shows both existing and proposed transit route alignments and the locations of major destinations in the study area.

Conduct Comprehensive Analysis of Transit Service

Based on the nature and extent of the recommendations, the study recommends a comprehensive analysis of transit service in the study area, potentially in the context of a comprehensive full system operational analysis to identify opportunities to improve service to the area. RTA has made repeated incremental changes to local bus routes in
the area over the last ten years, mostly reducing service by eliminating or combining routes to generate cost savings in the face of funding shortfalls. The current bus service in the study area reflects the consequences of those incremental and piecemeal service reductions. A comprehensive review would evaluate these changes in the light of the existing and anticipated markets in the area, and would provide RTA with an opportunity to better align its service with the multifaceted transit needs of this area, and to address regional transportation issues that affect this area, while avoiding negative impacts on RTA’s larger regional transit network.

Obviously, any proposed changes to transit service or facilities in the study area will require analysis by RTA to evaluate the impacts of these changes to the agency’s other services and to its financial, vehicle and employee capacity. Efforts must be made to minimize operating and maintenance costs impacts of service changes or facilities on RTA and to avoid the diversion of resources from other worthy services and facilities outside the study area. Where possible, stakeholders in the study area should try to identify alternative funding sources and/or in kind contributions that can be made by local municipalities, businesses and institutions in the corridor to improve transit service and facilities while minimizing the impact on RTA’s operating and capital budgets.

**Increase Local and Express Bus Service**

Proposed improvements to local and express bus service include additional (or modified) service through and to the study area that provide:

- Connections to and between employment and retail destinations, such as Eton, Pinecrest, and retail along Chagrin.
- Connections to and between employment and medical centers.
- Connections between hospitals and other medical and medical office facilities in the study area, such as connecting the various healthcare facilities along the Eastside Health Corridor with each other and to medical destinations in University Circle.

**Existing & Proposed Transit Service and Amenities**
The bus service currently provided in the study area generally reflects elements of the region’s transportation safety net – local bus routes oriented to serving transit-dependent citizens, providing maximum geographic and time of day coverage at the expense of speed or service frequency. Such citizens are an important part of the transit market, but they are not its entirety. Other potential markets – commuters to downtown and University Circle, local residents and employees seeking fast, frequent connections to restaurants and retail stores, and even reverse commuters seeking employment in the area – are being unserved, or under-served, by the current network. The low service frequency, the need to transfer among multiple routes to complete many trips, and the low level of amenity of the buses and bus stops, make the existing service an unattractive alternative to driving for anyone who had that option. Implementing elements of the UCX bus service and bus stop improvements proposed by the Blue Line Extension Project, and developing a community-based bus route that would provide fast, frequent connections among destinations and trip generators within the study area, are two potential opportunities to diversify the transit offerings in the study area and address the needs of these transit markets.

**Improve Connections to Study Area Destinations & Complete Last Mile Connections to Van Aken Station**
Reconfigure the Blue Line extension BRT plan (UCX), extending the route eastward to Lander Road and north to Chagrin Boulevard to connect with or create a loop route combined with Route 5. This new and reconfigured route would provide the connection to University Circle identified in the Blue Line Extension Project along with providing frequent connecting service among numerous destinations within and near the study area to each other, including linkages to the Blue Line at Warrensville Station and to University Circle-medical and other area destinations.

**Establish Transit/ Transfer Facility at Warrensville Center/ Harvard Intersection**
Establish a new transit transfer center at or near the Warrensville/Harvard intersection to facilitate transfers between bus routes. Provide amenities to transferring passengers of existing and proposed bus routes serving this intersection.

**Establish Transit/ Transfer Facility and Possible Park-and-Ride at Tri-C East (Richmond at Harvard)**
Create a new facility to provide amenities that facilitate transfers among bus routes and provide amenities to waiting and transferring passengers at Tri-C East. This facility could be coupled with a park-and-ride lot oriented to serving area commuters from the Harvard Road I-271 Interchange, as recommended in the Blue Line Extension Project, facilitating transit connections to the study area destinations and University Circle, if service is established as recommended.

**Establish Transit/ Transfer Facility at Warrensville Center and Emery**
Given the current need for transit in the vicinity of the Warrensville/Emery intersection, including at JACK Thistledown Racino and Power Sports Institute, coupled with RTA’s plan to convert the current bus service provided by Route 41 to priority BRT service establish a new transit transfer center at or near the Warrensville/Harvard intersection to facilitate transfers between bus routes in this growing area. Provide amenities to transferring passengers of existing and proposed bus routes serving this intersection.

**Examine Opportunities to Use Transit to Address Traffic Congestion Issues at I-271/ Chagrin Interchange**
Roadway configuration, interchange and intersection spacing along Chagrin Boulevard, coupled with dense retail developments along the Chagrin corridor in Beachwood and Woodmere which generate high traffic volumes, result in ongoing congestion issues along Chagrin Boulevard in
the vicinity of the I-271 interchange. Growing development along the Harvard corridor has largely negated the initial congestion reduction benefits initially experienced with the Harvard Road interchange. Congestion is expected to worsen with continued development, particularly with the completion of the Pinecrest Development at Harvard and Orange Place, just east of the Harvard interchange. Improved transit service that provides frequent connections to area destinations could provide more travel options for and increased capacity in this congested area. The recommended development of a UCX/Route 5 transit loop that connects the Harvard and Chagrin Corridors via Lander Road and links them to the Van Aken District transit hub is one of perhaps several possible changes to address this issue.

**Broaden Base of Support for Transit Investment in the Study Area**

RTA is charged with providing public transit throughout Cuyahoga County, balancing the transit needs and desires of every community and each area of the county against the needs and desires of all the others throughout their service area. Given their funding constraints, RTA is challenged to simply connect the county’s transit-dependent population to jobs, education and medical care. Nevertheless, in recent years RTA has developed a number of services, like the HealthLine and CSU BRT lines and downtown Trolley network, as well as numerous bus and rail passenger facilities that rise far above the level of basic transit service. Fast, frequent and reliable service and comfortable, safe and attractive vehicles and facilities have attracted many non-transit dependent users to RTA’s services. These improvements often have been made better, and implemented faster, due to the support and, often, financial commitments of local municipalities, other governmental agencies and private businesses, organizations and institutions.

The several municipalities that govern the study area and the many major businesses and institutions with major facilities and large number of employees in the study area provide many potential investors to sponsor new transit facilities and to contribute to ongoing service improvements to offset a portion of the costs associated with improving RTA’s presence in the corridor. There may be opportunities for branding the proposed UCX BRT Line, like RTA’s other sponsored BRT services which include the HealthLine, the CSU Line and the MetroHealth Line.

Operation of services and development of facilities by entities other than RTA, like the operation of private shuttle routes or the development of transfer centers and passenger waiting facilities, provide additional opportunities to involve local municipalities, other governmental agencies and private entities in improving transit service in the study area.
17.4 Meetings
Project Team Meeting 1
January 14, 2016
## Northfield-Warrensville Multimodal Connectivity Plan

**Project Team Kick-off Meeting**  
*Warrensville Heights Civic Center*  
**January 14, 2016, 10:00 a.m. - 12 p.m.**

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PLEASE CORRECT ANY INACCURATE INFORMATION. THANK YOU!!

*GCRITA*  
Amy Snell  
asnell@gcrta.org  
216-711-91
Welcome and Introductions

Project Team
- Cuyahoga County Planning Commission (CCPC)
- City of Warrensville Heights
- City of Shaker Heights
- Village of North Randall
- Village of Highland Hills
- Office of Marcia L. Fudge
- GCRTA
- Northeast Ohio Areawide Coordination Agency (NOACA)
- Consultants (Parsons Brinckerhoff and Smith Group JJR)

Meeting Agenda
1. Welcome and Introductions
2. Meeting Objectives
3. Community Engagement Strategy
4. Project Approach and Schedule
5. Project Purpose and Goals
6. Study Area Features and Characteristics
7. Available and Needed Data
8. Next Steps

Community Engagement Strategy
1. Project Team
   - Manage and direct plan development
2. Steering Committee
   - Provide insights, information, guidance and feedback on plan development
3. Key Stakeholders
   - Provide focused input on key aspects of the plan
4. Public
   - Provide input and feedback on plan
   - MetroQuest survey

Data informed… Community Driven

Steering Committee
The Steering Committee will work closely with the Project Team in developing ideas, facilitating public outreach and engagement activities, and help to advance the project within their constituent groups.

- Mike Cleveland
- Mike Shaker
- City of Cleveland/Planning (or Project Team)
- Cleveland Clinic South Pointe Hospital
- Cleveland Metroparks
- Coastal representation – Highland Hills
- Council representation – North Randall
- Council representation – Shaker Heights
- Council representation – Warrensville Heights
- Cuyahoga County Dept of Public Works
- Cuyahoga County Board of Health
- Cuyahoga Community College
- Eastern Campus & Corporate College
- Developer – Pincrest (Fairmount Properties)
- Developer – Randall Park Mall (IRG)
- Developer – Van Aken District (RMS Investments)
- Eaton Corporation
- GCRTA
- Greater Cleveland Trail Leadership Network
- Mill Creek Watershed Council
- MetroHealth Joint Master management
- ODOT District 12
- Thistledown Racino
- Tri-City Chamber of Commerce (Highland Hills, North-Randall, Warrensville Heights)
- University Hospitals
- University Hospitals (Akrap, Rehabilitation Facility, Customer ServiceCtr)
- Village of Highland Hills
- Village of North Randall
- Village of Shaker Heights
- Village of Warrensville Heights
- Warrensville Heights YMCA
- University Hospitals (Sustainability Specialist Sarah O’Keefe)

Key Stakeholders: Focused Engagement

- City of Cleveland
- Cleveland Clinic – South Pointe Hospital
- Cuyahoga Community College
- Developer – Chagrin Highlands developer (Jacobs Group)
- Developer – Randall Park Mall (Industrial Realty Group, IRG)
- Developer – Pincrest (Fairmount Properties)
- Developer – Van Aken District (RMS Investments)
- Eaton Corporation (sustainability program)
- Thistledown Racino
- University Hospitals (Sustainability Specialist Sarah O’Keefe)
Phase 1: Define the Vision

- Task 1: Project Initiation
  - Project Team Kickoff Meeting
  - Steering Committee Kickoff Meeting
  - Community Engagement Strategy

  Complete streets strategy
  Active transportation & health benefits
  Access to healthy food options & recreation
  Multi-modal network
  Link neighborhoods, employment, health & education
  Green spaces & greenway system
  Reliable transit
  Drive economic development via access
  Advance job creation potential
  Build on previous studies and plans
  Propose alignments & preliminary designs

- Task 2: Existing Conditions Inventory
  - Assemble existing plans & recommendations
  - Incorporate relevant GIS-based data
  - Mapping (infrastructure, transit, natural areas, land use, demographics, destinations, etc.)
  - Conduct studies
    - Project Team Meeting 2
    - Steering Committee Meeting 2
    - Public Meeting 1
    - “Pop Up” Meetings

Phase 2: Concept Development

- Task 3: Plan Elements
  - Traffic study
  - Initial concept development
    - Strategies for: pedestrians, bikeways, social equity, land use & redevelopment, greenways, transit
  - MetroQuest Survey
  - Project Team Meeting 3
  - Steering Committee Meeting 3
  - Public Meeting 2

- Task 4: Community Engagement
  - Survey
  - Meetings
  - Refine concepts based on feedback
  - Develop evaluation criteria
  - Assess feasibility
    - Project Team Meetings 4 & 5
    - Steering Committee Meeting 4

Phase 3: Deliver Northfield-Warrensville Multi-Modal Connectivity Plan

- Task 6: Draft Plan, Recommendations, Implementation Strategy
  - Short & long term recommendations
  - Implementation strategy

- Task 7: Final Report
  - Project Team Meetings 6 and 7
  - Steering Committee Meeting 5

Schedule

- Phase 1: Define the Vision
  - Task 1: Project Initiation
  - Task 2: Existing Conditions Inventory

- Phase 2: Concept Development
  - Task 3: Plan Elements
  - Task 4: Community Engagement
  - Task 5: Refine Concepts, Assess Feasibility

- Phase 3: Deliver the Plan
  - Task 6: Draft Plan, Recommendations, Implementation Strategy
  - Task 7: Final Report

- Project Team Meeting
- Steering Committee Meeting
- Public Meeting
Project Purpose and Goals

**Purpose:** Develop a multi-modal connectivity plan that connects existing and planned developments, land uses and destinations in the project area, to facilitate active transportation, economic investment and redevelopment.

=W Plan Goals (draft, starting point for discussion):
- Identify non-motorized and transit networks to provide more transportation options, providing enhanced access and service throughout the study area.
- Link neighborhoods, employment, health & education, retail, leisure activities.
- Drive economic development, reinvestment and job creation via enhanced access.
- Integrate community health considerations into preferred multimodal network recommendations.
- Complement existing plans and initiatives to encourage collaboration between regional and community partners.
- Incorporate complete and green streets systems and strategies and green infrastructure into the recommendations.
- Create place-based actionable design strategies and concepts that build on existing plans and studies.

From TLOI Grant Application:
- Complete streets strategy
- Access to healthy bike lanes & recreation
- Multi-modal network
- Link neighborhoods, employees, health & education, retail, leisure activities
- Open space and greenway system
- Reliable travel
- Drive economic development via access
- Advance job inventory potential
- Build on previous studies and plans
- Propose alignments & preliminary designs

NOACA Water Quality/Sustainable Stormwater Management Plan

NOACA Stormwater Planning grant application to the U.S. Environmental Protection Agency Urban Water Small Grants program
- Develop sustainable stormwater management in the study area
- Currently a non-attainment area

Study Area

Transit Opportunities
Transit Opportunities

Eastside Health Corridors

Major Attractions

What’s Missing?

Traffic Study / Complete Streets

Available & Desired Data

- Traffic analysis
  - Northfield
    - North of Emery
    - South of Emery
  - Emery
    - East of Green
    - West of Green
    - Reconstruction
  - Warrensville?
  - Harvard?

Recommended corridors for traffic study?

Overview of primary corridors
- Missing sidewalk links
- ADA compliance issues at intersections

GIS data from Eastside Greenway Plan
- Natural areas
- Transportation network (roadways, sidewalks, bicycle facilities, transit system)

Relevant data from Eastside Greenway Health Impact Assessment (HIA)

Existing Plans
- Warrensville/Van Aken TOD Plan
- GCRTA Blue Line Corridor Extension Study
- Warrensville Center Road/Van Aken Reconfiguration Project
- Warrensville Heights Master Plan and Update
- Others?

Other information requests
- Thistledown Racino plans
- Randall Park Mall redevelopment plans/ideas
Next Steps

Prepare for Steering Committee Meeting #1
- January 28, 2016 at 1:00 p.m.

Task 2: Existing Conditions Inventory
- Existing data
- Relevant plans and projects
- Field verification
- Prioritization of corridors and primary destinations
- Project Team Meeting #2
- Steering Committee Meeting #2
Steering Committee Meeting 1
January 28, 2016
## Northfield-Warrensville Multi-Modal Connectivity Plan
### Steering Committee Kick-off Meeting
Warrensville Heights Civic Center
January 28, 2016, 1:00 p.m. – 3:00 p.m.

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PLEASE CORRECT INACCURATE INFORMATION. THANK YOU!!

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Stephane Faciana - Cuyahoga Community College
Dr. J. Michael Thomson - Cuyahoga Community College, Eastern Campus President
## Northfield-Warrensville Multimodal Connectivity Plan

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**PLEASE CORRECT INACCURATE INFORMATION. THANK YOU!!**
## Northfield-Warrensville Multimodal Connectivity Plan

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**PLEASE CORRECT INACCURATE INFORMATION. THANK YOU!!**
Northfield-Warrensville Multi-Modal Connectivity Plan
Steering Committee Kick-off Meeting

ESG Overview

2014 CLECI
Cuyahoga County Planning Commission
Applicant on behalf of 14 Communities
The planning process is the Eastside Greenway project schedule is a TIGER grant.

LAND studio
× One engineering
Budget $250,000
○ Intensive land and social planning

Health Impact Assessment
× Comprehensive analysis of the planning process
○ Transportation
○ Community Health
○ Green space
○ Food

ESG Purpose & Project Area

Project Purpose
- Create a network of pedestrian and bike facilities
- Provide an alternative mode of transportation
- Connect neighborhoods to employment centers, transit, services, parks and green spaces

EASTSIDE GREENWAY PLAN
A STRATEGIC VISION TO CONNECT EASTERN CUYAHOGA COUNTY

ESG Health Impact Assessment

The highest standards of health should be within reach of all, without distinction of race, religion, political belief, economic or social condition.

