



EAST LIBERTY STATION: REALIZING THE POTENTIAL

Transit Revitalization Investment District
Planning Study



pittsburgh
city planning

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EXECUTIVE SUMMARY

Study Area Background

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In the 1950s, Pittsburgh's East Liberty neighborhood was home to the third largest commercial district in Pennsylvania, with more than 500 local businesses and a population of 14,000. But by the end of the decade, post-war suburban development began to erode East Liberty's business district. A group of local business owners was mobilized to work with the Urban Redevelopment Authority of Pittsburgh (URA) to stop the flight of retailers and residents.

The resulting urban renewal project was intended to modernize East Liberty's business district, making it competitive with new suburban malls. The project transformed the neighborhood, demolishing over 1,200 houses and reducing the size of the business district from 3.2 million to 1.9 million square feet. Most demolition was done to create Penn Circle, a new one-way peripheral ring road with complementary parking lots surrounding the neighborhood's retail core. The project closed Penn Avenue to traffic, creating a pedestrian mall, and the City of Pittsburgh's Housing Authority (HACP) also built three low-income residential high-rise towers adjacent to the business district.

East Liberty's transformation was well intentioned but it actually contributed heavily to the decline of a once-vibrant community. The demolition and lengthy construction process, along with the



East Liberty before Urban Renewal in 1955. Photo: Historical Society of Western Pennsylvania

growth of suburban retail, helped to accelerate the business district's decline. The physical infrastructure in and around East Liberty's walkable, transit-rich business district was remade in the 1960s specifically to support create automobile-oriented development. Penn Circle was meant to help the business district, but it actually diverted traffic away from East Liberty's core and acted as a barrier for pedestrians walking from the surrounding neighborhoods. By the 1980s, East Liberty had lost more than 1 million square feet of commercial space and half its population, and was home to less than 100 businesses.

Vacancy and abandonment spread, crime rates increased and more homeowners left the neighborhood. In contrast, the Shadyside neighborhood, located just south of East Liberty, remained relatively stable.

East Liberty Development Inc. (ELDI) has worked since the 1980s to reopen Penn Avenue to two-way traffic and has been instrumental over the past several decades in attracting new development. Community organizing and coordinated strategic planning set the stage for positive transformation in the neighborhood, and in 1999, ELDI created a new community

plan for revitalizing East Liberty. In the 2000s, ELDI continued to work with private developers to renovate buildings, to attract new tenants to the core business district and bring new development to the surrounding blocks. The neighborhood's housing stock was also transformed: the three low-income urban renewal high rise towers were demolished and have been replaced by 450 units of mixed-income rental and for-sale housing units. Housing reinvestment is also occurring in the surrounding residential neighborhood. Today, East Liberty is no longer perceived to be unsafe and it has become a destination for retail, dining and nightlife.

Transit Oriented Development

East Liberty has an opportunity to position itself for long-term sustainable growth by capitalizing on its existing public transportation infrastructure and encouraging transit oriented development (TOD). One of East Liberty's strongest assets is its direct access to the Martin Luther King, Jr. East Busway, one of the Port Authority of Allegheny County's (PAAC) bus rapid transit (BRT) corridors. To be successful in the 21st century and fully capitalize on redevelopment opportunities, the area requires more robust pedestrian and bicycle connections to its mass transit infrastructure. At the same time, sites adjacent to the transit station should be developed as a more intense mix of uses with direct links to public transportation options. The strategy of reviving East Liberty's historic core commercial district



East Liberty Station and the surrounding district today. Photo: Urban Redevelopment Authority of Pittsburgh

through multimodal improvements can be a model for Pittsburgh and for other communities throughout Pennsylvania.

East Liberty is uniquely positioned to leverage the PAAC transit network, especially the East Busway. Through a partnership with the PAAC, the Southwestern Pennsylvania Commission (SPC), Allegheny County, the Pittsburgh Public School District (PPSD), URA, ELDI, community development organizations and the private development community, the City of Pittsburgh is collaboratively building a sustainable strategy to support

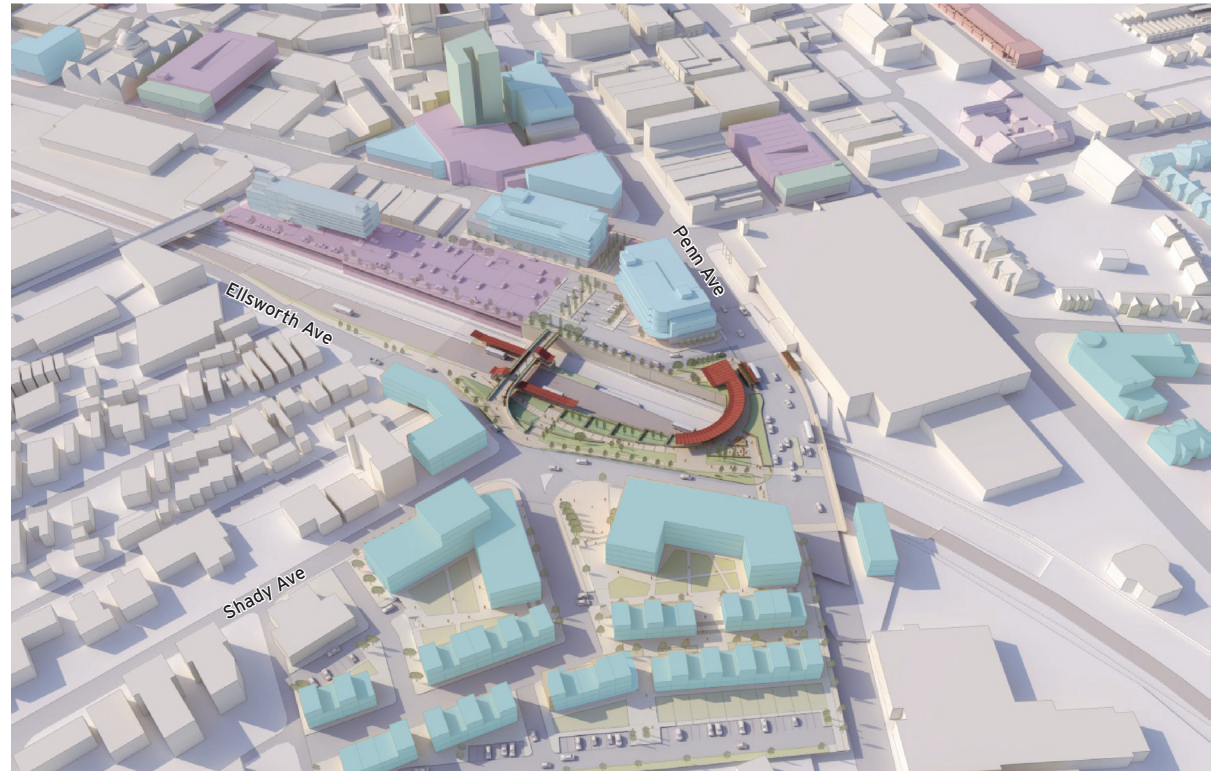
neighborhood revitalization efforts. The coordination of transportation and land use planning, through TOD, is a key component of the City's strategy.

The *East Liberty Transit Revitalization Investment District* (eITRID) planning study examines transportation facilities, infrastructure improvements and development scenarios in the vicinity of the East Liberty Busway station. Pennsylvania's Transit Revitalization Investment District (TRID) Act of 2004, establishes a mechanism for creating tax-increment value capture districts around major transit

stations to facilitate the construction of TOD. Building on existing development and infrastructure planning, eITRID refines recent planning proposals for the study area to maximize walkability, transit service, smart mobility and TOD potential following the “Livable Communities Principles.” eITRID examines the feasibility of creating a value capture boundary within the study area to facilitate these opportunities. This new revitalization strategy supports the continued implementation of large-scale redevelopment projects while also fostering organic smaller-scale growth.

The major goals of the eITRID are:

- Combining the existing market analysis, infrastructure needs and station/site development concepts to tell a complete story.
- Integrating East Liberty Station with development sites in surrounding neighborhood areas, effectively reconnecting the East Liberty, Larimer and Shadyside neighborhoods by applying Livable Communities Principles.
- Identifying the most pressing infrastructure needs to support TOD at key sites within the potential TRID boundary.
- Working with the communities and taxing bodies to determine if the establishment of a TRID is acceptable and to identify the physical area that it should encompass based on a review of analysis and potential development scenarios.



Major TOD development opportunities in relation to the redesigned station

Study Area Analysis

East Liberty experienced its first spurt of commercial revitalization in the 1990s with the construction of a new Home Depot store on the site of a failed Sears department store. Whole Foods Market soon followed as part of the Mosites Company's Eastside I development project, which transformed an underutilized stretch of Centre Avenue. Several buildings within the central business district were rehabilitated with a mix of offices above ground floor commercial space, and the restaurant and entertainment

district along South Highland Avenue in Shadyside has expanded into the East Liberty core. Additional retail and entertainment space was added through the completion of Mosites \$32.5 million Eastside II development project, adjacent to Whole Foods. Mosites also developed a Target department store on Penn Avenue, which recently opened in the summer of 2011. Walnut Capital's redevelopment of the former Nabisco bakery complex into Bakery Square, a mixed-use development project on Penn Avenue, continued this development momentum.

New higher quality mixed-income rental and affordable housing projects, driven by ELDI, the URA and The Community Builders, commenced in parallel with commercial revitalization efforts. In a little over a decade, 1,400 public housing units within three high rise structures - Liberty Park, East Mall Tower and Penn Circle Apartments - were replaced with 450 new mixed-income units. While many affordable housing units were created by 2010, much of this new development only included small amounts of market rate/affordable market rate rentals. Especially limited are new single family detached units. Within East Liberty's residential core, over 30% of the housing stock was built before 1940. The focus on rental housing in East Liberty has somewhat limited the development of for-sale units, a market area in which demand has only recently increased.

Building on the momentum of significant investments within the study area, this planning study focuses on TOD as the preferred strategy for reversing the effects of decades of auto-dependent development. TOD organizes relatively compact, high-density mixed-use development around transit to encourage public transportation use and create more efficient and sustainable land use patterns. More than simply locating a project next to a transit station, it represents the creation of a walkable, active and beautiful place centered around human-scaled multi-modal transit access. TOD aims to create healthy, connected neighborhoods where transit

access is an integrated part of community members' daily life.

TOD takes into account economic, land use, transportation, environmental, housing and social equity goals. By facilitating public transit use, this development type can reduce dependence on fossil fuels, lower residents' transportation costs, ease congestion, improve safety, promote walking/health and improve environmental quality. It can also catalyze revitalization in the broader neighborhood, better connecting residents to jobs, commercial activity and services.

East Liberty's TOD renaissance will be centered around access to East Liberty Station, which lies at the heart of the eTRID study area. The eTRID study area is defined by the half-mile radius around the station platforms, though the 5 and 10 minute walking distance metric is an even more accurate measure of TOD potential. All of the East Liberty business district sits within the station's "pedestrian-shed," with much of it within a five minute walk from the platform. The ten minute walking-shed extends well into Shadyside and to the edges of East Liberty into Larimer. Connections to Downtown Pittsburgh are provided by the busway with additional strong transit service to Oakland, the City's higher education and medical hub. East Liberty Station and sites immediately adjacent to it are prime candidates for TOD. Combined with other potential sites located within a short walk of the station, there are significant redevelopment opportunities in



A 5 and 10 minute walkshed from the station defines the eTRID study area

East Liberty, Shadyside and Larimer that would benefit from a TOD approach.

However, the urban fabric and existing infrastructure within the study area present major hindrances limiting the area's TOD potential. For decades, the area around East Liberty Station has been dominated by large expanses of surface parking and infrastructure not designed for pedestrian comfort. Buried in the middle of the block between Highland and Shady Avenues, the station suffers from a lack of connectivity as it is situated a grade lower than East Liberty's business district. The station's only public street frontage is along a section of Ellsworth Avenue that has historically not been a primary entrance point. No active uses actually face the



East Liberty Station - Photo: Urban Redevelopment Authority of Pittsburgh



Looking west from the station platform

station entry and access from East Liberty is only possible by crossing pedestrian bridges buried behind the adjacent block. Large blocks and a lack of north-south connections also limit the station's efficiency for pedestrians, resulting in a smaller 5 and 10 minute walking-shed.

Other significant attributes of the study area include:

- Significant demographic and market value differences that exist between Shadyside and East Liberty/Larimer
- Approximately \$4 million of property tax revenue forgone annually by local taxing bodies due to exempt properties (most controlled by the City, government authorities and parking/utilities)

- Over 10% of the total land area is currently classified as vacant
- There are many small development parcels and a high percentage of underutilized land with low building to land value ratios
- Existing zoning generally encourages higher intensity mixed-use development, but some areas are zoned in a manner that is not conducive to TOD
- East Liberty is already a significant multi-modal node in the City's transportation network, with a high-density pedestrian environment, numerous bicyclists and the highest level of Busway ridership outside of Downtown

- Significant transportation improvements have been made to convert parts of Penn Circle to two-way traffic, but this process is incomplete
- As a TOD location East Liberty can be classified as a Mixed-Use Center, meaning that the area has an equal balance between workers and residents and a fairly high land use intensity
- The height and density of buildings allowed by zoning in the area immediately adjacent to the East Busway Station is less than what is recommended in most best-practice guidelines for this type of urban TOD

Development Potential

TOD principles are expected to drive real estate market activity across all segments. According to *Emerging Trends in Real Estate 2011*, published by the Urban Land Institute, Class A office buildings in primary 24-hour markets remain highly coveted by tenants. Developers will focus their efforts on infill locations near vibrant downtown cores and urban districts. For example, the recent expansion of Oakland institutions towards East Liberty has been prompted by a shortage of Class A office space in the region's primary institutional district. The demand for 'green' space will continue to grow as well.

Twenty-something "echo boomers" want to experience more vibrant urban areas and their aging baby boomer parents look for greater convenience in downscaled lifestyles. Rising fuel costs and the economic downturn are also making it less affordable to commute by car. According to popular theory about the 'creative class,' places where educated, energetic, creative young people want to be, complete with 24-hour amenities, will continue to succeed. New commercial and residential development in East Liberty is expected to continue over the next decade. Current and future development should be supported by infrastructure improvements that support inter-modal transportation shifts, increased density and a mix of uses.

Projects in the pipeline for the next 5 years, within the eTRID study area, include the redevelopment of significant sites for a mix of new uses including residential, office, retail, hotels and a movie theater. Much of this activity will focus on East Liberty's historic commercial core and the area near the Shady and Penn intersection that is referred to as the Eastern Gateway. Another significant mixed-use development opportunity exists at the site of the former Reizenstein Middle School, across Penn Avenue from Bakery Square. Many structures within the commercial core are currently underutilized and poised for redevelopment. This includes the Broad Street Corridor, featuring the highest concentration of currently vacant and available properties within the study area.

