

UPTOWN TRANSPORTATION DEMAND MANAGEMENT PLAN

PITTSBURGH, PA

December 2022



Uptown Transportation Demand Management Plan

Pittsburgh, Pennsylvania

Prepared for:
Department of Mobility and Infrastructure
City Council Building, Room 301
414 Grant Street
Pittsburgh, Pennsylvania 15219

Prepared by:
Kittelson & Associates, Inc.
1635 Market Street, Suite 1600
Philadelphia, PA 19103
267.551.3447

Veronica P. McBeth, MSL
Amelia Martin
Alek Pochowski
Caitlin Mildner, AICP

Project Number 24704

December 2022



CONTENTS

Introduction and Background	1
Transportation Demand Management.....	2
Residential Permit Parking (RPP)	2
Existing Conditions	4
Commute Patterns	4
Crash History	6
Bicycle and Pedestrian Infrastructure.....	8
Parking	10
Transit.....	12
Plan Review	13
Summary of TDM Context in Uptown	15
Evaluation and Goals	17
Neighborhood TDM Plan	20
Transportation Demand Management Measures	22
Governance Structure	26
Outreach summary	25
Neighborhood Parking Plan.....	28
RPP Program Comparison	28
Strategies	30

LIST OF TABLES

Table 1 Uptown Resident Commute Distance to Work Outside Uptown (2018)	5
Table 2 Commute Distance to Work in Uptown (2018)	6
Table 3. Goals, Objectives, and Performance Measures	17
Table 4 TDM Toolkit	23

LIST OF FIGURES

Figure 1 Inflow and Outflow of Jobs (2018)	4
Figure 2 Uptown Residents' Employment Destinations (2018)	5
Figure 3 Commute Mode Split by Census Tract 103 (2019)	5
Figure 4 Uptown Employee Home Origins (2018)	6
Figure 5 Total Crashes – Bicycle, Pedestrian, and Vehicular (2014-2018)	7
Figure 6 Bicycle and Pedestrian Crashes (2014-2018)	8
Figure 7 Vehicles Observed Parking on the Sidewalk	9
Figure 8 Pedestrian Crossing Distance at Diamond Street and Fifth Avenue	10
Figure 9 Pedestrian Crossing Enhancement at Forbes Avenue and Boyd Street	10
Figure 10 Anticipated 2022 Future Parking Lots and Garages	11
Figure 14 PBOT Example TDM Governance	26
Figure 12. Residential permit area regulation sign in Uptown	28

APPENDICES

Appendix A Existing Conditions Maps

Appendix B TDM Reference Materials



Section 1

Introduction

INTRODUCTION AND BACKGROUND

Uptown is a vibrant neighborhood within that is home to residents, Duquesne University, University of Pittsburgh Medical Center (UPMC) Mercy Hospital, and a mix of other land uses, including: commercial, entertainment, and office. Uptown is situated just north of the Monongahela River in Pittsburgh, Pennsylvania. The neighborhood is bordered by Interstate (I) 579 to the west, Robinson Street on the east, Colwell Street to the north, and Boulevard of the Allies to the south. It is situated east of Downtown and south of the Hill District. Given Uptown's proximity to Downtown and Oakland, Uptown's parking supply is often used by inbound commuters traveling to Downtown and surrounding neighborhoods for work. As a result, Uptown experiences a high demand for parking.

The neighborhood's parking supply continues to face challenges as it anticipates privately owned publicly available surface parking lots are converted for new development. Additionally, as Uptown anticipates new development, Bus Rapid Transit (BRT) along Fifth Avenue and Forbes Avenue, and other infrastructure changes, the neighborhood is focused on preemptively identifying a parking strategy that will protect residential parking resources and manage parking demand. The neighborhood is working to identify strategies that will balance the needs of employees, residents, and visitors traveling to, from, and within the neighborhood.

The neighborhood is interested in exploring Transportation Demand Management (TDM) as a strategy for enhancing safety for all users and improving air quality while also managing the demand for parking by encouraging alternative travel modes and reducing single occupancy vehicle (SOV) trips. This report provides an overview of TDM best practices from cities with similar geographies and populations. Based on TDM findings and lessons learned from other cities, as well as conversations with City staff, agency partners, and stakeholders, this report outlines an approach to TDM that will guide residents, employees, visitors, and employers to reduce SOV trips and encourage alternative modes of transportation. The recommendations outlined in this report are focused on protecting residential parking resources and stabilizing parking demand as existing privately owned surface parking lots are redeveloped over time.

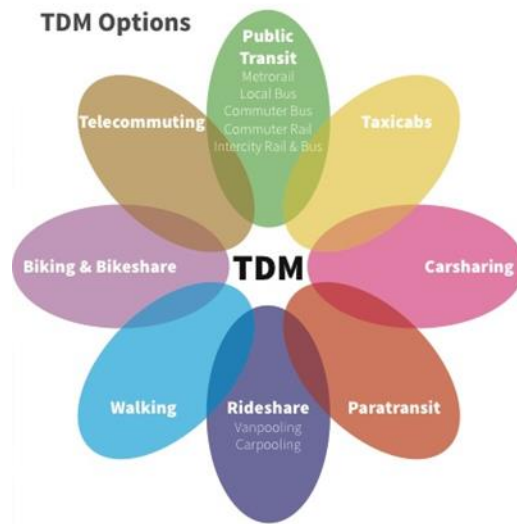
As part of the TDM plan, a neighborhood parking plan that helps to preserve residential parking resources from demand resulting from the conversion of private surface parking lots into development and from other area land uses is included. The neighborhood parking plan provides an overview of successful parking management programs that address the intrusion of parking vehicles in the neighborhood by daily commuters and events, primarily PPG Paints Arena. The parking plan guides the updates of residential parking controls in the neighborhood within in the context of the recently adopted residential permit parking (RPP) legislation and conversations with DOMI staff.

Uptown has been developing strategies to enhance the neighborhood through the Uptown Task Force that consists of a partnership of organizations, institutions, community groups, property owners, and public agencies. The Uptown Task Force supports and stewards the Uptown / West Oakland Ecolnnovation District (EID), which is focused on identifying redevelopment opportunities that can improve the neighborhood's environment, support the needs of existing residents, and expand entrepreneurship and job growth. The EID plan focuses on four main topics:

- **Community** – Preserve affordable housing, encourage job growth, and support local institutions.
- **Development** – Encourage new development and preservation and align zoning with community goals.
- **Mobility** – Calm traffic, improve safety, and encourage walking and bicycling.
- **Infrastructure** – Improve community health, upgrade existing and create new parks, manage stormwater, and implement district energy.

This report will expand on the EID's mobility focus area. The study area discussed in this memorandum closely follows the study area identified in the EID plan.

Figure 1: Diagram of TDM Options
MANAGEMENT



TDM is defined as a program of information, encouragement, and incentives provided by local or regional entities to help people learn about, and hopefully use even if on occasion, transportation options to optimize all modes in the system. TDM is driven by transportation infrastructure, land uses, and mode shift. TDM focuses on understanding how and why people make decisions about the different type of trips that they take. TDM strategies will help Uptown identify opportunities to balance the demand for parking throughout the neighborhood and encourage non-SOV commute trips.

The first step in developing TDM strategies that may be appropriate for a given area is to understand existing transportation conditions and patterns. Before outlining TDM recommendations for Uptown, this memorandum will provide a complete review of the existing transportation network and conditions within the neighborhood. The strengths, opportunities, and weaknesses in Uptown's existing transportation network will be outlined and the memorandum will present a TDM plan that identifies strategies to encourage alternatives to driving.

Source: Mobility Lab

RESIDENTIAL PERMIT PARKING

Residential permit parking (RPP) is a program established to make it easier for residents to park on public streets near their homes. It is typically a mechanism for addressing overspill parking from nearby parking generators, such as shopping or employment centers, transit stations, stadiums, and arenas. Generally, residents in a zone pay a fee to receive a permit that allows their automobile(s) to park in a designated zone. In 1977, the United States Supreme Court upheld the legality of RPP zones (*Arlington County vs. Richards*), and since that time, the use of RPP has become a common practice throughout the United States.

In Pittsburgh, the RPP program began in 1981 around the old St. Francis Hospital along Penn Avenue in Lawrenceville. While the original RPP zones were placed in neighborhoods with large employers, the program expanded to areas where non-residents used on-street parking as commuter "park and ride" spaces. The stated main purpose of the Pittsburgh RPP program is to "keep commuters and other visiting drivers from parking on residential streets for a long period of time, thus preventing residents from finding a parking space close to their homes." The program does not guarantee a parking space for any resident or grant permit holders dispensation from City parking laws.



Section 2

Existing Conditions

EXISTING CONDITIONS

Prior to developing a TDM plan, the project team reviewed existing transportation conditions and transportation infrastructure in Uptown to better understand the neighborhoods strengths and weaknesses as they relate to the surrounding area and to identify solutions and potential opportunities for improvement. The existing conditions evaluation consisted of a field visit in December 2020 as well as a review of existing plans and data provided by the city of Pittsburgh's Department of Mobility and Infrastructure (DOMI) and Department of City Planning (DCP).

Uptown's existing transportation network serves a variety of multimodal users, including people walking, biking, driving, and taking transit. Commute mode split information collected from Census data will be discussed in more detail in the next section, but overall, it revealed that Uptown residents, employees, and visitors commute using a variety of modes. Given the high percentage of commute trips taken by foot, a safe and connected network of sidewalks and crosswalks are critical for Uptown commuters.

Uptown's transportation network consists of several connector streets, including Forbes Avenue, Fifth Avenue, and Boulevard of the Allies. These streets serve as primary corridors for east and west travel throughout the neighborhood. Dinwiddie Street, I-579, and the Birmingham Bridge provide primary north and south connections to the neighborhood. The remaining streets primarily serve local neighborhood travel.

The existing conditions assessment included a review of the following:

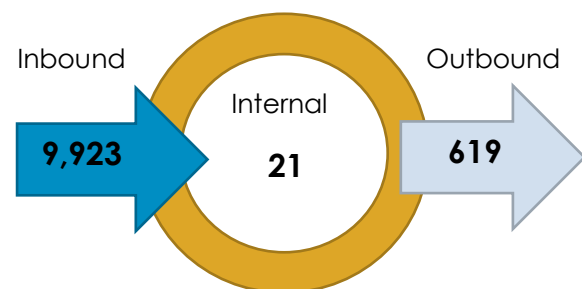
- Commute Patterns
- Crash History
- Existing Bicycle and Pedestrian Infrastructure
- Existing Parking
- Existing Transit Infrastructure

Key findings for each element of the existing conditions analysis are summarized below. Maps were created to better understand the inventory and condition of transportation infrastructure in Uptown. The maps are provided in the appendix.

COMMUTE PATTERNS

The inflow and outflow of the neighborhood's employees and residents was evaluated to understand commute patterns in the area and the demand for commute-based transportation. Longitudinal Employer-Household Dynamics (LEHD) was used to evaluate commute patterns to, from, and through Uptown. LEHD shows that approximately 620 residents work outside of Uptown and approximately 9,900 employees commute into the neighborhood for work (see **Figure 2**). Approximately 20 people live and work within the neighborhood.

