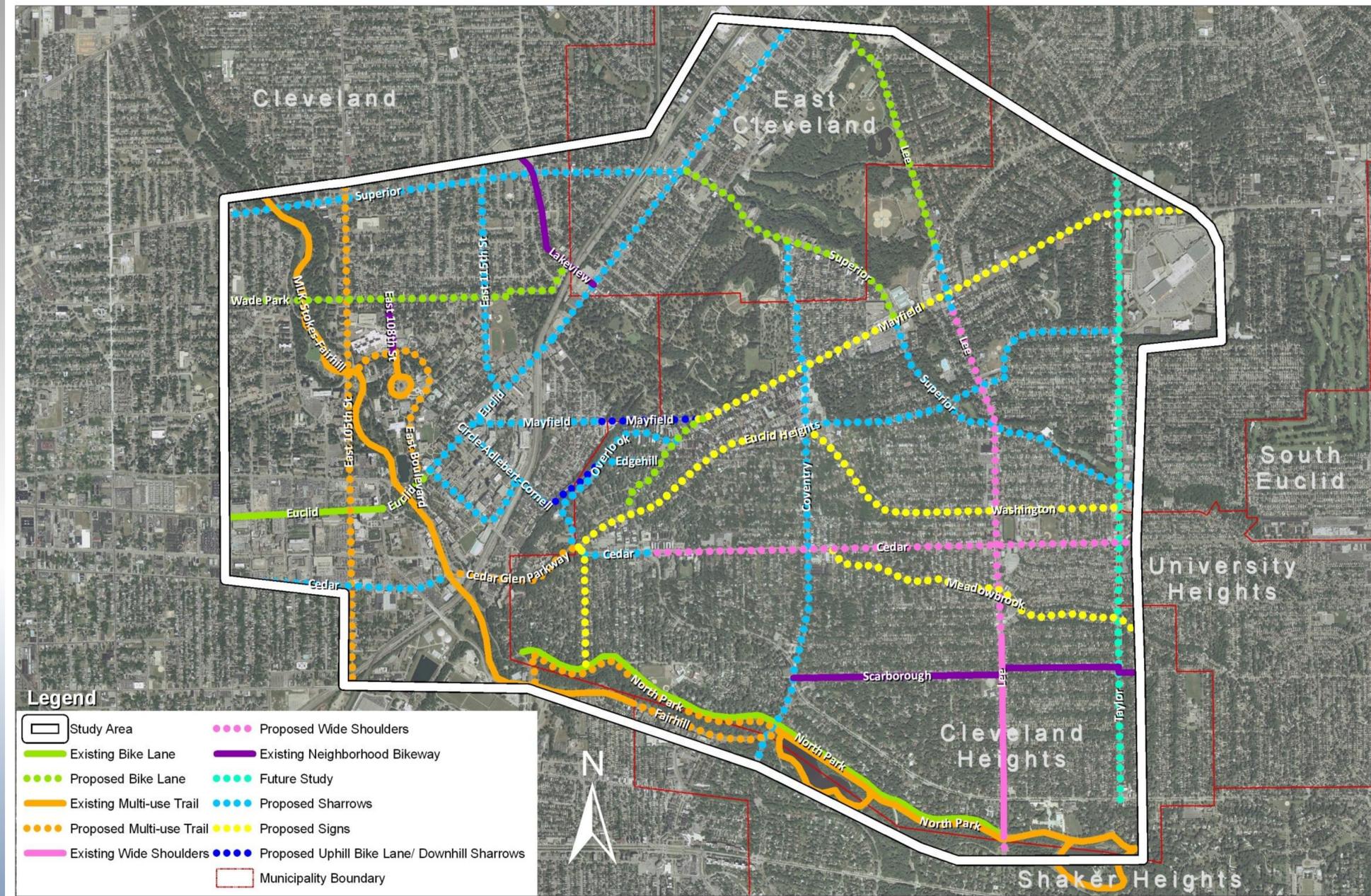