HIA Recommendations

Health Impact Assessment (HIA) Summary
- Establish a Greenway Coalition (e.g., Government entity)
- Develop local neighborhood watch groups
- Establish a comprehensive greenway management plan
- Consider geographic distribution of facilities
- Well-lit, visible greenway
- Include access to playgrounds and scenic areas
- Education campaign
- Identify greenway access points (wayfinding)
- Survey residents for needs/use patterns (done)
Inventory & Analysis

Greenway Network

Corridor Concepts

ESG Relevance

• GIS-based data
• HIA data and recommendations
• Corridor concepts
• Understanding of study area
• Funding and implementation strategies
• Overlap in steering committee members
• Greenway concept embraced by region

Northfield-Warrensville Center Corridor Multi-Modal Connectivity Plan

Meeting Agenda

1. Welcome and Introductions
2. Background
   - What is Active Transportation?
   - Eastside Greenway Plan
3. Community Engagement Strategy
4. Project Approach and Schedule
5. Project Purpose and Goals
6. Study Area Features and Characteristics
7. Available and Needed Data
8. Next Steps
Project Team

- Cuyahoga County Planning Commission (CCPC)
- City of Warrensville Heights
- City of Shaker Heights
- Village of North Randall
- Village of Highland Hills
- Office of Marcia L. Fudge
- GCRTA
- Northeast Ohio Areawide Coordination Agency (NOACA)
- Consultants (Parsons Brinckerhoff and Smith Group JJR)

Steering Committee

The Steering Committee will work closely with the Project Team in developing ideas, facilitating public outreach and engagement activities, and help to advance the project within their constituent groups.

- Bike Cleveland
- City of Cleveland Planning (for Project Team)
- Cleveland Clinic (South Pointe Hospital)
- Cleveland Metroparks
- Council representative – North Randall
- Council representative – Shaker Heights
- Council representative – Warrensville Heights
- Cuyahoga County Dept of Public Works
- Cuyahoga County Board of Health
- Cuyahoga Community College (Eastern Campus & Corporate College)
- Developer – Pinecrest (Fairmount Properties)
- Developer – Randall Park Mall (IRG)

Key Stakeholders: Focused Engagement

- City of Cleveland
- Cleveland Clinic – South Pointe Hospital
- Cuyahoga Community College
- Developer – Chagrin Highlands developer (Jacobs Group)
- Developer – Randall Park Mall (Industrial Realty Group, IRG)
- Developer – Pinecrest (Fairmount Properties)
- Developer – Van Aken District (RMS Investments)
- Eaton Corporation (sustainability program)
- Thistledown Racing
- University Hospitals (Sustainability Specialist Sarah O'Keefe)

Phase 1: Define the Vision

- Task 1: Project Initiation
  - Project Team Kickoff Meeting
  - Steering Committee Kickoff Meeting
  - Community Engagement Strategy

  - Complete streets strategy
  - Active transportation & health benefits
  - Access to healthy food options & recreation
  - Multi-modal network
  - Link neighborhoods, employment, health & education
  - Green spaces & greenway system
  - Reliable transit
  - Drive economic development via access
  - Advance job creation potential
  - Build on previous studies and plans
  - Propose alignments & preliminary designs
Phase 1: Define the Vision

- Task 2: Existing Conditions Inventory
  - Assemble existing plans & recommendations
  - Incorporate relevant GIS-based data
  - Mapping (infrastructure, transit, natural areas, land use, demographics, destinations, etc.)
  - Conduct studies
    - Project Team Meeting 2
    - Steering Committee Meeting 2
    - Public Meeting 1
    - “Pop Up” Meetings

Phase 2: Concept Development

- Task 5: Refine Concepts & Assess Feasibility
  - Community input
    - Survey
    - Meetings
  - Refine concepts based on feedback
  - Develop evaluation criteria
  - Assess feasibility
    - Project Team Meetings 4 & 5
    - Steering Committee Meeting 4

Phase 3: Deliver Northfield-Warrensville Multi-Modal Connectivity Plan

- Task 6: Draft Plan, Recommendations, Implementation Strategy
  - Short & long term recommendations
  - Implementation strategy

- Task 7: Final Report
  - Project Team Meetings 6 and 7
  - Steering Committee Meeting 5

Project Vision, Purpose, Objectives

**Vision**: Develop a multi-modal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

**Purpose**: Drive economic development, reinvestment and job creation by improving multimodal access to enhance livability and quality of life throughout the study area and connecting to the surrounding region.

**Objectives**:
- Identify non-motorized enhancements to provide transportation options providing improved access and services
- Support economic growth and job creation
- Enhance transit connectivity and service
- Link neighborhoods, employment, health, education, retail, entertainment and recreation
- Integrate community health considerations into preferred multi-modal network recommendations
- Incorporate complete and green streets systems and strategies and green infrastructure into the recommendations
- Complement plans and initiatives to encourage collaboration between regional and community partners
- Create place-based sustainable design strategies and concepts that value existing resources and ‘lock in’ existing plans and studies
- Incorporate smart technologies that support multimodal transportation opportunities now and into the future
NOACA Water Quality/Sustainable Stormwater Management Plan

NOACA Stormwater Planning grant application to the U.S. Environmental Protection Agency Urban Water Small Grants program
- Develop sustainable stormwater management in the study area
- Currently a non-attainment area

Existing Transit Network

Transit Opportunities

Eastside Health Corridors

Major Attractions

What’s Missing?
**Sidewalk Study**

- Overview of primary corridors
  - Missing sidewalk links
  - ADA compliance issues at intersections

**Traffic Study / Complete Streets**

- Traffic analysis
  - Northfield
    - North of Emery
    - South of Emery
  - Emery
    - East of Green
    - West of Green
    - Reconstruction

**Available & Desired Data**

- GIS data from Eastside Greenway Plan
  - Natural areas
  - Demographic data
  - Transportation network (roadways, sidewalks, bicycle facilities, transit systems)
  - Relevant data from ESG Health Impact Assessment

- Existing Plans
  - Warrensville/Van Aken TOD Plan
  - GCRTA Blue Line Corridor Extension Study
  - Warrensville Center Road/Van Aken Reconfiguration Project
  - Warrensville Heights Master Plan and Update

- Other available information?
  - Thistledown Racino plans
  - Randall Park Mall redevelopment plans/ideas
  - Other privately owned land use plans and concepts
    - University Hospital
    - Countryside Highlands
    - Others?

**Next Steps**

- Task 2: Existing Conditions Inventory
  - Existing data
  - Relevant plans and projects
  - Field verification
  - Prioritization of corridors and primary destinations
  - Project Team Meeting #2 (March 3, 2016)
  - Steering Committee Meeting #2 (March 24, 2016)
Attendance
Project Team Meeting #2
March 3, 2016 at 10:00 a.m.
Village of Highland Hills Town Hall (3700 Northfield Road, Highland Hills, Ohio 44122)

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Meeting Agenda

1. Welcome
2. Meeting Purpose and Objectives
3. Existing Conditions Data
   - Land Use
   - Demographics
   - Transportation
   - Environmental
4. Other Data Needs
5. Next Steps

Phase 1: Define the Vision

- Task 2: Existing Conditions Inventory
  - Assemble existing plans & recommendations
  - Incorporate relevant GIS-based data
  - Mapping (infrastructure, transit, natural areas, land use, demographics, destinations, etc.)
  - Conduct studies

- Project Team Meeting 2
- Steering Committee Meeting 2
- Public Meeting 1
- "Pop Up" Meetings

Parcel Uses

- High degree mixed use pattern
- Adjacent to large industrial land and highway intersection
- Limited park space

Employment Centers

1. Van Aken district
2. Beachwood Commerce Park & Enterprise Place Business Park
3. Miles Road Business Corridor & Industrial Parks
4. Eastside Health Center (growing economic center)
Recreational & Cultural Destinations

- Chagrin Highlands
- Cleveland Clinic South Pointe Hospital
- Commerce Park
- Corporate College
- Cuyahoga Community College - Eastern Campus
- Cuyahoga County Library, Westlake
- Eaton Headquarters
- Enterprise Park
- Griffin Family Services Center
- Harvard Park
- Heights Business Center
- Hopkins Hospital Outpatient Center
- Metropolitan Plaza
- Metro Center
- Pacific Shopping Center
- Phoenix Automotive
- Gordon Road Golf Park (not shown)
- Sycamore Park
- Tremont Park
- University Medical Facilities (Phelps Administrative Offices)
- Van Aken District
- Village Gallery
- Village Square
- Warrensville Heights High School
- War Memorial Hts

Population Density

- Relatively low population density
- 2010 Census: ~15,000 people in study area (~58,000 in map area)

Car Ownership Rates

- Factor in possible demand for transit and non-motorized facilities

Median Annual Income

- Low to medium income overall
- Highest incomes closer to Van Aken district

Crime Rates

- Demographics
**Vehicle Travel Lanes**

- Transportation

**Right-of-Way**

- Width of public right of way from property line to property line

**Pavement Width**

- Curb-to-curb width of paved roadway area

**Right-of-Way Width**

- Remaining ROW width beyond edge of roadway
- Area available for sidewalk zone, landscaping, side path trails, etc.

**Traffic Volume: AADT**

- Average Annual Daily Traffic (vehicles per day, vpd)

**Traffic Study**

- Turning Movement Counts
  - Northfield Corridor
    - Harvard/Northfield
    - Ellacott-Clarkwood/Northfield
    - Emery/Northfield
    - N.Miles/Northfield
  - Emery Corridor
    - Warrensville Center/Emery
    - Emery/Northfield
    - Derbyshire-Granada/Emery
    - Green/Emery

- ATR (hose) Counts
  - Emery east of Merrygold

Sidewalks

• Critical gaps: Harvard, Miles
• Partial sidewalks (gap and/or one side): Northfield, Green, Chagrin, Emery

Bicycle & Multi-Use Facilities

• No existing or planned bicycle facilities in study area

Eastside Health Corridors
**Public Transportation (Rail & Bus)**

- Transit services covers the study area
- Potential to provide bus stops closer to population centers

**Land Cover**

- Off-street trail opportunities along river/stream corridors
- Explore use of natural land areas on publicly-owned property

**Environmental – Habitat Restoration**

Habitat preservation and restoration suitability based on:
- Proximity to existing habitat/natural land areas
- Proximity to stream corridors

**Previous Projects**

1. Warrensville/Van Aken Transit-Oriented Development Plan, Warrensville/Van Aken Station Area Plan, & Warrensville/Van Aken Intersection Configuration
2. Richmond Road Corridor Transportation Study
3. Chagrin Falls Region Alternative Transportation Study

**Planned & Potential Development**

- Eastside Greenway Plan
- Van Aken District Plan
- Highland Hills land use
- Highland Hills bike path

**ESG: Proposed Greenways**

- Warrensville Center (transformational)
  - Harvard
  - Miles
The Alliance for Biking & Walking 2016 Benchmarking Report

- Our transportation choices are significantly impacted by a wealth of different factors — from gender to income to available infrastructure — and a new report from the Alliance for Biking & Walking illuminates the key indicators that shape American mobility.

- *Bicycling and Walking in the United States: 2016 Benchmarking Report* collects and analyzes data from all 50 states, the 50 most populous U.S. cities, and 18 additional cities of various sizes. It traces the rise of walking and biking and explores the intersections between transportation, health, economics, equity, government funding, advocacy efforts — and much more.

Next Steps

1. Complete Existing Conditions Inventory
   - Obtain noted plans and related data
   - Complete existing conditions traffic analysis

2. Economic and land use considerations

3. Prepare for Steering Committee Meeting #2
   - March 24, 2016
Available & Desired Data

GIS data from Eastside Greenway Plan
- Natural areas
- Demographic data
- Transportation network (roadways, sidewalks, bicycle facilities, transit system)

Relevant data from Eastside Greenway Health Impact Assessment (HIA)

Existing Plans
- Warrensville/Van Aken TOD Plan
- GCRTA Blue Line Corridor Extension Study
- Warrensville Center Road/Van Aken Reconfiguration Project
- Warrensville Heights Master Plan and Update
- Others?

Other information requests
- Thistledown Racino plans
- Randall Park Mall redevelopment plans/ideas
Steering Committee Meeting 2
March 24, 2016
# Northfield-Warrensville Multimodal Connectivity Plan

## Steering Committee (listed alphabetically by last name)

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<td>216-241-3204 x284</td>
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<td>330-659-4060 X1108</td>
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<td>C</td>
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<tr>
<td>M</td>
<td>Matthew Green, V. P. Marketing Communications</td>
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<tr>
<td>M</td>
<td>Martha Halko, Deputy Director Prevention and Wellness</td>
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<tr>
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<td>Matthew Howard, Councilman</td>
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<td>440-551-7990</td>
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<tr>
<td>D</td>
<td>Don Jolly (John Folkman), Superintendent</td>
<td>City of Warrensville Heights City Schools</td>
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</tr>
<tr>
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<td>Stanley Kosilesky, Planning and Fiscal Administrator</td>
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<td>Scott Lokke, Sr. Vice President and General Manager</td>
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<td>Gregory Malone, Program Manager</td>
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<td>Kevin McDaniel, District Director</td>
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<td>216-522-4900</td>
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**PLEASE CORRECT INACCURATE INFORMATION. THANK YOU!!**
## Northfield-Warrensville Multi-Modal Connectivity Plan

**Steering Committee Meeting #2**  
SouthPointe Hospital, 20000 Harvard Road, Warrensville Heights  
March 24, 2016, 10:00 a.m. – 12:30 p.m.

### Initial Project Team (listed alphabetically by last name)

<table>
<thead>
<tr>
<th>Initial</th>
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<tr>
<td></td>
<td>Joyce Braverman, Director of Planning</td>
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<tr>
<td></td>
<td>Michael Collier, Congressional Staff</td>
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<tr>
<td></td>
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<td></td>
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<td></td>
<td>Larry Finch, Community Development Director and Representative</td>
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<td></td>
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# Northfield-Warrensville Multimodal Connectivity Plan

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- **Tim Rosenberger**, Lead Transit Planner, WSP|Parsons Brinckerhoff, Rosenberger@pbworld.com, 216-781-7808
- **Scarlett Sharpe**, Sr. Planner, WSP|Parsons Brinckerhoff, sharpesd@pbworld.com, 216-928-8327
- **Nancy Lyon-Stadler**, Sr. Principal Engineer, WSP|Parsons Brinckerhoff, stadlern@pbworld.com, 216-928-8338

**PLEASE CORRECT INACCURATE INFORMATION. THANK YOU!!**

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Meeting Agenda

1. Welcome
2. Meeting Purpose and Objectives
3. Existing Conditions Data
   - Zoning and Land Use
   - Demographics
   - Destinations
   - Transportation
   - Environmental
4. Other Data Needs
5. Next Steps

Schedule

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<td>Task 3: Concept Development</td>
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<td>Task 4: Community Engagement Survey</td>
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<td>Task 6: Plan/Implementation, Protocol/Progress Review</td>
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- Project Team Meeting 2 (complete)
- Steering Committee Meeting 2
- Public Meeting 1
- "Pop Up" Meetings

Phase 1: Define the Vision

- Task 2: Existing Conditions Inventory
  - Assemble existing plans & recommendations
  - Incorporate relevant GIS-based data
  - Mapping (infrastructure, transit, natural areas, land use, demographics, destinations, etc.)
  - Conduct studies
  - Project Team Meeting 2 (complete)
  - Steering Committee Meeting 2
  - Public Meeting 1
  - "Pop Up" Meetings

Parcel Data

- Land Use
  - High density mixed use pattern
  - Adjacent to large industrial land and highway intersection
  - Limited park space

- Zoning
  - Differences between land use and zoning
Employment Centers

1. Van Aken district
2. Beachwood Commerce Park & Enterprise Place Business Park
3. Miles Road Business Corridor & Industrial Parks
4. Eastside Health Corridor (growing economic center)

Jobs: Inflow / Outflow

- Study Area Boundary

- Expanded Area Boundary

Economic Growth & Development

1. Eastside Health Corridor (University Health)
2. Former Randall Park Mall Site (industrial)
3. Van Aken district developments
4. Thistledown Racino

Open Space & Schools/Libraries

- Green Road Park
- Camp George Forbes
- Cleveland Memorial Gardens Cemetery
- Highland Park Golf Course
- Highland Park Cemetery
- Mill Creek
- Warrenville Heights YMCA