Figure 2 Inflow and Outflow of Jobs (2019)



Source: LEHD, 2019

COMMUTE OUTBOUND FOR WORK

LEHD data from 2019 provides information about outbound work commute trips for residents living in Uptown. This measure assesses where Uptown residents are commuting for work. **Figure 2** summarizes the distance traveled to work by employees who live in Uptown and **Figure 3** displays where Uptown residents commute for work. The majority of Uptown residents are employed in Oakland or Downtown. Given Uptown's proximity to the region's two largest employment centers, it is not surprising that many residents commute to the

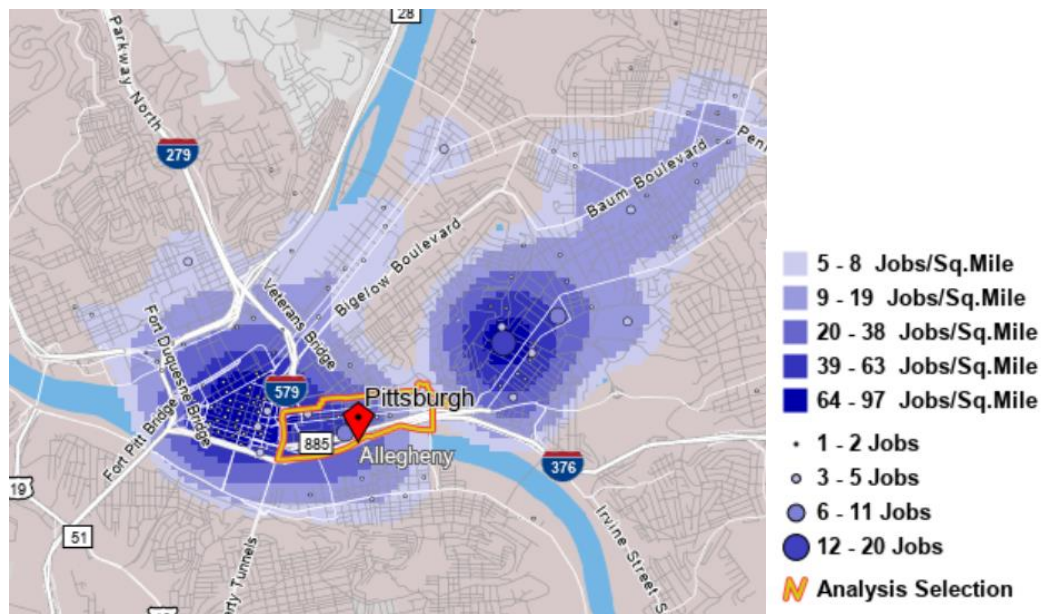
adjacent Oakland and Downtown. Uptown's proximity to these employment centers makes walking, transit, and other non-auto modes viable options for commuting.

Table 1 Uptown Resident Commute Distance to Work Outside Uptown (2019)

Commute Distance to	Count	Percentage
Less than 10 Miles	301	47%
10 to 24 Miles	120	19%
25 to 50 Miles	42	7%
Greater than 50 Miles	177	27%
Total	640	100%

According to LEHD data, most Uptown residents who work outside of the neighborhood are between the ages of 30 to 54 (44%). Thirty-eight percent of Uptown residents employed outside of the neighborhood make \$3,300 or more per month. The largest job sectors employing Uptown residents are Health Care and Social Assistance (20%) and Accommodation and Food Services (12%). Source: LEHD, 2019

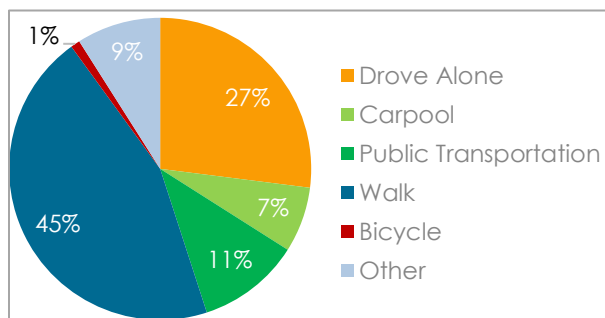
Figure 3: Uptown Residents' Employment Destinations (2019)



Source: LEHD, 2019

Figure 4 displays census tract level commute patterns for employed Uptown residents aged 16 years and older. Census Tract 103 was used for this evaluation, which aligns with Uptown. As shown, the most prevalent commute mode is walking (45%), followed by driving alone (27%), and public transportation (11%).

Figure 4 Commute Mode Split by Census Tract 103 (2019)



Census data indicates that Uptown commute trips are highly multimodal. Given Uptown's proximity to other neighborhoods and major employers, non-SOV modes serve as viable options for residents. Inbound commute trips represent a significant portion of Uptown employment commute trips. However, inbound commute trips actually represent a smaller portion of commute activity in Uptown, as shown previously in **Figure 2**. Inbound commute trips are outlined in the next section. Source: American Community Survey, 2019

COMMUTE INBOUND FOR WORK

This measure assesses the origins of employees who live outside the neighborhood and work in Uptown. **Table 2** summarizes the distance traveled by employees who work in Uptown and **Figure 5** displays where employees live. Employees are traveling to Uptown from many different areas across the region but predominately from neighborhoods northeast and south of Uptown. Employees are traveling from Lower Lawrenceville, Bloomfield, Upper Hill, Squirrel Hill, and South Side Flats. These neighborhoods are well connected to Uptown via public transportation.

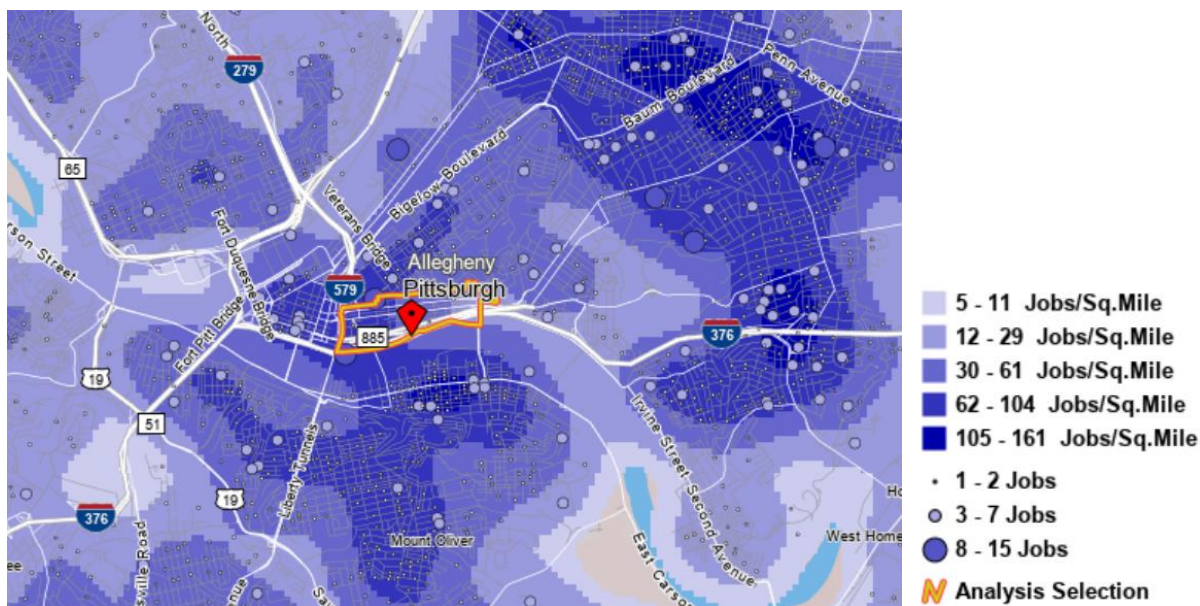
Table 2 Commute Distance to Work in Uptown (2019)

Commute Distance to Work	People	Percentage
Less than 10 Miles*	6,015	61%
10 to 24 Miles	2,518	25%
25 to 50 Miles	680	7%
Greater than 50 Miles	731	7%
Total	9,944	100%

Source: LEHD, 2019

*LEHD data does not provide details for commute trips less than 10 miles.

Figure 5 Uptown Employee Home Origins (2019)



Source: LEHD, 2019

According to 2019 LEHD data, most employees in Uptown are between the ages of 30 to 54 (49%). Fifty-two percent of employees in Uptown make \$3,300 or more per month. The largest job sectors in Uptown are Health Care and Social Assistance (41%) and Educational Services (20%). Most employees commuting into Uptown are employed by Duquesne University or UPMC Mercy.

CRASH HISTORY

The neighborhood's crash history was reviewed to understand crash trends and determine safety challenges. The crash history study period is from 2014 to 2018 and is shown in **Figure 6**. There were no reported fatal crashes during this period. Most crashes took place along the Boulevard of the Allies, Fifth and Forbes Avenues, and adjacent to clusters near I-579 interchanges and there were fewer on local streets.

clusters along Fifth Avenue are shown at the intersections at the Boulevard of the Allies and Gist Street. Crashes are clustered at intersections in central Uptown, along Stevenson Street, Pride Street, Miltenberger Street, Gist Street, and Seneca Street. Additionally, crashes are clustered at the main gateways into Uptown, including along I-579 and the Birmingham Bridge and Boulevard of the Allies. Crashes were less prevalent on local neighborhood streets. Crashes consisted of a mix of rear end crashes, sideswipes, and angle crashes.

Figure 6 Total Crashes – Pedestrian, Bicycle, and Vehicular (2014-2018)



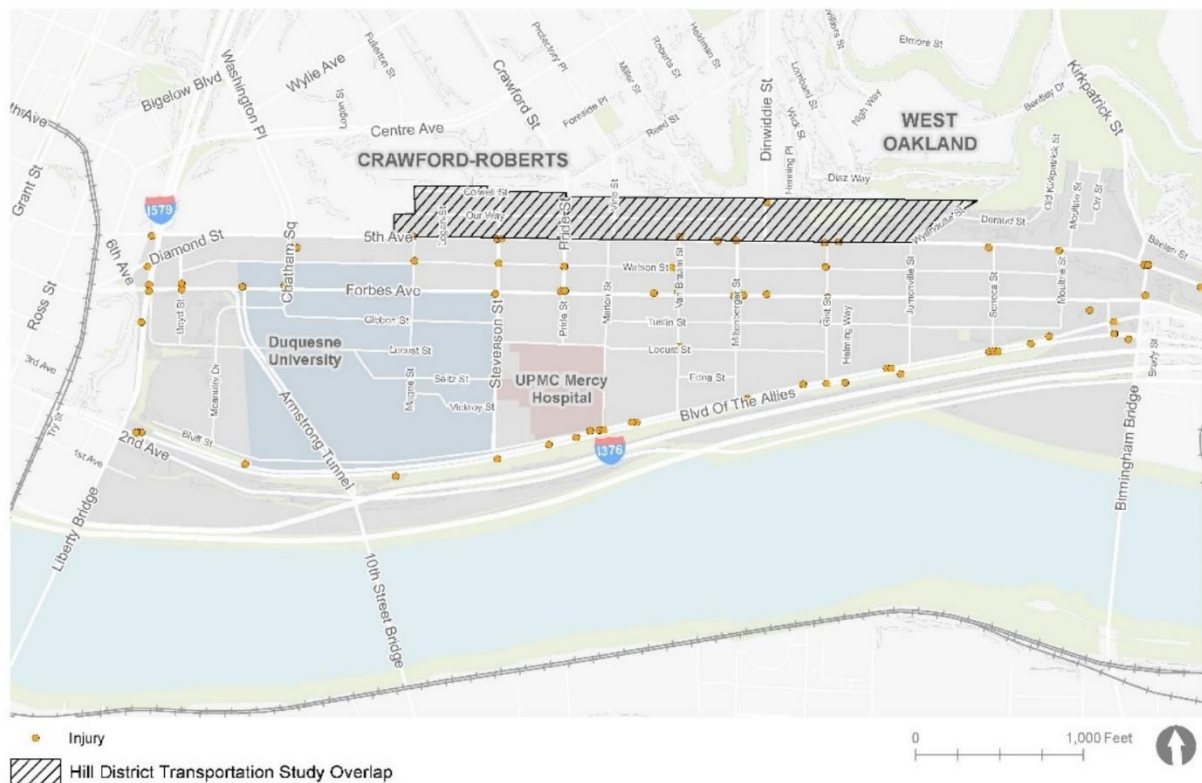
Crashes (2014-2018)
Uptown Transportation Demand Management Plan

Source: PennDOT

Bicycle and pedestrian crashes are shown in **Figure 7**. This excludes the vehicle crashes shown in Figure 5. All of these crashes occurred at intersections in the neighborhood, primarily along Fifth Avenue, Forbes Avenue, and Boulevard of the Allies. Bicycle and pedestrian crashes often take place at intersections, as there are several conflict points between travel modes. In addition to the major east-west streets in Uptown, bicycle and pedestrian crashes are clustered along Stevenson Street, Pride Street, and Miltenberger Street. Bicycle and pedestrian crashes were not reported on other local neighborhood streets in the south portion of Uptown.