In the future, revitalization efforts can focus on traditional residential areas within the East Liberty and Larimer neighborhoods. At the northwest corner of Penn Circle, conceptual plans call for redeveloping surface parking lots and abandoned structures into new residential uses, including a mix of for-sale single-family detached houses and townhomes. Future TOD redevelopment potential exists for various surface parking lots and several large suburban style commercial plazas. These sites could be reconfigured into pedestrian-scaled developments that are well connected to East Liberty Station and other transportation options.

TOTAL DEVELOPMENT CURRENTLY PROJECTED FOR THE STUDY AREA (\$285 million in investment)

- 486,630 SF Office
- 163,995 SF Mixed-Use Commercial
- 45,000 SF Stand Alone Commercial
- 192 Hotel Rooms
- 5 Screen Movie Theater
- 345 Multi-Family Rental Units
- 88 Single Family Detached Units
- 204 Single Family Attached Units
- 94 Multi-Family For-Sale Units

While the existing zoning is relatively conducive to TOD in terms of the allowable use mix, it is less than ideal in terms of allowable development intensity and height. Best practice development targets for a Mixed-Use Center station such as East Liberty recommend higher-intensity residential development than is currently permitted by zoning. Higher intensity residential development zoning should be explored for the area immediately adjacent to East Liberty Station in the East Liberty core and along Penn Avenue. Areas with zoning categories that are not conducive to TOD, such as Highway Commercial, should also be reevaluated in anticipation of future redevelopment opportunities.

Transportation and Infrastructure Improvements

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A public realm with transportation infrastructure that is dominated by automobile use cannot support or sustain high density urban development. Mode sharing, especially the increased utilization of public transit, is necessary to facilitate these opportunities. The East Liberty 2010 Community Plan promotes TOD as the preferred redevelopment approach for addressing these challenges. Rebuilding the station and the vacant bus transfer area, and creating TOD as a result of improved connectivity, is one of the major planning goals defined for the Eastern Gateway. Investing in human-scaled, multi-modal transportation infrastructure is key to fostering TOD potential around East Liberty Station and continuing to revitalize the surrounding study area.

The recommended public infrastructure and transit improvements apply TOD principles within the eTRID study area. The Busway and East Liberty Station are existing transit assets that must be enhanced as the heart of any strategy to promote TOD in the neighborhood. Areas outside of the immediate station vicinity should also incorporate these guidelines to help create a vibrant urban environment. Recommendations focus both on district-wide improvements and those necessary for specific, potential TOD sites. Investments outlined in this report will help to promote sustainable urban redevelopment practices within the study area.



Proposed station and intersection improvements

Many of the potential projects planned for the study area are dependent upon key district-wide transportation infrastructure improvements that support an increased development density. Enhancements to East Liberty Station and immediately adjacent areas are a top priority as they will directly contribute to the recognized goal of increasing public transit use. Major streets around the station should be redesigned so that alternative modes of transportation and automobile use can both be safely accommodated. Other recommended improvements include a coordinated district-wide parking strategy, the implementation of previously identified public space improvements and enhancements to key parts of the road network, such as Penn Circle. Detailed proposals for a redesigned

East Liberty Station, street reconfiguration options for the Penn and Shady intersection and recommendations for bicycle improvements on segments of these roadways are also provided.

Infrastructure investments will be prioritized by their ability to facilitate further redevelopment and benefit multiple users in the study area. The overall framework would remain flexible to accommodate various future development scenarios, but maintain the ability to provide assistance to large scale projects and district-wide improvements. Further planning, engineering and design related to infrastructure improvements are expected beyond the recommendations outlined in this eTRID report.

Value Capture Strategy

Urban, mixed-use TOD projects are overburdened with additional costs when compared to competing real estate investments. These projects entail significantly more expense than other suburban or even infill real estate products. As a result, TOD projects often experience difficulties when competing for investment dollars versus other products. This inherent gap often requires some type of subsidy/incentive to ensure that projects attract private financing and equity sources. A TRID can provide the public financial assistance necessary to facilitate TOD projects within this project study area.

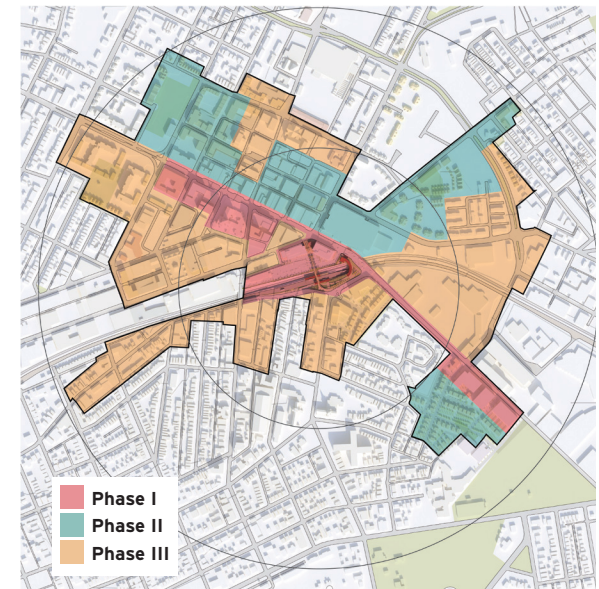
The creation of a TRID itself does not represent a direct source of upfront funding for TOD, transit improvements or other public infrastructure. Pursuant to the TRID Act, a coterminous value capture area shall be simultaneously created at the time that a specific TRID boundary is determined. Establishment of this value capture boundary allows the local taxing bodies and transit agency to share incremental tax revenues generated within the boundary to implement projects identified in the planning study. Essentially, the value capture area mirrors a 20-year TOD-specific Tax Increment Financing (TIF) District with revenues dedicated to fund specific improvements and maintenance within the defined area.

The TRID value capture mechanism allows for the diversion of incremental tax revenues

within the identified TRID boundary as new development occurs. Establishing value capture areas within this boundary allows revenues to be used to finance public transportation capital improvements, site development and other public infrastructure and maintenance in accordance with the Act. When examining the potential TRID boundary around East Liberty Station, priority was given to the identified 5 and 10 minute walking-shed areas that are recognized as a standard distance for TOD activity. These areas were then overlaid with anticipated project area boundaries and identified TOD potential within the study area to develop specific value capture area boundary recommendations.

Specific value capture areas within the TRID boundary should be phased to allow the maximum amount of revenue to be diverted to finance identified improvements and maintenance. Defined value capture areas within the TRID boundary should be expanded over time to accommodate development potential over the next decade and beyond. This method allows for flexibility in light of uncertainty surrounding future development schedules. eITRID's recommended value capture strategy proposes a phased approach to collecting revenues and making key infrastructure investments within a TRID boundary that expands over time.

The recommended strategy combines project-specific and district-wide approaches to provide financial support for key investments that will facilitate



Recommended Phased Value Capture Area Boundaries

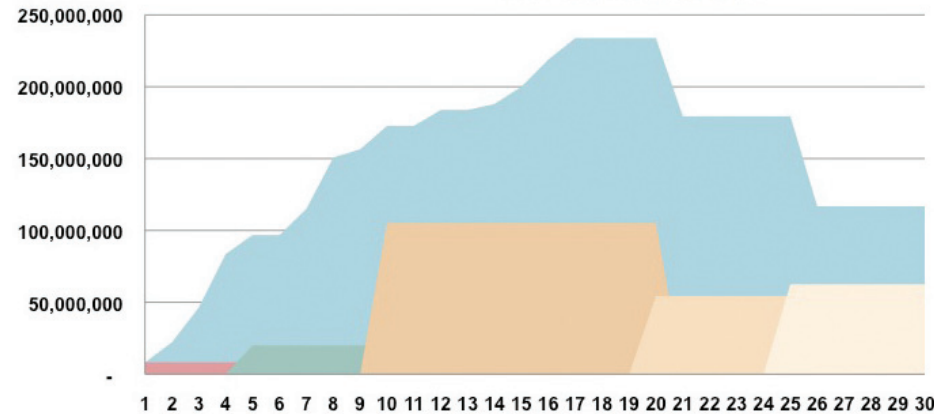
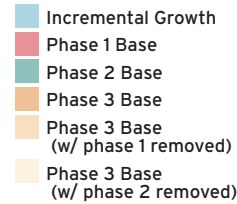
TOD within the study area. To the extent possible, the strategy provides upfront funding for larger projects to overcome challenges inherent to urban, mixed-use developments. Other redevelopment projects will contribute to the newly created eITRID value capture fund (VC Fund) which will be utilized primarily to fund district-wide improvements. A guiding principal of the strategy will be to incentivize, not subsidize, TOD and infrastructure development within the study area. Investments will be prioritized by their ability to facilitate further redevelopment. As with the value capture area boundaries, the TRID Management Entity would be responsible for determining project financing structures and VC Fund investment priorities across the district.

Much of the potential development within the study area is dependent on key district-wide infrastructure that will allow for increased density and connectivity. The phased expansion of the value capture area would respond to local market conditions and provide the greatest degree of flexibility in terms of implementing the development, transit and infrastructure recommendations outlined in this planning study. Proposed value capture area expansions are based upon maximizing the potential value capture to fund these improvements. The recommended eTRID value capture strategy will guide investment in project-specific infrastructure, district-wide improvements and maintenance.

Ultimately, successful TOD requires good markets, well designed station areas and excellent coordination between numerous parties - all dedicated to its success. With these ingredients, the study area will be uniquely positioned to capitalize on TOD opportunities. However, as discussed, the current infrastructure and urban fabric remains a hindrance to dense, mixed-use development in the vicinity of East Liberty station. Uncertainty as to how these improvements will be financed deters the development community from advancing projects despite improving market conditions.

A financial strategy to address the site-specific and district-wide impediments to TOD is critical to unlocking the redevelopment potential of the eTRID

Estimated Assessed Value



study area. It is anticipated over \$280 million of mixed-use and residential development will occur within the TRID boundary over the 30-year timeframe. This includes known projects as well as the redevelopment of sites that have been identified as potential opportunities. At the time of full build-out, this new development is expected to create over \$230 million of total assessed value.

Approximately \$125 million of incremental assessed value would be created by the development program at the peak of the TRID value capture area. The newly created value represents a 20% increase over the base assessed value today. Within the half-mile study area, new incremental value created within the TRID boundary would represent an increase in total assessed value of approximately 33% after all value capture areas expired. An annual incremental real property tax revenue of \$3.8 million would be generated by this increase in assessed value during the peak.

Approximate \$65 million of incremental revenues would be generated by new projects within the TRID boundary over 30 years by phasing implementation of the value capture areas. A portion of these new revenues would be diverted to fund specific project infrastructure or district-wide improvements as outlined in the recommended eTRID comprehensive value capture strategy.

While the capture of TRID revenues within the proposed value capture areas represents taxes foregone by the local taxing bodies, every dollar of this public investment will leverage at least six dollars of private investment. Other significant benefits are also anticipated within the study area after the eTRID is implemented, including: private investment, job creation, retention of existing jobs and other non-real property or income tax revenues/fees associated with area-wide revitalization following transportation and infrastructure improvements.

Study Process

The eTRID planning study was undertaken by a multi-disciplinary team led by GSP Consulting Corp (GSP), a Pittsburgh-based consulting firm specializing in economic development strategies, development finance and government relations. GSP coordinated a comprehensive TRID financing strategy based upon viable market alternatives and a community needs assessment. The firm also managed the efforts of the consultant team and the project schedule. Studio for Spatial Practice, a local architecture, urban design and planning firm, provided conceptual designs for planned or potential TOD in conjunction with infrastructure improvements. They also facilitated public input during the planning process and produced outreach and training materials. Fitzgerald & Halliday, Inc. assessed transit, transportation and parking systems and identified areas for improvement. A review of utility infrastructure was conducted by Civil and Environmental Consultants, Inc.

eTRID commenced in February 2011 as the consultant team initiated a review of numerous past planning studies covering the study area. Early work also focused on benchmarking national TOD efforts drawing upon the resources of the Center for Transit Oriented Development (CTOD), a recognized research leader and TOD advocate group. A major component of this portion of the study was examination the CTOD station typologies which provided guidance about TOD opportunities

relating to station location, function and performance. The consultant team analyzed existing conditions within the study area including demographics, land use, zoning, major recent redevelopment initiatives, the local real estate market and physical characteristics of the built environment.

A major goal throughout the planning process was incorporating the vision of local stakeholders, including all aspects of the community's asset base. These stakeholders formed the eTRID Steering Committee where elements of the study methodology, analysis and strategy were reviewed. Over the course of eTRID, three separate committee meetings were held in addition to other sessions with individual parties active in community development, transit and real estate in the study area.

In August 2011, the consultant team held a TRID Community Planning Session in conjunction with Pittsburgh's Department of City Planning (DCP) and ELDI. The event sought to educate the local residential and business community about the TRID process and involved the public in the process of reviewing preliminary options for the preferred TOD scenarios. During this meeting, the team gathered public input about the kinds of public improvements that should be considered to improve mobility in East Liberty and encourage TOD around East Liberty Station. Working in small groups, participants and the consultant team discussed a series of questions about the future of the station and movement throughout the study area.



eTRID public workshop, August 2011

As the planning process continued, public comments from the session and feedback from the Steering Committee meetings were incorporated into the proposed TOD scenarios and recommended infrastructure improvements. The recommended TRID boundary and value capture area phases were developed in consideration of local development potential and necessary infrastructure. Building upon physical site characteristics, market analysis and a community needs assessment, the comprehensive TRID value capture strategy was devised to provide a blueprint for revitalizing the study area through TOD.

This final draft report was presented to the DCP and the Steering Committee for comment in December of 2011 and was subsequently updated.

1.

TRANSIT ORIENTED DEVELOPMENT PRINCIPLES & BEST PRACTICES

TOD is a method for organizing relatively compact, high density mixed-use development around transit as means of encouraging transit use and creating more efficient and sustainable land use patterns. It typically consists of moderate and high-density housing, along with a mix of complementary public uses, jobs, retail and services within a half-mile walk from a major transit stop. There has been tremendous demand for housing near transit over the past decade in the US, with an anticipated 9 million additional households within half-mile of a transit station by 2030.¹

More than simply a project next to a transit station, TOD is the creation of a walkable, active and beautiful place centered around transit access at human scale. The approach aims to create healthy, connected neighborhoods with integration between the station and the surrounding community. In many respects, TOD offers a return to early pre-1950 development patterns such as urban streetcar suburbs. Public transportation would be once again integrated into the physical and social fabric of the surrounding neighborhood.