Health Care & Jobs

- Cleveland Clinic South Pointe Hospital
- University Hospital Rehab
- University Hospital Ahuja Medical Center
- University Hospital Administrative Offices
- University Hospital Medical Offices
- University Hospital Customer Service
- Suburban Pavilion Nursing Home
- Highland Hills Behavioral Health Hospital
- Brehn Family Center
- Green Road Development Ctr
Shopping & Entertainment Districts

A. Van Aken District
B. Pavilion Shopping Ctr
C. Village Square
D. Shops of Eton
E. Harvard Park
F. Chagrin Highlands
G. Thornton Park
H. Pinecrest

Entertainment / Cultural

Destinations

Population Density

- Relatively low population density
- 2010 Census: ~15,000 people in study area (~58,000 in map area)

Demographics

Car Ownership Rates

- 1 Dot = ~10 people
- Factor in possible demand for transit and non-motorized facilities

Demographics

Median Annual Income

- Low to medium income overall
- Highest incomes closer to Van Aken district

Demographics

Crime Rate

Travel Lanes

Transportation

• Relatively low population density
• 2010 Census: ~15,000 people in study area (~58,000 in map area)

Demographics

• Low to medium income overall
• Highest incomes closer to Van Aken district

Demographics

• Relatively low population density
• 2010 Census: ~15,000 people in study area (~58,000 in map area)
Right-of-Way (ROW) Width
- Typical ROW width at 80-feet for primary streets

Pavement Width
- Transportation

ROW Width (outside of roadway)
- Current ROW width not allocated to vehicle travel lanes
- Generally want ~15-feet per side (30-feet total) for sidewalks and amenity zone/buffer

Traffic Volume (AADT)
- Transportation

Lanes vs. Volume
- Road Diet Candidates are roadways with 4-5 travel lanes with less than 15,000 vehicles/day
- Need to consider peak hour volumes

Traffic Study
- Turning Movement Counts
  - Northfield Corridor
    - Harvard/Northfield
    - Ellacott-Clarkwood/Northfield
    - Emery/Northfield
    - N. Miles/Northfield
  - Wmrsn Center/Emery
  - Emery/Northfield
  - Derbyshire-Granada/Emery
  - Green/Emery

- ATR (hose) Counts
  - Emery east of Merrygold

- Traffic data collection completed week of February 22, 2016
Sidewalk Network

- Critical gaps: Harvard and Miles
- Partial sidewalks (gap and/or one side): Northfield, Green, Chagrin, Emery

NOACA Sidewalk Path Inventory

Bicycle & Multi-use Facilities

- There are some planned routes near the study area (Van Aken) & Orange Side Paths
- NOACA Priority Routes: Northfield, Miles, Chagrin, and Green
- Eastside Greenway routes: Miles, Warrensville Center, and Harvard

NOACA Regional Priority Bikeway Network

Eastside Health Corridors

Transit – RTA System Map
Transit Service

- There are a few stops along Emery Road and Granada Boulevard where the highest concentrations of housing are located.

Public Transportation (Rail & Bus)

- Transit services covering the study area
- Potential to provide bus stops closer to population centers

Mobility Access Analysis

- Shows locations where residents have access or no access to (1) Transit stops, (2) Bike facilities, and (3) Park space within a 1/4 mile distance.

Land Cover

- Large undeveloped areas exist in and adjacent to the study area. These areas provide opportunities for new connectivity.

Property: Tax Exempt Status

- Indicates public & quasi-public properties and highlights potential properties for incorporating non-motorized trails and facilities.
Planned & Potential Development
- Eastside Greenway Plan
- Van Aken District Plan
- Highland Hills land use
- Highland Hills bike path
- Chagrin Highlands

ESG: Proposed Greenways
- Warrensville Center (transformational)
- Harvard Mile

Shaker Heights – Van Aken District

Highland Hills – Land Use Concepts

Highland Hills – Potential Bike Path

Chagrin Highlands

source: www.jresgroup.com
Composite

- Indicated public & quasi-public property, highlights potential properties for incorporating non-motorized trails and facilities.

Next Steps

1. Complete Existing Conditions Inventory
   - Obtain noted plans and related data
   - Complete existing conditions traffic analysis

2. Economic and land use considerations

3. Initiate Concept Development

Data Needs

- ESG HIA data
- Highland Hills roadway corridor (Beachwood to Harvard connection)
- Pinehurst
- Randall Park Mall
- Thistledown Racino
- University Hospitals
- Chagrin Highlands agreement
- Other plan / master plan information?
- Any other GIS-based data?

THE ALLIANCE FOR BIKING & WALKING 2016 BENCHMARKING REPORT

- Our transportation choices are significantly impacted by a wealth of different factors — from gender to income to available infrastructure — and a new report from The Alliance for Biking & Walking illuminates the key indicators that shape American mobility.

- Bicycling and Walking in the United States: 2016 Benchmarking Report collects and analyzes data from all 50 states, the 50 most populous U.S. cities, and 18 additional cities of various sizes. It traces the rise of walking and biking and explores the intersections between transportation, health, economics, equity, government funding, advocacy efforts — and much more.

Study Area

Available & Desired Data

GIS data from Eastside Greenway Plan
- Natural areas
- Demographic data
- Transportation network (roadways, sidewalks, bicycle facilities, transit system)

Relevant data from Eastside Greenway Health Impact Assessment (HIA)

Existing Plans
- Warrensville/Van Aken TOD Plan
- GCRA Akron Inner Core Extension Study
- Warrensville Center Road/Van Aken Reconfiguration Project
- Warrensville Heights Master Plan and Update
- Others?

Other information requests
- Thistledown Racino
- Randall Park Mall redevelopment plans/ideas

NEED TO CROSS-CHECK THIS LIST WITH DATA WE HAVE RECEIVED
Stakeholder Meetings

City of Beachwood, Ohio – April 18, 2016
Eaton Corporation – April 19, 2016
Jacobs Group – April 22, 2016
Cuyahoga Community College – April 22, 2016
Tri-City Chamber of Commerce – April 22, 2016
University Hospital – April 22, 2016
SouthPointe Hospital – April 26, 2016
JACK Thistledown Racino – April 26, 2016
GCRTA – May 12, 2016
Meeting Agenda

1. Welcome
2. Meeting Purpose and Objectives
3. Existing Conditions Data
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  - Project Team Meeting 2 (complete)
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Parcel Data

- Land Use
  - Differences between land use and zoning
- Zoning

Northfield-Warrensville Multi-Modal Connectivity Plan
Steering Committee Meeting #2: Existing Conditions
March 24, 2016
### Employment Centers

1. Van Aken district
2. Brecksville Commerce Park & Enterprise Place Business Park
3. Miles Road Business Corridor & Industrial Parks
4. Eastside Health Corridor (growing economic center)

### Land Use

- Jobs: Inflow / Outflow
  - Study Area Boundary
  - Expanded Area Boundary

### Economic Growth & Development

1. Eastside Health Corridor (University Health)
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### Open Space & Schools/Libraries

- Open Space & Recreation
  - Green Road Park
  - Camp George Forbes
  - Cleveland Memorial Gardens Cemetery
  - Highland Park Golf Course
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  - Mill Creek
  - Warrenville Heights YMCA

- Schools/Libraries
  - Cuyahoga Community College (Eastern Campus)
  - Cuyahoga County Library (Warrensville Heights)
  - Cuyahoga County Library (Garfield Heights)
  - Warrensville Heights High School
  - John Dewey Elementary
  - Corporate College
  - Cuyahoga Hills Boys School

### Health Care & Jobs

- Health Care Facilities
  - Cleveland Clinic
  - South Pointe Hospital
  - University Hospital Rehab
  - University Hospital Ahuja Medical Center
  - University Hospital Administrative Offices
  - University Hospital Medical Offices
  - University Hospital Customer Service
  - Suburban Pavilion Nursing Home
  - Highland Hills Behavioral Health Hospital
  - Brehn Family Center
  - Green Road Development Ctr

### Jobs: Inflow / Outflow

- Open Space & Recreation
  - Employment
    - Office / Industrial
      - Commerce Park
      - Eaton Headquarters
      - Enterprise Park
      - Former Randall Park Mall site
      - Metropolitan Plaza (Titan Insurance)
      - PNC Bank
      - East Ohio Gas Services
      - Green Road National Guard Armory

- Health Care Facilities
  - Cleveland Clinic
  - South Pointe Hospital
  - University Hospital Rehab
  - University Hospital Ahuja Medical Center
  - University Hospital Administrative Offices
  - University Hospital Medical Offices
  - University Hospital Customer Service
  - Suburban Pavilion Nursing Home
  - Highland Hills Behavioral Health Hospital
  - Brehn Family Center
  - Green Road Development Ctr
Shopping & Entertainment Districts:
A. Van Aken District
B. Pavilion Shopping Ctr
C. Village Square
D. Shops of Eton
E. Harvard Park
F. Chagrin Highlands
G. Thornton Park
H. Pinecrest

Entertainment / Cultural
1. Thistledown Racino

Population Density
- Relatively low population density
- 2010 Census: ~15,000 people in study area (~58,000 in map area)

Car Ownership Rates
- 1 Dot = ~10 people
- Factor in possible demand for transit and non-motorized facilities

Median Annual Income
- Low to medium income overall
- Highest incomes closer to Van Aken district

Crime Rate

Travel Lanes
Right-of-Way (ROW) Width

• Typical ROW width at 80-feet for primary streets

ROW Width (outside of roadway)

• Current ROW width not allocated to vehicle travel lanes
• Generally want ~15-feet per side (30-feet total) for sidewalks and amenity zone/buffer

Lanes vs. Volume

• Road diet candidates are roadways with 4-5 travel lanes with less than 15,000 vehicles/day
• Need to consider peak hour volumes

Traffic Study

• Traffic data collection completed week of February 22, 2016

Traffic Volume (AADT)

• Road Diet Candidates are roadways with 4-5 travel lanes with less than 15,000 vehicles/day
• Need to consider peak hour volumes

Transportation

Pavement Width

• Typical pavement width at 20-feet for primary streets

Traffic Study

• Turning Movement Counts
  - Northfield Corridor
    • Harvard/Northfield
    • Ellacott-Clarkwood/Northfield
    • Emery/Northfield
    • N. Miles/Northfield
  - Emery Corridor
    • Warrensville Center/Emery
    • Emery/Northfield
    • Derbyshire-Granada/Emery
    • Green/Emery
  - ATR (hose) Counts
    • Emery east of Merrygold

• Traffic data collection completed week of February 22, 2016
Sidewalk Network

- Critical gaps: Harvard and Miles
- Partial sidewalks (gaps and/or one side): Northfield, Green, Chagrin, Emery

Transportation

NOACA Sidewalk Path Inventory

Transportation

Bicycle & Multi-use Facilities

- There are some planned routes near the study area (Van Aken) & Orange Side Paths
- NOACA Priority Routes: Northfield, Miles, Chagrin, and Green
- Eastside Greenway routes: Miles, Warrensville Center, and Harvard

Transportation

NOACA Regional Priority Bikeway Network

Transportation

Eastside Health Corridors

Transit – RTA System Map

Transportation
Transit Service
- There are a few stops along Emery Road and Granada Boulevard where the highest concentrations of housing are located.

Public Transportation (Rail & Bus)
- Transit services covering the study area
- Potential to provide bus stops closer to population centers

Mobility Access Analysis
- Shows locations where residents have access or no access to (1) Transit stops; (2) Bike facilities; or (3) Park space within a ¼ mile distance.

Land Cover
- Large undeveloped areas exist in and adjacent to the study area. These areas provide opportunities for new connectivity.

Property: Tax Exempt Status
- Indicates public & quasi-public properties and highlights potential properties for incorporating non-motorized trails and facilities.
Planned & Potential Development

- Eastside Greenway Plan
- Van Aken District Plan
- Highland Hills land use
- Highland Hills bike path
- Chagrin Highlands

ESG: Proposed Greenways

- Warrensville Center (transformational)
- Harvard
- Miles

Shaker Heights – Van Aken District

Highland Hills – Land Use Concepts

Highland Hills – Potential Bike Path

Chagrin Highlands

Source: www.jresgroup.com
Composite

• Indicates public & quasi-public property. Highlights potential property for incorporating non-motorized links and facilities.

Next Steps

1. Complete Existing Conditions Inventory
   – Obtain noted plans and related data
   – Complete existing conditions traffic analysis

2. Economic and land use considerations

3. Initiate Concept Development

Data Needs

• ESG HIA data
• Highland Hills roadway/corridor (Beachwood to Harvard connection)
• Pinehurst
• Randall Park Mall
• Thistledown Racino
• University Hospitals
• Chagrin Highlands agreement
• Other plan / master plan information?
• Any other GIS-based data?

The Alliance for Biking & Walking 2016 Benchmarking Report

• Our transportation choices are significantly impacted by a wealth of different factors — from gender to income to available infrastructure — and a new report from the Alliance for Biking & Walking illuminates the key indicators that shape American mobility.

• Bicycling and Walking in the United States: 2016 Benchmarking Report collects and analyzes data from all 50 states, the 50 most populous U.S. cities, and 18 additional cities of various sizes. It traces the rise of walking and biking and explores the intersections between transportation, health, economics, equity, government funding, advocacy efforts — and much more.

Study Area

Available & Desired Data

GIS data from Eastside Greenway Plan
– Natural areas
– Demographic data
– Transportation network (roadways, sidewalks, bicycle facilities, transit system)

Relevant data from Eastside Greenway Health Impact Assessment (HIA)

Existing Plans
– Warrensville/Van Aken TOD Plan
– GCMA Akron Line Corridor Extension Study
– Warrensville Center Road/Van Aken Reconfiguration Project
– Warrensville Heights Master Plan and Update
– Others?

Other information requests
– Thistledown Racino plans
– Randall Park Mall redevelopment plans/ideas
Concept Development and Online Survey Meeting
May 24, 2016
## Attendance

**MQ Survey Development Meeting**  
**May 24, 2016**

<table>
<thead>
<tr>
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</tr>
</tbody>
</table>
Welcome and Introductions

Vertical Heading: Welcome
Horizontal Heading: Learn about the Northfield-Warrensville Multi-Modal Connectivity Plan

Priorities

I would most like to see complete streets treatments on:

- Chagrin Blvd
- Emery Road
- Green Road
- Harvard Road
- Northfield Road
- Warrensville Center Road

Survey

Tab 1: Travel Modes
Question 1: How do you usually get around? (check boxes for your most frequent travel modes)
- Car
- Public transportation
- Bike
- Walk

Question 2: How would you like to get around, if it could be made accessible to you? (check all that apply)
- Car
- Public transportation
- Bike
- Walk

Tab 2a: Question 1: Click on the image that best represents you on a bicycle:
- Parent with Child on Bike
- Commuter Bicyclist in a Bike Lane
- Recreational Cyclist/Multi-use Trail
- Road (lycra) Cyclist
- I Don’t Ride a Bike

Tab 2b: Question 2: When you ride, what type of bicycle facility do you prefer?
- Normal road
- Road with sharrows
- Bike lane
- Cycle Track
- Multi-use trail need image

Tab 3: Land Use
Identify the type of new development you would like to see more of in the study area. Select up to 3 images:
- Low density office/light industrial/office park
- Mixed use (residential/office over retail)
- High density residential
- Park/green space/trails
- Other (include comment box)
Question 1: What would you like to see at a transit stop? (check all that apply)

- Wi-Fi
- Seating
- Bike racks
- Shelter
- Real time bus route and arrival information
- Electric outlet (cell phone charger)
- Trash receptacle
- Recycling container
- Lighting
- Emergency call box
- Solar power
- Other? (Include comment box)

Screen 4: Origin-Destination Map

Horizontal Heading: Where do you go?
Vertical Heading: Map

Text at Top: This map works like a normal Google map. Drag markers to identify your frequent destinations. The "Other" box can be used to specify additional destinations or to identify issues of concern.

Icons: Provide icons for the destinations listed below: include comment box with frequency, mode and open area for additional comments. If we can use 7 instead of 6, please separate Shopping/Dining and Entertainment.