Approximately half of the reported bicycle and pedestrian crashes took place at unsignalized intersections. Approximately half of the reported crashes involved aggressive driving (272 out of 480 reported bicycle and pedestrian crashes). Approximately 50 out of 480 crashes resulted from vehicular speeding.

Figure 7 Bicycle and Pedestrian Crashes (2014-2018)



Bicycle and Pedestrian Crashes (2014-2018)
Uptown Transportation Demand Management Plan

Source: PennDOT

BICYCLE AND PEDESTRIAN INFRASTRUCTURE

Uptown has limited existing bicycle infrastructure. Unmarked on-street bike routes are provided on Dinwiddie Street and Kirkpatrick Street into West Oakland. Fifth Avenue and Forbes Avenue are currently cautionary bike routes. Additionally, there is no formal connection to the Three Rivers Heritage Trail.

The BRT plans along the Fifth and Forbes corridor will introduce bicycle and pedestrian enhancements, including:

- A protected two-way cycle track on Fifth Avenue from Downtown to Magee Street;
- A protected one-way cycle track on Fifth Avenue (westbound) and Forbes Avenue (eastbound) from Magee Street to Moultrie Street;
- A potential bike connection on Moultrie Street from Fifth Avenue to Forbes Avenue (DOMI is currently looking into the specifics of this connection);
- A shared use path along Fifth Avenue from Moultrie Street through Oakland; and
- Enhanced bicycle lane transitions from the Birmingham Bridge to the protected facilities on Fifth Avenue and Forbes Avenue.

Sidewalks are present on most streets throughout the neighborhood but are narrow and have some gaps, blockages, and deterioration in places. During the December 2020 site visit, cars were observed parking on the sidewalk, blocking the pedestrian path (see **Figure 8**).

Expanding on the neighborhood's existing bicycle and pedestrian network, the City plans to implement a bike connection on Brady Street to connect Moultrie Street to the Three Rivers Heritage Trail. Expected completion of the expansion of the existing bicycle and pedestrian network in this area will happen once the BRT and Parkway project construction projects are completed. This connection will enhance the bicycle network in Uptown and provide connections to other neighborhoods and destinations via the riverfront trail.

Figure 8 Vehicles Observed Parking on the Sidewalk



Given the grid-like network of streets in Uptown, most intersections have short crossing distances for pedestrians. However, several skewed intersections create long and uncomfortable conditions for people crossing as demonstrated on Diamond Street at Fifth Avenue (see **Figure 9**). This intersection will be redesigned as part of BRT plans, however, other intersections throughout the neighborhood face similar geometric challenges. Uptown experiences areas of high pedestrian activity, especially surrounding Duquesne University and during events at PPG Paints Arena. The City installed pedestrian crossing enhancements at Forbes Avenue and Boyd Street (see **Figure 10**). This intersection experienced several crashes, with some including people biking and walking.

Figure 9 Pedestrian Crossing Distance at Diamond Street and Fifth Avenue



Figure 10 Pedestrian Crossing Enhancement at Forbes Avenue and Boyd Street

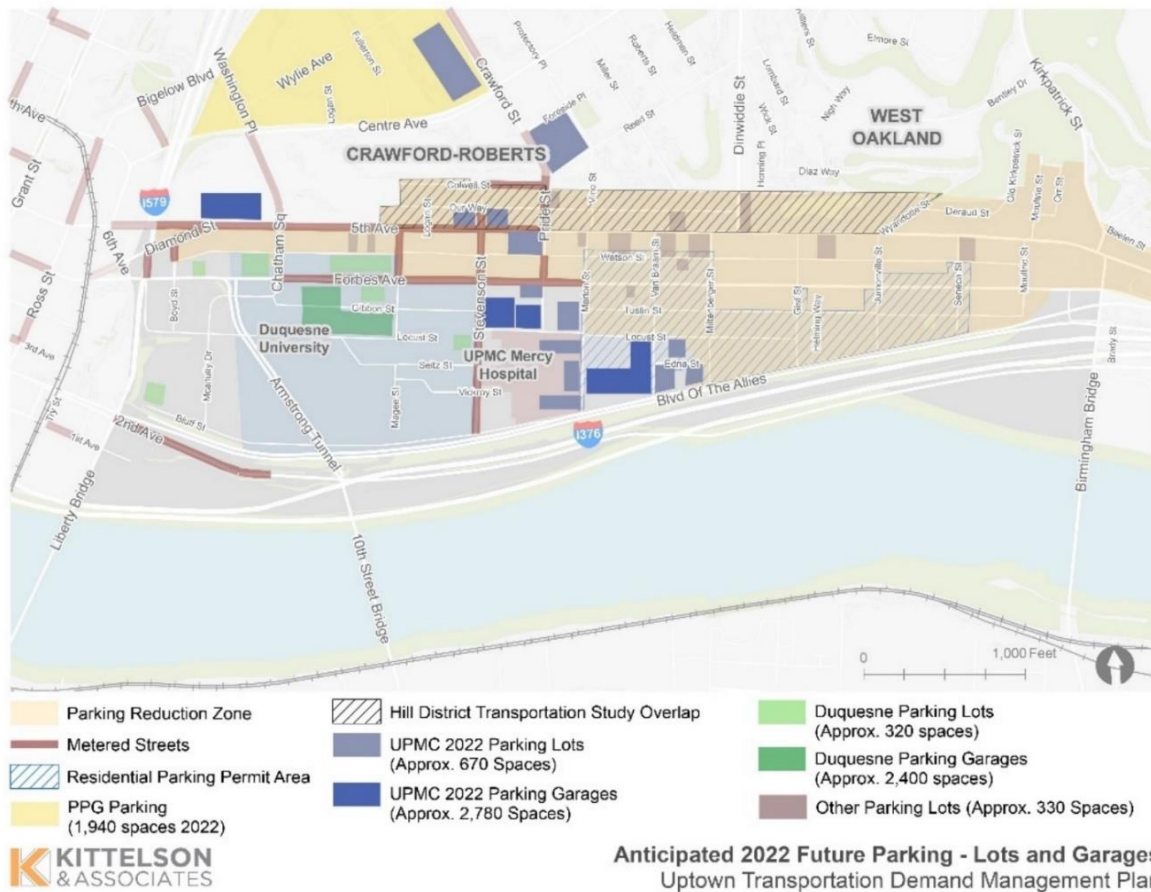


PARKING

Uptown has a mix of parking supply, including surface lots, parking garages, residential permit parking areas, on-street parking, and metered parking. **Figure 11** displays the mix of parking provided and anticipated in Uptown. The map shows the residential permit parking (RPP) area in the east side of the neighborhood. RPP

areas restrict non-resident parking to one-hour between the hours of 7:00 a.m. to 7:00 p.m. on all days except Sundays. Residential parking permits cost \$20 per vehicle per year. Visitor Parking Passes are available for \$1 per address and allow parking for three days. Recent changes to the municipal code now allow neighborhoods like Uptown to adjust these costs.

Figure 11 Anticipated 2022 Future Parking Lots and Garages



On-street parking is provided on most streets within the neighborhood. Several streets within the neighborhood have metered parking, including the western sections of Fifth and Forbes avenues, Chatham Square, and Stevenson, Pride, and Colwell streets.

The EID identified an estimated 377 on-street parking spaces in Uptown. At the time of the EID, there were an estimated 225 homes within the residential parking permit zone, and 193 issued permits as of 2016, the year of the most recent parking audit.¹ While these figures indicate that there are more available spaces on the street than residential permits sold, they reinforce those complaints from residents regarding lack of available parking are not reflective of issued permits but may indicate enforcement issues or residential parking abuse.

There are numerous parking lots and garages Fifth and Forbes avenues through the neighborhood. These parking facilities are a combination of UPMC and Duquesne parking lots and garages as well as surface parking lots. These parking lots are primarily used by commuters, including UPMC and Duquesne employees,

¹ [Residential Parking Permit Program September 2016.pdf \(pittsburghpa.gov\)](#)

visitors, and students. Given the handful of large employers located in Uptown and nearby in Downtown, there is a high demand for commuter-based parking. Many commuters also use existing surface parking lots north of Uptown in the Lower Hill, the majority of which will go offline as the Lower Hill is redeveloped. Recently updated zoning changes removed parking minimums and established parking maximums to discourage overbuilding parking facilities.

To rebalance parking demands and offset redevelopment plans for existing surface parking lots, there are proposed plans to add parking garages surrounding Duquesne University and UPMC Mercy Hospital to partially accommodate the demand for commuter-based parking. Proposed future parking will not fully replace the parking that will be lost from redevelopment efforts. Existing and proposed parking lots and garages are shown in **Figure 11**.

TRANSIT

Transit service in Uptown runs along the Fifth and Forbes corridor and Boulevard of the Allies. Uptown is well connected to Downtown, Oakland, and other neighborhoods via bus routes, including:

- **Route 28X Airport Flyer:** From the Pittsburgh Airport through Downtown, Uptown, Oakland, Bellefield to Point Breeze
- **Route 58 Greenfield:** From Downtown east through Uptown, Greenfield, Schenley Park, Oakland, and Bellefield
- **Route 61A Swissvale:** From Downtown through Uptown, Oakland, Squirrel Hill, Wilkinsburg, Edgewood, Swissvale, and Braddock
- **Route 61B Braddock-Swissvale:** From Downtown through Uptown, Oakland, Swissvale, Rankin, and Braddock
- **Route 61C McKeesport – Homestead:** From Downtown through Uptown, Oakland, Squirrel Hill, south to the Waterfront Mall, Whitaker, Duquesne, to McKeesport
- **Route 61D Murray:** From Downtown east through Uptown, Oakland, Bellefield, Squirrel Hill, south to the Greenfield and the Waterfront Mall
- **Route 65 Squirrel Hill:** From Downtown east through Uptown to Squirrel Hill
- **Route 67 Monroeville:** From Downtown through Uptown, Oakland, Wilkinsburg, Monroeville, and the Community College of Allegheny Boyce
- **Route 69 Trafford:** From Downtown through Uptown, Oakland, Carnegie Mellon, Wilkinsburg, Forest hills, Chalfant, East Pittsburgh, and Trafford
- **Route 71A Negley:** From Downtown through Uptown, Oakland, Bloomfield, East Liberty, and Morningside
- **Route 71B Highland Park:** From Downtown through Uptown, Oakland, and Morningside/Highland Park
- **Route 71C Point Breeze:** From Downtown through Uptown, Oakland, East Liberty, and Wilkinsburg
- **Route 71D Hamilton:** From Downtown through Uptown, Oakland, Bellefield, Point Breeze, and Wilkinsburg

In general, transit service connects Uptown to neighborhoods to the southeast. Transit transfers are required to access destinations to the south, west, and north. Transit service provides access to many major destinations and employers within and surrounding the City, including the Pittsburgh International Airport, University of Pittsburgh (Pitt), Carnegie Mellon University (CMU), the Waterfront, Schenley Park, University of Pittsburgh Medical Center and satellite facilities (UPMC), and other major destinations.