1. PolicyLink, Equitable Development Toolkit

Understanding TOD

Over the last two decades, the concept of TOD has advanced from an approach to reforming suburban development advocated in books like Peter Calthorpe's Next American Metropolis to a much more nuanced way of understanding of the relationship between land use and transportation. The theory now goes beyond the organization of development and mobility to include the creation of a more sustainable, functional and equitable urban region.

A leader in TOD research is the Center for Transit Oriented Development (CTOD,) a national nonprofit "dedicated to providing best practices, research and tools to support market-based transit-oriented development." CTOD has advanced the concept of TOD, providing design and development principles for transit oriented development.

Transit operators and planners have begun to embrace TOD as a strategy to build support to expand transit systems, increase ridership, and better integrate existing transit facilities into their contexts.

eITRID draws on all of these sources in considering TOD for East Liberty, looking to CTOD for principles and best practices, recent examples of TOD guidelines from Atlanta and three station area case studies.

TOD provides a synergy between economic, land use, transportation, environmental, housing and social equity goals. By facilitating public transit use, this development type can reduce



Principles and Best Practices: TOD 101 - CTOD



Transit Oriented Development Guidelines - Marta



Recent TOD: Del Mar Station - Downtown Pasadena

dependence on fossil fuels, lower residents' transportation costs, ease congestion, improve safety, promote walking/health and improve environmental quality. It can also be a catalyst for neighborhood revitalization through new investment as residents are better connected to jobs, commercial activity and services.

Local Benefits:

- Revitalization - especially vacant or underutilized parcels
- Access to goods, services and employment
- Reduced transportation costs - 2nd largest household expense (households in the study area are spending 17-25% of their income on transportation)²
- Additional housing options
- Public safety for pedestrians
- increased customer base and improved access to labor markets

Regional Benefits:

- Reduced burden on infrastructure
- Reduced air pollution, carbon emissions and energy consumption
- Reduced traffic congestion
- Smart growth sprawl reduction
- Improved access to employment centers
- increased transit system operational efficiency

2. <http://htaindex.cnt.org> - census tract auto ownership costs, auto use costs, and public transit costs, using 2008 gas prices, as a percentage of 2000 median household income.

TOD Typologies

In recent years, CTOD has developed the concept of station typologies which classify transit stations and development opportunities according to their location, function and more recently, performance in the larger urban region. Classification strategies tend to rely on measures of residential and employment density, housing to employment ratios and sometimes vehicle miles traveled (VMT).

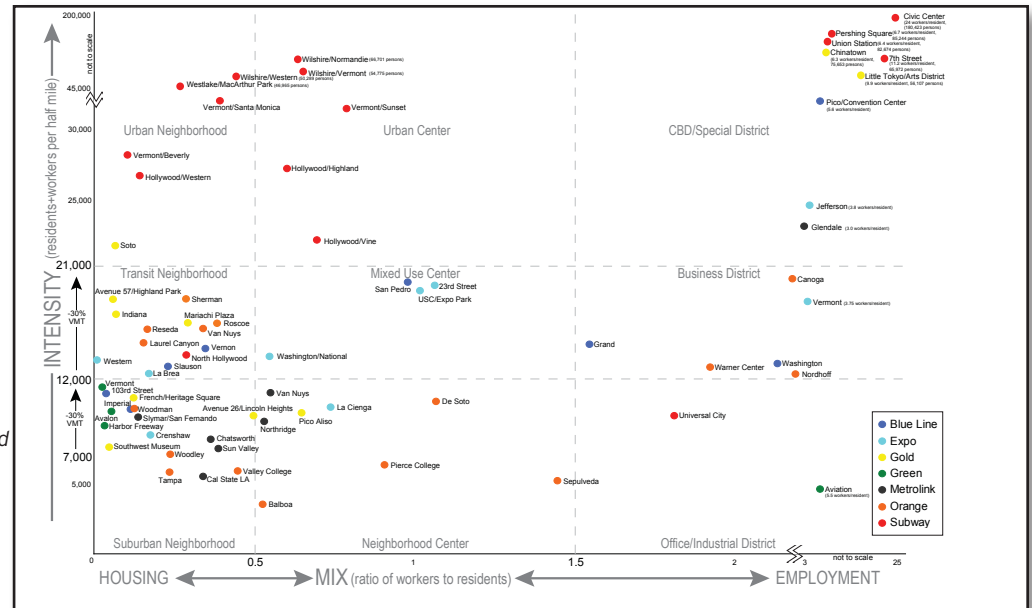
Classification strategies designed to guide development have tended to focus on measures of **land use intensity** (residents and workers in the half-mile station area) **versus land use mix** (ratio of workers to residents.) This approach is illustrated in CTOD's study of Los Angeles shown at right. This typically is paired with TOD guidelines for each station type. In this study, we have used this methodology to classify East Liberty in relation to the other stops on the East Busway as a means of identifying appropriate development types.

In CTOD's more recent *Performance-Based Transit-Oriented Development Typology Guidebook*, a more research oriented measure is put forward to benchmark and compare existing station areas and how various metrics compare. The typology is based on VMT versus a slightly different measure of land use mix calculated as total workers / workers + residents. This method allowed CTOD to compare the performance of hundreds of existing station areas across the country and develop normative metrics for a variety of measures.

TOD station typology matrix for Los Angeles

CTOD - Creating Successful Transit-Oriented Districts in Los Angeles, 2010

Note: Web links and page citations for all external reports referenced in this document can be found on page 104.



Normative Metrics for TOD Station Types

CTOD - Performance-Based Transit-Oriented Development Typology Guidebook, 2010

Table 4. Normative Metrics

Place Types	Residential Places					Balanced Places					Employment Places				
	Low VMT	Low-Mod VMT	Mod VMT	High-Mod VMT	High VMT	Low VMT	Low-Mod VMT	Mod VMT	High-Mod VMT	High VMT	Low VMT	Low-Mod VMT	Mod VMT	High-Mod VMT	High VMT
Total Intensity (residents + workers)	54,216	24,718	12,580	7,708	3,429	64,155	21,763	11,600	6,867	3,242	109,306	34,914	13,009	5,969	2,325
Residents	44,293	20,106	10,229	6,292	2,716	29,875	10,732	5,884	3,695	1,764	12,581	5,103	2,065	1,154	321
Workers	9,923	4,612	2,351	1,416	713	34,280	11,031	5,716	3,172	1,478	96,725	29,811	10,944	4,815	2,004
Workers/Residents	18.3%	19.5%	19.6%	20.3%	19.6%	51.6%	49.7%	48.2%	46.0%	46.2%	86.5%	83.9%	84.2%	83.0%	87.1%
Households	16,214	7,684	3,906	2,253	974	15,466	4,646	2,429	1,467	670	6,828	2,524	861	467	120
Household Size	2.71	2.61	2.62	2.71	2.68	1.95	2.21	2.41	2.43	2.60	1.58	1.67	2.22	2.28	2.64
Gross Density (units/acre)	50.0	21.6	10.3	5.7	2.2	48.7	16.4	7.6	4.0	1.9	28.5	10.3	4.6	2.2	0.9
Residential Density (units/acre)	53.2	23.6	12.1	6.7	3.4	55.6	20.9	10.5	5.8	3.5	51.4	20.6	10.8	6.0	2.9
Block Size (acres)	4.2	4.1	5.7	7.7	18.8	3.7	5.8	8.5	9.9	23.7	3.7	6.4	14.2	69.9	86.7
Monthly T Cost	\$422	\$563	\$688	\$781	\$906	\$394	\$597	\$721	\$794	\$900	\$463	\$613	\$713	\$793	\$920
Yearly T Cost	\$5,064	\$6,756	\$8,256	\$9,372	\$10,872	\$4,728	\$7,164	\$8,652	\$9,528	\$10,800	\$5,556	\$7,356	\$8,556	\$9,516	\$11,040
Average Median Income (1999)	\$31,713	\$35,643	\$41,344	\$53,492	\$62,069	\$43,997	\$37,364	\$43,395	\$51,138	\$65,544	\$41,875	\$34,183	\$43,935	\$40,985	\$57,562
Travel Time to Work (minutes)	35.6	31.4	27.4	25.5	24.7	23.5	22.1	21.4	21.6	22.9	18.0	17.1	18.7	19.0	21.5
Employment Proximity	233,890	127,448	65,640	42,260	20,788	451,725	152,310	73,393	41,335	27,131	396,277	159,118	99,848	58,747	32,167
Transit Access Index	31	19	13	10	3	56	28	11	9	4	85	45	19	10	4
Autos/Household	0.45	0.82	1.18	1.47	1.71	0.52	0.87	1.22	1.41	1.68	0.48	0.74	1.11	1.18	1.61
Home Journey to Work Transit	58%	39%	23%	15%	8%	43%	25%	14%	10%	8%	25%	16%	13%	9%	5%
Home Journey to Work Walk/Bike/Transit	68%	47%	27%	18%	10%	64%	40%	23%	15%	11%	58%	37%	24%	18%	9%
Workplace Journey to Work Transit	33%	20%	11%	7%	2%	38%	17%	8%	5%	3%	38%	16%	9%	5%	3%
Workplace Journey to Work Walk/Bike/Transit	47%	30%	18%	12%	6%	48%	23%	12%	8%	5%	43%	19%	11%	7%	5%

Seven Guiding TOD Principles

The following is a list of seven key principles for TOD. In general, eTRID draws on and paraphrases TOD principles generated by the Center For Transit Oriented Development, but also drawing on other sources and recommendations for TOD best practices.

1. Maximize location efficiency

TOD is based on the conscious placement of homes, jobs, civic uses, shopping, entertainment, parks and other amenities close to transit stations to promote multimodal travel options. Uses should be balanced relative to the station type and dense relative to the surrounding community. Compact land use around the station creates opportunities for as many people as possible to live, work and shop within walking or biking distance of the station.



The Spui - Amsterdam

2. Build a mix of housing choices and complementary uses

TOD should expand housing choices and opportunities encouraging and allowing more people to ride transit. New housing should accommodate a variety of household types at a range of price points including long term strategies for including and maintaining affordable housing options. Complementary public uses, jobs, retail and services should be located in close proximity.



Portland - Pearl District - Photo: www.mithun.com

3. Create walkable places for people.

TOD should create beautiful pedestrian friendly places that integrate transit and mixed-use development into their surrounding context. New buildings, transit design and infrastructure improvements should be organized in ways that reinforce one another in the creation of a place where people's daily needs can be met using transit and on foot. High quality public spaces, safe and active streetscapes, small navigable blocks, public art, high quality architecture and the innovative use of landscape elements are all key elements of a successful public realm.



High Line New - York City

4. Maximize station connectivity and visibility.

The station should be a key node in the public realm and pedestrian network, with maximum accessibility and visibility from the major street network and surrounding neighborhood. Station entries should connect to active pedestrian spaces which encourage gathering. Pedestrian connections to feeder transit routes should be visible and well-integrated into the public space network.



Manchester - Picadilly Gardens

5. Design streets for all users.

Streets should be designed to safely accommodate all users including, pedestrians, bicycles, cars and buses. In close proximity to transit, priority should be given to accommodating non-automotive modes when conflicts arise.



Portland - Shared Street

6. Manage parking effectively.

Parking supply and location should reinforce TOD goals while balancing market demands. Parking should be shared to the degree possible, and park-and-ride provision should be appropriate to the station typology, generally decreasing as land use intensity increases. A parking strategy should also include bicycle parking, car pooling priority, and ideally bicycle and car sharing services.



Parking Pay Station

7. Capture the value of transit

TOD should capitalize on the value of transit. Value capture strategies can include fiscal policies such as property and sales taxes, real-estate lease and sales revenues, farebox revenues and fees on everything from parking to business licenses. Policies can also include non-fiscal strategies, including inclusionary zoning, where the value of transit access can induce a market-rate development to include affordable units, or "in kind" public improvements such as parks or plazas that are conditions of development. In the case of a TRID, value capture can be a means to fund necessary infrastructure improvements, encourage higher quality development and ensure community benefits such as affordable housing, small business opportunities and job creation.



Pasadena - Del Mar Station TOD

Photo: www.mparchitects.com

TOD in the context of Livable Communities



TOD is complementary to the Livable Communities Principles defined by the Partnership for Sustainable Communities, an interagency partnership between HUD, DOT and EPA established in 2009. The Livable Communities Principles are consistent with principles and best practices for TOD, emphasizing the creation of both housing and employment centers that are efficiently located and accessible by transit. The principles also specifically call out walkable TOD in existing communities as sustainable and desirable development pattern for future growth.

The core principles are:

1. Provide more transportation choices.

Develop safe, reliable and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.

2. Promote equitable, affordable housing.

Expand location- and energy-efficient housing choices for people of all ages, incomes, races and ethnicities to increase mobility and lower the combined cost of housing and transportation.

3. Enhance economic competitiveness.

Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers as well as expanded business access to markets.

4. Support existing communities.

Target federal funding toward existing communities - through such strategies as transit-oriented, mixed-use development and land recycling - to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.

5. Coordinate policies and leverage investment.

Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

6. Value communities and neighborhoods.

Enhance the unique characteristics of all communities by investing in healthy, safe and walkable neighborhoods - rural, urban or suburban.

In developing TOD and TRID recommendations for East Liberty, the Livable Communities Principles served as a guide for developing infrastructure and development recommendations.

TOD Case Studies

eITRID includes a series of case studies intended to gauge best practices and development challenges for TOD station area design and planning. Projects in Pasadena, Dallas and Minneapolis were examined. In addition, eITRID system wide design guidelines for TOD produced for Atlanta.