- Home
- School/Work
- Shopping/Dining/Entertainment
- Health Care
- Parks/Recreation
- Other

Screen 5: Thank You and Demographics

Horizontal Heading: Please tell us about yourself
Vertical Heading: Thank You

Questions:

- Age
- Gender
- Zip Code
- Stay Involved (email address)

I have access to: (check all that apply)
- Car
- Bike
- Transit

I am in the study area for: (check all that apply)
- Home
- Work/School
- Shopping/Entertainment
- Health Care
- Recreation

I am in the study area (check one)
- Daily
- A few times a week
- A few times a month
- A few times a year

Thank You message:

Thank you for participating in the Northfield-Warrensville Multi-Modal Connectivity Plan survey and for telling us what is important to you. Your input will help us understand your needs and desires with respect to mobility in the project area and help us build a better plan. Stay tuned for updates on plan development!
Project Team Meeting 3
June 23, 2016
# Northfield-Warrensville Multimodal Connectivity Plan

**ATTENDANCE**

**Project Team Meeting #3**  
**June 23, 2016, 10:00 a.m.**  
**Power Sports Institute 21210 Emery Road, Cleveland, Ohio**

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## Attendance

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Rachel Elson, Intern</td>
<td>City of Shaker Heights Planning</td>
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<td>-</td>
</tr>
<tr>
<td>Maurice Jones Jr., Intern</td>
<td>City of Warrensville Heights, Econ. Dev.</td>
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</table>
Screen 1 Welcome and Introductions

Vertical Heading: Welcome
Horizontal Heading: Learn about the Northfield-Warrensville Multi-Modal Connectivity Plan

Screen 2 Priorities

I would most like to see complete streets treatments on:

Chagrin Blvd
Emery Road
Green Road
Harvard Road
Northfield Road
Warrensville Center Road

Screen 3 Survey

Horizontal Heading: Tell us what you think
Vertical Heading: Survey

Tab 1: Travel Modes
Question 1: How do you usually get around? (check boxes for your most frequent travel modes)
• Car
• Public transportation
• Bike
• Walk

Question 2: How would you like to get around, if it could be made accessible to you? (check all that apply)
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• Public transportation
• Bike
• Walk

Tab 2a: Question 1: Click on the image that best represents you on a bicycle:
• Parent with Child on Bike
• Commuter Bicyclist in a Bike Lane
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Tab 3: Land Use
Identify the type of new development you would like to see more of in the study area. Select up to 3 images:
• Low density office/light industrial/office park
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• Other (include comment box)
Question 1: What would you like to see at a transit stop? (check all that apply)

- Wi-Fi
- Seating
- Bike racks
- Shelter
- Real-time bus route and arrival information
- Electric outlet (cell phone charger)
- Trash receptacle
- Recycling container
- Lighting
- Emergency call box
- Solar power
- Other? (Include comment box)

Screen 4 Origin-Destination Map

Horizontal Heading: Where do you go?
Vertical Heading: Map

Text at Top: This map works like a normal Google map. Drag markers to identify your frequent destinations. The "Other" box can be used to specify additional destinations or to identify issues of concern.

Icons: Provide icons for the destinations listed below. Include comment box with frequency, mode and open area for additional comments. If we can use 7 instead of 6, please separate Shopping/Dining and Entertainment.

- Home
- School/Work
- Shopping/Dining/Entertainment
- Health Care
- Parks/Recreation
- Other

Screen 5 Thank You & Demographics

Horizontal Heading: Please tell us about yourself
Vertical Heading: Thank You

Questions:
- Final Questions (Optional)
- Age
- Gender
- Zip Code
- Stay Involved (email address)

I have access to: (check all that apply)
- Car
- Bike
- Transit

I am in the study area for: (check all that apply)
- Home
- Work/School
- Shopping/Entertainment
- Health Care
- Recreation
- Other (comment box?)

I am in the study area (check one)
- Daily
- A few times a week
- A few times a month
- A few times a year

Thank You message:
- Thank you for telling us what is important
- Thank you for participating in the Northfield-Warrensville Multi-Modal Connectivity Plan survey and for telling us what is important to you. Your input will help us understand your needs and desires with respect to mobility in the project area and help us build a better plan. Stay tuned for updates on plan development!
Steering Committee Meeting 3
June 30, 2016
Northfield-Warrensville Multimodal Connectivity Plan
Steering Committee
Mandel Humanities Center, Tri-C Eastern Campus Room 228
4250 Richmond Road Highland Hills, Ohio 44122

June 30, 2016, 10:00 a.m. – 12:30 p.m.

<table>
<thead>
<tr>
<th>Initial</th>
<th>Representative</th>
<th>Organization</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td></td>
<td>Michael Coller, Congressional Staff</td>
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<td>Stanley Anderson, Councilman</td>
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## Northfield-Warrensville Multimodal Connectivity Plan

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* Attending
T Tentative

PLEASE CORRECT ANY INACCURATE INFORMATION. THANK YOU!

x Crystal Gatier, Intern, City of Warrensville  
x Maurice Jones, Intern, City of Warrensville  
x Amelia Visnauskas, Intern, County Planning
Meeting Agenda

1. Project update
   - Stakeholder outreach
2. Plans for Public Outreach
3. Public meeting presentation
4. Review online survey
5. Next Steps

Key Stakeholders

- City of Beachwood
- City of Cleveland
- City of Warrensville Heights
- Cleveland Clinic – South Pointe Hospital
- Cuyahoga Community College (Tri-C)
- Developer – Chagrin Highlands (Jacobs Group)
- Developer – Van Aken District (RMS Investments)
- Eaton Corporation
- GCRTA
- JACK Thistledown Racino
- University Hospitals
- Warrensville Chamber of Commerce
- Warrensville Heights School District

Public Outreach

- Plans for Public Outreach
  - July 12th Public Meetings
  - Pop-Up Activities
  - Project Summary for Websites

Public Outreach

July 12th Public Meetings

- Tri-C Campus East Health Careers and Technology Building, Room 021
  - 11:00 a.m. – 1:00 p.m., and
  - 6:00 p.m. to 8:00 p.m.
- Pop-Up Activities
  - Various Locations
  - JACK Thistledown Racino
  - Tri-C
  - University Hospital Customer Service Center
  - South Pointe Hospital
  - Warrensville Heights Festival August 19th 3:00 p.m. to 10:00 p.m.
  - Highland Heights Municipal Center
  - Others
- Project Summary for Websites

Northfield-Warrensville Multi-Modal Connectivity Plan
Steering Committee Meeting #3

June 30, 2016
June 30, 2016

Steering Committee Meeting #3 Presentation

**Northfield-Warrensville Center Corridor Multi-Modal Connectivity Plan**

**Why are we here today?**
- Understand the project
- Existing conditions overview
- Online survey
- Provide input

**Project Vision, Purpose, Objectives**

**Vision:**
Develop a multi-modal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

**Purpose:**
Drive economic development, reinvestment and job creation by improving multimodal access to enhance livability and quality of life throughout the study area and connecting to the surrounding region.

**Objectives:**
- Identify non-motorized enhancements to provide transportation options providing improved access and service.
- Support economic growth and job creation.
- Enhance transit connectivity and service.
- Link neighborhoods, employment, health, education, retail, entertainment and recreation.
- Integrate community health considerations into preferred multimodal network recommendations.
- Incorporate complete and green streets systems and strategies and green infrastructure into the recommendations.
- Implement plans and initiatives to encourage collaboration between regional and community partners.
- Create place-based adaptable design strategies and concepts that value existing resources and build on existing places and traditions.
- Incorporate smart technologies that support multimodal transportation opportunities now and in the future.

**Project Elements**
- Pedestrian Accommodations
- Bicycle Facilities
- Social Equity
- Land Use (current & future)
- Greenway Strategy
- Transit Strategy
- Traffic Analysis

**Project Team**
- Cuyahoga County Planning Commission (CCPC)
- City of Warrensville Heights
- City of Shaker Heights
- Village of North Randall
- Village of Highland Hills
- Office of Marcia L. Fudge
- GCRTA
- Northeast Ohio Areawide Coordination Agency (NOACA)
- Consultants (Parsons Brinckerhoff and Smith Group JJR)
The Steering Committee will work closely with the Project Team in developing ideas, facilitating public outreach and engagement activities, and help to advance the project within their constituent groups.

- Bike Cleveland
- City of Cleveland/Planning (or Project Team)
- Cleveland Clinic (South Pointe Hospital)
- Cleveland Metroparks
- Council representative – Highland Hills
- Council representative – North Randall
- Council representative – Warrensville Heights
- Council representative – Shaker Heights
- Council representative – Warrensville Heights
- Council representative – Cuyahoga County Dept of Public Works
- Council representative – Cuyahoga County Board of Health
- University Hospitals (Ahuja, Rehabilitation Facility, Customer Service Ctr)
- Warrensville City School District
- Warrensville Heights YMCA
- Developer – Vine Trees District (RHS Investments)
- Eaton Corporation
- ODOT District 12
- Thistledown Racino
- Tri-C Chamber of Commerce
- Highland Hills, North Randall, Warrensville Heights
- Van Aken District (RMS Investments)
- Eaton Corporation
- GCRTA
- Greater Cleveland Trails Leadership Network
- Mill Creek Watershed Council
- Mill Creek watershed
- ODOT District 12
- North Randall
- Project Team
- Thistledown

**Schedule**

- **Phase 1 – Define the Vision**
  - Task 1: Project Initiation
  - Task 2: Existing Conditions Inventory

- **Phase 2 – Concept Development**
  - Task 3: Community Engagement
  - Task 4: Community Engagement Survey
  - Task 5: Refine Concepts, Assess Feasibility

- **Phase 3 – Deliver the Plan**
  - Task 6: Plan, Recs & Implementation
  - Task 7: Final Report

**Transportation**

- **Traffic Study / Complete Streets**

  **Traffic analysis**
  - Northfield:
    - North of Emery
    - South of Emery
  - Emery:
    - East of Green
    - West of Green
    - Reconstruction

**Pavement Width**

**Traffic Volume (AADT)**
• Road Diet Candidates are roadways with 4-5 travel lanes with less than 15,000 vehicles/day
• Need to consider peak hour volumes

**Transportation**

**Sidewalk Study**

Overview of primary corridors
- Missing sidewalk links
- ADA compliance issues at intersections

**Transportation**

**Sidewalk Network**

• Critical gaps: Harvard and Miles
• Partial sidewalks (gaps and/or one side): Northfield, Green, Chagrin, Emery

**Transportation**

**Bicycle & Multi-use Facilities**

- There are some planned routes near the study area (Van Aken) & Orange Side Paths
- NOACA Priority Bikeways: Northfield, Miles, Chagrin, and Green
- Eastside Greenway routes: Miles, Warrensville Center, and Harvard

**Transportation**

**NOACA Regional Priority Bikeway Network**

- [Diagram of NOACA Regional Priority Bikeway Network]
Population Density
- Relatively low population density
- 2010 Census: ~15,000 people in study area (~58,000 in map area)

Car Ownership Rates
- 1 Dot = ~10 people
- Factor in possible demand for transit and non-motorized facilities

Land Cover
- Indicates degree of potential connectivity to natural areas for either preservation or restoration efforts.

Open Space & Schools/Libraries
- Destinations
- Green Road Park
- Camp George Forbes
- Cleveland Memorial Gardens Cemetery
- Highland Park Golf Course
- Highland Park Cemetery
- Mill Creek
- Warrenville Heights YMCA
- Cuyahoga Community College (Eastern Campus)
- Cuyahoga County Library (Warrensville Heights)
- Cuyahoga County Library (Garfield Heights)
- Warrensville Heights High School
- John Dewey Elementary
- Corporate College
- Cuyahoga Hills Boys School

Health Care & Jobs
- Destinations
- Green Road National Guard Armory
- Cleveland Clinic South Pointe Hospital
- University Hospital Rehab
- University Hospital Ahuja Medical Center
- University Hospital Administrative Offices
- University Hospital Medical Offices
- University Hospital Customer Service
- Suburban Pavilion Nursing Home
- Highland Hills Behavioral Health Hospital
- Brehn Family Center
- Green Road Development Ctr

Shopping & Entertainment
- Destinations
- Van Aken District
- Pavilion Shopping Ctr
- Village Square
- Shops of Eton
- Harvard Park
- Chagrin Highlands
- Thornton Park
- Pinecrest Development

Environmental
- Health Care & Jobs
- Shopping & Entertainment
Combined Destinations

Eastside Health Corridors

Employment Centers

Land Use

Economic Growth & Development

Jobs: Inflow / Outflow

Jobs: Inflow / Outflow

1. Van Aken District
2. Beachwood Commerce Park & Enterprise Place Business Park
3. Miles Road Business Corridor & Industrial Parks
4. Eastside Health Corridor (growing economic center)

1. Eastside Health Corridor (University Hospitals)
2. Former Randall Park Mall Site (industrial)
3. Van Aken district developments
4. Thistledown Racino

- Study Area Boundary
- Expanded Area Boundary
Key Stakeholders

- City of Beachwood
- City of Cleveland
- City of Warrensville Heights
- Cleveland Clinic – South Pointe Hospital
- Cuyahoga Community College (Tri-C)
- Developer – Chagrin Highlands (Jacobs Group)
- Developer – Van Aken District (RMS Investments)
- Eaton Corporation
- GCRTA
- JACK Thistledown Racino
- University Hospitals
- Warrensville Chamber of Commerce
- Warrensville Heights School District

Warrensville Heights

North Randall

Shaker Heights – Van Aken District

Cuyahoga Community College Eastern Campus

Chagrin Highlands

Land Use
Employees
Transportation
Future Plans
Connectivity
Access/Circulation

source: www.jresgroup.com
Highland Hills – Potential Bike Path

Online Survey

https://ntlci-draft.metroquest.com/
Next Steps

- Refine Plan Concepts and Access Feasibility
  - Evaluate Public Meeting and Online Survey Comments
  - Develop Evaluation Criteria
- Draft Plan, Recommendations and Implementation Strategies
  - Short and Long Term Recommendations

Parcel Data

Land Use

- Mixed use pattern
- Adjacent to large industrial land and highway intersection
- Limited park space

Parcel Data

- Differences between land use and zoning

Parcel Data

Employment Centers

- Van Aken district
- Beachwood Commerce Park & Enterprise Place Business Park
- Miles Road Business Corridor & Industrial Parks
- Eastside Health Corridor (growing economic center)

Traffic Study

Transportation

- Turning Movement Counts
  - Northfield Corridor
  - Ellacott-Clarkwood Northfield
  - Emery Northfield
  - N. Miles Northfield
  - Warrensville Center Emery
  - Emery Northfield
  - Derbyshire-Granada Emery
  - Green/Emery
- ATR (tow) Counts
  - Emery east of Merrygold

Traffic Study

- Traffic data collection completed week of February 22, 2016

Travel Lanes

Transportation

- Travel Lanes
Right-of-Way (ROW) Width

• Typical ROW width at 80-feet for primary streets

Median Annual Income

• Low to medium income overall
• Highest incomes closer to Van Aken district

Crime Rate

Demographics

NOACA Sidewalk Path Inventory

Transportation

Transit Service

• There are a few stops along Emery Road and Granada Boulevard where the highest concentrations of housing are located.

Public Transportation (Rail & Bus)

• Transit services covering the study area
• Potential to provide bus stops closer to population centers
Mobility Access Analysis

- Shows locations where residents have access or no access to (1) Transit stops; (2) Bike facilities; and (3) Park space within a ¼ mile distance.

Transportation

Land Cover

- Large undeveloped areas exist in and adjacent to the study area. These areas provide opportunities for new connectivity.

Environmental

Property: Tax Exempt Status

- Indicates public & quasi-public properties and highlights potential properties for incorporating non-motorized trails and facilities.

Planned & Potential Development

- Eastside Greenway Plan
- Van Aken District Plan
- Highland Hills land use
- Highland Hills bike path
- Chagrin Highlands

Highland Hills – Land Use Concepts

- Indicates public & quasi-public property. Highlights potential properties for incorporating non-motorized trails and facilities.

Composite

- Indicates public & quasi-public property. Highlights potential properties for incorporating non-motorized trails and facilities.
Public Meeting 1
July 12, 2016
## Northfield-Warrensville Multimodal Connectivity Plan
### Public Meeting

**Meeting Location:** Tri-C Eastern campus Room 021  
**Date & Time:** 7/12/16 11:00 a.m.

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# Northfield-Warrensville Multimodal Connectivity Plan
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• Understand the project
• Existing conditions overview
• Study area communities
• Online survey
• Community input

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Vision: Develop a multi-modal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

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Objectives:
- Identify non-motorized enhancements to provide transportation options providing improved access and service.
- Support economic growth and job creation.
- Enhance transit connectivity and service.
- Link to neighborhoods, employment, health, education, retail, entertainment and recreation.
- Integrate community health considerations into preferred multimodal network recommendations.
- Incorporate complete and green streets systems and strategies and green infrastructure into the recommendations.
- Complement plans and initiatives to encourage collaboration between regional and community partners.
- Create place-based actionable design strategies and concepts that value existing resources and build on existing plans and studies.
- Incorporate smart technologies that support multimodal transportation opportunities now and in the future.
Project Elements

- Pedestrian Accommodations
- Bicycle Facilities
- Social Equity
- Land Use (current & future)
- Greenway Strategy
- Transit Strategy
- Traffic Analysis

Project Team

- Cuyahoga County Planning Commission (CCPC)
- City of Warrensville Heights
- City of Shaker Heights
- Village of North Randall
- Village of Highland Hills
- Office of Marcia L. Fudge
- Greater Cleveland Regional Transit Authority (RTA)
- Northeast Ohio Areawide Coordinating Agency (NOACA)
- Consultants (WSP|Parsons Brinckerhoff & SmithGroupJJR)

Steering Committee

The Steering Committee works closely with the Project Team in developing ideas, facilitating public outreach and engagement activities, and helps to advance the project within their constituent groups.