Plans are currently underway to develop Bus Rapid Transit (BRT) along Fifth and Forbes avenues to connect Downtown, Uptown, Oakland, and the East End. These plans for BRT are anticipated to significantly improve transit efficiency and reliability. Additionally, the plans include bus station enhancements and transit infrastructure improvements. The BRT service will provide a core route that will run east-west between Downtown and Oakland on the bus routes that provide service to Greenfield, Highland Park, and through Mon Valley communities. The proposed BRT improvements will include new branded buses, a dedicated travel lane for buses, transit signal priority, a cycle track for bicyclists, and changes to street parking. In

Uptown, major station enhancements are proposed at Duquesne University and other core stations are proposed along Fifth Avenue and Forbes Avenue, including Chatham Street, Pride Street, Miltenberger Street, Soho, and Jumonville Street. When BRT operations begin, the 61D, 71A, 71C, and 71D routes will terminate in Oakland and will not pass through Uptown, rather BRT will run on more-frequent headways for the 61A, 61B, 61C, 71B, and P3 routes to maintain high-quality service.

PLAN REVIEW

Neighboring plans, studies, and other relevant materials were reviewed to understand existing and anticipated future impacts to Uptown's transportation system to better plan and align TDM efforts that are likely to have the most success in reducing SOV trips, particularly during peak travel times. Many of the plans discussed a need for TDM and parking management strategies. The following plans were reviewed and are briefly summarized below in terms of their relevance to TDM and parking:

EID (2017). This plan focuses on protecting the environment, supporting the needs of existing residents, and expanding job growth. The plan discusses TDM strategies that formed the basis for TDM recommendations in this plan specific to the Uptown neighborhood. Additional observations and recommendations are displayed in the appendix, including gateway treatment opportunities, safety concerns, and missing trail connections. The following summarizes key takeaways from the plan:

1. Opportunities to enhance gateways to the neighborhood, including Washington Place and Fifth Avenue and I-579 and Fifth Avenue/Forbes Avenue.
2. There are several intersections with safety concerns, including Stevenson and Gist streets along the Boulevard of the Allies and Washington Place and Diamond Street along Fifth Avenue. Poor intersection geometry and vehicle speeding create unsafe conditions at these locations.
3. The need for trail connections to the Great Allegheny Passage and the Three Rivers Heritage Trail.
4. The plan lists the following TDM strategies:
 - a. Reduce institutional demand for all-day parking spaces by implementing TDM programs;
 - b. Encourage employers to utilize the Port Authority's Job Perks program, an incentive program for employers and workers;
 - c. Unbundle off-street parking from the sale and rental of residential and office property; and
 - d. Allocate space for bicycle parking, carshare vehicles, and electric vehicles.

Additionally, the EID plan encourages the management of parking districtwide rather than on a site-by-site basis, including the following:

1. Eliminate parking minimums and replace them with parking maximums;
2. Better manage on-street parking to eliminate free commuter parking;
3. Invest in new shared parking garages and lots that serve as "community infrastructure hubs";
4. Prohibit surface parking lots and ground floor parking garages to activate ground floor uses;
5. Encourage mode shift through the expansion of Healthy Ride and offering incentives not to drive, including parking cash-outs;
6. Pilot game-day reduced transit fares of micro-transit service to manage event-based parking demand;
7. Optimize shuttle service to South Side loop to further facilitate student demand for on-campus parking;
8. Provide carshare options for students or employees within existing parking garages at UPMC and Duquesne University;
9. Provide loading zones on all commercial blocks;
10. Consider graduated pricing for residential permits per additional vehicle per household;
11. Review parking utilization data and tickets issues over a series of three months to determine the cause of high utilization on residential streets;
12. Provide a dedicated parking enforcement officer for Uptown and West Oakland's residential areas weekdays from 8:30 a.m. to 4:00 p.m. to monitor abuse of RPP streets, and following the reconstruction of Fifth and Forbes for the BRT, to ensure a smooth transition of on-street uses;

13. Meter all on-street parking along commercial corridors, with RPP on the side streets
 - a. Fifth and Forbes entirely metered;
 - b. All blocks connecting with Fifth and Forbes should have two-hour parking restrictions;
 - c. Meter Stevenson and Marion streets between Colwell Street and Boulevard of the Allies; and,
 - d. Extend the RPP area to include Moultrie Street between Forbes Avenue and Tustin Street.
14. Pursue reductions in rental unit RPP permits to two per household from the current three per household.
15. Use demand-based parking pricing on all metered commercial blocks to maintain no more than 85% occupancy;
16. Consider event-day increased rates for on-street metered spaces;
17. Establish a Parking Enhancement District (PED) with all parking meter revenue allocated towards local improvements;
18. Unbundle off-street parking from the sale and rental of residential and office property; and
19. Allocate space for bicycle parking, carshare vehicles, and electric vehicles.

Fifth Avenue and Forbes Avenue BRT. The planned BRT will connect employment centers, improve bus reliability, consolidate bus routes, and minimize inconsistent traffic patterns. Construction is scheduled to begin in 2022 and last **three years**. Other elements of the BRT includes:

1. Changes to on-street parking and travel lanes on Fifth and Forbes avenues;
 - a. Some on-street parking on Fifth Avenue and Forbes Avenue will be removed and reallocated for BRT and associated improvements.
2. Enhancements for people biking and walking, including curb extensions to shorten crossing distances and a proposed sidewalk-level cycle track on Forbes Avenue through Uptown;
 - a. The contraflow bus lane on Fifth Avenue is proposed to become a 14-foot shared use path for people biking and walking from the Birmingham Bridge to Bellefield Street in Oakland.
3. Significant enhancements to bus stop infrastructure, including shelters, seating, real-time signs, and ticketing machines, among other features; and
4. Pick-up/Drop-off and loading activities will be restricted from taking place in the BRT lanes.

Lower Hill Redevelopment. The 28-acre Lower Hill Redevelopment Site will consist of a redevelopment of the area that was formerly the Lower Hill neighborhood and later the Civic Arena that is now used almost exclusively for parking. Redevelopment plans include the seven city blocks bounded by Centre Avenue, Bedford Avenue, Washington Place, Crawford Street, and an additional block of proposed park area bounded by Washington Place, Centre Avenue and the Crosstown Boulevard, and the CONSOL Energy Center. The development proposes additional residential, retail, office, cineplex, hotel, and arena components that may increase the demand for parking and increase through trips in Uptown.

1. The study identifies a need for 854 on-site public parking spaces, which is the number of spaces needed without the proposed on-site entertainment venue.
2. There are currently 2,390 off-street spaces, and 2,178 spaces are proposed with the development (for a net decrease of 212 spaces). Most of the proposed spaces are deemed for residential uses only.
3. Many commuters utilize surface and garage parking in the Lower Hill to access jobs in Downtown and Uptown. Duquesne and UPMC are major employment centers, and employees commuting into Uptown use parking in the Lower Hill as overflow parking.
4. During the daytime, 1,382 of the 2,390 existing off-street spaces are used by commuters. In the future, 448 public parking spaces will be available to commuters during the daytime.
5. During evening/weekend events, the number of publicly available off-street spaces will be reduced from 2,390 to 603.

In addition to the developments outlined above, several surface parking lots along Fifth Avenue and Forbes Avenue in Uptown and the nearby Hill District are likely to be sold and redeveloped, putting additional pressure on an already limited parking supply. As the neighborhood's parking supply changes, mitigation strategies must be implemented to balance the supply and demand for parking.

SUMMARY OF TDM CONTEXT IN UPTOWN

Uptown has previously served the parking needs of Downtown. However, the excessive parking facilities have limited potential growth within Uptown. The EID focused on creating economic development opportunities within Uptown and reorienting the neighborhood's zoning based on transit-oriented development (TOD) and other TDM opportunities. The updated zoning removed parking minimums and established parking maximums to discourage overbuilding parking facilities. Future economic development efforts for Uptown include managing the demand for parking by encouraging transit and promoting other TDM strategies.

As economic development takes place, Uptown's lack of quality affordable housing must be a consideration. Residents are concerned about gentrification as the neighborhood is slated for new development that will follow the construction of the BRT system on Fifth and Forbes avenues. Recommendations around messaging to be sensitive to these concerns are discussed in more detail in the section of this report titled "Improve Infrastructure with Development Activity".

Through the existing conditions analysis and discussions with stakeholders, two key opportunities will help define the success of TDM in Uptown. These opportunities are summarized below.

INSTITUTIONAL PARTNERSHIPS

Public-private partnerships with institutions like Pitt, CMU, and UPMC are becoming more common to help address challenges that may come out of the innovation economy. TDM is no exception. For Uptown in particular, partnership with Duquesne University and UPMC may be the key to unlocking desired change for the neighborhood. Interviewees spoke of the increasing willingness of these institutions to serve as a leader for the community. Although there has been interest in developing and advancing a TDM practice, there are currently financial and staffing limitations in the neighborhood that inhibit local champions from devoting time to implementing TDM. Institutional partnerships could fill an important role for the community.

Through conversations, it became apparent that one limitation for the neighborhood is organization or ability to engage in the development review process. Engaging with developers to ensure that they are building projects that will positively impact the community takes significant time, which residents may not have. For TDM to succeed and serve the community, individuals who can consider and represent community needs will be crucial. An institutional partnership or a registered community organization may provide individuals to fill that role as residential representatives.

SPORTING AND DOWNTOWN EVENTS

Uptown currently is often treated as off-site parking for Pittsburgh Penguins games and other Downtown events, often resulting in undesired increased parking demand. The high demand for parking during sporting and other events presents an opportunity to shift the demand for parking and introduce TDM strategies that influence a large portion of Pittsburgh drivers. Many sporting event attendees opt to take public transportation to games and events. Targeted TDM strategies should encourage individuals to continue using non-SOVs to commute for other trips purposes.



Section 3

Evaluation and Goals

EVALUATION AND GOALS

Uptown's dynamic, multi-faceted transportation system warrants goals that address the TDM and parking experience for users of the system, the needs of the broader area transportation system, and the City's perspectives overseeing the operating agencies (DOMI, the Department of City Planning (DCP), and the Pittsburgh Parking Authority (PPA)). Goals and objectives for the Uptown TDM Plan consider infrastructure for all users and modes, including personal and commercial vehicles, transit, bicycles, and pedestrians. These goals and objectives were developed based on the multi-layered approach to considering the user experience, the area's transportation system, and the agency perspective. Initially, two goals were developed:

1. Enhance the system user experience
2. Enhance the agency perspective

These two goals were expanded to include sub-goals and objectives. The sub-goals and objectives for **Goal 1: Enhance the system user experience** focus on effectively managing the area's parking and developing a transportation system that is equitable for all travelers. The goals and sub-goals of **Goal 2: Enhance the agency perspective** focuses on better managing and understanding demands for the City's public and private partnerships, accommodating the diverse needs of competing user groups for the same space, and optimizing the customer experience throughout the process.

Table 3 summarizes the performance measures, evaluation methods, and targets associated with each goal, sub-goal, and objective. The table also identifies target performance measures and the data sources or methods for measuring performance.