Station Case Study:

Del Mar Station - Pasadena, California

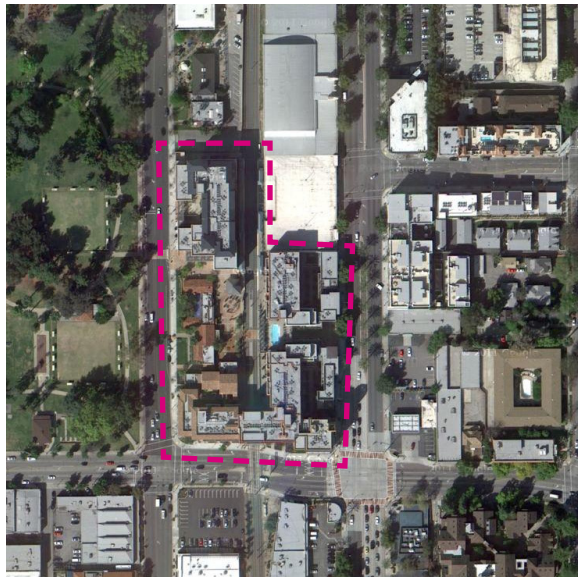
Del Mar Station is an example of excellent integration of new mixed-use development with an LRT station reconstruction project. The project includes 347 apartments and 20,000 Sf of retail around an at grade light rail station situated in the middle of the block. Mid-rise apartment buildings organized around the edges of the block form a series of public plazas which lead to the station platforms. A key attribute of the project is the quality of the pedestrian spaces that lead to and include the station. Buildings are oriented to both the street and the mid-block pedestrian realm. Public art and high quality landscape treatments are used to connect the station to the larger public realm.

below right: Google Aerial of Del Mar Station

*below: Images of Del Mar Station - Rosenfeld, Daniel Urban Partners with design by Moule & Polyzoides Architects and Urbanists
Photos: www.mparchitects.com*



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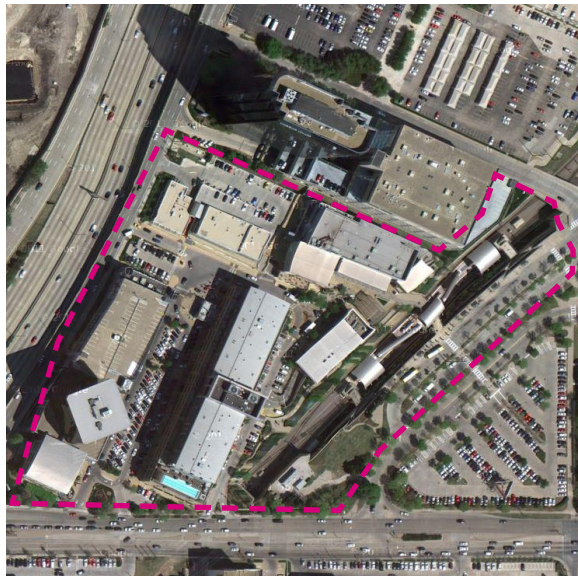
Station Case Study: Mockingbird Station

Dallas, Texas

Mockingbird Station is an example of a successful use of TOD to create a new pedestrian oriented node of development around a transit station in an otherwise automobile oriented environment. The development includes 211 apartments, 137,000 sf of office space and 178,000 sf of retail space. The project was successful in bringing new users to the Dallas transit system and in introducing higher density development adjacent to transit to the Dallas region. The station construction also offered a good example of using a combination of station architecture and landscape improvements to connect a grade separated station to its surrounding urban context.

*below right: Google Aerial of
Mockingbird Station*

*below: Images of Mockingbird Station
- Hughes Development, with design by
RTKL Selzer & Envirodesign
Photos: www.ctod.org & flickr.com*



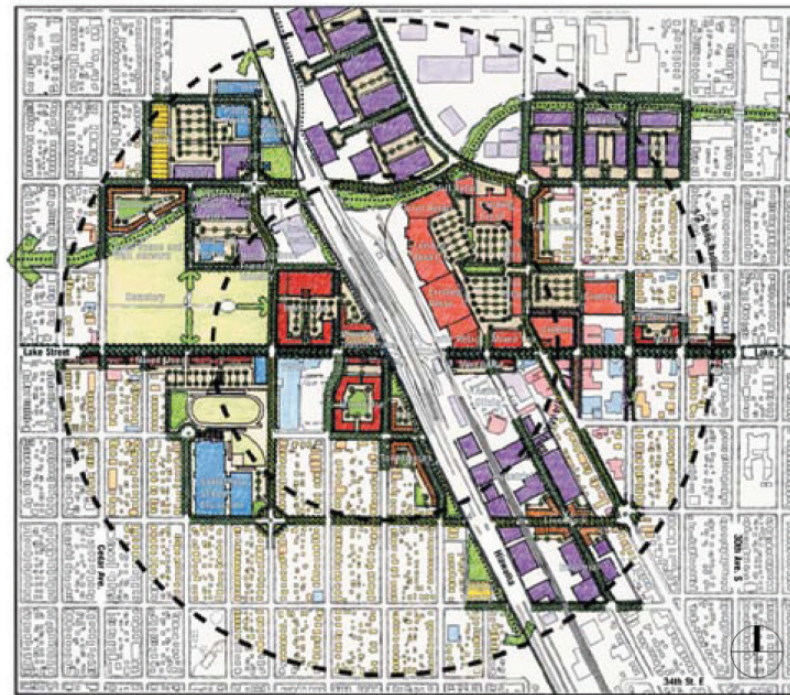
Station Case Study:

Hiawatha and Lake Street Station
 Minneapolis, Minnesota

Hi-Lake Station is a relatively new station on the Hiawatha line in Minneapolis. This station was introduced into an automobile dominated environment with a mix of existing retail, institutional and residential uses. Although station area planning for TOD was in place and development and investment have occurred around the station, a lack of coordinated implementation and investment in the surrounding streetscape and pedestrian realm has limited the success of this particular TOD.

Hi-Lake underscores the need for coordination between station design, pedestrian and bicycle infrastructure investment and appropriate mixed-use development.

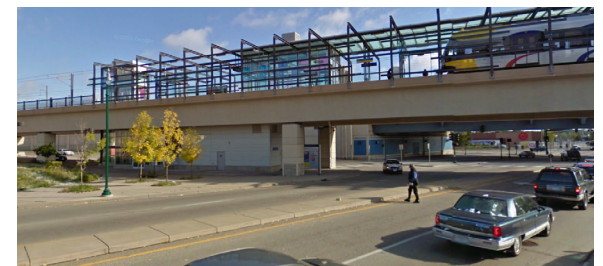
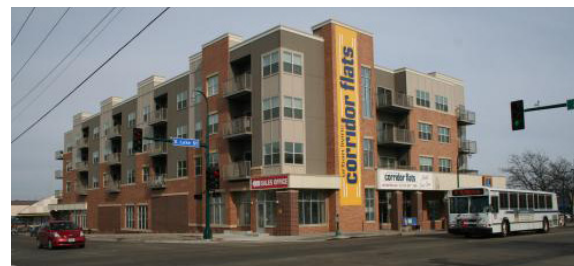
Hiawatha/Lake Street TOD Master Plan



2001 Hi-Lake TOD plan by Calthorpe Associates and the IBI Group
 Plan: ibigroup.com

Below left & right: Google Aerial and Streetview of Hi-Lake today showing the new station

Below center: Planned and built condominium developments adjacent to Hi-lake station
 Photos: www.ctod.org



Guidelines Case Study:

MARTA Transit Oriented Development Guidelines - Atlanta

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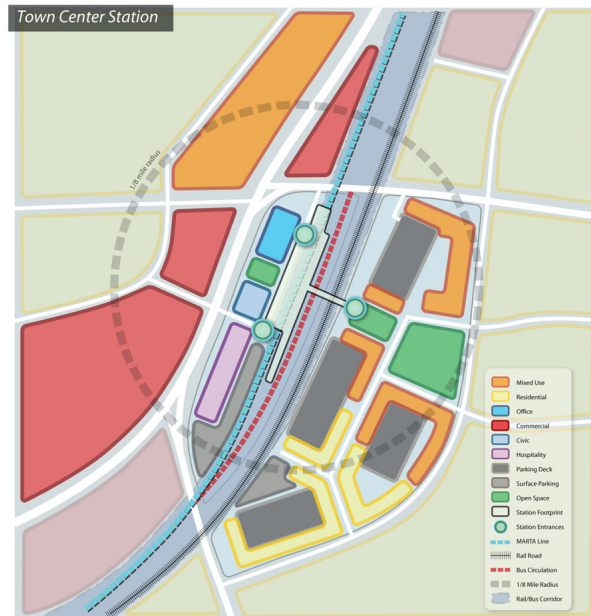
In recent years, CTOD has developed the concept of TOD typologies which classify transit stations and development opportunities according to their location and function in the larger urban region. A particularly useful and sophisticated example of TOD guidelines organized by station typology is the recent set of guidelines created for Atlanta by the regional transit operator MARTA. The guidelines establish best practice targets for station area development uses, density and organization. Also included are standards for station area infrastructure including, organization, pedestrian and bicycle facility provision, complete streets strategies and parking provision and management. The document also contains a model zoning overlay district for TOD with density and parking modifications.


The following pages are key excerpts from the MARTA Guidelines:



Town Center

Town center stations are set in nodes of dense, active, mixed-use development. These station areas have a wide array of land uses from housing and civic amenities to retail and office spaces. Development is of a comparatively lesser scale than the urban core, with mid-rise construction more common than high-rise buildings. Institutional or signature commercial buildings physically address adjacent major thoroughfares and intersections. The site often has an internal "main street" that organizes activity. The interior streets tend to be more pedestrian oriented with street-facing mixed use and residential buildings. Land use intensity and building height transition downward near adjoining residential areas. Town centers often incorporate a formal open space, such as a green or park framed by buildings and active uses. Overall, the site is compact and has a very refined network of pedestrian links, streets, and short blocks to promote circulation among multiple uses and connections to surrounding areas. Some limited surface parking is available, but most parking occurs in decks wrapped by ground-level uses to reduce visual impact on the built environment.




TRANSIT-ORIENTED DEVELOPMENT GUIDELINES

STANDARDS FOR DENSITY AND USE

This section provides a set of specific standards by which the density and mixed use principles of TOD can be applied to transit stations in Metro Atlanta. These standards are drawn from best practices in other transit metropolises, as well as from LCJ plans and TOD-friendly zoning provisions in our own region. Land use regulation and zoning of course, are a municipal and county prerogative. As a TOD stakeholder and advocate, MARTA will encourage the adoption of standards like these throughout the region. These are also the standards that MARTA intends to apply to joint development projects on its own property. In cases where current zoning would prevent these or similar standards from being applied to MARTA property, we will work in partnership with local zoning authorities to seek changes.

The density and use standards outlined here would be applied within a "TOD district" reflecting each station's zone of influence—the pedestrian, visual, and economic orbit within which TOD is broadly encouraged. While the appropriate boundaries will vary from place to place, a typical TOD district might extend up to one-half-mile from a metro rail, commuter rail, or regional bus rapid transit station and one-quarter-mile from a neighborhood bus or streetcar stop.

At the center of a TOD district, a "core area" may be delineated, defined either by a radius or by the designation of specific parcels. The core area is the "TOD bull's eye"—the streets, sidewalks, and buildings closest to the station, where it is appropriate to apply TOD standards more aggressively. A TOD core area will generally extend a quarter-mile or less from the station or stop.

Density

A basic premise of these *TOD Guidelines* is that while the appropriate level of density for a given station will vary with its location, community setting, and function, development should be relatively dense and compact in the immediate station area, compared to its surroundings.

Density can be measured in a number of ways:

- Floor area ratio ("FAR") is the ratio of the total built space on a site to its land area, and is a widely used measure of density. For example, if a site with a land area of 10,000 square feet has a 30,000 square-foot building on it, its FAR is 3.0. FAR is an especially useful measure because it can be used to compare densities across different uses.
- For residential development, TOD planners often measure density in terms of dwelling units per acre. For example, a suburban subdivision with single-family homes on quarter-acre lots would provide four units per acre, while apartment blocks in urban neighborhoods can easily contain 75 units per acre or more, even when mixed with other uses.

* For many people, the most recognizable measure of density and scale is height. Height and density are not a perfect match—a taller building with more open space at ground level, and a shorter building with less open space, could have identical FARs, and buildings may feel more or less tall depending on how they relate to the street.

Recommended densities for the various station types are outlined in the table below. For ease of reference, all three density measures are presented—FAR, dwelling units per acre, and height, although for zoning purposes most jurisdictions use FAR as the governing metric. These densities are stated in wide ranges, because even among stations of the same

Appropriate Density Ranges by Station Type			
Station Type	Floor Area Ratio (FAR)	Residential Units (per Acre)	Height (in Floors)
Urban Core	8.0-30.0	75+	8-40
Town Center or Commuter Town Center	3.0-10.0	25-75	4-15
Neighborhood	1.5-5.0	15-50	2-8
Arterial Corridor	1.0-6.0	15-50	2-10

general type, different community settings will call for different scales of development. (Suggested densities are not provided for special regional destinations, since these are unique uses to which no one density standard applies, or for collectors, which have park-and-ride as their principal use.)

To achieve an effective TOD density for a particular TOD district, MARTA supports a combination of baseline densities and density bonuses.

The baseline should reflect a scale of development generally appropriate for its community context but clearly denser than the surrounding areas. The baseline should not be uniform throughout the TOD district. Instead, it should step down, with the highest density in the "bull's-eye" immediately surrounding the station and lower density along the outer edge of the TOD district, as it blends into the surrounding neighborhoods. This can be achieved by applying two simple tools, as illustrated in Figure 1 on the right:

Station Typology Matrix

Station Type	Ideal Land Use Mix and Scale of Development	Transit Mode and Function	Public Realm	Keys to Success	Local Examples	National Examples
Urban Core	<ul style="list-style-type: none"> Downtown-scale mix of employment (office, institutional, hotel and civic uses. Return of multi-family residential is a growing trend. Retail and restaurant sector gaining. High-rise towers common; new buildings at least mid-rise. 	<ul style="list-style-type: none"> Heavy rail/multi-modal. High-volume transfers between corridors/modes. No park-and-ride. A regional transit destination at or near system core. 	<ul style="list-style-type: none"> Stations usually grade-separated and closely spaced for walking. Station is part of the core pedestrian network. Buses stop at sidewalk. 	<ul style="list-style-type: none"> Attract a 24/7 mix (i.e., more residential, retail, dining, cultural). Ensure station-area safety during non-9-5 hours. 	<ul style="list-style-type: none"> Downtown (Five Points, Peachtree, Civic Center, Garnett) Midtown (North Avenue, Midtown, Arts Center) 	<ul style="list-style-type: none"> South Boston Waterfront (Boston, MA) Market Street, San Francisco
Town Center	<ul style="list-style-type: none"> Balanced mix of multi-family residential development with office, retail, entertainment, and civic uses. Vertical mixed-use is common. May be pre-existing or new town center. Transition to lower-density outside the quarter-mile radius. Mid-rise buildings dominate; some high- and low-rise. 	<ul style="list-style-type: none"> Multi-modal rail or BRT station with regional and local bus service. Park-and-ride, if any, is secondary. A transit origin and destination. 	<ul style="list-style-type: none"> Stations grade-separated (heavy rail) or at-grade. Traditional town center pedestrian network with station at focal point. Curb-side parking desirable; no off-street parking in front of buildings/garages wrapped. 	<ul style="list-style-type: none"> Get market to accept reduced residential and commercial parking. Optimize street level relationships among transit, public realm, development. 	<ul style="list-style-type: none"> Decatur (tip of historic town center) Brookhaven (tip of new town center based on LCJ study) 	<ul style="list-style-type: none"> Rockville Town Center (Rockville, MD) Mockingbird Station (Dallas, TX)
Commutter Town Center	<ul style="list-style-type: none"> Balanced mix of multi-family residential development with office, retail, entertainment, and civic uses. Vertical mixed-use is common. Likely to be a new town center at or near a regional highway exit. Transition to lower density outside the quarter-mile radius. Mid-rise buildings dominate; some high- and low-rise. 	<ul style="list-style-type: none"> Multi-modal rail or BRT station with regional and local bus service. A primary park-and-ride capture point with at least 1,000 spaces. A transit origin and destination environment. 	<ul style="list-style-type: none"> See town center description above. Park-and-ride is in structure and ideally feeds retail environment. 	<ul style="list-style-type: none"> Town Center attributes, plus: Optimize park-and-ride count, operation, and management. Locate park-and-ride to minimize conflict with TOD. 	<ul style="list-style-type: none"> Lindbergh City Center (existing) Donorville (future) 	<ul style="list-style-type: none"> Phasare Hill (Costa Costa, CA) White Flint (Bethesda, MD)
Neighborhood	<ul style="list-style-type: none"> Multi-family residential and/or neighborhood-scale mixed-use with retail, restaurant, and service-oriented offices. Transition to lower-density single- or multi-family away from the "main street". Low to mid-rise buildings. 	<ul style="list-style-type: none"> Can be a rail, streetcar, or local bus stop. A transit origin and walk-in line station. Park-and-ride avoided or minimized. 	<ul style="list-style-type: none"> Heavy rail stations grade-separated, light rail stations off-street, bus or streetcar stops on-street. 	<ul style="list-style-type: none"> Design bus or streetcar stops as integral part of high-quality streetscape. Attract feasible, mixed-use, mixed-income development. 	<ul style="list-style-type: none"> Ashby and Vine City (rail) Future Bell Line Stations (streetcar) Ponce de Leon Corridor (bus) 	<ul style="list-style-type: none"> Bland Street Station (Charlotte, NC, rail) Washington Street Silver Line (Boston, on-street rapid bus)