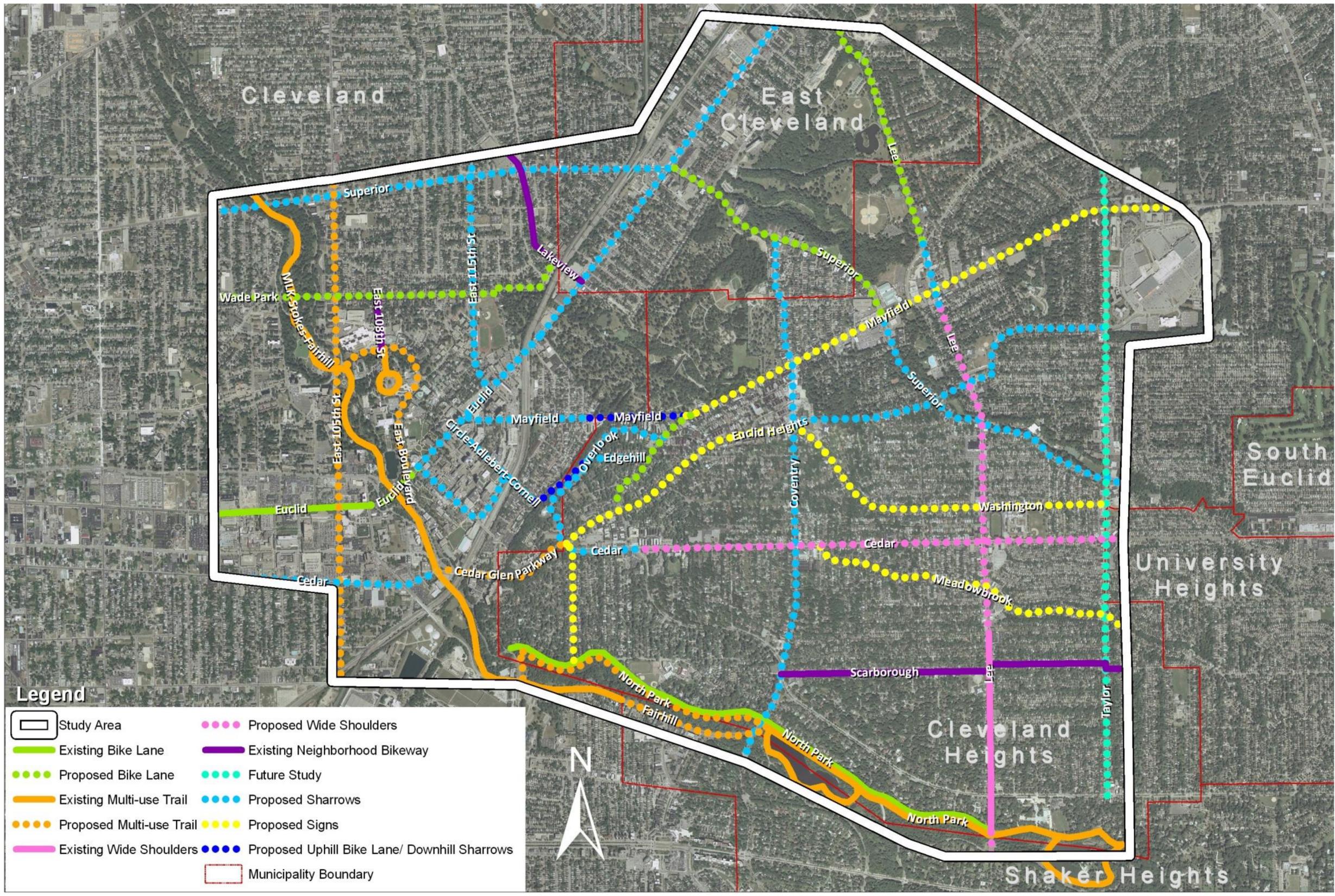