Table 3. Goals, Objectives, and Performance Measures

Goal	Sub-Goal	Objectives	#	Performance Measure	Evaluation Method / Source	Target
Enhance the System User Experience	Effectively Manage the area's on-street parking resources	Increase parking availability	1	Turnover of high-demand parking spaces	Parking occupancy data	Improve turnover of high-demand parking spaces
		Reduce time spent finding parking	2	Length of time of cruising trips	Automated parking search time (AVI) data, manual bike survey data, and customer feedback	Reduce time spent finding parking
		Reduce illegal parking	3	Parking citations issued and the number of minutes vehicles violate parking regulations	Police citation data and observations	Reduce illegal parking
		Simplify parking payment	4	Compliant and efficient use of parking spaces	Observations, surveys; measuring the length of time of cruising trips	Improve visibility and user understanding of the parking payment process
	Maintain and foster a safe, sustainable, equitable, and inclusive transportation system	Reduce Vehicle Miles Traveled	5	Percentage of vehicles searching for parking and length of trips	Automated parking search time (AVI) data	Reduce total cruising VMT
		Improve safety	6	Erratic and unpredictable motorist behavior	Observations and police data	Reduce erratic and unpredictable motorist behavior
		Reduce congestion and improve reliability	7	The percent change in travel time index (TTI) and planning time index (PTI)	Streetlight data	Reduce congest and improved reliability
		Improve economic access and activity	8	Change over time in sales volumes, sales per establishment, total establishments, and total employees per establishment	Citywide economic data	Improve sales volume, employment, and number of establishments
		Optimize multimodal interactions	9	Bus speeds, bus ridership, Healthy Ride ridership	Healthy Ride and Port Authority data	Increase access to other transportation modes

Goal	Sub-Goal	Objectives	#	Performance Measure	Evaluation Method / Source	Target
		Improve convenience	10	Benefits and burden related to system users	User survey/ACS Data	Determine appropriate resources to aid vulnerable populations (financial services, enhanced accessibility, etc.)
		Monitor effects on disadvantaged populations	11	Change in the travel behavior of disadvantaged populations (age/ability/unsheltered/other)	Survey/ACS Data/Origin-Destination Data	Understand the financial and public health implications on disadvantaged populations
Enhance the Agency Perspective	Effectively manage assets	Minimize costs and equipment needs	12	Program cost over time and equipment maintenance	Pittsburgh Parking Authority data	Minimize costs, reduce equipment needs, and maximize data collection
	Accommodate competing users	Encourage transportation mode integration	13	Bus ridership, Healthy Ride ridership	Healthy Ride and Port Authority data	Improve accommodations for other travel modes
	Optimize Customer Experience	Accurately predict parking occupancy	14	Mobile application performance	Mobile application testing	Increase accuracy of mobile application real-time traveler information
		Ensure revenue stability	15	Number of transactions and revenue per transaction	Pittsburgh Parking Authority data	Maintain net positive parking revenue
		Maintain cost-effectiveness	16	Equipment and maintenance costs; equipment life cycle; energy costs; data gateway costs enforcement costs	Pittsburgh Parking Authority data	Reduce cost and maximize effectiveness



Section 4

Neighborhood TDM Plan

NEIGHBORHOOD TDM PLAN

TDM strategies are aimed at reducing SOV trips, particularly during peak travel times, and encouraging alternate modes, such as transit, bicycling, and walking. DOMI has been advancing TDM through various efforts. Nationally, TDM has become an important component of the development review and approval process. In some areas, it has also become a citywide or regional initiative. For example, [Way To Go Durham](#) works with regional partners to create and identify cost-effective solutions to reduce SOV trips.

In both applications of TDM at the site-level and regional-level, successful measures are driven by consideration of the transportation infrastructure, land uses, and transportation users. Uptown-specific considerations were made in developing a TDM Toolkit. Area considerations are discussed first to frame the reasoning behind the TDM Toolkit. An overview of measures that were contemplated for the area is then provided, followed by the proposed TDM Toolkit for Uptown. Lastly, a discussion of governance structure for implementing TDM is included with recommended next steps.

AREA CONSIDERATIONS AND OPPORTUNITIES

Plans for BRT on Fifth Avenue and Forbes Avenue will enhance existing transit service, and the transit improvements outlined in BRT plans will make transit a more viable transportation option by offering more reliable and frequent transit service. Anticipated transit enhancements will reduce commute times and attract people to travel by transit. These considerations have been incorporated into the development of TDM strategies and build upon these proposed transit enhancements.

Other considerations and opportunities present for the area in implementing TDM strategies are outlined below. This includes opportunities for institutional partnerships, opportunities for BRT promotion, improving infrastructure with development activity, and encouraging sporting events to support TDM strategies.

OPPORTUNITIES FOR INSTITUTIONAL PARTNERSHIPS

Initiating partnerships with institutions and major employers in the neighborhood, including Duquesne University and UPMC Mercy Hospital may be an effective TDM strategy. The neighborhood has a significant number of employees who live outside of Uptown and commute in for work. The following TDM strategies may be used to form partnerships with institutions to encourage alternative modes of commuting to work:

- Encourage employers to offer commute benefits for non-SOV commutes. Provide transit subsidies.
- Organize carpool/vanpool systems.
- Establish clear pick-up and drop-off areas.
- Incentivize teleworking and flex hours, when possible.
- Enhance transit amenities on institution campuses.
- Limit the construction of new parking facilities.
- Increase the cost of parking for SOV drivers.
- Offer parking permit buy-back programs for individuals interested in changing their primary commute mode.
- Consider offering fare-free transit for employees.
- Establish commute patterns early on – focus on encouraging new employees and students to explore non-auto transportation options. Provide information and materials in a welcome packet.
- Offer carpool and/or carsharing memberships and create designated parking spaces for carsharing vehicles (Zipcar).
- Regularly send educational information to employees and students, discussing the importance of reducing one's dependence on automobiles (environmental benefits, economic savings, etc.).

- Utilize signage, maps, and wayfinding for transit stops and routes.

These represent initial topics for discussion with area institutions like Duquesne University and UPMC Mercy Hospital. Institutional Master Plans (IMPs) are also under development for area institutions, which may identify other topics to add to the list above. While those IMPs and subsequent topics are still under development, this list serves as an initial resource for a Neighborhood TDM Coordinator. It is recommended Neighborhood TDM Coordinator review area IMPs before they are being finalized. See “Flagship Recommendations” for more details on the Neighborhood TDM Coordinator.

OPPORTUNITIES FOR BRT PROMOTION

Given the PAAC and City’s plans to construct 7.4 miles of dedicated bus lanes to serve 44 stations in the City, the neighborhood has the opportunity to inform, educate, and encourage residents, visitors, and commuters to use the new BRT service. The following TDM strategies may be used to encourage BRT ridership:

- During BRT Construction:
 - Host informational and educational tabling sessions at local events to promote BRT.
 - Host events and presentations by City officials to share updates about BRT construction and operations.
 - Create flyers, handouts, and BRT route maps to distribute around the neighborhood.
 - Create billboards and advertisements to publicize the BRT service and build anticipation.
 - Utilize social media to keep the public informed and up to date on BRT construction progress.
 - Consider using a variety of payment options – mobile, contact-free, cash, credit card, transit pass, etc.
- Post-BRT Construction:
 - Ensure stations have maps and bus route information to help riders navigate the system
 - Ensure buses remain clean and well maintained.

IMPROVE INFRASTRUCTURE WITH DEVELOPMENT ACTIVITY

Encouraging active transportation remains a viable TDM strategy, especially with the planned cycle track on Fifth Avenue being constructed with the BRT. Redevelopment activity in Uptown and surrounding neighborhoods provides an opportunity to improve active transportation infrastructure, filling funding gaps for bicycle and pedestrian projects that can otherwise be difficult to fund.

It is important to emphasize with these projects that active transportation infrastructure is intended to serve existing neighborhood tenants, not only future tenants. Concerns surrounding gentrification can often become linked to revitalized streetscapes. It is essential to reinforce to existing residents the intent of redevelopment is not to displace, but to nurture and grow the existing community. Redevelopment and redesigned streets are for all users and TDM strategies can support equitable redevelopment by keeping transportation costs for existing residents low. Current community partners and residents have laid the groundwork for this messaging, and that message should remain at the core of implementing TDM efforts.

As bicycle and pedestrian infrastructure projects take place and active transportation becomes a more viable option for a wider variety of people, the following strategies may be revisited:

- Construct safe and reliable bicycle and scooter racks and storage areas. Bike lockers may be added at major transit stations or major institutions and new developments.
- Use wayfinding to help people biking and walking navigate throughout the neighborhood.
- Connect bicycle and pedestrian facilities within Uptown to facilities in surrounding neighborhoods, particularly to the proposed cycle track on Fifth Avenue that would be constructed with the BRT.

ENCOURAGE SPORTING EVENTS TO SUPPORT TDM

Given the proximity to the PPG Paints Arena, many attendees travel to games, either driving and parking in and around Uptown or via transit. One TDM strategy is to piggy-back on individuals' willingness to travel to events by transit and encourage these individuals to continue using transit for other purposes, such as commuting to work, taking recreational trips, and taking leisurely trips. A second strategy is to conduct targeted TDM marketing for those traveling via car to the same events. Marketing activities could include:

- Reemphasizing and encourage taking the bus more regularly.
- Including transit passes with the price of event tickets.
- Setting up tables/booths at sporting events incentivizing and educating sports attendees of the benefits of commuting by transit. Offer rewards and incentives.
- Offering discounts and incentives for sports attendees who take transit to sporting events.

TDM MEASURES

Building on these considerations and opportunities, the toolkit of TDM measures was then developed. This included a peer review of TDM measures developed by other municipalities and institutions across the country. Relevant excerpts from the following references are included in Appendix B:

- Transportation Demand Management Plan – MedStar Georgetown University Hospital
- San Francisco Standards for the Transportation Demand Management Program
- ALTRANS Transportation Demand Management (TDM) Program Manager – Sample Job Posting
- TDM Guidelines for New Developments – Department of Mobility and Infrastructure
- Transportation Demand Management Plan – Indiana University Bloomington
- Comprehensive Transportation Review – 2100 2nd Street, SW
- Transportation Impact Study – McMillan Sand Filtration Site PUD
- Uptown Mobility Subcommittee TDM Strategies Discussion, April 8, 2021

These references were selected due to the similar land uses in the neighborhood, particularly to provide comparisons for hospitals and universities. Key takeaways from this review were:

- Designation of a TDM Coordinator is critical for implementation of other strategies and measures, particularly for large institutions like hospitals and universities.
- TDM measure cost assumptions provide an order of magnitude for costs.
- Successful TDM implementation considers land use and end-users (residents, employees, patrons, etc.)
- Provision of site facilities, like bike parking, shower and changing facilities, and real time transit screens, has become a commonplace requirement for urban redevelopments.
- Improving site design and considering off-site improvements to pedestrian and bicycle safety may be appropriate depending on the size and impact of certain projects.

DOMI's TDM Guidelines for New Developments were also used to develop neighborhood-specific strategies. The recommendations outlined in this memorandum select the most relevant strategies from DOMI's TDM Guidelines and identifies additional strategies based on the aforementioned peer review of TDM measures. Table 3 includes the recommended TDM measures for Uptown, including descriptions, cost assumptions, one-time and annual costs, and land uses that are applicable to the measures. To further outline next steps, two flagship recommendations were identified in consultation with DOMI to prioritize future actions. The flagship recommendations are hiring a Neighborhood TDM Coordinator and to unbundle the price of parking from leases and other land uses.