Station as Centerpiece

Make the station or stop an iconic element and a gathering place

- Key streets should visually terminate at the station or the station entry, where possible, to enhance visibility.
- Station entries should connect to plazas that reinforce transit as a focal point.
- Immediate station areas should incorporate nearby pocket parks, outdoor seating and other common spaces, as well as shelters to create a variety of comfortable gathering spots for riders and visitors.
- Gathering spaces around transit should include seating and generous staging areas for transferring transit users, pedestrians and other visitors to the area.
- Stations and adjacent buildings should embrace distinct architectural elements that build strong civic character.
- The station area plan should incorporate civic buildings like libraries, galleries and museums, public open spaces and other community amenities and site these elements to maximize visibility and access for nearby residents.



Streets that terminate at the station create a dramatic view of the station (Denver, Colorado)



Plazas in front of station entrances enhance its civic character and make transit a focal point. (Manchester, England)

Street Standards

The following diagrams illustrate the suggested right of way standards for streets and sidewalks within TOD districts. They promote an environment that gives priority to the pedestrian while adequately accommodating vehicles and transit.

MAIN STREET

A Wide sidewalks encourage pedestrian activity

B Furniture zone protects pedestrian and provides key amenities

C On street parking calms traffic and supports retailers

D Include bicycle lanes on all major roadways leading to the station

Supplemental zone acts as outdoor seating for restaurants.

On-street parking acts as a buffer between the sidewalk and vehicular traffic.

Active and Passive Pedestrian Zones

One of the primary purposes of open space in a TOD is to allow for easy and safe pedestrian circulation between transit and surrounding land uses, such as housing, restaurants, stores, and offices. These active pedestrian zones should be sufficiently wide and clear to accommodate the movement of people, particularly in urban core and town center station areas. An equally important function of pedestrian space is to allow for relaxed gatherings and informal social interaction, whether it is sitting on a bench or people watching from an outdoor cafe. These passive pedestrian zones help to define the outdoor rooms that make TOD dynamic.

- Passive conditions, such as cafe seating are complementary to active sidewalks. They should not intrude into the pedestrian zone, but instead occupy a separate physical footprint.
- Sidewalks should provide ample room for pedestrian clear zones.
- Cafe seating should occur along the building edge or along the edge of the sidewalk between tree plantings, so long as a pedestrian clear zone remains unobstructed.
- The design of public spaces should encourage moveable seating to allow a certain flexibility of use in a planned, structured setting.
- Public space, in an urban environment, should integrate the surrounding buildings. Activity generated by buildings contributes to the success of the public realm.
- Provide adequate lighting along pedestrian paths and public spaces to ensure pedestrian safety.
- For public realm street standards/dimensions see Design Standards table on page 85.

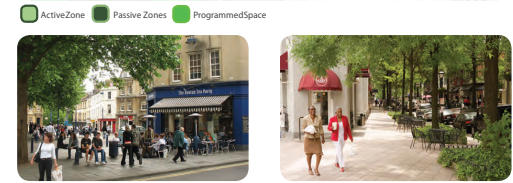




Photo: Urban Redevelopment Authority of Pittsburgh

2.

STUDY AREA ANALYSIS

East Liberty's revitalization will be centered around direct access to the PAAC MLK East Busway. The local station lies at the heart of the eTRID study area. Both the station itself and the sites immediately adjacent to it are prime candidates for TOD. Combined with other potential sites within a short walk of the station, tremendous redevelopment opportunities exist in the neighborhood. However, the area requires more robust pedestrian, bike and mass transit infrastructure to capitalize on this potential.

Analysis in the following section details existing conditions in the eTRID study area. Previously discussed typologies

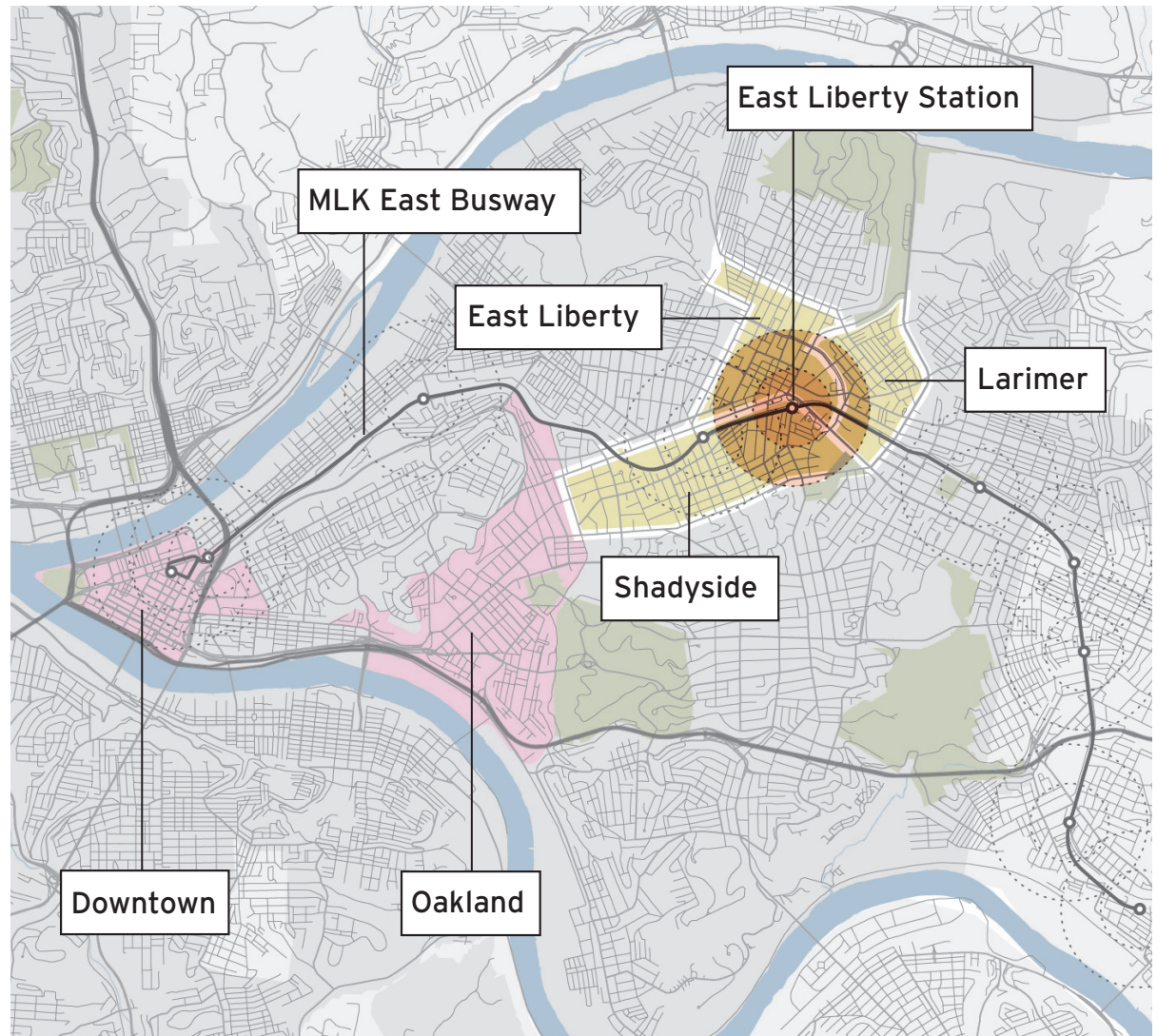
and TOD principles are applied locally to East Liberty station and the immediate vicinity. This includes evaluation of multimodal transportation with the defined half-mile radius. A summary of recent major development in the study area is followed by a real estate market overview. Demographic statistics, land use and current zoning is also provided. Recommendations presented at the conclusion of this report build upon decades of previous planning studies summarized here.

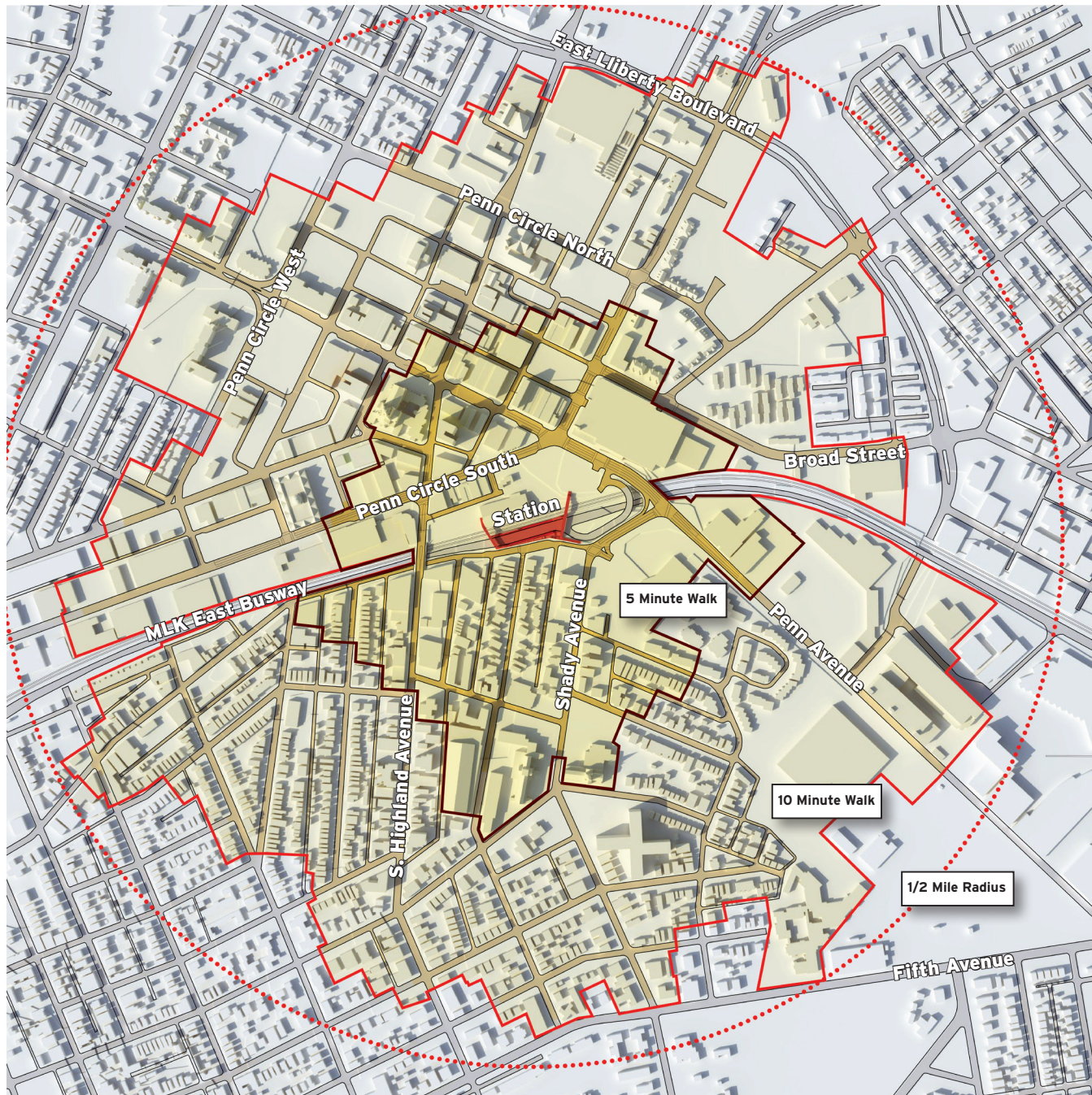
STUDY AREA OVERVIEW

Study Area Context

East Liberty Station is within a 10 minute walk of three Pittsburgh neighborhoods, East Liberty, Shadyside and Larimer. East Liberty is in the center of Pittsburgh's east end, a historically mixed-use hub surrounded by primarily residential neighborhoods. The station is connected to Downtown Pittsburgh by the Martin Luther King Jr. East Busway a BRT system. Strong transit connections also exist to Oakland the city's university and medical hub. Downtown and Oakland are the second and third largest employment centers in the state of Pennsylvania.

East Liberty has historically been one of the most important mixed-use neighborhoods in the City of Pittsburgh. It also has a long history as a transit destination and transfer point. The neighborhood was also the site of one of Pittsburgh's more ambitious and ultimately unsuccessful urban renewal schemes. Today the neighborhood is experiencing a renaissance as a retail and entertainment destination for the city's East End after a twenty year hiatus.





**Study Area Definition:
East Liberty Station
10 minute Walking-Shed**

The eTRID study area is defined by the area within a 10 minute (half-mile) walk from the station platforms. The map at left illustrates 5 & 10 minute walks from the station platform, corrected for actual street patterns.

All of the East Liberty business district sits within the station pedestrian shed, with much of it within a five minute walk from the platform. The ten minute walking-shed extends well into Shadyside and to the edges of East Liberty into Larimer. New development at Bakery Square sits just within the boundary on the eastern edge.