Recommended Bicycle Facilities



OVERVIEW OF BIKEWAY RECOMMENDATIONS		
BIKEWAY CORRIDOR	FACILITY TYPE	RECOMMENDATION
Superior west of Euclid	Sharrows (need traffic study)	1. Bikes May Use Full Lane signs; monitor for bike use. 2. Implement 3-lane road with parking on one side and sharrows (need traffic study).
Superior Euclid to Mayfield	Bike Lane	1. Euclid to Coventry (no on-street parking): buffered bike lanes with 2 travel lanes in each direction. 2. Coventry to Mayfield (with on-street parking): single travel lane with bike lanes and parking with bump outs (need traffic study). If not feasible, two travel lanes with sharrows and parking.
Superior Mayfield to Washington	Sharrows	Provide sharrows in travel lanes.
Euclid west of MLK-Chester	Existing Bike Lane	None. (existing bikeway facility is appropriate)
Euclid MLK to Adelbert	Bike Lane	Provide WB bike lane by reconfiguring the roadway (narrowing travel lanes and/or median). Provide wayfinding signage to Harrison-Dillard Trail.
Euclid Adelbert to E.123rd	Sharrows	Provide sharrows in outside travel lanes.
Euclid E.123rd through East Cleveland	Sharrows	Provide sharrows in outside travel lanes. Accommodate East Cleveland's future development plans.
Mayfield Euclid to E.126th	Sharrows	Implement accommodations consistent with TLCI study recommendations. Provide sharrows through Little Italy.
Mayfield E.126th to Kenilworth	Uphill Bike Lane/ Downhill Sharrows	Uphill bike lane and downhill sharrows. Provide wayfinding signage to Edgehill-Overlook corridor for less experienced bicyclists.
Mayfield northeast of Kenilworth	Signs	Bikes May Use Full Lane signs; monitor for bike use.
Circle - Adelbert - Cornell	Sharrows	Sharrows and Bikes May Use Full Lane signs.
Wade Oval	Existing Multi-Use Trail	Provide bikeway signage to the park (Wade Oval).
East Boulevard	Multi-Use Trail	1. Bikes May Use Full Lane signs; bikeway signage. 2. Install multi-use trail along west side of East Blvd, connecting to Harrison-Dillard Trail, Euclid Avenue and Wade Park.
E.105th Street	Multi-Use Trail	Continue complete streets cross section to be provided with Opportunity Corridor. Note: The proposed configuration of OC boulevard would include wide outside travel lanes for shared use with bicycle traffic. It would also include a multi-use path on the south side of the road and a sidewalk on the north side.
E.108th Street	Existing Neighborhood Bikeway	No specific bikeway treatment.
E.115th Street	Sharrows	Sharrows and bikeway signage.
Lakeview	Existing Neighborhood Bikeway (monitor for bicycle use)	No specific bikeway treatment. Monitor for bikeway use; consider future accommodations, if appropriate.
Wade Park	Bike Lane (need traffic study)	1. Provide wayfinding and route signage. Monitor for bikeway use. 2. Conduct traffic study to evaluate feasibility of bike lanes (with removal of on-street parking), as a cohesive corridor treatment between E.66 th and E.118 th Streets.
MLK-Stokes-Fairhill	Existing Multi-Use Trail (Need connections to Cleveland Heights and Shaker Heights facilities)	Provide connections between Lake-to-Lakes Trail and North Park Boulevard, and into Shaker Heights and trail network around Shaker Lakes.
Cedar Avenue west of MLK	Sharrows	Defer to city design project for provision of complete and green street components. Supports provision of Bikes May Use Full Lane signs and monitoring of bike use for potential future installation of sharrows. Prefer 3-lane roadway with sharrows and parking on one side.
Cedar Glen Parkway Cedar Hill, MLK to Euclid Heights	Multi-Use Trails (Both north and south sides of Cedar)	Treatments listed in order of preference, with the ability to provide all identified facilities. 1. Provide multi-use path on south side of Cedar (coordinate to ensure RTA University-Cedar Station provides wide sidewalk). 2. Widen north sidewalk as multi-use path. 3. Construct grade-separated elevated trail on north side of Cedar. 4. Widen Cedar to provide uphill bike lane and downhill sharrows.
Cedar Euclid Hts to Fairmount	Sharrows	Implement treatments recommended by TLCI study; include sharrows in outside travel lanes.
Cedar east of Fairmount	Wide Shoulders	Provide striped wide shoulders.
North Park MLK to Coventry	Existing Bike Lane Multi-use trail	Provide multi-use trail along south side of North Park and connecting to Lake-to-Lakes Trail at MLK.
North Park Coventry to Lee	Existing Bike Lane and Existing Multi-Use Trail	None. (existing bikeway facilities are appropriate)
Grandview-Bellfield-Delaware-Overlook	Signs	Provide bicycle connection along South Overlook (via wayfinding signage, not pavement markings).
Euclid Heights Cedar to Coventry	Signs (monitor for bicycle use)	Provide Bikes May Use Full Lane signs. Monitor for bicycle use to evaluate provision of bicycle facility(ies) with associated removal of on-street parking.
Euclid Heights Coventry to Taylor	Sharrows	Provide sharrows and wayfinding signage.
Coventry	Sharrows	Provide sharrows.
Lee north of Monticello	Bike Lane (need traffic study)	Convert current 4-lane road to 3-lane road with bike lanes/wide shoulders (based on available roadway width).
Lee Monticello to Whitehorn	Sharrows	Provide sharrows.
Lee Whitehorn to Delwood	Wide Shoulders	Restripe with 11 ft travel lanes and wide shoulders (edgeline striping), as appropriate, throughout this section. In the Cedar-Lee District, reduce center turn lane width to widen travel lanes; install sharrows in travel lanes where edgeline striping is not feasible.
Lee Delwood to North Park	Existing Wide Shoulders	None. (existing bikeway facilities are appropriate)
Lee North Park into Shaker Heights	Wide Shoulders	Provide striped wide shoulders. Note: Converting Lee Road to a 3-lane roadway with a center turn lane and wide shoulders between South Park and City Hall is included in the Lee Road Traffic Study and Corridor Plan that was approved by Shaker Heights City Council on November 26, 2012.
Taylor	Future Study	Defer to recommendations in proposed future TLCI study.
Scarborough	Existing Neighborhood Bikeway	No specific bikeway treatment.
Meadowbrook	Signs (monitor for bicycle use)	Provide bikeway signage. Monitor for bicycle use and potential future provision of sharrows.
Washington	Signs	Provide bikeway signage.
Edgehill Overlook to Kenilworth	Sharrows	Provide sharrows in travel lanes; retain on-street parking on both sides.
Edgehill Murray Hill to Overlook	Uphill Bike Lane/ Downhill Sharrows	Uphill bike lane and downhill sharrows.
Overlook Kenilworth to Cedar	Sharrows	Provide sharrows in travel lanes for entire length of this corridor.
Derbyshire- Kenilworth Mayfield to Euclid Heights	Bike Lane (need traffic study)	Convert Derbyshire-Kenilworth to 2-lane roadway with bike lanes (need traffic study).