- Bike Cleveland
- Cleveland Clinic (South Pointe Hospital)
- Cleveland Metroparks
- Cuyahoga County Board of Health
- Cuyahoga Community College (Tri-C)
- Developer – Pinecrest (Fairmount Properties)
- Developer – Randall Park Mall (IRG)
- Eaton Corporation
- Greater Cleveland Trails Leadership Network
- Heights District
- JACK Thistledown Racino
- JCC
- LID District
- Greater Cleveland Regional Transit Authority (RTA)
- Lighting Committee
- Mill Creek Watershed Council
- Noaca (stormwater management)
- Northeast Ohio Areawide Coordinating Agency (NOACA)
- University Hospitals (Blackshear Rehabilitation Facility, Customer Service Ctr)
- Western Reserve Park District
- Woodward Heights
- Woodward Heights YMCA
- Woodward Heights School District

Schedule

Phase 1 – Define the Vision
- Task 1: Project Initiation
- Task 2: Existing Conditions

Phase 2 – Concept Development
- Task 3: Plan Elements
- Task 4: Community Engagement (Survey)
- Task 5: Refine Concepts, Assess Feasibility

Phase 3 – Deliver the Plan
- Task 6: Plan, Recs & Implementation
- Task 7: Final Report

Transportation – RTA System Map

Pavement Width
Traffic Volume (AADT)

Transportation

Lanes vs. Volume

Transportation

Traffic Study / Complete Streets

Traffic analysis

- Northfield
  - Harvard
  - Ellacott-Clarkwood
  - Emery
  - Miles
- Emery
  - Warrensville Center
  - Northfield
  - Granada-Derbyshire
  - Green

Traffic Analysis – Existing Conditions

Transportation

Traffic Analysis – Existing Conditions (optimized timing & phasing)

Transportation

- Optimize Signal Timing
- Modify Signal Phasing
- Install Intersection protected left lane at Territorial
- Install Dual Right Hand Lever at Territorial
- Northfield
  - north of Emery
- Emery
  - between Warrensville Center and Richmond

Traffic Analysis – Existing Conditions (optimized timing & phasing)

Transportation

- Capacity reductions are not advisable until future land use and associated traffic impacts can be projected
- Northfield south of Emery
- Emery
  - between Warrensville Center and Richmond
Sidewalk Network (NOACA)

- Critical gaps: Harvard and Miles
- Partial sidewalks (gaps and/or one side): Northfield, Green, Chagrin, Elyria

NOACA Regional Priority Bikeway Network

- Gaps in sidewalk network
- Lack of pedestrian signal heads
- ADA features (e.g., truncated dome strip at curb ramps)

Bicycle & Multi-use Facilities

- Existing and planned do not show many bicycle facilities

Transportation

- There are some planned routes near the study area (Van Aken & East Side Paths)
- NOACA Priority Routes: Northfield, Miles, Chagrin, and Green
- Eastside Greenway routes: Miles, Warrensville Center, and Harvard

Population Density

- Relatively low population density
- 2010 Census: ~15,000 people in study area (~58,000 in map area)

Demographics

- Indicates degree of potential connectivity to natural areas for either preservation or restoration efforts.

Car Ownership Rates

- 1 Dot = ~10 people
- Factor in possible demand for transit and non-motorized facilities

Environmental

- Indicates degree of potential connectivity to natural areas for either preservation or restoration efforts.
Open Space & Schools/Libraries

1. Green Road Park
2. Camp George Forbes
3. Cleveland Memorial Gardens Cemetery
4. Highland Park Golf Course
5. Highland Park
6. Mill Creek
7. Warrenville Heights YMCA
8. Thornton Park
9. Cuyahoga Community College (Eastern Campus)
10. Cuyahoga County Library (Warrensville Heights)
11. Warrensville Heights High School
12. John Dewey Elementary
13. Corporate College
14. Cuyahoga Hills Boys School

Health Care & Jobs

15. Commerce Park
16. Eaton Headquarters
17. Enterprise Park
18. Former Randall Park Mall site
19. Metropolitan Plaza (Titan Insurance)
20. PNC Bank
21. East Ohio Gas Services
22. Green Road National Guard Armory
23. Cleveland Clinic South Pointe Hospital
24. University Hospital Rehab
25. University Hospital Ahuja Medical Center
26. University Hospital Administrative Offices
27. University Hospital Medical Offices
28. University Hospital Customer Service
29. Suburban Pavilion Nursing Home
30. Highland Hills Behavioral Health Hospital
31. Brehn Family Center
32. Green Road Development Center

Shopping & Entertainment

33. Van Aken District
34. Pavilion Shopping Center
35. Village Square
36. Shops of Eton
37. Harvard Park
38. Chagrin Highlands
39. Pinecrest Development
40. JACK Thistledown Racino

Eastside Health Corridors

1. Van Aken District
2. Beachwood Commerce Park & Enterprise Place Business Park
3. Miles Road Business Corridor & Industrial Parks
4. Eastside Health Corridors (growing economic center)

Source: Trails Leadership Network, 2014

Land Use
Future Employment Centers

1. Eastside Health Corridor
2. Former Randall Park Mall Site (industrial)
3. Van Aken District developments
4. JACK Thistledown Racino

Jobs: Inflow / Outflow

• Study Area Boundary

Warrensville Heights

Active Projects
• Heinen’s (60 KSF food production facility)
• Lifebanc (20.8 KSF addition to existing facility)
• Allen Renzi/ORG Mgt (20 KSF new gymnastics academy)
• JACK Thistledown Racino (15 KSF horse barn)
• Residential projects (Cinema Park, Chateaux of Emery Woods)
• Demolition of car dealership (Bass Chevrolet)

Planned initiatives
• New Town Center (by YMCA and library)
• Warrensville Heights School District changes
  – Consolidate schools
  – Build new flagship High School
  – Build new Elementary School (Pre-K to Grade 5)
  – Reconstruct existing High School as new Middle School

North Randall

1. JACK Thistledown Racino (ongoing development)
2. Randall Park Mall site (redevelopment opportunities)
3. Power Sports Institute, Ohio Technical College
Highland Hills
1. Highland Park Golf Course
2. Highland Park Cemetery
3. Office park development along Harvard & Green

Shaker Heights
Van Aken District, RMS redevelopment

Cleveland
1. Camp George Forbes
2. Cleveland House of Corrections
3. Cleveland Memorial Gardens Cemetery
4. Highland Park Golf Course
5. Chagrin Highlands

Key Stakeholders
... and What We Learned
- City of Beachwood
- City of Cleveland
- City of Warrensville Heights
- Cleveland Clinic – South Pointe Hospital
- Cuyahoga Community College (Tri-C)
- Developer – Chagrin Highlands (Jacobs Group)
- Developer – Van Aken District (RMS Investments)
- Eaton Corporation
- GCRTA
- JACK Thistledown Racino
- Power Sports Institute (with City of North Randall)
- University Hospitals
- Warrensville Heights Area Chamber of Commerce
- Warrensville Heights School District

City of Beachwood
1. Chagrin Highlands
2. Eaton Corporation
3. Proposed connector road
   *(Commerce Park to Harvard)*
   Beachwood purchased 2456 Mercantile Road in Commerce Park to build a new road
4. Connector Trail
   Beachwood promoting complete and green streets
   Proposed trail connection at 24950 Chagrin, owned by First Catholic Slovak Ladies

Eaton Corporation
1. 53 acres in Chagrin Highlands
2. 900 staff on site
3. Sustainability
   Sustainable facility with sustainable initiatives, focus on safety, employee life style, amenities
4. Alternate Mode Connectivity
   a) Limited transit service, non-auto travel is not common
   b) Desired destinations:
      - Blue Line & Van Aken District
      - Chagrin Highlands/Highland Park
      - Pinecrest and Eaton shopping district
**Greater Cleveland Regional Transit Authority (RTA)**

1. Primary transit routes: #5, 15, 34, 41/41 F
   - Limited extensions of #19, 94
2. Severely financially constrained
   - Funding decreased 80% within past 20 years
   - Ohio is one of worst funded transit in nation
3. Proposed service cuts include stopping #34 at Green Road Station.
4. No current plans for new Bus Rapid Transit (BRT) or other new service in project area
   - RTA understands transit potential but lacks funding for new service
   - Long-range planning shows Warrensville Center Road is a priority corridor

---

**JACK Thistledown Racino**

1. 750 employees at JACK Thistledown Racino
   - 7000 employees in JACK Entertainment
2. Plans to invest $70 million in next 5 years
   - New parking structure
   - Updated building façade
   - Primary entrance off Warrensville Center with new jumbotron
   - Potential new Starbucks
   - Potential new hotel
3. Alternate modes transportation is desired for staff (improves employee access) as well as guests

---

**Chagrin Highlands**

Jacobs Group and City of Cleveland

1. Master Agreement guided development from early 1990s
2. 600+ acres located in Orange, Beachwood, Highland Hills, Warrensville Heights
3. Managed by Jacobs Group
4. Development land use & size
   - Driven by end-users
   - Unknowns are a challenge to this project, notably impacts to transportation network

---

**Chagrin Highlands**

1. Business owners in Warrensville Heights, North Randall and Highland Hills
2. Approximately 600-700 businesses
3. Chamber focus areas
   - Workforce development, job creation and livability (residential quality of life)
4. Study area connectivity impacts businesses
   - Want to engage hotels to improve transportation access for employees
5. Randall Park Mall redevelopment will influence business and worker access
   - Workers are biking long distances to get to jobs (from Maple Heights and Cleveland neighborhoods)

---

**Tri-C Eastern Campus**

1. 200 acre campus
   - Desire to connect to other Tri-C campuses
   - Partnerships with other colleges (Hiram), Warrensville Heights High School, Abigu
2. Transportation
   - RTA bus primary student access
   - Desire to increase RTA service
3. Future development (2014 Master Plan)
   - Beyond education: work-heal-learn-shop-play
   - Walkable, accessible, trail network
   - Community resource (amphitheater, athletic facilities, programming, concerts, etc.)
   - On-campus housing for non-local students
   - Connect to jobs and medical centers in area

---

**Warrensville Heights Area Chamber of Commerce**

1. 200 acre campus
   - Desire to connect to other Tri-C campuses
   - Partnerships with other colleges (Hiram), Warrensville Heights High School, Abigu
2. Transportation
   - RTA bus primary student access
   - Desire to increase RTA service
3. Future development (2014 Master Plan)
   - Beyond education: work-heal-learn-shop-play
   - Walkable, accessible, trail network
   - Community resource (amphitheater, athletic facilities, programming, concerts, etc.)
   - On-campus housing for non-local students
   - Connect to jobs and medical centers in area
South Pointe Hospital (Cleveland Clinic)

1. 173-bed acute care, teaching hospital
   - Serving southeast neighborhoods since 1957
   - 1,200 employees

2. Patients
   - Admit ~600 in-patients per month
   - Approximately 50-100 appointments cancelled per week because of transportation related issues

3. Ohio University’s Heritage College of Osteopathic Medicine
   - Opened Medical School Extension, July 2015
   - Many non-local students would benefit from nearby housing and alternate mode mobility

University Hospitals (UH)

1. Multiple facilities in/ near project area
   - Ahuja Medical Center, Beachwood
   - Management Services Center (MSC), Shaker Heights
   - Customer Service Center, Highland Hills
   - Harvard corridor

2. Step Up to University Hospital program
   - Works with community partners to prepare area residents for jobs with UH

3. Transit limitations hamper staff and patient access to/between UH facilities and other nearby destinations

Future changes...

1. Van Aken District
2. Warrensville Heights Schools
3. JACK Thistledown Racino
4. Warrensville Heights Town Center
5. Tri-C Master Plan
6. Highland Park Golf Course
7. Chagrin Highlands
8. Highland Park
9. Randall Park Mall

Online Survey

http://NWconnects.metroquest.com/

Future changes...

1. Van Aken District
2. Warrensville Heights Schools
3. JACK Thistledown Racino
4. Warrensville Heights Town Center
5. Tri-C Master Plan
6. Highland Park Golf Course
7. Chagrin Highlands
8. Highland Park
9. Randall Park Mall

Online Survey
Now it’s time to ...

Take the survey!

Project Vision, Purpose, Objectives

Vision: Develop a multi-modal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

Purpose: Drive economic development, reinvestment and job creation by improving multimodal access to enhance livability and quality of life throughout the study area and connecting to the surrounding region.

Objectives:
- Identify non-motorized enhancements to provide transportation options providing improved access and service.
- Support economic growth and job creation.
- Enhance transit connectivity and service.
- Link neighborhoods, employment, health, education, retail, entertainment and recreation.
- Integrate community health considerations into preferred multimodal network recommendations.
- Incorporate complete and green streets systems and strategies and green infrastructure into the recommendations.
- Complement plans and initiatives to encourage collaboration between regional and community partners.
- Create place-based sustainable design strategies and concepts that utilize existing resources and build on existing plans and studies.
- Incorporate smart technologies that support multimodal transportation opportunities now and in the future.

Parcel Data

Land Use

- High density mixed use
- Adjacent to large industrial land and highway intersection
- Limited park space
Parcel Data

- Differences between land use and zoning

Employment Centers

1. Van Aken district
2. Beachwood Commerce Park & Enterprise Place Business Park
3. Miles Road Business Corridor & Industrial Parks
4. Eastside Health Corridor (growing economic center)

Land Use

Transportation

Traffic Study

Turning Movement Counts
Northfield Corridor
- Harvard/Northfield
- Ellacott-Clarkwood/Northfield
- Emery/Northfield
- N. Miles/Northfield

Emery Corridor
- Warrensville Center/Emery
- Emery/Northfield
- Derbyshire-Granada/Emery
- Green/Emery

ATR (hose) Counts
- Emery east of Merrygold

Traffic data collection completed week of February 22, 2016

Travel Lanes

Transportation

Right-of-Way (ROW) Width

Transportation

- Typical ROW width at 80-feet for primary streets

Median Annual Income

Demographics

- Low to medium income overall
- Highest incomes closer to Van Aken district
• There are a few stops along Emery Road and Granada Boulevard where the highest concentrations of housing are located.

• Transit services covering the study area
• Potential to provide bus stops closer to population centers

• Shows locations where residents have access or no access to (1) Transit stops; (2) Bike facilities; and (3) Park space within a ¼ mile distance.

• Large undeveloped areas exist in and adjacent to the study area. These areas provide opportunities for new connectivity.
Property: Tax Exempt Status

- Indicates public & quasi-public properties and highlights potential properties for incorporating non-motorized trails and facilities.

Planned & Potential Development

- Eastside Greenway Plan
- Van Aken District Plan
- Highland Hills land use
- Highland Hills bike path
- Chagrin Highlands

Highland Hills – Land Use Concepts

- Retail / commerce
- Industrial / Office Parks
- Health care & large offices
- Residential
- Schools

- 4-5 lane roads with less than 15,000 AADT
- Wide ROW (sidepath opportunity)
- Explore off-street trail opportunities

Composite

- Indicates public & quasi-public property. Highlights potential properties for incorporating non-motorized trails and facilities.

City of Beachwood

- New Connector Road
  The City of Beachwood purchased the property at 22456 Mercantile Road within Commerce Park to provide a connection between Commerce Park and the University Hospital Facilities on Harvard Road.