Table 4 TDM Toolkit

Category	TDM Measure	Description	Cost Assumptions	One-Time (Estimated) Costs	Annual Cost (Estimated)	Applicable Land Use(s)
Mode Shift	Neighborhood TDM Coordinator	Create a job position to coordinate TDM activities within the area. Details regarding how this position could be created and funded are ongoing. Bringing these parties to the table so a partnership could also be explored with Duquesne University or UPMC should they have or be willing to hire a TDM Coordinator. With the creation of a TDM Coordinator position, the following activities could be implemented:	Salary information from relevant Glassdoor positions	\$0	\$50,000 - \$89,000	Neighborhood-wide, institutional
	TDM Communications and Education	<ul style="list-style-type: none">- BRT Communications Plan and Coordination- Transportation Options Webpage (for all modes)- Transportation Advising/Transportation 511- New Hire Commute Assistance- Carpool/Vanpool Matching Provide education about incentives for UPMC and Duquesne University employees and students to live in Uptown and not own a car. These incentives at a minimum could include rideshare, mobile app ride-hail services, Healthy Ride, transit benefits, and even rent subsidies or a contribution towards a house down payment to people who choose to live in Uptown.	Assumes cost for additional support/consultant services. Based on similar cost assumptions developed by Wells + Associates for MedStar Georgetown University Hospital.	\$0	~\$150,000 - \$200,000	Institutional, office, residential
	Live and Work in Uptown	Provide education about incentives for UPMC and Duquesne University employees and students to live in Uptown and not own a car. These incentives at a minimum could include rideshare, mobile app ride-hail services, Healthy Ride, transit benefits, and even rent subsidies or a contribution towards a house down payment to people who choose to live in Uptown.	Based on similar cost assumptions for the Johns Hopkins University Lyft Subsidy Program	\$0	\$250,000	Institutional, office, residential
	Monitoring Report	Conduct and review peak period weekday traffic counts at key locations, review available PennDOT traffic information, document new land developments and implemented TDM measures/infrastructure, and summarize results with a year-to-year comparison in a presentation to stakeholders. This measure would focus on major landowners or institutions.	Assumes consultant is retained to conduct and summarize data at 10 locations.	N/A	\$10,000 - \$15,000	Major landowners, institutional
Vehicle	Unbundle Parking	Work with new residential and commercial developments to separate the cost of parking from the property lease or deed. Identify opportunities with existing neighborhood institutions to similarly unbundle parking for employees.	This measure in theory is cost neutral. However, it will necessitate the support of the Neighborhood TDM Coordinator to be successful and reduce SOV trips. Additionally, will help educate people about the various options available to them.	\$0	See "Neighborhood TDM Coordinator"	Office, retail, residential, institutional
Transit	Develop Complementary Shuttle Service	Coordinate a shared shuttle service that serves neighborhood institutions and complements bus service provided by Port Authority. The primary goal is to consolidate shuttle routes between institutions so there is no redundancy of shuttle service and adjust shuttle routing such that shuttle service does not overlap Port Authority bus service.	This coordination would necessitate staff time from institutions and Port Authority. The Neighborhood TDM Coordinator would likely lead these efforts.	N/A	See "Neighborhood TDM Coordinator"	Institutional
	Provide Transit Passes	Request new residential and commercial developments to provide Port Authority passes or subsidies to employees or residents.	Assumes cost is covered by developers. Early coordination with developers is recommended to	N/A	N/A	Office, retail, residential, institutional

	Real-Time Transit Screens	Explore opportunities with existing neighborhood institutions to similarly provide transit benefits. Request new developments provide screens with real-time arrival transit information in a publicly accessible space. Explore opportunities with existing neighborhood institutions to provide transit screens.	come to a mutual agreement on cost. Cost provided to buy and install one screen.	\$7,000	\$1,200	Office, residential, institutional
Active Transportation	Site Bicycle and Scooter Facilities	Explore opportunities with existing neighborhood institutions and evaluate area-wide demand to provide bicycle facilities and potentially new Healthy Ride stations. Work with developers to provide short-term and long-term bicycle parking, consistent with zoning code, as well as consider providing new Healthy Ride stations. For office uses, provide shower and changing facilities as well as secure bike lockers and storage for those who bike to work.	Assumes cost is covered by developers. Estimate for bike parking based on similar cost assumptions developed by Wells + Associates for MedStar Georgetown University Hospital.	\$1,000 - \$3,000 (bike parking per location)	\$100 - \$200 (bike parking per location)	Office, retail, residential, institutional
	Site Pedestrian and Bicycle Design	Explore opportunities with existing neighborhood entities to provide pedestrian and bicycle safety and/or traffic calming improvements. Work with developers to incorporate improved pedestrian and bicycle facilities with development plan. Consider off-site pedestrian and bicycle improvements in cases where the size and impact of a project may warrant further improvements.	Assumes cost is covered by developers. Early coordination with developers is recommended to come to a mutual agreement on cost.	N/A	N/A	Office, retail, residential, institutional

NEIGHBORHOOD TDM COORDINATOR

One flagship recommendation identified for next steps is designation of a Neighborhood TDM Coordinator. This recommendation is important to prioritize, as having a singular point of contact that serves all neighborhood stakeholders and manages neighborhood access holistically will facilitate the implementation of TDM in the neighborhood, reducing vehicle trips. It also allows coordination of individual shuttle providers to reduce cost or improve service for the same cost.

The purpose of this position is to coordinate activities for the neighborhood and implement the recommendations outlined in this memorandum. The success of TDM implementation for the neighborhood hinges on having leadership and staff capacity to oversee the following activities:

- Coordinate with neighborhood residents, employers and their employees, and students to understand their travel needs;
- Work with neighborhood institutions to identify any mutually beneficial opportunities to implement TDM, especially as it relates to unbundling parking;
- Work to coordinate ongoing funding and economic investment from developers, hospitals, universities, and other stakeholders to establish the ongoing funding and coordination for a TDM Coordinator position;
- Review development plans and collaborate with developers to ensure plans serve the interests of residents. Working with developers, establish a mutually agreeable level of investment in transportation improvements (provision of Transit Screens, cost of transit passes, etc.);
- Coordinate and collaborate with the PAAC on promoting the delivery of BRT; and
- Establish and maintain a monitoring program, including reporting.

To assist in the development of responsibilities for this position and budget for personnel costs, a sample job posting for a similar position is included in Appendix B.

LIVE AND WORK IN UPTOWN

Provide incentives for UPMC and Duquesne University employees and potentially students to live in Uptown and not own a car. These incentives could include rideshare, mobile app ride-hail services, Healthy Ride, and transit benefits or even rent subsidies or a contribution towards a house down payment to people who choose to live in Uptown.

UNBUNDLE PARKING

The second flagship recommendation identified was to unbundle parking or to separate the cost of parking from property leases or deeds. As described previously, a Neighborhood TDM Coordinator would be helpful in advancing and coordinating TDM efforts, such as unbundling parking. A Neighborhood TDM Coordinator could serve as a liaison between the community, stakeholders, and the City. This recommendation is important to prioritize, as it discourages new residents to bring additional vehicles into the neighborhood. This results in reduced demand for SOV trips and minimizes the need for vehicle parking, while preserving existing neighborhood parking resources. In addition, neighborhood residents have repeatedly expressed their concerns regarding the provision of parking in the neighborhood. The neighborhood is currently experiencing a high demand for parking, which is likely to be exacerbated by the removal of parking facilities that result from redevelopment. Unbundling parking is an effective and low-cost measure to begin addressing this concern. As users see and absorb the true cost of driving, they are more likely to contemplate switching travel modes.

OUTREACH SUMMARY

Stakeholder meetings and neighborhood engagement activities provided input and context for the development of the TDM plan. Meetings with the Uptown Mobility Subcommittee were held in February, April,

and May of 2021. The first meeting provided an overview of what TDM includes, Uptown's existing transportation conditions, an example of a TDM Toolkit, and preliminary recommendations. The second meeting provided an overview of Uptown's existing transportation conditions, what TDM includes, specific TDM strategies for Uptown, flagship recommendations, and a beginning discussion on governance structure. The third meeting continued the discussion on governance structure.



Section 5

Neighborhood Parking Plan

NEIGHBORHOOD PARKING PLAN

Figure 12. Residential permit area regulation sign in Uptown



The neighborhood is interested in Identifying a residential parking strategy that helps to preserve residential parking resources from demand resulting from commuter parking, particularly overflow parking demand from downtown, and the conversion of private surface parking lots into development.

The consideration of the transportation infrastructure drives the identification of parking strategies, land uses, and transportation users to develop Uptown-specific strategies. An overview of RPP programs from across the United States provides a starting point for the neighborhood parking plan, followed by identifying parking strategies. Implementation considerations and performance measures for evaluating the effectiveness of the strategies are described in the subsequent section.

RPP PROGRAM COMPARISON

A scan of RPP programs in other jurisdictions was completed to understand common elements and characteristics amongst RPP programs, including unique strategies or innovative policies that support parking management in residential areas.

SIZE OF DISTRICTS

While no reviewed program has a maximum size for parking a district, the need size of the district needs to be small enough to eliminate intra-area commuting. Because of the size of the Uptown area, this issue is not applicable. However, several jurisdictions have minimum sizes, including Pittsburgh, which has a minimum size of 10 block faces or 100 parking spaces. Other cities have minimum sizes as small as a single block face, the requirement of at least 50 permits, or a minimum of one mile of street frontage.

PERMIT TYPES

A variety of different types of residential parking permits are used throughout the country. While most permits are valid for one year, a few programs issue two-year permits for a higher fee. Except for Boston, Massachusetts, all programs offer a visitor/guest pass option. About half of the jurisdictions allow contractor permits, including San Francisco, which charges contractors \$1,602 per year to enable contractor vehicles to park in any RPP area in the City. In addition to Pittsburgh, San Francisco also allows a commercial/business permit. Arlington, Virginia, and New Orleans both allow property owner/landlord permits. About half of the jurisdictions, including Boston, Charleston, South Carolina, San Francisco, and Washington, D.C., provide healthcare permits. Childcare permits are available in Montgomery County, Maryland, and San Francisco. Student permits are available in Montgomery County and San Francisco, while educational staff permits are available in San Francisco. Other permits available across the country include temporary permits (typically when a resident has applied for a permit but has not yet received the official placard/sticker), military/government, fire station, foreign consulate, diplomat, reciprocity, and special event permits, which allows a resident to get permits for guests of a special event at their property.

PERMIT FEES

Most jurisdictions charge a flat per-vehicle rate for each parking permit. With recent changes to the municipal code, Pittsburgh is now able to adjust fees. About half of the jurisdictions provide a cap on the number of permits available per household, usually between 3 and 4, although Charleston, South Carolina, limits households to two permits. A few jurisdictions, including Washington, D.C., Alexandria, and Arlington, Virginia, use graduated pricing for residential permits per additional vehicle per household. Compared to the \$20 typical fee in Pittsburgh, Washington, D.C. charges \$50, Annapolis, Maryland, charges \$55, and San Francisco charges \$152.

PERMIT RESTRICTIONS

Restrictions also vary throughout the country. Typically, RPP restrictions are from Monday through Friday during work hours (8 a.m. to 5 p.m.). In Savannah, Georgia, there is no RPP signage, but those with RPP permits can park at metered spots free of charge. It is also common to allow non-residents to park for a limited amount of time, typically two hours. About half of the jurisdictions have resident-only restrictions which prohibit non-residents from parking in RPP zones for any amount of time. In Boston, most zones are resident-only, but Washington, D.C. has put a moratorium on allowing resident-only zones because of issues that have been identified with pushing parking demand to nearby blocks. Overnight restrictions are also inconsistent across the country, with about half of the jurisdictions, including Pittsburgh, having some form of overnight restriction.