Recommended Bicycle Facilities



Existing Conditions



Desired Project Outcomes:

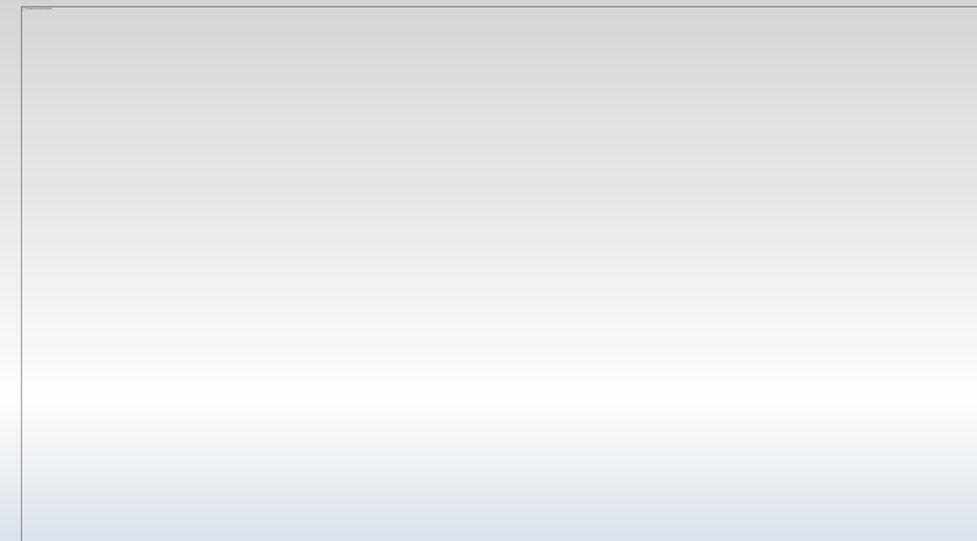
- Facilitate alternate mode travel between Cleveland Heights, University Circle, and the adjacent communities
- Encourage mode shift away from auto travel
- Improved connections between Cleveland Heights and University Circle
- Supporting Cleveland Heights as a residential location for University Circle workers
- Support ongoing development of Cleveland Heights and University Circle by reducing parking demand