- Trial Connector: The City of Beachwood is also promoting complete and green streets with a proposed trail connection at 22950 Chagrin Boulevard property owned by the First Catholic Slovak Ladies.
Pop-Up Meeting Boards
August, 2016
Current Area Destinations

**Open Space & Recreational**
1. Green Road Park
2. Camp George Forbes
3. Cleveland Memorial Gardens Cemetery
4. Highland Park Golf Course
5. Highland Park Cemetery
6. Mill Creek
7. Warrenville Heights YMCA
8. Thornton Park

**Schools/Libraries**
9. Cuyahoga Community College (Eastern Campus)
10. Cuyahoga Co. Library (Warrensville Heights)
11. Warrensville Heights High School & Middle School
12. John Dewey Elementary
13. Corporate College
14. Cuyahoga Hills Boys School

**Office / Industrial**
15. Commerce Park
16. Eaton Headquarters
17. Enterprise Park
18. Former Randall Park Mall site
19. Metropolitan Plaza (Titan Insurance)
20. PNC Bank
21. East Ohio Gas Services
22. Green Road National Guard Armory

**Health Care**
23. Cleveland Clinic South Pointe Hospital
24. University Hospital Rehab
25. University Hospital Ahuja Med Center
26. University Hospital Admin Offices
27. University Hospital Medical Offices
28. University Hospital Customer Service
29. Suburban Pavilion Nursing Home
30. Highland Hills Behavioral Health Hospital
31. Brehn Family Center
32. Green Road Development Center

**Shopping & Mixed Use Districts**
33. Pavilion Shopping Center
34. Van Aken District
35. Village Square
36. Shops of Eton
37. Harvard Park
38. Chagrin Highlands
39. Pinecrest Development

**Entertainment**
40. Thistledown Racino

Future changes…

**Planned Change**
1. Van Aken District
2. Warrensville Hts schools
3. JACK Thistledown Racino
4. Warrensville Hts town center
5. Tri-C Master Plan
6. Highland Park Golf Course
7. Chagrin Highlands
8. Highland Hills
9. Former Randall Park Mall site

**Potential Change**
Project Vision, Purpose, Objectives

**Vision:** Develop a multi-modal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

**Purpose:** Drive economic development, reinvestment and job creation by improving multi-modal access to enhance livability and quality of life throughout the study area and connecting to the surrounding region.

**Objectives**
- Identify non-motorized enhancements to provide transportation to improve access and service
- Support economic growth and job creation.
- Enhance transit connectivity and service.
- Link neighborhoods, employment, health, education, retail, entertainment and recreation.
- Integrate community health considerations into preferred multimodal network recommendations.
- Incorporate complete and green streets systems and strategies and green infrastructure into the recommendations.
- Complement plans and initiatives to encourage collaboration between regional and community partners.
- Create place-based actionable design strategies and concepts that value existing resources and build on existing plans and studies.
- Incorporate smart technologies that support multimodal transportation opportunities now and in the future.
Project Team Meeting 4
October 4, 2016
ATTENDANCE
Project Team Meeting #4
October 4, 2016, 2:00 p.m.
Cuyahoga County Planning Commission, 2076 E. 9th Street, Cleveland, Ohio 44115

<table>
<thead>
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</tbody>
</table>
Northfield-Warrensville Multi-Modal Connectivity Plan
Project Team Meeting #4
October 4, 2016

Corridor Priorities

Harvard, Warrensville Center and Chagrin are viewed as important and are fairly closely ranked.

Survey Results

Survey Visits through October 3, 2016
Total Visits 587 / Total Respondents 345 (59%)

Tell Us What you Want!
Travel Modes

Car – 296 (73%)  
Walk – 39 (10%)  
Bike – 18 (4%)  
Transit – 51 (13%)

Tell Us What you Want!
Bike Facilities

Most survey respondents (86%) prefer a bicycle facility with designated space for bicyclists.  
40% of survey respondents prefer multi-use trails for bicycling.

Tell Us What you Want!
Bike Rider

Half of survey respondents do not ride a bicycle.  
Very few (~4%) identify themselves as bicyclists who are comfortable in the road.

Tell Us What you Want!
Bike Facilities

Most survey respondents (86%) prefer a bicycle facility with designated space for bicyclists.  
40% of survey respondents prefer multi-use trails for bicycling.
Almost 60% of survey respondents prefer land use that includes park/green space/trails. About 30% of survey respondents would like to see mixed use development. There is little support for high density residential, low density office/industrial park.

Multiple answers were permitted.

Where Do You Go?

Tell Us What you Want!

Land Use

Almost 60% of survey respondents prefer land use that includes park/green space/trails. About 30% of survey respondents would like to see mixed use development. There is little support for high density residential, low density office/industrial park.

Multiple answers were permitted.

Tell Us What you Want!

Transit and More

Shelter – 236
Real Time Bus Info – 198
Seating – 158
Emergency Call – 146
Lighting – 134
WiFi – 130
Trash Bins – 129
Electric Outlets – 120
Bike Racks – 53
Recycling Bins – 51
Solar Power – 46

Tell Us What you Want!

Transit and More

Multiple answers were permitted.

Please Tell Us About Yourself

Demographics

Home
School / Work
Shop / Dine / Fun
Health Care
Park / Recreation
Other

% of survey respondents were female.
Please Tell Us About Yourself

I have access to:

1. Car
2. Bike
3. Transit

I am in the study area for:

1. 273
2. 158
3. 157
4. 123
5. 119
6. 250

Multiple responses were permitted.

Please Tell Us About Yourself

Zip Code Data
No presentation was given at this meeting.
Project Team Meeting 5
February 8, 2017
# Northfield-Warrensville Multimodal Connectivity Plan

## Northfield-Warrensville Multi-Modal Connectivity Plan

**Project Team Meeting**  
**Cuyahoga County Library-Warrensville Heights Branch**  
**February 8, 10:00 a.m. – 12:30 p.m.**

<table>
<thead>
<tr>
<th>Initial</th>
<th>Representative</th>
<th>Organization</th>
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| *        | *Maribeth Feke,*  
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| *        | *Larry Finch,*  
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|         | David Smith,  
Mayor | Village of North Randall | mayor@northrandall.com | 216-662-0430 |
| *        | *Jim Sonnhalter,*  
Manager of Planning | Cuyahoga County Planning Commission | jsonnhalter@cuyahogacounty.us | 216-443-3713 |
|         | Raymond Turner | City of Warrensville Heights | rturner@cityofwarrensville.com | 216-443-3713 |
|         | Alison Wasserman,  
Regional Planner | NOACA | awasserman@mpo.noaca.org | 216-241-3984 |

*Note: Alison Wasserman was unable to attend.*

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*This document contains information on the Northfield-Warrensville Multimodal Connectivity Plan. The list includes representatives, their organizations, emails, and phone numbers for the project team meeting.*
### Consultant Team

<table>
<thead>
<tr>
<th>Initial</th>
<th>Representative</th>
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*Confirmed by RSVP*

PLEASE CORRECT ANY INACCURATE INFORMATION. THANK YOU!!
Project Vision & Purpose

**Vision:** Develop a multi-modal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

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Project Elements

- Pedestrian Accommodations
- Bicycle Facilities
- Social Equity
- Land Use (current & future)
- Greenway Strategy
- Transit Strategy
- Traffic Analysis

Warrensville Heights

**Active Projects**

- Heinen’s (60 KSF food production facility)
- Lifebanc (20.8 KSF addition to existing facility)
- Allen Renzi/ORG Mgt (20 KSF new gymnastics academy)
- JACK Thistledown Racino (15 KSF horse barn)
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- Demolition of car dealership (Bass Chevrolet)

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- New Town Center (by YMCA and library)
- Warrensville Heights School District changes
  - Consolidate schools
  - Build new flagship High School
  - Build new Elementary School (Pre-K to Grade 5)
  - Reconstruct existing High School as new Middle School

North Randall

1. JACK Thistledown Racino (ongoing development)
2. Randall Park Mall site (redevelopment opportunities)
3. Power Sports Institute, Ohio Technical College
Highland Hills
1. Highland Park Golf Course
2. Highland Park Cemetery
3. Office park development along Harvard & Green

Cleveland
1. Camp George Forbes
2. Cleveland House of Corrections
3. Cleveland Memorial Gardens Cemetery
4. Highland Park Golf Course
5. Chagrin Highlands

Shaker Heights
Van Aken District, RMS redevelopment

Key Stakeholders
... and What We Learned
- City of Beachwood
- City of Cleveland
- City of Warrensville Heights
- Cleveland Clinic – South Pointe Hospital
- Cuyahoga Community College (Tri-C)
- Developer – Chagrin Highlands (Jacobs Group)
- Developer – Van Aken District (RMS Investments)
- Eaton Corporation
- GCRTA
- JACK Thistledown Racino
- Power Sports Institute (with City of North Randall)
- University Hospitals
- Warrensville Heights Area Chamber of Commerce
- Warrensville Heights School District

Future changes...
1. Van Aken District
2. Warrensville Heights Schools
3. JACK Thistledown Racino
4. Warrensville Heights Town Center
5. Tri-C Master Plan
6. Pinecrest
7. Highland Park Golf Course
8. Chagrin Highlands
9. Highland Hills
10. Randall Park Mall Site

Online Survey

Project Team Meeting #5 Presentation
Survey Results
Survey Visits through October 3, 2016
Total Visits 587 / Total Respondents 345 (59%)

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Total Visits 587 / Total Respondents 345 (59%)

Corridor Priorities
Harvard, Warrensville Center and Chagrin are viewed as important complete streets corridors and are fairly closely ranked.

Tell Us What you Want!
Travel Modes
How do you get around?
- Car – 296 (73%)
- Walk – 9 (20%)
- Bike – 18 (4%)
- Transit – 51 (13%)

How would you like to get around?
- Car – 215 (46%)
- Walk – 101 (21%)
- Bike – 10 (4%)
- Transit – 101 (21%)

Multiple answers were permitted with 404 choices identified for Q1 and 463 for Q2.

Tell Us What you Want!
Bike Rider
Half of survey respondents do not ride a bicycle. Very few (<10%) identify themselves as bicyclists who are comfortable riding in the road. This is completely normal and aligns with national trends.

Tell Us What you Want!
Bike Facilities
Most survey respondents (80%) prefer bicycle facilities with designated space for bicyclists. 40% of survey respondents prefer multi-use trails for bicyclists.

Tell Us What you Want!
Land Use
Almost 60% of survey respondents prefer land use that includes park/green space/trails. About 30% of survey respondents would like to see mixed use development. Little support for high density residential or low density office/industrial park.

Other
- Shopping
- Food court
- Senior only residential
- High density residential
- Affordable senior housing
Tell Us What you Want!
Transit and More

- Shelter – 206
- Real Time Bus Info – 198
- Seating – 158
- Emerging Call – 146
- Lighting – 134
- WiFi – 130
- Trash Bins – 129
- Electric Outlets – 120
- Bike Racks – 53
- Recycling Bins – 51
- Solar Power – 46

Multiple answers were permitted.

Where Do You Go?

- Home
- School / Work
- Shop / Dine / Fun
- Health Care
- Park / Recreation
- Other

Where Do You Go?

- Home
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- Other

Please Tell Us About Yourself
Demographics

- Age
- Gender Identification

- Gender Identification:
  - Male: 220
  - Female: 220

- Age:
  - 18 and under: 122 (53.5%)
  - 25-44: 133 (57.3%)
  - 45-64: 92 (39.8%)
  - 65 and older: 9 (9.9%)

Broad cross-section across most age groups (working ages are most represented).

% of survey respondents were female.

Please Tell Us About Yourself
I am in the study area for:

- Home
- School / Work
- Shop / Dine / Fun
- Health Care
- Park / Recreation
- Other

Multiple responses were permitted.
Please Tell Us About Yourself
Zip Code Data

Economic Development

Primary Objective
Support economic development through place-based transportation and land use recommendations, and to connect these recommendations with existing assets and investment opportunities within the Project Area.

Smart Growth Economic Development Strategy
Ensure the area’s continued success by cultivating its competitive advantage and by using its unique assets to attract new investment and to support existing businesses.

Project Area Socioeconomic Data:
Revenue: 55.48B 337.60B
Average Household: 55.48 337.60
Per Capita: 55.48 337.60

Economic Development

Economic Development

Economic Development

Economic Development

Economic Development

Economic Development
Economic Development

Competitive Advantage
- 126,000 jobs within a 15-minute drive
- Located at the convergence of I-271 & I-480, dubbed “Headquarters Highway” in the Cuyahoga County Economic Development Plan
- Major health, science and technology corporations in the area
- Anchored by strong retail, restaurant and entertainment venues

Economic Development

Smart Growth Strategy Components
- Expand existing businesses & attract new businesses
- Invest in Workforce development
  (Note: Mayor’s Forum on Workforce Readiness - March 20, 2017 @ Tri-C East)
- Improve quality of life amenities

Economic Development

Assets
- Chagrin Highlands
- Randall Park Mall property
- Cuyahoga Community College
- Existing industrial parks (Renaissance Industrial Parkway, Cranwood Parkway, and Miles & Aurora Roads industrial parks)
- Retail, hospitality and office parks (Harvard Park, Richmond Highlands, Northfield Miles Plaza)

Economic Development

Expand Existing Businesses and Attract New Businesses

- Review existing conditions for parcel boundaries and ownership. Also review existing industries, hazardous properties, building fiscal and physical deficiencies, and possible acquisitions.
- Seek to attract new businesses in high priority industries that are compatible with existing industries to help increase the fiscal employment and build upon the existing base.
- Improve infrastructure for multi-modal access including walking or biking in the area.
- Streetscape and Wayfinding enhancements.

Economic Development

Expand Existing Businesses and Attract New Businesses

- Seek the highest and best use of the property. Mixed use may have less impact on traffic volume and transit impacts than light industrial or office. Other focal points and possible development targets include the Camp George Forbes site and the Cleveland House of Corrections.

Economic Development

Invest in Workforce Development

- The current Tri-C Master Plan was completed in 2013, and updated 2014. The plan seeks to make the campus an extension of the larger community using the work/live/learn/ishop/pay model.
  (Approximately 200 acres)
Economic Development
Invest in Workforce Development

The PowerSport Institute (PSI) is a branch campus of Ohio Technical College. The 20,700 square foot facility provides motorcycle mechanics training in Ohio on a wide array of manufacturers and equipment in the powersport industry.

Comprehensive training program includes:
- Auto-Diesel Technology
- Collision Repair and Refinishing
- Manufacturing Training
- Classic Car Restoration Technology
- Complete Automotive Technology
- Diesel Equipment Technology
- Motorcycle and Powersports Technology
- Welding and Fabrication Technology

Institute is located on Emsly Road in North Randall. It is serve by RTA Route 41F. Housing for students is needed.

Economic Development
Improve Quality of Life Amenities

JACK Thistledown Racine:
JACK Thistledown Racino employs more than 7,000 employees throughout the JACK Entertainment system and 750 at JACK Thistledown Racino.

With incremental capital investments of over $3 billion in the next several years, JACK anticipates changes to the building facade and the addition of a new parking structure. JACK also anticipates adding 1,900 parking spaces with new garages. Changes to property entrances and traffic signalization, including making Warrensville Center Road the Main Entrance with 1800 State Route Landmark Sign. Long-range planning also includes suggestions of nearby property acquisitions to add supporting amenities in the project area.

Economic Development
Improve Quality of Life Amenities

Warrensville Heights Town Center:
The City of Warrensville Heights desires a destination Town Center that would be the center of activity in the project area. The desire is that it be a walkable area with pedestrian amenities and proximity to other municipal services.

Update the civic center plan to include:
- Consolidated schools
- New Flagship Elementary School
- New Elementary School (Kindergarten-Grade 8)
- New Elementary School to new Middle School
- Transit improvements on adjacent Northfield Road: Connectivity multi-purposes;

Economic Development
Recommendations

Highlight areas with planned investment and potential land use changes that will impact how the area absorbs future development and growth potential.

Actions:
1. Build upon existing investments as planned expansions and redevelopment.
2. Be strategic by making short and long-term goals that allow for incremental changes.
3. Make targeted investments: place-based economic development aimed at a specific area or projects.
4. Build upon existing momentum.
5. Solicit specific and mission-appropriate partners.

Existing Conditions
Transit

Map illustrating existing transit service – bus routes, trains, bus stops (if possible).

Recommendations
Transit
Recommendations
Northfield Corridor, Emery to Miles

- Roughly 1/2 mile
- Regional and local connectivity
- 25 mph speed limit
- 3 traffic signals
- Range of travel lanes
  - 6 lanes at Emery intersection
  - 6 lanes south of Emery's
  - 7 lanes south of signal (at BK)
- Miscellaneous adding lanes
- Overhead lane use control signs
- 23 unsignalized access driveways
- 23 turn lane
- Multiple, disconnected surface parking lots
- Hostile environment for bicyclists and pedestrians

Incorporate into combined image showing non-motorized and transit recommendations.