The walking-shed is made less efficient because of the scale and geometry of some of the blocks around the station, especially to the east. In this area the lack of connections across the busway and rail line also limits the geography of the pedestrian-shed.

Demographic Profile

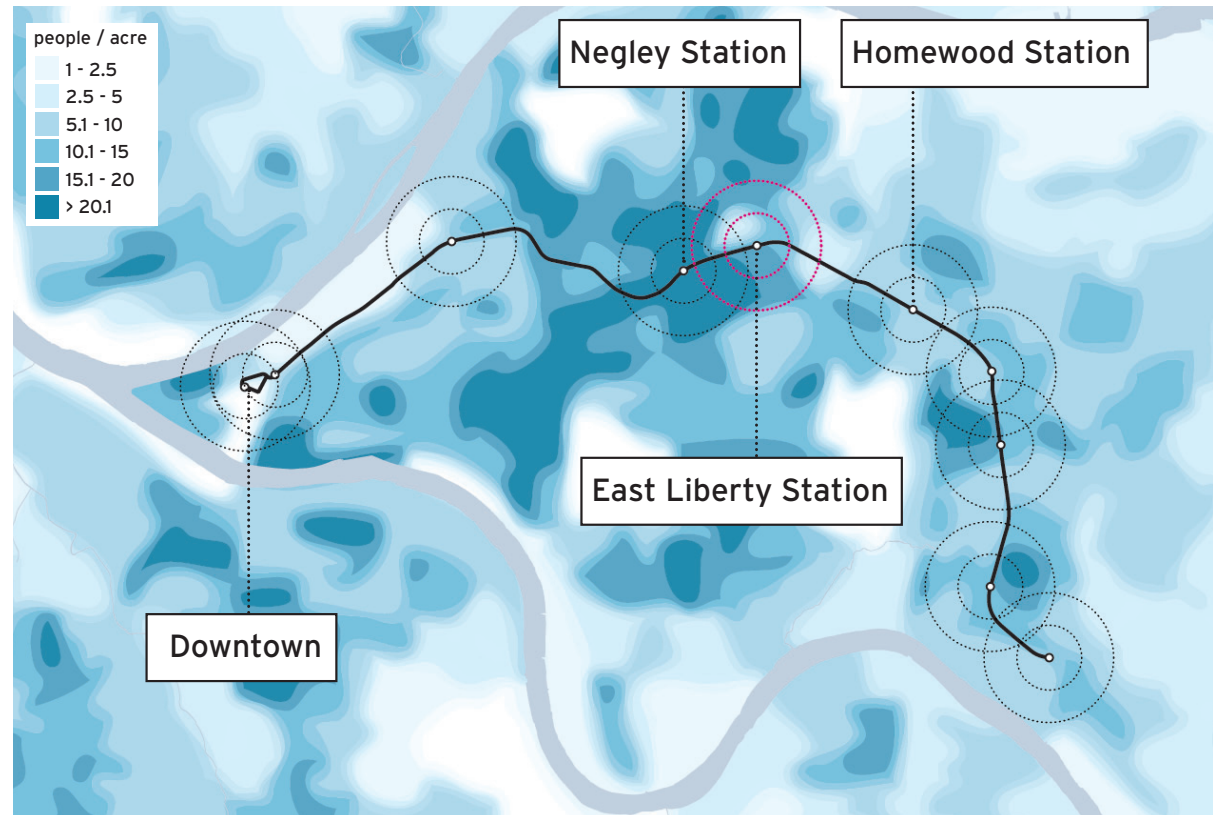
Approximately 6% of the City population resides within the study area. Household density per acre is much higher at nearly 21 units per acre compared to less than 5 for the City as a whole. The study area is also characterized by a larger percentage of non-white residents than the City average. While over 50% of people have attained less than a college degree, this statistic is better than the City-wide higher education figures.

Over 8,700 employed individuals currently reside within a half mile of the current East Liberty Station. According to the URA Main Streets market profile for the Penn Circle Commercial District (roughly corresponding to the study area), approximately 750 people are employed within this commercial district. The top neighborhood job categories include:

- Education, health and social services
- Professional, scientific, administration and waste management
- Retail trade
- Arts, entertainment, recreation, accommodation and food services

However, local unemployment is well above the regional and national averages at nearly 16%. Within this local population over a quarter of people live below the established poverty line. Median household income is 12% lower than the level for the entire City of Pittsburgh.

Population Density: 2010 Census



Demographic Profile	Study Area	City of Pittsburgh
Population	17,754	305,704
% Non-White	51%	34%
Households	8,286	138,739
Employment	8,725	148,197
% Unemployed	15.89%	6.8%
% < College Degree	53.70%	66.8% (25 yrs +)
Median Household Income	\$31,544	\$35,732
% People Below Poverty Line	26.51%	21.70%

Data: American Community Survey 2005-2009, Study area consists of census tracts within 1/2 mile of East Liberty Station

It is important to once again note the historical differences between the communities that comprise the study area. Statistics for more affluent Shadyside differ greatly when compared to areas to the north and east of the Busway/rail line. The neighborhoods of East Liberty and Larimer include 4 census tracts where:

- 80% of the population has attained less than a college degree
- unemployment rate is 23%
- median household income is \$24,000
- nearly 35% of people are below the poverty line

Each of these areas is classified as Severely Distressed by the Community Development Financial Institutions (CDFI) Fund, a division of the US Department of the Treasury. These figures are comparably less favorable than the entire study area which contains portions of Shadyside.

The Market Value Analysis (MVA) is a statistical tool that uses market data to classify geographic areas and produce a map of the varying market types within the City. Market types are designated according to clustering similar characteristics, including housing units, residential, sales prices, vacancy, percent commercial, new unit permits, code violations, foreclosures and section 8 rentals. With the goal of tailoring investment strategies to the conditions of each market area, the MVA is a tool to improve each unique neighborhood.

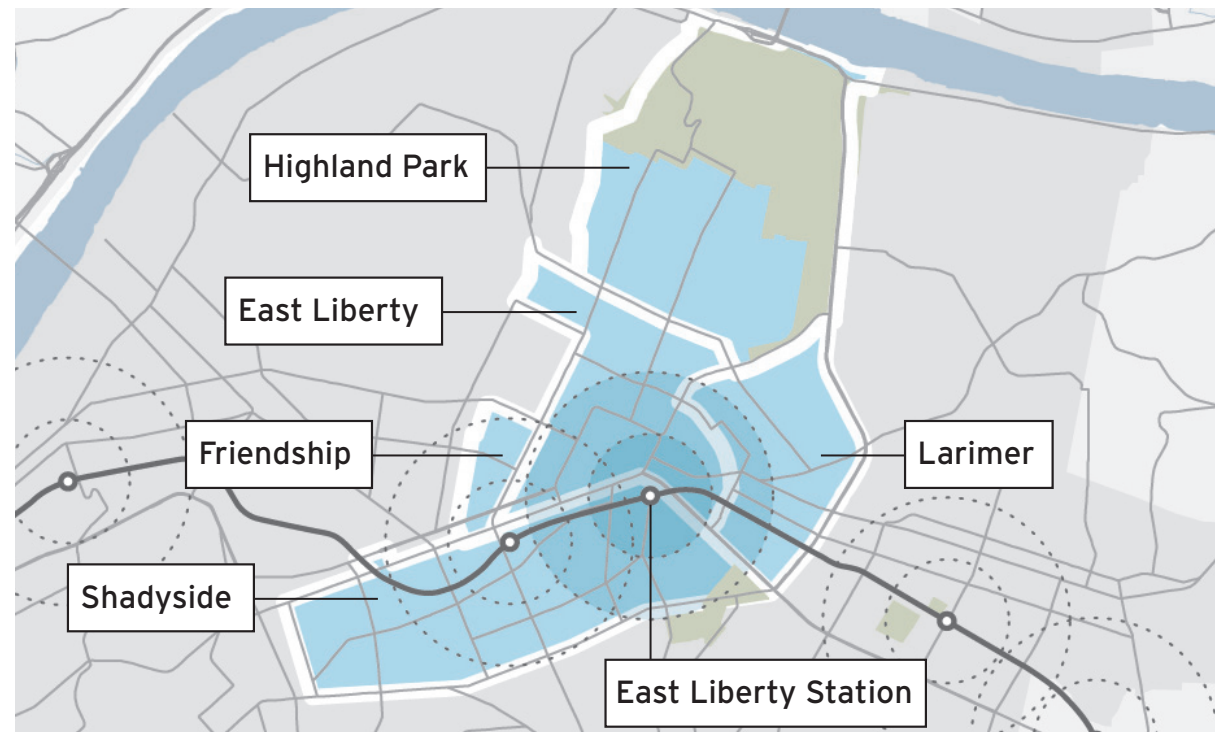
Once again, the differences between areas of the study area to the south versus those to the north are highlighted by the MVA. Areas of Shadyside rank among the highest market values in the City with portions closer to the upper midrange. Conversely, East Liberty and Larimer rank at the bottom among the poorest markets in the City. Within these two neighborhoods, the average residential sale price is nearly \$200,000 less than stronger markets and they both have much higher incidences of foreclosure and Section 8 rental units.

Additionally, they rank comparatively high in other neighborhood statistics including:²

- Code violations
- Vacant residential units
- Condemned properties
- % of taxable properties with liens (including over 2 years)
- Greater population loss after 1950

The need for intervention to prevent further market failure is evident throughout much of the study area. Though, these weaker markets are bounded to the north by another strong market in Highland Park as well.

2. PGHSNAP Neighborhood Profile



EAST LIBERTY STATION & TOD

32

East Liberty station already has many of the qualities that TOD principles would recommend. Being situated in a historic urban neighborhood, the station area is already a relatively dense mixed-use urban area with multi-modal connections.

However, the environment around the station varies radically from one direction to another from tightly knit single family houses immediately to the south and west to automobile oriented commercial uses to the east. Some directions reflect the goals of TOD better than others.

For decades, the area around the Busway station has been dominated by large expanses of surface parking and infrastructure not designed for pedestrian comfort. The station also suffers from being buried in the middle of the block between Highland and Shady a grade lower than that of the East Liberty business district. The station's only public street frontage is along a section of Ellsworth Avenue that has historically not been a front door. Thus no active uses actually face the station entry and access from East Liberty is only possible by crossing pedestrian bridges buried in the back of the block. Large blocks and a lack of



north-south connections also limits the pedestrian efficiency of the station making for a smaller 5 & 10 minute walking shed.

The existing transit station consists of a pair of platforms with canopy elements and integrated seating. A pair of pedestrian bridges, accessed by stairs, are situated at either end of the platforms, providing pedestrian connections across the railroad to East Liberty. The bridge elements and stair towers tie the station together visually and give it a recognizable identity.



Looking west from the station platform



The station from the western pedestrian bridge



Looking East from the Ellsworth Avenue station entrance

Classifying East Liberty Station

In the larger context of the East Busway, East Liberty can be classified as a *Mixed-Use Center*, meaning it is a fairly dense mixed-use urban place with a balance of housing and jobs present within a half-mile of the station. However, the area immediately adjacent to East Liberty Station is under developed. The majority of stations on the busway have a mixed-use character, but apart from Negley Station and the Downtown terminus, East Liberty has the highest land use intensity and is the most significant employment center on the Busway. Along the main stretch of the Busway, only Negley Station is surrounded by higher density development, with a larger residential population situated in the half-mile transit shed.

The station typology classification is useful because it offers a best practice development target baseline to measure TOD proposals against as future development occurs in the station area. eITRID uses the definition and development targets for mixed-use centers put forth by CTOD when analyzing development scenarios.

Mixed-use centers tend to cover a wide range of densities, from 25 units/acre to 75 units/acre with residential development typologies ranging from town houses to mid-rise apartment and condominiums. The development guidelines also recommend a broad mix of uses from housing and office to retail and institutional uses.



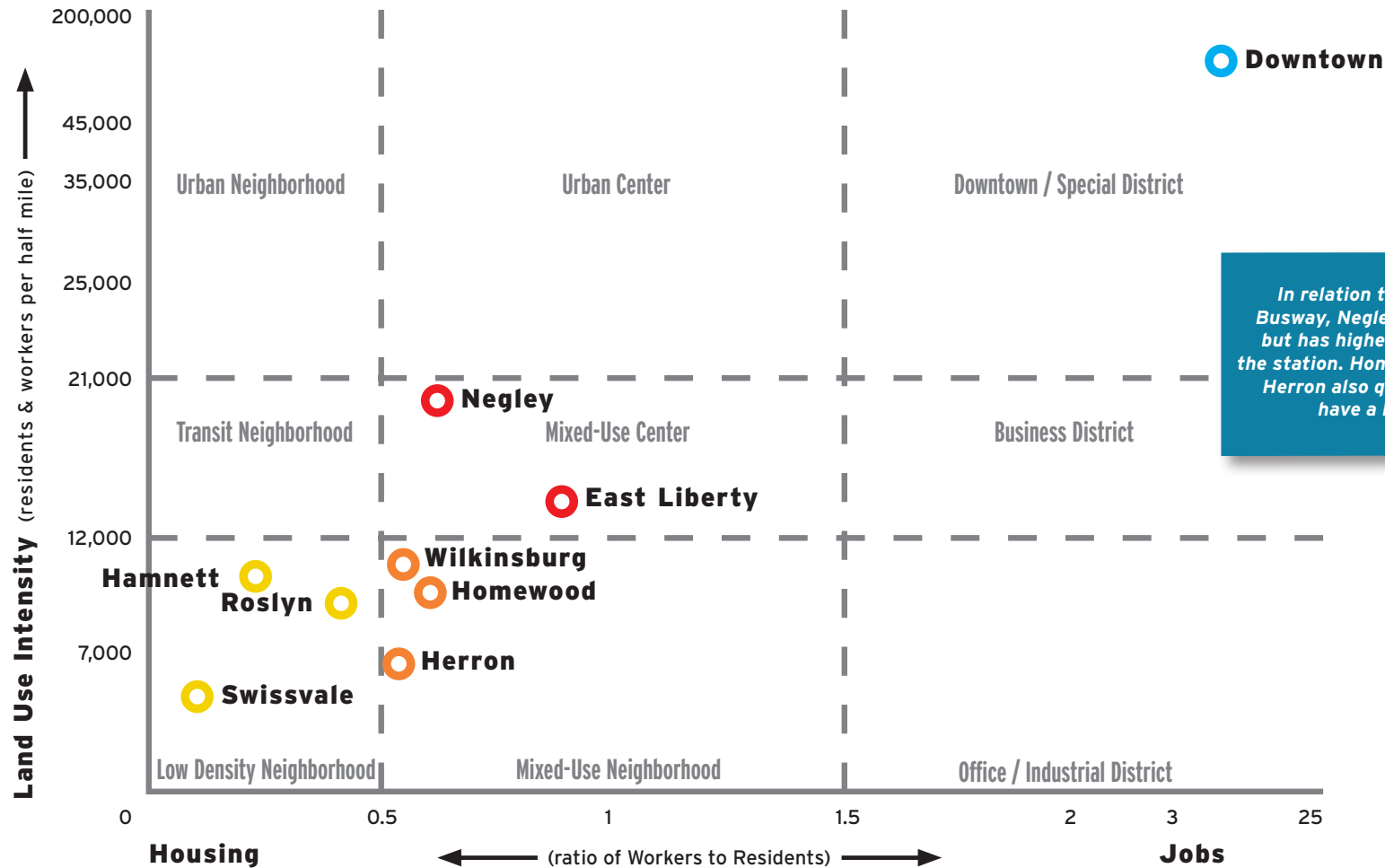
The Station looking west - Photo: Urban Redevelopment Authority of Pittsburgh