Analysis of Existing Transit Services

- Greater Cleveland RTA provides through bus services that provide connections between Cleveland Heights and University Circle. However, these services primarily pass through University Circle on the way to downtown Cleveland
- RTA's former Cleveland Heights Circulators, which connected University Circle and Cleveland Heights, were discontinued in 2007 due to low ridership
- Case Western Reserve South Loop connects the Case Campus to the Coventry Road commercial area. This route operates in the evenings to provide students access to shopping and entertainment opportunities

Public and Stakeholder Input

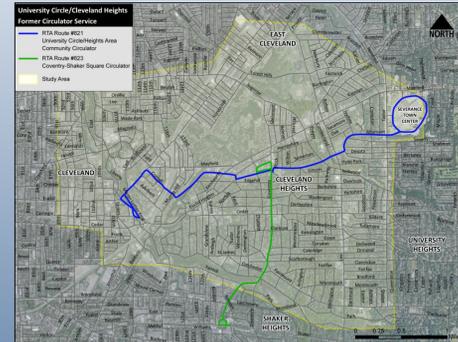
- On-line survey generated more than 700 responses, covering transit routing, infrastructure and bicycle needs
- Extensive input from Cleveland Heights and University Circle institutions



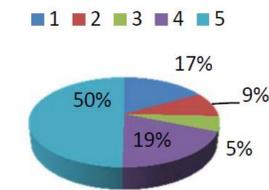
Existing RTA Services

Existing Circle Link Route

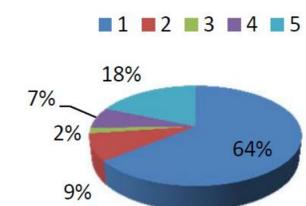
RTA Circulators (Discontinued)



I live close enough to take transit to school/work.



I regularly take transit to school/work.



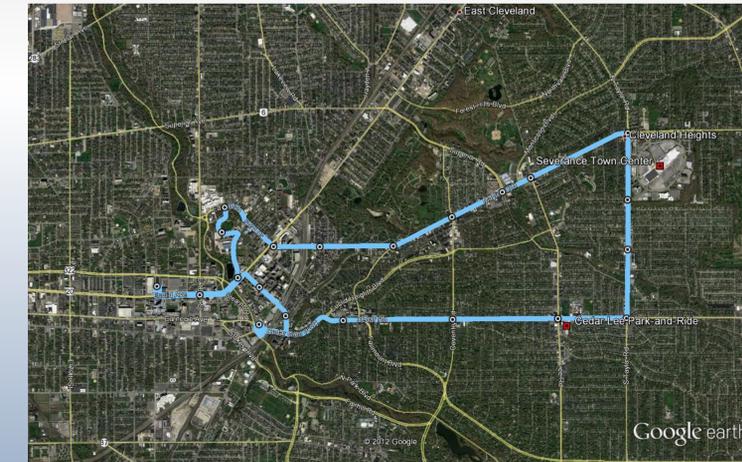
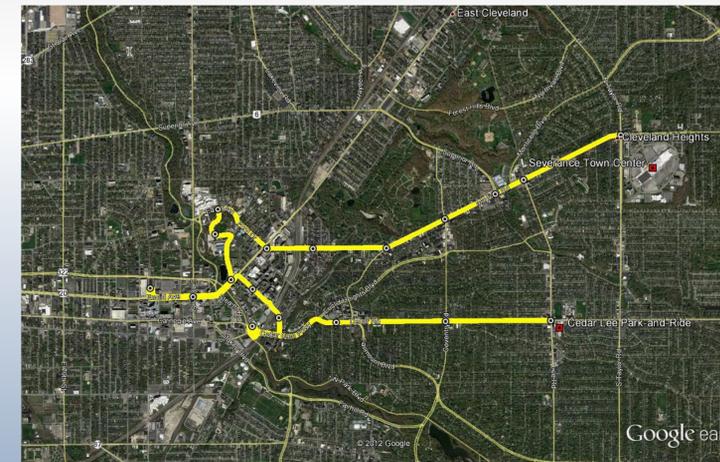
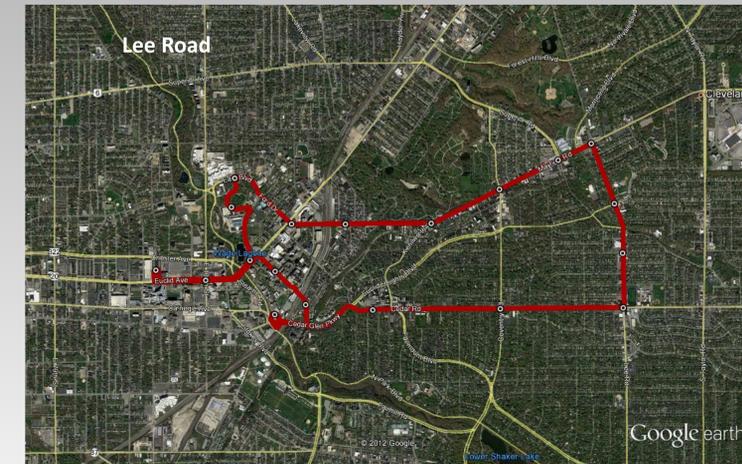
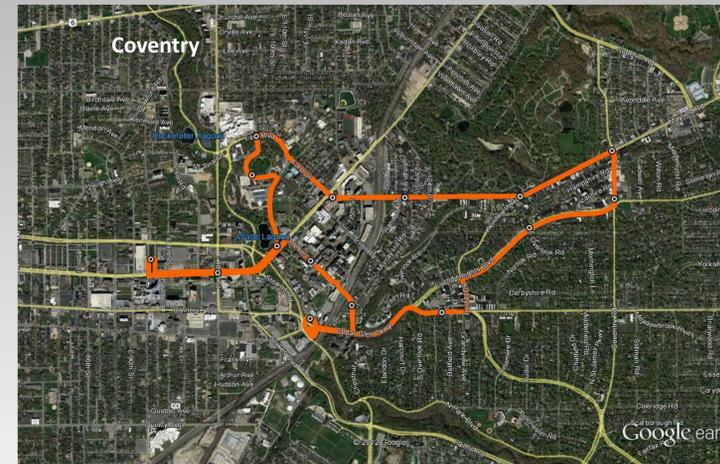
In a series of survey questions in which 1 represented strong disagreement and 5 represented strong agreement, respondents expressed an openness to using transit, but indicated that they rarely use it. Respondents expressed concerns about ease of use, comfort and safety on the existing services. Passengers indicated that real time bus location information and route information, bus shelters, and improved lighting were the most important amenities to encourage transit use.