THANK YOU!
Steering Committee Meeting 4
February 15, 2017
# Northfield-Warrensville Multimodal Connectivity Plan

## Northfield-Warrensville Multi-Modal Connectivity Plan
### Steering Committee Meeting #4
#### Cuyahoga County Library, Warrensville Heights Branch

**February 15, 10:00 a.m. – 12:30 p.m.**

<table>
<thead>
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2. Cleveland House of Corrections
3. Cleveland Memorial Gardens Cemetery
4. Highland Park Golf Course
5. Chagrin Highlands

Key Stakeholders
... and What We Learned
- City of Beachwood
- City of Cleveland
- City of Warrensville Heights
- Cleveland Clinic – South Pointe Hospital
- Cuyahoga Community College (Tri-C)
- Developer – Chagrin Highlands (Jacobs Group)
- Developer – Van Aken District (RMS Investments)
- Eaton Corporation
- GCRTA
- JACK Thistledown Racino
- Power Sports Institute (with City of North Randall)
- University Hospitals
- Warrensville Heights Area Chamber of Commerce
- Warrensville Heights School District

Future changes...
1. Van Aken District
2. Warrensville Heights Schools
3. JACK Thistledown Racino
4. Warrensville Heights Town Center
5. Tri-C Master Plan
6. Pinecrest
7. Highland Park Golf Course
8. Chagrin Highlands
9. Highland Park
10. Randall Park Mall site

Online Survey
Survey Results

Survey Visits through October 3, 2016
Total Visits 587 / Total Respondents 345 (59%)

Corridor Priorities

Harvard, Warrensville Center and Chagrin are viewed as important complete streets corridors and are fairly closely ranked.

Tell Us What you Want!

Travel Modes

How do you get around?

Car – 296 (73%)
Walk – 39 (10%)
Bike – 18 (4%)
Transit – 54 (13%)

How would you like to get around?

Car – 215 (48%)
Walk – 78 (17%)
Bike – 69 (15%)
Transit – 101 (22%)

Multiple answers were permitted with 404 choices identified for Q1 and 463 for Q2.

Respondents would like to decrease auto travel and increase travel by walking, bicycling and transit.

Tell Us What you Want!

Bike Facilities

Most survey respondents (80%) prefer bicycle facilities with designated space for bicyclists.

40% of survey respondents prefer multi-use trails for bicyclists.

Tell Us What you Want!

Land Use

Almost 60% of survey respondents prefer land use that includes park/green space/trails.

About 30% of survey respondents would like to see mixed use development.

Little support for high density residential or low density office/industrial park.

Tell Us What you Want!

Bike Rider

Half of survey respondents do not ride a bicycle.

Very few (<10%) identify themselves as bicyclists who are comfortable riding in the road. This is completely normal and aligns with national trends.

Almost 60% of survey respondents prefer land use that includes park/green space/trails.

About 30% of survey respondents would like to see mixed use development.

Little support for high density residential or low density office/industrial park.

Other:

- Mixed use (retail, business, and Mixed use with green space)
- Family oriented space
- Senior only residential
- High density residential
- Affordable space 200k or less
- Gas stations
- Shopping centers
- Green space
- Big box
- Shopping centers
- Green space
Tell Us What you Want!
Transit and More

- Shuter – 206
- Real Time Bus Info – 198
- Seating – 146
- Emerging Call – 146
- Lighting – 134
- WiFi – 133
- Trash Bins – 129
- Electric Outlets – 120
- Bike Racks – 53
- Recycling Bins – 51
- Solar Power – 46

Multiple answers were permitted.

Where Do You Go?

- Home
- School / Work
- Shop / Dine / Fun
- Health Care
- Park / Recreation
- Other

Where Do You Go?

- Home
- School / Work
- Shop / Dine / Fun
- Health Care
- Park / Recreation
- Other

Please Tell Us About Yourself
Demographics

- Broad cross-section across most age groups (working ages are most represented).

- % of survey respondents were female.

Please Tell Us About Yourself
I have access to:

- Home
- School / Work
- Shop / Dine / Fun
- Health Care
- Park / Recreation
- Other

I am in the study area for:

- Home
- School / Work
- Shop / Dine / Fun
- Health Care
- Park / Recreation
- Other

Multiple responses were permitted.
Please Tell Us About Yourself
Zip Code Data

Economic Development

Smart Growth Economic Development Strategy
Ensure the area’s continued success by cultivating its competitive advantage and by using its unique assets to attract new investment and to support existing businesses.

Economic Development

Project Area Socioeconomic Data:

<table>
<thead>
<tr>
<th>Age of Population in Decade</th>
<th>15 Minute</th>
<th>30 Minute</th>
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<tbody>
<tr>
<td>Children (Under 20)</td>
<td>3,042</td>
<td>3,152</td>
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<tr>
<td>(20 to 34)</td>
<td>15%</td>
<td>12%</td>
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<tr>
<td>Senior (65 and Over)</td>
<td>16%</td>
<td>14%</td>
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<tr>
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<td>25%</td>
<td>27%</td>
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<tr>
<td>20 to 34</td>
<td>15%</td>
<td>12%</td>
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<tr>
<td>35 to 44</td>
<td>10%</td>
<td>10%</td>
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<tr>
<td>45 to 54</td>
<td>10%</td>
<td>9%</td>
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<tr>
<td>55 to 64</td>
<td>10%</td>
<td>10%</td>
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<tr>
<td>65 and Over</td>
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<td>12%</td>
</tr>
<tr>
<td>Total Population</td>
<td>128,166</td>
<td>93,891</td>
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Economic Development

Project Area Socioeconomic Data:

<table>
<thead>
<tr>
<th>Sector</th>
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<tr>
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<td>1,007</td>
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<tr>
<td>Agriculture</td>
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<tr>
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<tr>
<td>Educational and Health Service</td>
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<td>200,922</td>
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<tr>
<td>Leisure and Hospitality</td>
<td>12,307</td>
<td>12,367</td>
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<tr>
<td>Other Services</td>
<td>1,007</td>
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</tr>
<tr>
<td>Public Administration</td>
<td>2,027</td>
<td>28,241</td>
</tr>
</tbody>
</table>

Economic Development

Primary Objective
Support economic development through place-based transportation and land use recommendations, and to connect these recommendations with existing assets and investment opportunities within the Project Area.

Economic Development

Project Area Socioeconomic Data:

<table>
<thead>
<tr>
<th>Industry by Industry</th>
<th>15 Minute</th>
<th>30 Minute</th>
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</thead>
<tbody>
<tr>
<td>Natural Resources, Mining</td>
<td>294</td>
<td>4,014</td>
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<td>103,397</td>
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</table>
Economic Development

Competitive Advantage

- 126,000 jobs within a 15-minute drive
- Located at the convergence of I-271 & I-480, dubbed “Headquarters Highway” in the Cuyahoga County Economic Development Plan
- Major health, science and technology corporations in the area
- Anchored by strong retail, restaurant and entertainment venues

Economic Development

Smart Growth Strategy Components

- Expand existing businesses & attract new businesses
- Invest in Workforce development
  (Note: Mayor’s Forum on Workforce Readiness - March 20, 2017 @ Tri-C East)
- Improve quality of life amenities

Economic Development

Assets

- Chagrin Highlands
- Randall Park Mall property
- Cuyahoga Community College
- Existing industrial parks (Renaissance Industrial Parkway, Cranwood Parkway, and Miles & Aurora Roads industrial parks)
- Retail, hospitality and office parks (Harvard Park, Richmond Highlands, Northfield Miles Plaza)

Economic Development

Expand Existing Businesses and Attract New Businesses

- Review existing conditions for parcel boundaries and ownership. Also review existing industries, hazardous properties, building fiscal and physical deficiencies, and possible acquisitions.
- Seek to attract new businesses in high priority industries that are compatible with existing industries to help increase the local employment and build upon the local base.
- Improve infrastructure for multi-modal access including walking or biking in the area.
- Streetscape and Wayfinding improvements.

Economic Development

Expand Existing Businesses and Attract New Businesses

- Chagrin Highlands development began in the early 1990’s under a Master Agreement. The development is 600+ acres located in four communities (Orange, Beachwood, Highland Hills, and Warrensville Heights) The current plan for development are end-user driven.
- Seek the highest and best use of the property. Mix-use may have less impact on traffic volume and transit impacts than light industrial or office. Other focal points and possible development targets include the Camp George Forbes site and the Cleveland House of Corrections.

Economic Development

Invest in Workforce Development

- The current Tri-C Master Plan was completed in 2013, and updated 2014. The plan seeks to make the campus an extension of the larger community using the work/live/learn/zhap/pay model.
  (Approximately 200 acres)
Economic Development
Invest in Workforce Development

The PowerSport Institute (PSI) is a branch campus of Ohio Technical College. The 207,000 square foot facility provides motorcycle mechanics training in Ohio on a wide array of manufacturers and equipment in the powersport industry.

Comprehensive training program includes:
- Auto Diesel Technology
- Collision Repair and Refinishing
- Manufacturing Training
- Classic Car Restoration Technology
- Complete Automotive Technology
- Diesel Equipment Technology
- Motorcycle and Powersports Technology
- Welding and Fabrication Technology

Institute is located on Emory Road in North Randall. It is served by RTA Route 416. Housing for students is a need.

Economic Development
Improve Quality of Life Amenities

Warrensville Heights Town Center

The City of Warrensville Heights desires a destination Town Center that would be center of activities in the project area. The desire is that it be a walkable area with pedestrian amenities and proximity to other municipal services.

Update the civic center plan to include:
- Consolidate schools
- New flagship high school
- New elementary school (Pre K to Grade 3)
- Reconstructed high school as new middle school
- Transit improvements needed on Northfield Road
- Connectivity to multi-purposes centers

Economic Development
Recommendations

Highlight areas with planned investment and potential land use changes that will impact how the area absorbs future development and growth potential.

Actions:
1. Build upon existing investments as planned expansions and redevelopment.
2. Be strategic by making short and long-term goals that allow for incremental changes.
3. Make targeted investments: place-based economic development aimed at a specific area or projects.
4. Build upon existing momentum.
5. Solicit specific and mission-appropriate partners.

Existing Conditions
Transit

New map illustrating existing transit service - bus routes, train, bus stops (if possible).

Recommendations
Transit

JACK Thistledown Racino

JACK Thistledown Racino employs 7,800 employees throughout the JACK Entertainment system and 700 at JACK Thistledown Racino.

With incremental capital investments of over $130 million in the next several years, JACK anticipates changes to the building facade and the addition of a new parking structure. JACK also anticipates adding 1000 parking spaces with new garages. Changes to property entrances and traffic signalization, including making Warrensville Center Road the main entrance with a Judozi Town Landmark Sign. Long-range planning also includes suggestions of nearby property acquisitions to add supporting amenities to the projects area.
Existing Conditions
Bicycle & Pedestrian

Recommendations
Bicycle & Pedestrian

Traffic Study & Complete Streets
Traffic Analysis

Traffic Analysis – Existing Conditions
(optimized timing & phasing)

Complete Streets Opportunities
(add on-street bike lanes)

Recommendations
Access Management
Recommendations
Northfield Corridor, Emery to Miles

- Roughly ½ mile
- Regional and local connectivity
- 25 mph speed limit
- 3 traffic signals
- Range of travel lanes
  - 6 lanes at Emery intersection
  - 4 lanes south of Wendy’s
  - 6 lanes north of signal (at BK)
  - 7 lanes south of signal (at BK)
- Miscellaneous adding lanes
- Overhead lane use control signs
- 23 unsignalized access driveways
  - 13 east side
  - 10 west side
- Multiple, disconnected surface parking lots
- Hostile environment for bicyclists and pedestrians

Northfield Corridor, Emery to Miles – north half

Northfield Corridor, Emery to Miles – south half

Recommendations

Incorporate into combined image showing non-motorized and transit recommendations.

THANK YOU!
Steering Committee Meeting 5
January 26, 2018
Northfield-Warrensville Multimodal Connectivity Plan

MEETING MINUTES
Steering Committee Meeting Final
January 26, 2018, 10:00 a.m.
Cuyahoga Community College Eastern Campus
(4250 Richmond Road ` Health Careers & Technology Building)

Attendance

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanley Anderson</td>
<td>City of Warrensville Heights</td>
<td>216-926-7254</td>
<td><a href="mailto:sanderson62@att.net">sanderson62@att.net</a></td>
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<td><a href="mailto:gcoyne@cuyahogacounty.us">gcoyne@cuyahogacounty.us</a></td>
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<td>Carletta Fellows</td>
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<td></td>
<td><a href="mailto:cfellows@cityofwarrensville.com">cfellows@cityofwarrensville.com</a></td>
</tr>
<tr>
<td>Susan Hamilton</td>
<td>Village of Highland Hills</td>
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<td><a href="mailto:shamilton@hovancsek.com">shamilton@hovancsek.com</a></td>
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<tr>
<td>Ann Klavora</td>
<td>City of Shaker Heights</td>
<td>216-491-1432</td>
<td><a href="mailto:ann.klavora@shakeronline.com">ann.klavora@shakeronline.com</a></td>
</tr>
<tr>
<td>Michael Kubek</td>
<td>NOACA</td>
<td>216-241-2414, ext. 212</td>
<td><a href="mailto:mkubek@mpo.noaca.org">mkubek@mpo.noaca.org</a></td>
</tr>
<tr>
<td>Nancy Lyon-Stadler</td>
<td>WSP</td>
<td>216-928-8338</td>
<td><a href="mailto:stadlern@pbworld.com">stadlern@pbworld.com</a></td>
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<tr>
<td>Andrea Mitchell</td>
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<td><a href="mailto:amitchell@cityofwarrensville.com">amitchell@cityofwarrensville.com</a></td>
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<tr>
<td>Marionette Richardson-Scott</td>
<td>Cuyahoga County Planning Commission</td>
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<td><a href="mailto:mrichardson@cuyahogacounty.us">mrichardson@cuyahogacounty.us</a></td>
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<tr>
<td>Tim Rosenberger</td>
<td>WSP</td>
<td>216-781-7808</td>
<td><a href="mailto:rosenberger@pbworld.com">rosenberger@pbworld.com</a></td>
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<td>Brad Sellers</td>
<td>City of Warrensville Heights</td>
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<tr>
<td>Amy Snell</td>
<td>GCRTA</td>
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<td><a href="mailto:asnell@gcrta.org">asnell@gcrta.org</a></td>
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<td>Jim Sonnhalter</td>
<td>Cuyahoga County Planning Commission</td>
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<td>Jim Thompson</td>
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<td>Raymond Turner</td>
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<td><a href="mailto:rturner@cityofwarrensville.com">rturner@cityofwarrensville.com</a></td>
</tr>
</tbody>
</table>

Welcome and Introductions
Marionette Richardson-Scott opened the meeting introducing Lisa Schneider from the office of Dr. J. Michael Thomson, President of Cuyahoga Community College Eastern Campus. Ms. Schneider gave a brief welcome.

Nancy Lyon-Stadler facilitated the meeting. She began by giving an overview of the Project Vision and Purpose. She then discussed the following:

Project Elements
1. Pedestrian Accommodations;
2. Bicycle Facilities;
3. Social Equity;
4. Land Use (current & future);
5. Greenway Strategy;
6. Transit Strategy; and
7. Traffic Analysis.

Plan Development
The audience was reminded of the Project Phases going from Phase I Vision – Existing Conditions, to
Phase II Concept development- including Community Engagement, and Phase III Plan Delivery-including
Plan Recommendation and the Final Report.

General Recommendations
The recommendations were highlighted in three broad categories including transit, transportation and
land use and economic development.

Transit and Transportation
The transit recommendations focused on the current system, opportunities for enhancement, first and
last mile connections, and transit waiting environments. The transportation recommendations included
pedestrian treatments including sidewalk connectivity, multi-use trails and bike lanes, intersection and
crossing treatments- including signal operations and grade separations, complete streets and access
management.

Land Use/Economic Development
The land use recommendations used high level workforce and employment data to describe the existing
economic conditions of the Project area, proposed a Workforce Development Plan, offered strategies
for development and redevelopment, and encouraged collaborative partnerships.

Bike/Pedestrian Recommendations
The major Bike/Pedestrian recommendations include:
1. Multi-use trails along Warrensville Center, Harvard, Chagrin, Emery, and Green Roads as well as
   several neighborhood links to reach area destinations;
2. Several at grade, midblock and separated crossing enhancements throughout the Project area;
3. An Inroad Bikeway along Northfield and Emery Roads; and
4. Reconfiguration of the Interchange at Miles and Warrensville Center Road to improve
   walkability.