East Liberty Station - a grade separated bus rapid transit facility

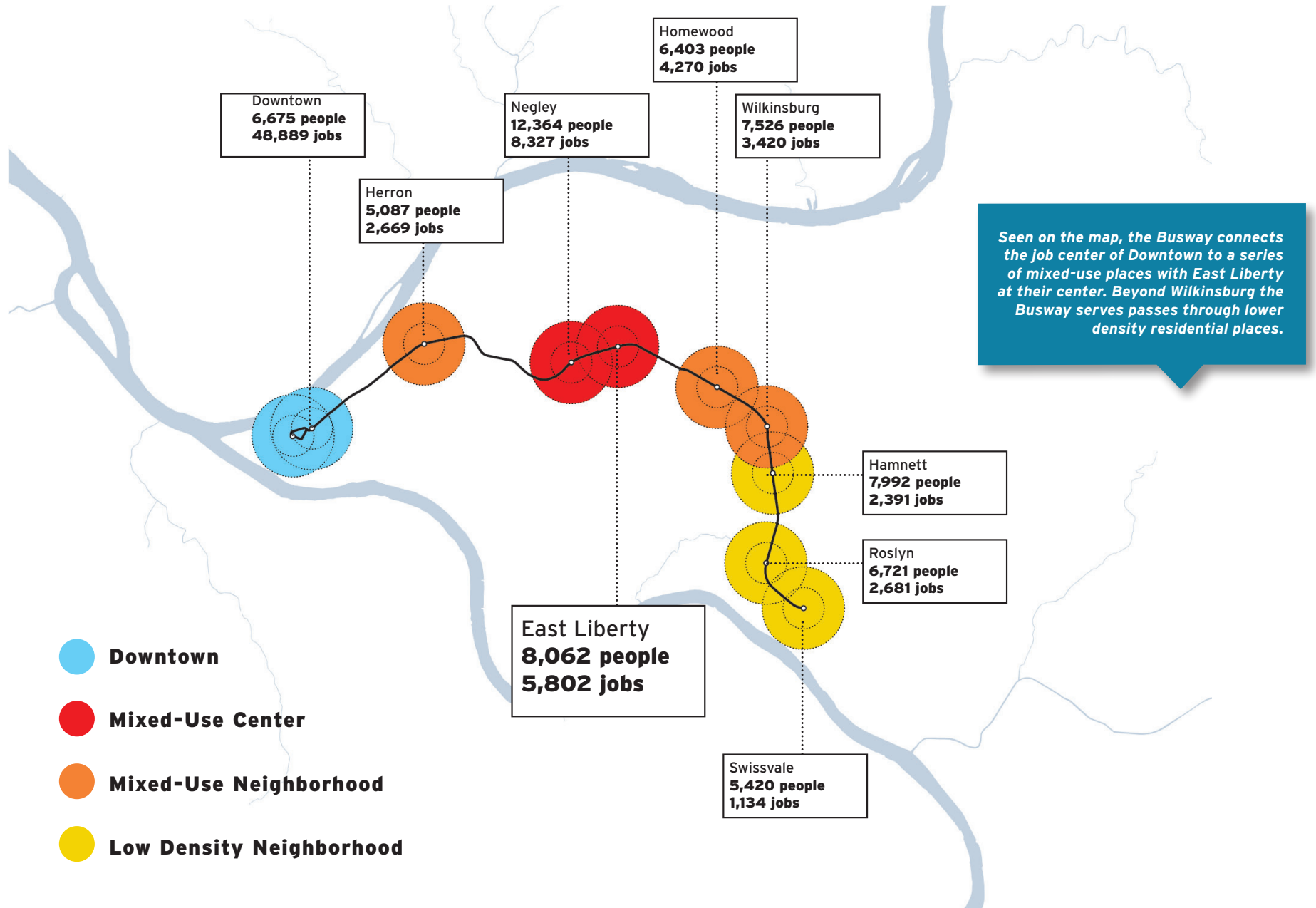
EAST BUSWAY TRANSIT ORIENTED DEVELOPMENT TYPOLOGY

East Busway Stops Compared:



In relation to the other stops on the Busway, Negley station is similar with but has higher housing densities near the station. Homewood, Wilkinsburg and Herron also qualify as mixed-use, but have a lower land use intensity.

Methodology & Data: Center for Transit Oriented Development / U.S. Census Bureau
 Population: Census 2000 aggregated from Census 2000 blocks / Jobs: CTOD Database2008 LED Work Area Characteristics total aggregated from Census 2008 Blocks. Note: East Liberty Station only reflects 2010 census population counts



A survey of best practice guidelines for TOD recommend the following targets for new development in a mixed-use center like East Liberty. These targets are compiled from a variety of sources including CTOD's station typology studies for Denver and Los Angeles, Marta's TOD guidelines for Atlanta and *The New Transit Town - Best Practices in Transit-Oriented Development* by Hank Dittmar and Gloria Ohland.

Following these guidelines for future development would suggest increasing residential development and exploring higher densities than currently exist around the station especially for new residential development.

In some cases these general guidelines conflict with the existing zoning around the station, or suggest densities that would be in conflict with the existing context in some parts of the station area.

DEVELOPMENT GUIDELINES FOR A MIXED-USE CENTER

Targets for 1/4 mile radius area:

Land Uses	Residential, Retail, Office, Civic & Entertainment
Residential Density	25 - 75 Units / Acre Gross
Floor to Area Ratio	3.0 - 10.0 (1.0 Min)
Housing Types	Midrise & Lowrise Multi-family, Town-houses
Retail	Over 50,000 sf
Scale & Mix	4 - 15 Stories Vertical mixed-use desirable
Transit Function	<ul style="list-style-type: none"> • Transit origin and destination. • Park-and-ride, if any, is secondary. • Rail or BRT interface with multiple local bus lines.

East Liberty & the TOD principles

Applying the TOD principles to East Liberty Station shows that it already has many of the qualities desirable for TOD. However, the principles also suggest that deliberate planning and new infrastructure investments will be required to realize its full potential as a TOD.

1. Maximize location efficiency

The area around the station already contains a mix of uses, providing a range of housing choices and employment opportunities. However, automobile oriented infrastructure, under-developed parcels and uses dominated by large surface parking lots, create a fragmented pedestrian environment around the station. New development should contain a mix of uses and strive to create a continuous high-quality public realm.

2. Build a mix of housing choices and complementary uses

Residential density varies around the station with little or no housing in some directions. There are opportunities to increase housing density and choice in the station area. New medium-density residential uses could be a component of new development to the north and east of the station, bringing blocks around the station closer to the desirable level for a Mixed-Use Urban Center of at least 25 units/acre. New housing should be complemented by retail, office and other uses.

3. Create walkable places for people.

Walkability around the station varies radically from one edge of the station to another. In part this is due to the recent reconstruction efforts along Penn Circle which brought the pedestrian environment in this area up to a very high standard through new streetscape improvements.



New Penn Avenue Streetscape



Penn & Shady Intersection

The diversity of conditions is visible in the diagram on the next page and in the images below. Letter grades are used to characterize both the safety and comfort of the pedestrian environment. The station itself could also be improved in the future with improved landscape, lighting and seating elements. Pedestrian improvements to the core of East Liberty have also been proposed and should be implemented to support TOD.

Grading Walkability:



Excellent: Sidewalks and crosswalks are in good condition and include upgraded lighting, planting areas and benches.



In Need of Improvement: Intersections are wide with little or no landscaping; intersection designs require pedestrians to make multiple crossings.

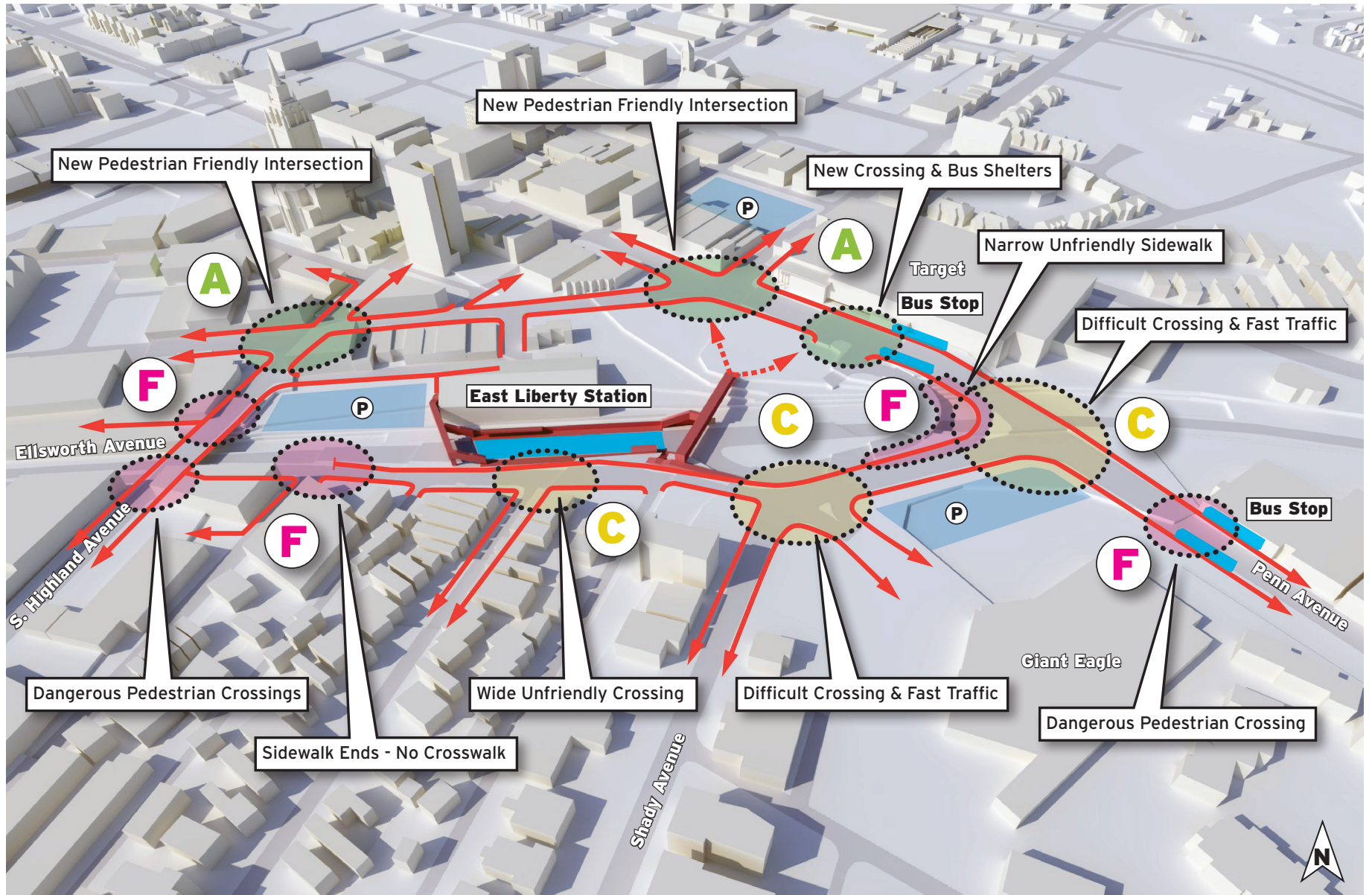


Poor: Intersections with no safe means for pedestrian crossing and/or missing or narrow sidewalk; areas with little or no landscaping.



Ellsworth sidewalk ends after the station

WALKABILITY ISSUES AROUND THE STATION



4. Maximize station connectivity and visibility.

The most public frontages around the station are currently dominated by a bus access ramp connecting the station to a now unused street level bus plaza. The entire Penn Avenue and Shady Avenue edge is defined by the busway ramp which is separated by a gap from the bridge supporting Penn Avenue itself. This public front door to the station is shown at right. The sidewalk is channeled between a concrete barrier and a chain-link fence which limits the visibility of the actual station platforms along its most public frontage at the intersection of Penn and Shady.

When the station was built, the main access route from this edge was through a bus layover and transfer plaza at Penn Avenue and Penn Circle South. This plaza was connected to the station via a pedestrian bridge. This street level plaza is no longer in use and in the current planning will become a development site which will put even more pressure on the Penn and Shady edge of the station as its most public edge in the future.

In large part this condition is a result of the curved busway ramp which sits between this area and the station platforms. The ramp is no longer in use as part of Port Authority's operations and is currently only functioning as an emergency vehicle access route. Providing an alternative emergency access route would allow the ramp to be repurposed as a key component of the pedestrian entry sequence for the station.