Transit Service Improvements



Proposed Improvements

- New Cleveland Heights-University Circle Shuttle/Circulator Route
- Branded Service
 - Distinctive vehicles (color scheme, logo)
 - Improved, distinctive stops
 - Identification of service on Circle Link, RTA schedules
- Convenient, Frequent Service
 - 15 minute headways during peak operating periods
 - Long peak operating periods (5-10 AM, 2-8 PM, Monday-Friday)
 - 30 minute headways other times
 - Seven day operation
 - Long span of service (5 AM-11 PM Sunday-Thursday, 5 AM -2 AM Friday-Saturday)
- Bi-Directional Service (clockwise and counter-clockwise)
- Four route options considered:
 - University Circle to Coventry via Euclid Heights, Mayfield Road
 - University Circle to Lee Road via Cedar, Mayfield
 - University Circle to Taylor via Cedar, Mayfield
 - “U” Route, University Circle to Cedar-Lee, Severance Town Center



Each widening of the route's alignment adds additional destinations and neighborhoods that can be served-but also adds additional costs. The Coventry route connects University Circle to Cedar-Fairmount, Coventry Road and Little Italy. The Lee Road route adds the Cedar-Lee area and Lee Road, as well as the many neighborhoods and smaller shopping and restaurant areas along Cedar, Mayfield and Lee. Taylor Road adds Severance Town Center and the shopping areas at Cedar-Taylor—while taking away access to many destinations along Lee Road. The “U” route connects to Cedar-Lee and Severance Town Center, while not providing costly service to the less productive areas in between.