BEST PRACTICES

Best practices and innovative strategies were identified from the various jurisdictions, including the following:

- Boston raised fines for RPP violations during stadium events in the Fenway/Kenmore District, which helped reduce parking demand in that area.
- Savannah does not post signs for RRP areas, and residents with a permit are allowed to park for free with no time limit at all metered spots in the residential zone.

- Jurisdictions have had success limiting demand by raising fees, which in many places, had not raised permit fees for an extended period of time.

STRATEGIES

A series of potential strategies to preserve residential parking resources from demand resulting from the conversion of private surface parking lots into development and from other area land uses are listed below. The strategies were developed based on the review of parking strategies from other jurisdictions, conversations with staff from DOMI, the Department of City Planning (DCP), the Pittsburgh Parking Authority (PPA), and PAAC, and a review of the proposed RPP legislation.

The strategies are divided into implementation mechanisms, including **Curbside Uses and Regulations**, **RPP Program, Policies, Shared Parking**, and **Reduce Demand**. Strategies consistent with the Ecolnnovation District study are designated with an (EID) after the strategy name.

The recent changes to the City of Pittsburgh Municipal Code allow for most of these strategies to be adopted. However, if after enacting the strategies and monitoring their effectiveness, the strategies are not found to have sufficiently preserved residential parking resources, a Parking Enhancement District could be considered. The prerequisites for eligibility for a parking zone to be eligible for a Parking Enhancement District include revenue requirements from on-street metered parking spaces, an RPP zone established on 80% of the street segments that intersect with streets with metered parking spaces, sponsorship by an outside organization that provides services with the parking zone, and a co-signature by the member of the City Council who represents any street segments in the proposed Parking Enhancement District. The enactment of a Parking Enhancement District allows parking revenue from the District to be reinvested in the area for public safety resources, public works resources, or capital improvements. A particular benefit of a PED in the Uptown neighborhood is that the revenue from a PED could be used to help offset the cost for a neighborhood TDM Coordinator. Strategies that may require the enactment of a Parking Enhancement District are designated with a (PED) after the strategy name.

CURBSIDE USES AND REGULATIONS

- Adjust the current RPP time-of-day restrictions from 7 a.m. to 7 p.m. to include evening and overnight time periods. This would help address demand from special events that occur in the evening or late at night.
- Adjust the current RPP day of week restrictions from Monday through Saturday to include Sunday. This would help address demand from special events that occur on Sundays.
- Provide additional accessible parking spaces on residential streets that allow RPP permit holders with disability placards/plates to use the spaces. This would help ensure that spaces are available for those who most need on-street parking spaces but requires dedicated enforcement to ensure compliance.
- On commercial streets, remove some metered parking to provide pick-up/drop-off zones for mobile app ride-hail vehicles and designated delivery zones. Often, these locations can use the same space since delivery vehicles tend to have higher daytime uses, and mobile app ride-hail vehicles tend to have higher evening uses. (EID)
- Meter all on-street parking along commercial corridors, with RPP on the side streets (EID)
 - Fifth and Forbes entirely metered
 - All blocks connecting with Fifth and Forbes should have two-hour parking restrictions
 - Meter Stevenson Street and Marion Street between Colwell Street and Boulevard of the Allies

- Extend the RPP area to include Moultrie Street between Forbes Avenue and Tustin Street
- Adjust the cost to park on metered streets to match demand by time of day and day of the week to keep approximately one parking space available on each block face. The cost should be adjusted every three to six months to match changes in demand. If price changes alone do not result in changes in demand, time limit changes can be considered. (EID)
- Establish special event/game day prices for metered on-street parking spaces in the area at a cost equivalent to parking in a private lot for the event. (EID, PED)
- Provide additional rideshare spaces on residential streets. This would provide more shared vehicles in the area and potentially reduce the number of residents who feel they must own a car parked on the street in the area.
- As properties redevelop or streetscape efforts are underway, DOMI reviews existing driveways and curb cuts for the potential to close or consolidate access points. As part of these reviews, consider options for further enhancing the streetscape. This could include providing greater clarity through the design of the residential curbside spaces, installing "parking boxes" (marked locations where curbside parking is allowed) and new signs, along with curb extensions to reduce pedestrian crossing distances and provide greater visibility of people crossing the street.

RPP PROGRAM

- Consider graduated pricing for residential permits per additional vehicle per household. This would help discourage residents from registering excess vehicles. (EID)
- Eliminate visitor passes and provide paid on-street parking in the entire area with RPP permit holders exempt from payment or time limit restrictions on residential streets. Instead of installing on-street meters, the use of mobile phone payment could be provided.
- Provide an incentive to residents who choose not to get a parking permit. This could potentially include a reduced-cost transit pass or a free month of Healthy Ride membership. This would likely need to be administered through an outside organization to minimize the burden on City Staff.

POLICIES

- Reduce or eliminate the availability of visitor permits, coupled with providing additional pass options, including contractor passes, healthcare permits, childcare permits, educational permits, or special event permits. This would need to be coupled with increased enforcement to be effective, which could be funded through additional revenue from a PED. (PED for enforcement)
- Prohibit the construction of new parking spaces in conjunction with new developments and instead require in lieu contributions equivalent to the cost of the parking that would have been built. These contributions could then be used to construct either public shared parking facilities, which could also serve as "community infrastructure hubs" as referenced in the EID or provide other services or capital projects that reduce the demand for parking. Potential locations for a shared public parking facility include the area between Miltenberger Street and Marion Street to be convenient for both the residential land uses to the east and the institutional land uses to the west.
- Unbundling parking or separating the cost of parking from property leases or deeds helps to reduce the demand for SOV trips and reduces the need for vehicle parking. *This strategy is discussed further in the TDM Plan.*

- Coordinate with the Pittsburgh Water and Sewer Authority as they develop an impervious surface fee to ensure the fee covers both surface and garage parking and encourage additional fees for parking facilities to account for runoff pollution arising from the parking facilities.
- Consider a waiver or reduction of the commercial parking tax in the Uptown area in exchange for institutions, such as UPMC and Duquesne University, to open their garages to residents and visitors, particularly in the evenings and on weekends when existing demand is lower.
- Either provide a dedicated Parking Enforcement Officer for Uptown (EID) or work with the Pittsburgh Parking Authority to increase enforcement of the area through enactment of a Parking Enhancement District.
- Continue to prohibit non-accessory surface parking lots as a permitted use and identify options for community-oriented administration of the prohibited uses. If surface parking lots are removed, consider working with the property owners to convert them to community uses such as playgrounds, green infrastructure, or parks potentially in lieu of fines or other enforcement action. Alternatively, the City may have to develop a program for acquiring the properties, potentially through the Outside Organization needed for the establishment of the PED. (EID)
- Prohibit ground floor parking garage entrances on Fifth or Forbes (EID)

SHARED PARKING

- In conjunction with the waiver or reduction of the commercial parking tax and working with the Neighborhood TDM Coordinator identified in the TDM Plan, work with UPMC and Duquesne University to open their garages to residents and visitors, particularly in the evenings and on weekends when existing demand is lower.
- As part of the TDM Plan monitoring report, require UPMC and Duquesne University to provide periodic (every one to two years) inventory and occupancy counts of their parking facilities and encourage them to make excess spaces available to residents. As part of any changes to the RPP structure, perform a baseline analysis to allow monitoring and future potential consideration of a PED.
- Collaborate with legal private lot owners to provide shared parking that would allow employees to use the facilities during the day and residents and visitors to use the lots in the evenings and on weekends when existing demand is lower.