Transit Recommendations
The manor Transit recommendations include:
1. RTA BRT priority corridor;
2. Enhanced transit waiting environments at Harvard and Warrensville Center Roads, and at Emery
   and Warrensville Center Roads; and
3. Proposed bus service modifications on Chagrin Road creating loops at Lander and Brainard
   Roads through the Health Corridor along Harvard Road between the area of the East Outer Belt
   Freeway at University Hospitals at Richmond Road to South Pointe Hospital just west of
   Warrensville Center Road. Future #41 BRT is also proposed along Warrensville Center Road.
## Corridor Recommendations

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Transit</th>
<th>Non-motorized</th>
<th>Land Use &amp; Development Focus</th>
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<tbody>
<tr>
<td>Warrensville Center Road</td>
<td>BRT Corridor (#41, Blue Line Ext.)</td>
<td>Multi-use trails, Enhanced pedestrian crossing treatments on Longbrook</td>
<td>Van Aken District&lt;br&gt;University Hospitals Administration&lt;br&gt;Cleveland Clinic South Pointe Hospital&lt;br&gt;JACK Thistledown Racino&lt;br&gt;Randall Park Mall Site-Amazon</td>
</tr>
<tr>
<td></td>
<td>Transit Waiting Environments on Harvard and Emery Road</td>
<td>Reconfiguration of Miles Road Interchange to improve walkability</td>
<td></td>
</tr>
<tr>
<td>Northfield Road</td>
<td>Blue Line Extension proposed loop</td>
<td>Multi-use trails, In-road bicycle facility, Chagrin to Emery with Amazon considerations, Access Management, Enhanced pedestrian crossing treatments on Harvard, Ellacott-Clarkwood and Emery Roads, Mid-block crossing for proposed Mill Creek trail</td>
<td>Van Aken District&lt;br&gt;Highland Cemetery&lt;br&gt;UH Customer Service&lt;br&gt;WH School Redevelopment Plan&lt;br&gt;WH Town Center&lt;br&gt;JACK Thistledown Racino&lt;br&gt;Randall Park Mall Site-Amazon</td>
</tr>
<tr>
<td>Green Road</td>
<td>Blue Line Extension proposed loop</td>
<td>Multi-use trail Chagrin to Miles via Clarkwood and Lawrence, Enhanced pedestrian crossing treatments on Harvard, Clarkwood-Lawrence, and Emery</td>
<td>Chagrin Highlands&lt;br&gt;WH Senior Center&lt;br&gt;Residential&lt;br&gt;Commercial along Emery</td>
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<tr>
<td>Richmond Road</td>
<td>Blue Line Extension proposed loop</td>
<td>Multi-use trail, Grade-separated crossings at Harvard, Enhanced pedestrian crossing treatments at Eaton-Auburn and Tri-C-Harvard Park</td>
<td>Chagrin Highlands-Eaton&lt;br&gt;UH Ahuja medical Center&lt;br&gt;Tri-C East&lt;br&gt;Harvard Park&lt;br&gt;Pinecrest&lt;br&gt;I-271 Interchange</td>
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<tr>
<td>Chagrin Road</td>
<td>Blue Line Extension proposed loop</td>
<td>Multi-use trail, Grade-separated crossings at Chagrin Road, Enhanced pedestrian crossing treatments at Haroville Center, Northfield, Green and Tri-C East</td>
<td>Van Aken District&lt;br&gt;Highland Cemetery and Golf Course&lt;br&gt;Commercial and Residential areas</td>
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<tr>
<td>Harvard Road</td>
<td>Blue Line Extension proposed loop</td>
<td>Multi-use trail, Grade-separated crossings at Richmond Road, Enhanced pedestrian crossing treatments at Warrensville Center, Northfield, Green and Tri-C East</td>
<td>“Health Corridor” including multiple UH and Cleveland Clinic facilities&lt;br&gt;Chagrin Highlands&lt;br&gt;Tri-C East&lt;br&gt;Harvard Park</td>
</tr>
<tr>
<td>Emery Road</td>
<td>Enhanced Transit Waiting Environments on Warrensville Center Road</td>
<td>Multi-use trail, Road diet and bike lanes perhaps on Emery taking Amazon into consideration</td>
<td>JACK Thistledown Racino&lt;br&gt;Randall Park Mall Site – Amazon&lt;br&gt;Commercial&lt;br&gt;Residential&lt;br&gt;John Dewey Elementary School</td>
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</table>
## Ms. Lyons-Stadler concluded by highlighting the recommendations that have particular importance and benefit to the core municipalities.

Andrea Mitchell asked if pictures could be provided illustrating the type of bridge recommended for the grade-separated treatments at Richmond and Harvard Roads.

Discussion ensued regarding: the Northfield-Harvard intersection and the inefficient signal timing; transit dependent populations and recommendations for RTA; commercial support and private transportation services; and the funding of other transit related recommendations and service enhancements.

Maribeth Feke indicated that RTA has spoken with representatives at Amazon regarding transit needs. Amy Snell noted that there have been some adjustments make to specific route that support the area around Amazon.

A discussion ensued around the options for funding the recommendations of the Connectivity Plan. And the cost of the recommendations. Michael Kubek indicated that the Connectivity Plan will include unit cost that can provide basic estimates of some of the cost, but since the Project area is so broad, further investigation would be required into the cost of specific recommendations.

A discussion also ensued regarding the need for prioritization and approach to implementing the recommendations, and even tackling the “low hanging fruit.” Mayor Sellers asked about recommendation priorities and responsible parties. Marionette Richardson-Scott suggested the development of an Implementation Committee to champion the process for moving the Final Connectivity Plan forward.

The meeting was adjourned at approximately 12:30 p.m.
Northfield-Warrensville Multi-Modal Connectivity Plan
Steering Committee Meeting #5
Recommendations

January 26, 2018

Project Vision & Purpose

Vision: Develop a multi-modal connectivity plan that connects existing and planned developments, land uses and destinations in the project area and surrounding region, consistent with good environmental stewardship, to facilitate active transportation, economic investment and redevelopment.

Purpose: Drive economic development, reinvestment and job creation by improving multimodal access to enhance livability and quality of life throughout the study area and connecting to the surrounding region.

Project Elements

• Pedestrian Accommodations
• Bicycle Facilities
• Social Equity
• Land Use (current & future)
• Greenway Strategy
• Transit Strategy
• Traffic Analysis

Plan Development

Phase 1 – Define the Vision
Task 1: Project Initiation
Task 2: Existing Conditions Inventory

Phase 2 – Concept Development
Task 3: Plan Elements
Task 4: Community Engagement
Task 5: Refine Concepts, Assess Feasibility

Phase 3 – Deliver the Plan
Task 6: Plan, Recs & Implementation
Task 7: Final Report

Focus of Recommendations

TRANSPORT
• Current system
• Opportunities to enhance service
• First/Last Mile connections
• TWEES (transit waiting environment)

TRANSPORTATION
• Basic pedestrian treatments (sidewalk connectivity)
• Intersection & crossing treatments (enhanced pedestrian amenities)
• Intersection geometries
• Access management
• Signal operations
• Complete streets (road diet)
• Bike lanes
• Multi-use trails
• Grade-separated crossings

Recommendations

LAND USE & ECONOMIC DEVELOPMENT
• Existing Conditions
• Workforce development plan
• Development & redevelopment
• Collaborative partnerships
Recommendations

**LAND USE & ECONOMIC DEVELOPMENT**

**Snapshot of Existing Conditions**

- 12,437 jobs in the Project Area
- 52,000 jobs including secondary project area
- 126,000 jobs within a 15-minute drive time
- Fairly educated workforce
  - 29% with a High School Diploma or GED
  - 30% with a Bachelor's Degree or higher
- Located at the convergence of I-271 and I-480

**Workforce development plan**

- Focused on major industries
  - Health Careers
  - Automotive & Logistics
- Tailored job-training programs
  - Medical Technology
  - Nursing
- New and emerging technologies
  - Innovation and development
  - Light Industry

**Development & redevelopment**

- Understanding the Corridor Character
  - Role of corridor in the Project Area,
- Encourage redevelopment of vacant & underutilized land
  - Example: commercial and industrial properties
- Leverage existing industries
  - Example: strong automotive and automotive industry along Miles Rd.
- Target areas with potential land use changes
  - New Amazon Facility
- Support community and stakeholder master plans
  - Community needs
  - Partnerships and Collaborations

**Collaborative partnerships**

- Integration
  - Market and industry
  - Planning
  - Legislation
- Innovation
  - Small and large businesses
  - Indian tribes
  - Educational institutions
- Identification
  - Branding and Marketing
  - Healthcare Corridor
  - Light Industry Corridor

**Bike/Ped Recommendations**

- Bike/Ped Recommendations
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- Bike/Ped Recommendations
- Bike/Ped Recommendations

**Recommendations**

1/26/2018
Transit Recommendations

Warrensville Center Road

TRANSIT RECOMMENDATIONS
• BRT corridor (441, Blue Line Ext)
• Enhanced T&E
  - Harvard
  - Emery
NON-MOTORIZED RECS
• Multi-use trail
• Enhanced ped crossing treatments
• Reconfigure Miles interchange to improve walkability
LAND USE & ECONOMIC DEV
• Van Aken District
• University Hospitals Administration
• Cleveland Clinic South Pointe Hospital
• JACK Thistledown Racino
• Randall Park Mall & Amazon

Richmond Road

TRANSIT RECOMMENDATIONS
• Blue Line Extension (proposed loop)
NON-MOTORIZED RECS
• Multi-use trail (east)
  - Grade-separated crossing(s) at Harvard
  - Enhanced ped crossing treatments
    - Eaton-Auburn
    - Tri-C East
    - Harvard Park
    - Pinecrest
    - I-77 interchange
LAND USE & ECONOMIC DEV
• Chagrin Highlands
  - Eaton
• UH Ahuja Medical Center
  - Tri-C East
• Harvard Park
• Pinecrest

Chagrin Boulevard

TRANSIT RECOMMENDATIONS
• Blue Line Extension (proposed loop)
NON-MOTORIZED RECS
• Multi-use trail (south)
LAND USE & ECONOMIC DEV
• Van Aken District
• Cemetery
• Golf course
• Commercial
• Residential

Green Road

TRANSIT RECOMMENDATIONS
• Blue Line Extension (proposed loop)
NON-MOTORIZED RECS
• Multi-use trail
  - West Chagrin to Chardon Lawrence
  - East (Chardon Lawrence to Miles)
• Enhanced ped crossing treatments
  - Harvard
  - Chardon Lawrence
  - Emery
LAND USE & ECONOMIC DEV
• Chagrin Highlands
• WH Senior Center
• Residential
• Commercial at Emery

Northfield Road

TRANSIT RECOMMENDATIONS
• Blue Line Extension (proposed loop)
NON-MOTORIZED RECS
• Multi-use trail (west)
  - Access management
  - Enhanced ped crossing treatments
    - Harvard
    - Van Aken
    - Chardon Lawrence
    - Emery
  - Mid-block crossing for proposed Mill Creek trail
LAND USE & ECONOMIC DEV
• Van Aken District
• Cemetery
• WH Customer Service
• WH school redevelopment plan
• WH Town Center
• JAXX Thistledown Racino
• Randall Park Mall & Amazon
• Other commercial/retail
TRANSIT RECOMMENDATIONS
• Blue Line Extension (proposed loop)
• Enhanced TWE
  – Tri-C East
NON-MOTORIZED RECS
• Multi-use trail (north)
  • Guide-separated crossing(s) at Richmond
• Enhanced ped crossing treatments
  – Mill Creek Center
  – Northfield
  – Green
  – Tri-C East
LAND USE & ECONOMIC DEV
• “Health Corridor”
  – Multiple Cleveland Clinic & UH facilities
• Chagrin Highlands
• Tri-C East
• Harvard Park

NON-MOTORIZED RECS
• Multi-use trail
  • Road diet & bike lanes (east of Emery)
  – Amazon considerations
LAND USE & ECONOMIC DEV
• JACK Thistledown Racino
• Randall Park Mall site & Amazon redevelopment
• Commercial
• John Dewey Elementary School
• Residential access

NON-MOTORIZED RECS
• Multi-use trail
  • Enhanced ped crossing treatments
    – Emery
  • Commercial
  • Golf course
  • Natural areas

NON-MOTORIZED RECS
• Multi-use trail
LAND USE & ECONOMIC DEV
• Suburban office park
• Golf course
• Natural areas

NON-CORRIDOR RECOMMENDATIONS
• Signal timing & phasing improvements
• Access management
  – Former Randall Park Mall site and surrounding roadways
• Comprehensive transit study
• Off-road multi-use trails
  – Mill Creek greenway trail
  – Town Center trail
• Support expansion of UH Bikes bike share program in study area
**Warrensville Heights**

- Encourage sound land development, multimodal facilities, and access management with redevelopment of Randall Park Mall site, working in partnership with North Randall
- Support expanded transit service
- Support non-motorized access to new town center and schools
- Support neighborhood walkability and walkable access to nearby destinations, especially Clarkwood-Grenada neighborhood

**North Randall**

- Encourage sound land development, multimodal facilities, and access management with redevelopment of Randall Park Mall site, working in partnership with Warrensville Heights
- Support expanded transit service

**Highland Hills**

- Multimodal connectivity along Harvard
  - Transit services & Blue Line extension
  - Multi-use trails along Harvard and Mill Creek
- Encourage sound land development and access management with new Chagrin Highlands developments
- Partner with Tri-C East for implementation of their master plan vision
- Support/expand UH Bikes bike share program

**Shaker Heights**

- First/Last mile connections to Van Aken District
- Bikeway connections
  - Warrensville Center Road
  - Northfield Road
- Support/expand UH Bikes bike share program

**Prioritization Guidelines**

- Connect/close existing gaps in non-motorized networks
- Understand and focus on community interests and priorities
- Partner with neighboring communities and stakeholder organizations to maximize leveraging of opportunities
- Work with RTA and neighboring communities to support transit improvements
- Take advantage of low-hanging fruit
  - Optimize signal operations (timing, phasing, GPS clocks)
  - Pedestrian enhancements at intersections (countdown pedestrian heads, curb ramps)
- Work toward transformational elements
17.5 Survey Questions and Results
Survey Results

Survey Visits through October 3, 2016
Total Visits 587 / Total Respondents 345 (59%)
Harvard, Warrensville Center and Chagrin are viewed as important and are fairly closely ranked.
Tell Us What you Want!

Travel Modes

How do you get around?

- Car – 296 (73%)
- Walk – 39 (10%)
- Bike – 18 (4%)
- Transit – 51 (13%)

How would you like to get around?

- Car – 215 (46%)
- Walk – 78 (17%)
- Bike – 69 (15%)
- Transit – 101 (22%)

Multiple answers were permitted with 404 choices identified for Q1 and 463 for Q2.
Tell Us What you Want!
Bike Rider

Half of survey respondents do not ride a bicycle.
Very few (<10%) identify themselves as bicyclists who are comfortable in the road.
Tell Us What you Want!

Bike Facilities

Most survey respondents (86%) prefer a bicycle facility with designated space for bicyclist.

40% of survey respondents prefer multi-use trails for bicycling.
Almost 60% of survey respondents prefer land use that includes park/green space/trails.

About 30% of survey respondents would like to see mixed use development.

There is little support for high density residential, low density office/industrial park.

**Other**
- Big box
- Mixed-use (retail, business, res)
- Senior only residential
- High density residential
- Affordable upscale condos
- Shopping
- Hotels
- Grocery, drug store, cleaners
- Green space
- Family-oriented space
- Mixed-use with green space
Tell Us What you Want!
Transit and More

Multiple answers were permitted.

- Shelter – 206
- Real Time Bus Info – 198
- Seating – 158
- Emergency Call – 146
- Lighting – 134
- WiFi – 130
- Trash Bins – 129
- Electric Outlets – 120
- Bike Racks – 53
- Recycling Bins – 51
- Solar Power – 46
Where Do You Go?

Map data ©2016 Google. 1 km, Terms of Use, Report a map error

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Please Tell Us About Yourself
Demographics

Broad cross-section across most age groups (working ages are most represented).

¾ of survey respondents were female.
Please Tell Us About Yourself

I have access to:

- Car: 157
- Bike: 158
- Transit: 273

I am in the study area for:

- Home: 119
- WorkSchool: 250
- ShoppingEntertainment: 123
- Health Care: 97
- Recreation: 89
- Other: 23

Multiple responses were permitted.
Please Tell Us About Yourself

Zip Code Data

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Totals   391
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Tell Us What you Want!
Transit and More

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Bike Racks – 53
Recycling Bins – 51
Solar Power – 46

Multiple answers were permitted.
Where Do You Go?
Please Tell Us About Yourself

Demographics

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