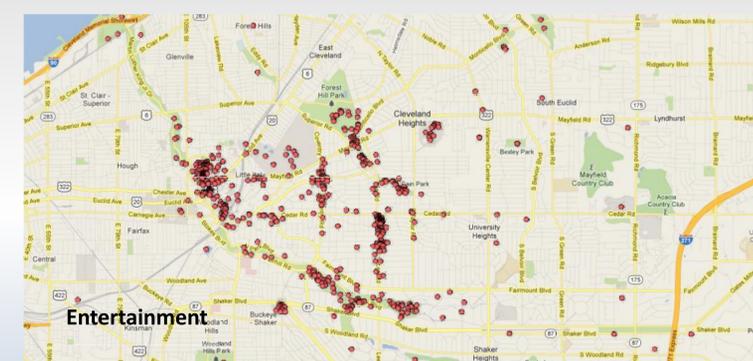
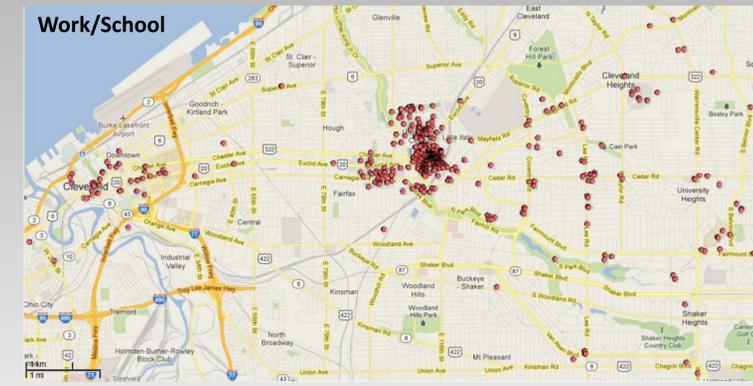
Transit Service Improvements



Why This Service?

Each aspect of the proposed service is crafted to meet a specific transit need of the study area. Needs were identified through the comments and survey conducted in the project's April public meetings, and in interviews with the University Circle area's four largest employers (Case Western Reserve University, Cleveland Clinic, University Hospitals, and the Veterans Administration)

Proposed Improvement	Reason
Branded Service	Makes service more visible and recognizable for potential customers
High Service Frequency	Reduces wait times, provides greater convenience for customers
Bi-directional service (clockwise, counter-clockwise)	Reduces ride lengths, provides greater convenience for customers
Long rush hour periods (5-10 AM, 2-8 PM)	Matches shift changes at hospitals
Late night service Friday and Saturday	Serves entertainment, dining market
Free fare	Customer input indicating interest in free fare; precedent of Circle Link service



How Much Will the Service Cost (and Who Will Pay?)

The table at right lists the estimated cost of operating the service (based on the current price that Standard Parking charges University Circle Incorporated for operating the Circle Link). The costs for Coventry, Lee Road and the "U" Route are the same due to layover requirements. Potential operators of the service include UCI/Standard Parking, RTA, or the City of Cleveland Heights. Initial funding could be provided by Federal Enhancement Grants (similar to the initial funding for RTA's Health Line and Downtown Trolley services). Funding could be provided by a consortium of organizations (UCI, City of Cleveland Heights, RTA, major employers) after 2 year Enhancement Grant period.

Route	Estimated Annual Operating Cost (at \$50/Hour)	Number of buses required)
Coventry	\$1.63 million	6
Lee Road	\$1.63 million	6
Taylor Road	\$1.82 million	8
"U"Route	\$1.63 million	6

The survey conducted for the April public meetings asked members of the public to indicate on computerized maps the locations where they live, work or attend school, shop, dine and go for entertainment. Those who responded live primarily in western Cleveland Heights and work or attend school primarily in University Circle, with a smattering working in downtown Cleveland or in various locations in Cleveland Heights. Shopping, Dining and Entertainment locations were concentrated in a few areas in University Circle, Little Italy and in the shopping districts of Cleveland Heights. The locations indicated on these maps guided our design of the proposed shuttle route.



Transit Station Improvements



Shelters and Transit Waiting Environment Improvements

Recommendations

- Real time bus arrival and route information, at stops/shelters and on smart phones
- Shelters and other upgraded amenities and transit stops
- Service/Corridor branding (Cedar Corridor Improvements)



Passenger Information and Branding

Bus Stop Sign Types

Sign Type	Route Range
Sign Type A.1	1-2 Routes
Sign Type A.2	3-6 Routes
Sign Type B.1	6-12 Routes
Sign Type B.2	12-16 Routes
Sign Type C.1	6-18 Routes
Sign Type C.2	18-32 Routes