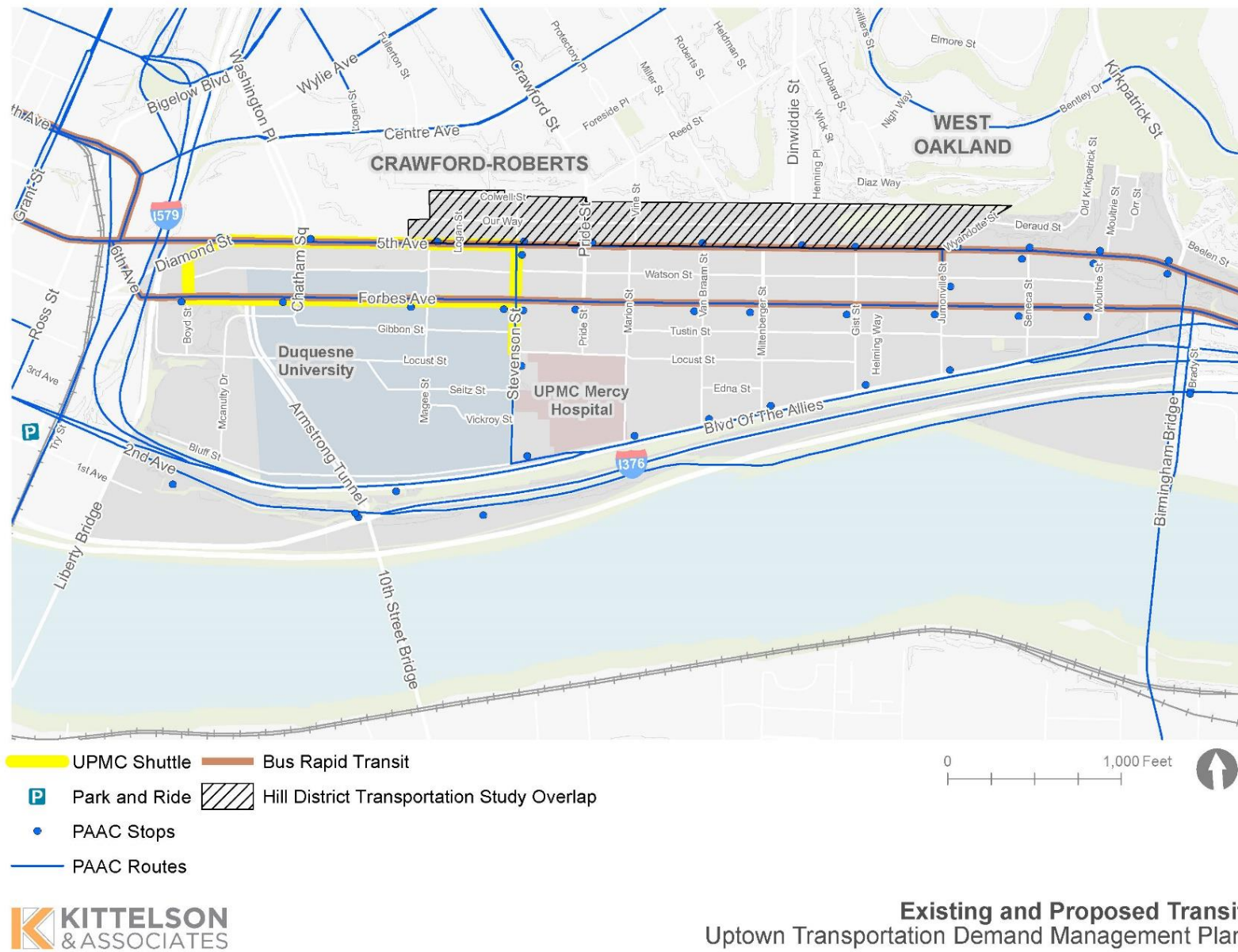
PROVIDE MULTIMODAL OPTIONS

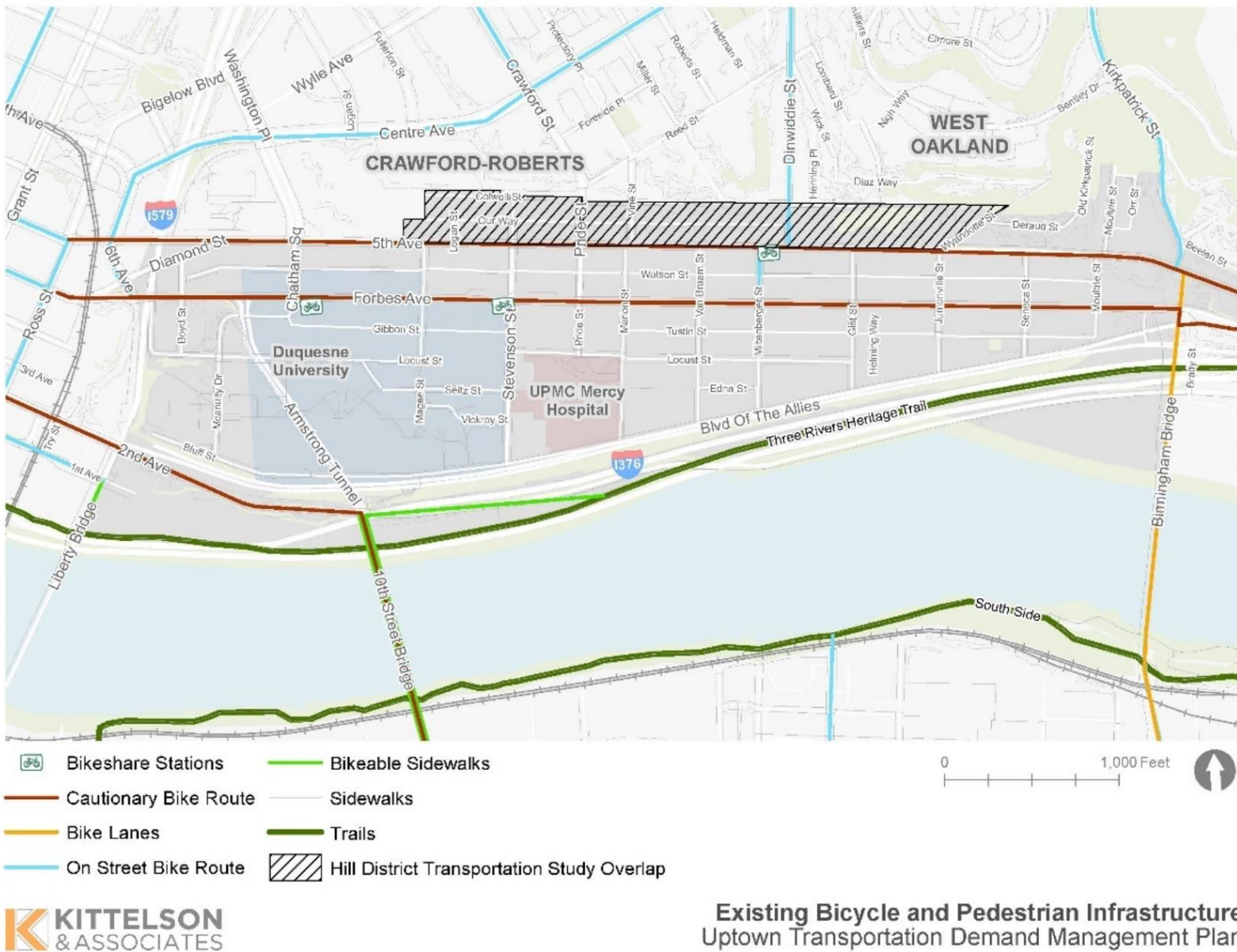
- Provide additional Healthy Ride stations, mobility hubs, and bicycle parking facilities to Uptown
- Consider restoring bus service on Dinwiddie to provide opportunities for people traveling from the Hill District to Uptown to do so without a private vehicle. Doing so would require removing parking from one side of the street and navigating potential community opposition. (EID)
- Using revenue from a potential PED, establish a neighborhood slow streets program to address neighborhood walkability through the implementation of traffic calming measures, improving sidewalk conditions, and providing comfortable on-street bicycle options in the Uptown area. These measures would also help improve access to BRT.

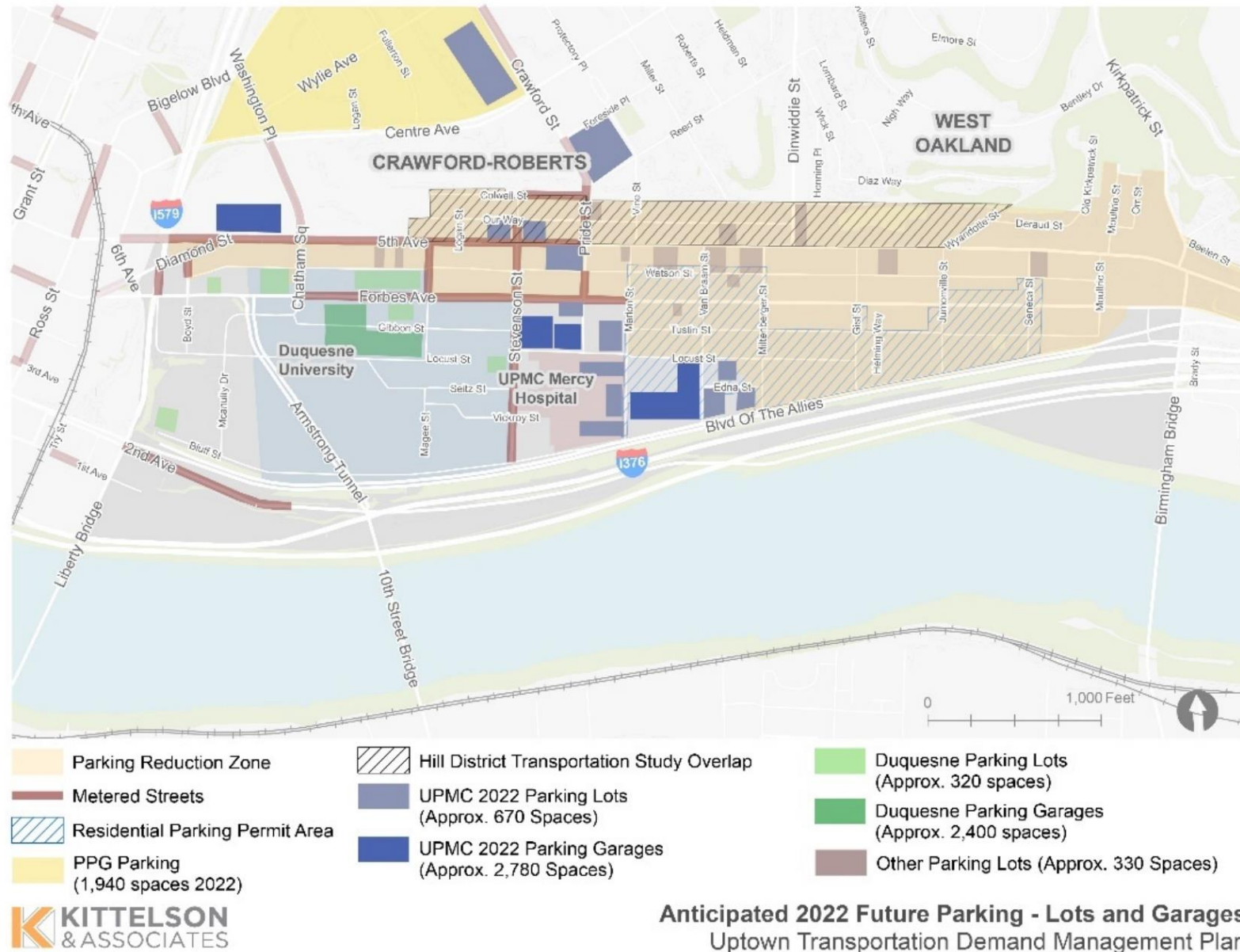


Appendix A

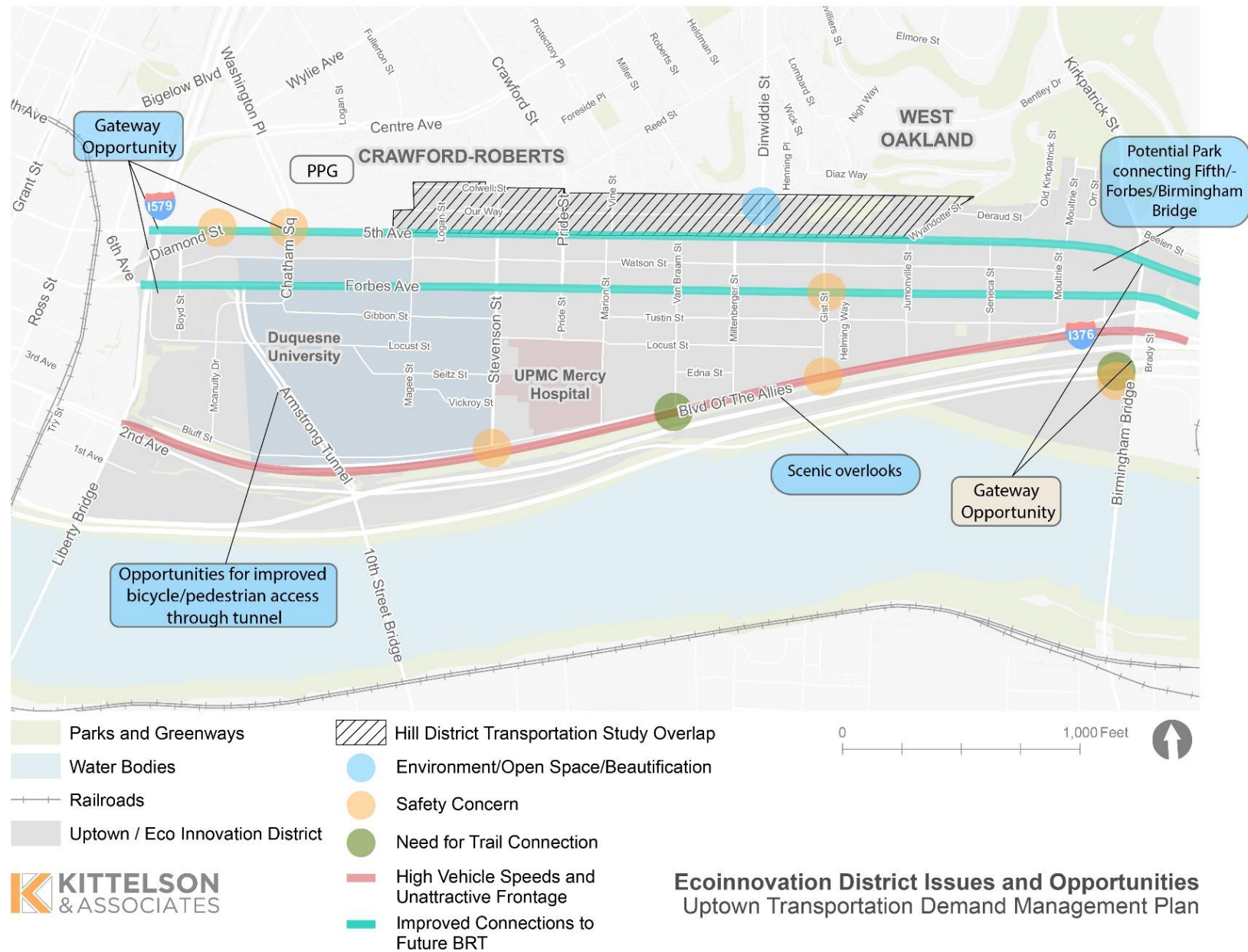
Existing Conditions Maps











Appendix B

TDM Reference Material