The Penn Avenue edge of the station area



The Shady Avenue edge of the station area

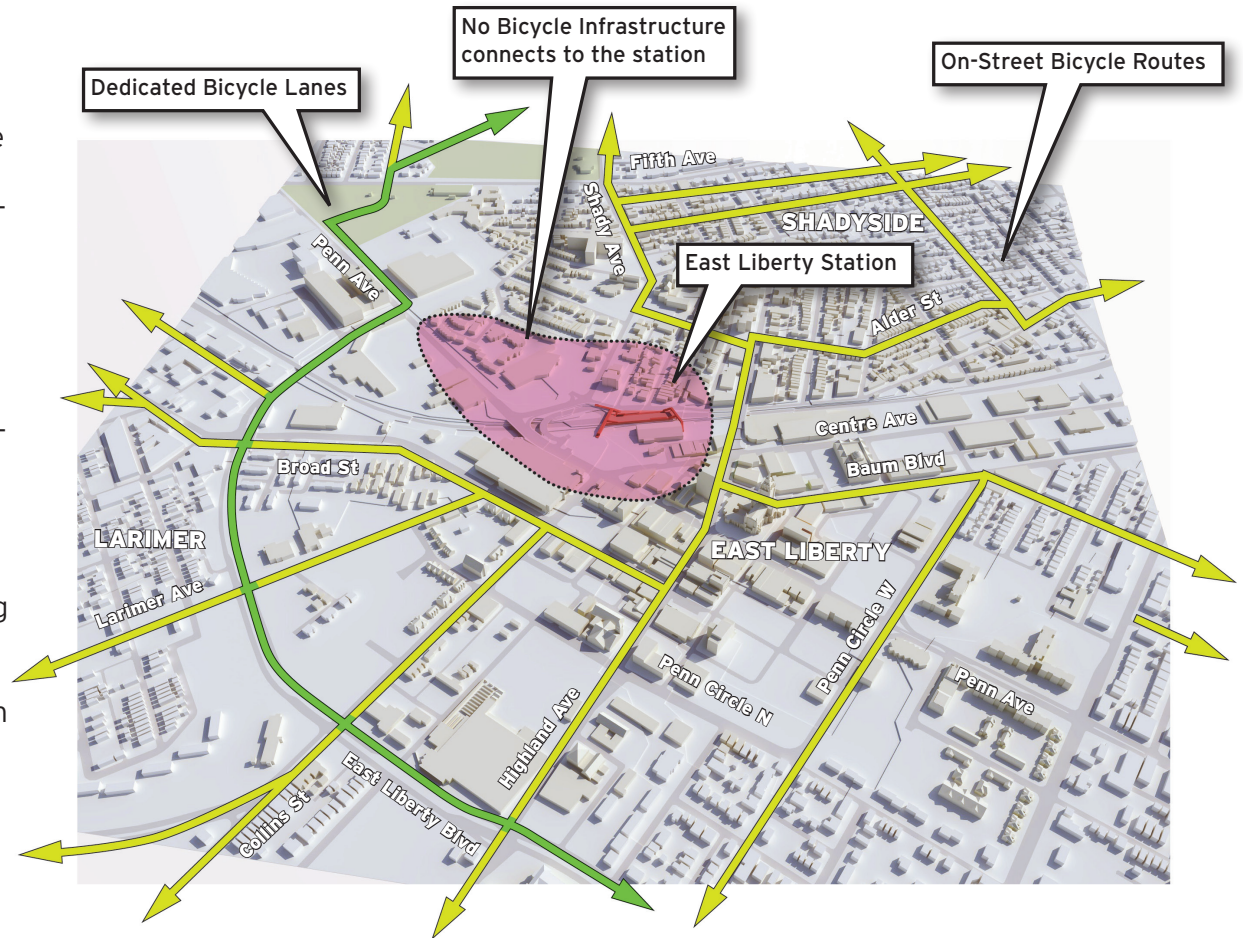
5. Design streets for all users.

The area around the station, particularly to the south and east is designed primarily with automobiles in mind. Pedestrians have difficulty navigating key intersections in this zone including locations with major on-street bus stops along Penn Avenue.

The bicycle infrastructure connections to the stop also suffer from the automobile oriented streets, again particularly along Penn Avenue to the east. In recent years, the City of Pittsburgh has made great progress in improving bicycle facilities throughout the city including the dedicated bicycle lanes along East Liberty Boulevard, Beechwood Boulevard and in Mellon Park. There has also been significant progress in adding shared lane markings and signage to key on-street routes. However these existing routes only serve the station area well from the southwestern side, approaching from Shadyside through smaller side streets.

Key missing links in the bicycle infrastructure exist on the section of Penn Avenue between Shady and East Liberty Boulevard and on Shady Avenue between Penn Avenue and Alder Street. The area shown in pink at right is in need of a complete street redesign to allow more modes of transportation to access the most public edge of the station and to support future TOD.

The station also lacks effective bicycle parking with only a single older bicycle rack. Redevelopment of the station should include a secure enclosed bicycle parking facility to encourage transit users to bicycle to the station.



Existing bicycle parking at the station



Example of Secure Bicycle Parking - MIT Campus, Cambridge

6. Manage parking effectively.

Parking in the station area and the greater East Liberty business district is a mix of public and private surface lots, limited structured parking associated with newer developments and on-street spaces, some of which are regulated by residential permit areas. Currently there is no dedicated parking for the station, although a section of the Shady Hill Plaza is signed to allow for station parking in what appears to be an effort to manage a tendency for unintended use of an over-sized parking field next to the station.

Both improvements to parking management and additional capacity are needed in the district around the station. New parking around the station should be managed as a shared resource for store patrons, office workers, transit riders, and residents to the greatest degree possible. Parking resources should be managed through coordination, better wayfinding, modernized payment methods and more consistent, demand driven pricing. Pricing strategies that promote transit utilization should be explored.



7. Capture the value of transit

Significant investment and redevelopment has already occurred around the station area over the last decade. Despite these successes, further investment is constricted by limited and obsolete public infrastructure, especially connections to the transit system. A mechanism is needed to capture the value of transit to reinvest in the station itself, and the infrastructure around it in order to facilitate future TOD.

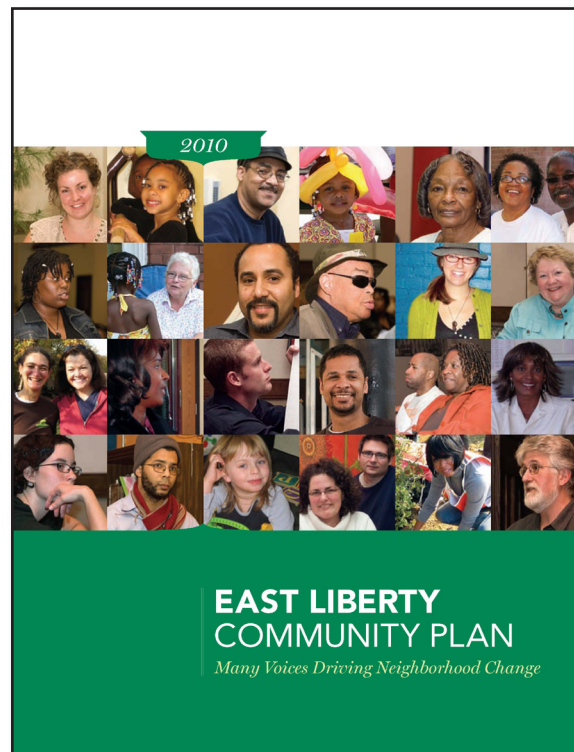
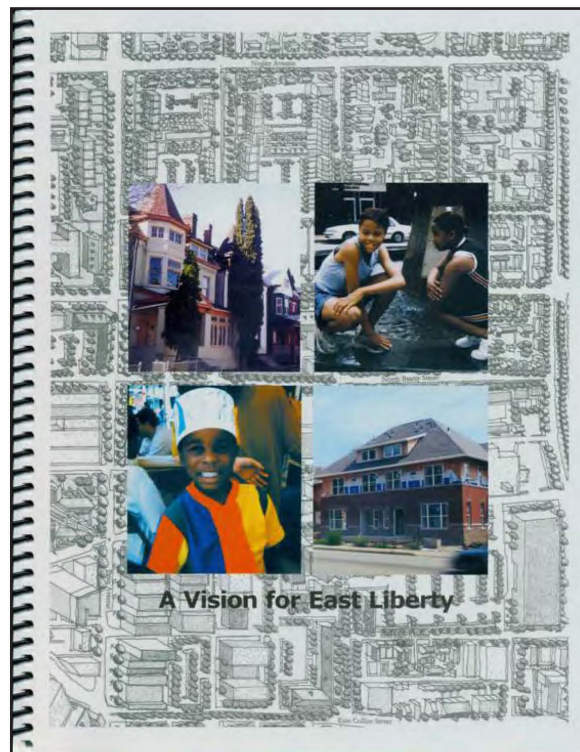
To date, tax increment financing (TIF) has been one of the most widely utilized tools for funding necessary public infrastructure that facilitates large scale redevelopment. This study will explore the feasibility and implications of creating a TRID as a means of capturing the value of transit district wide for reinvestment in a range of infrastructure needs in the station area to facilitate TOD and other development initiatives.

EAST LIBERTY PLANNING CONTEXT

ELDI has commissioned and led numerous community planning studies for the neighborhood over the last two decades. This work has included a community vision plan in 1998 and a plan update in 2010. In addition to the comprehensive vision plans, numerous sector and project specific studies have been completed as well as a

vision for green infrastructure and design guidelines for the neighborhood core. There have also been major studies of the Penn Avenue corridor and its relationship to multiple East End neighborhoods.

Below left: 1999 Community Vision, Below right: 2010 East Liberty Community Plan



Major Studies

- A Vision for East Liberty - 1999
 - Penn Circle Conversion Study - 2001
 - Street-Works Plans - 2003 & 2007
 - Development Guidelines for the Center of East Liberty - 2004
 - East Liberty Town Square - 2005
 - Penn Avenue Corridor Plan - 2006
 - Bakery Row Vision Plan - 2008
 - East Liberty Green Vision - 2008
 - Penn Avenue Corridor: Urban Catalogue & Streetscape Program - 2009
 - Parking Study - 2009
 - East Liberty Community Plan - 2010
 - Larimer Vision Plan - 2010
- ## Transit & TOD
- Eastern Corridor Transit Study - 2003
 - A Toolbox for Transit Oriented Communities - 2006
 - Eastside TOD TRID/TIF Analysis - 2008
 - Allegheny Places - Allegheny County Comprehensive Plan 2008
 - Connect 09 Transit Development Plan - 2009
 - East Liberty Station Development Strategy - 2011

EAST LIBERTY 2010 COMMUNITY PLAN: EASTERN GATEWAY GOALS

- **Develop a plan for the Shady Avenue & Penn Avenue intersection to foster development along the street edge and reposition the existing parking.**
- **Work with existing and new property owners to encourage community-friendly, active façades with consistent setbacks along Penn Avenue.**
- **Redevelop the East Liberty busway station and bus loop area to create transit-oriented development with anchor retail and parking.**
- ✓ ● **Rebuild infrastructure where Penn Avenue meets Penn Circle East to restore it to a four point intersection and create good traffic and pedestrian flow.**
- **Make accommodations for cycling and include bicycle parking with new infrastructure projects.**
- ✓ ● **Develop “landmark” anchor retail on the former Penn Circle high-rise site with an entrance on Penn Avenue.**

Source: ELDI 2010 East Liberty Community Master Plan

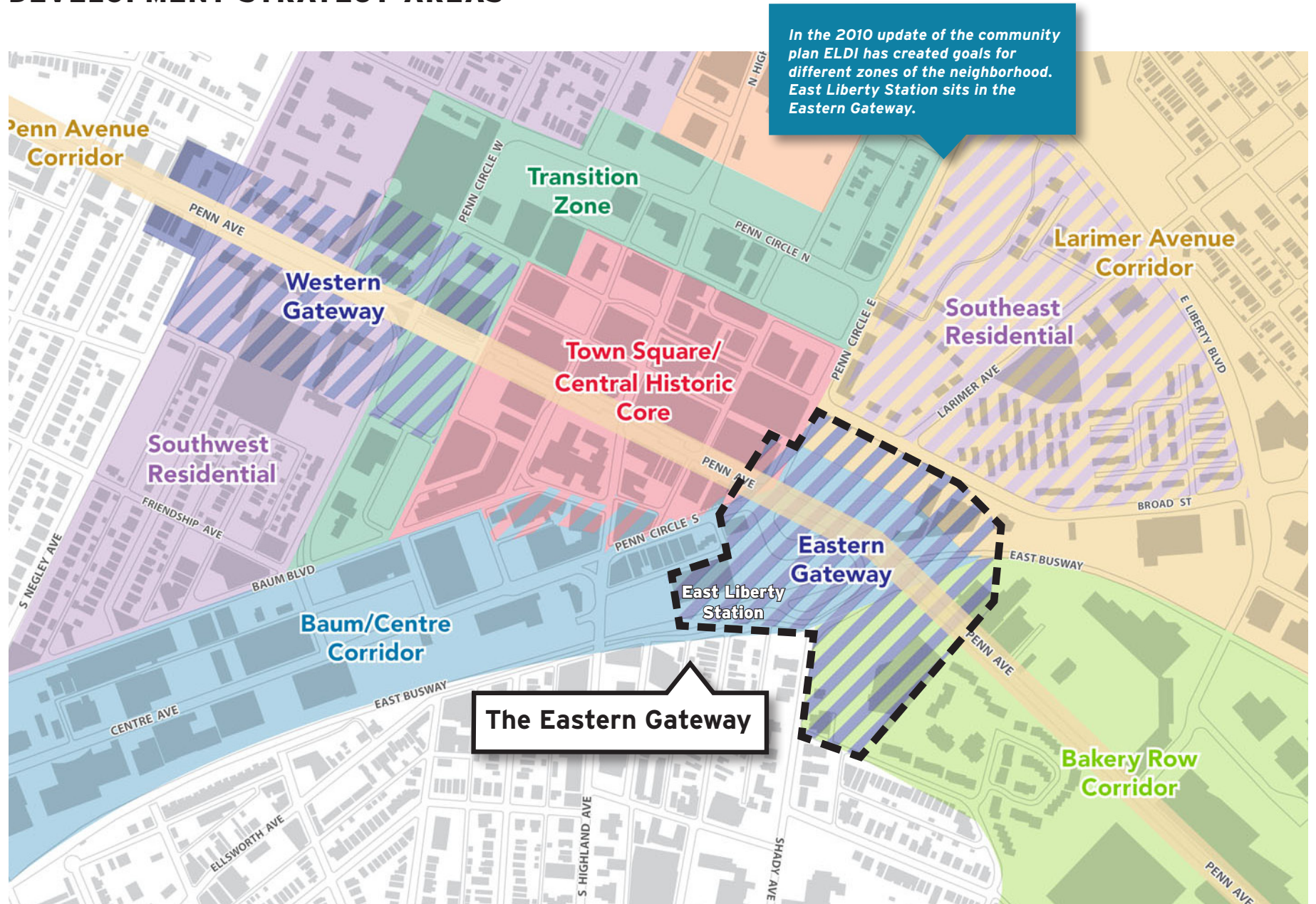
2010 Planning Areas & Goals

The 2010 community plan summarizes the previous planning work and puts forth a vision for the future of East Liberty. The 2010 plan is a baseline guiding the eTRID planning recommendations.

For the 2010 plan, the neighborhood was divided into a series of geographic areas and distinct goals were articulated for each area. The station and the TOD parcels immediately adjacent to it are situated in the Eastern Gateway, as shown on the following page. Six major goals are put forth for the Eastern Gateway, two of which have already been achieved.

Rebuilding the station and the bus loop to create TOD, is one of the major goals for the Eastern Gateway. The other goals of bringing active uses up to the street edge along Penn and Shady and introducing bicycle infrastructure should inform the redesign of the station as well as future TOD around it.

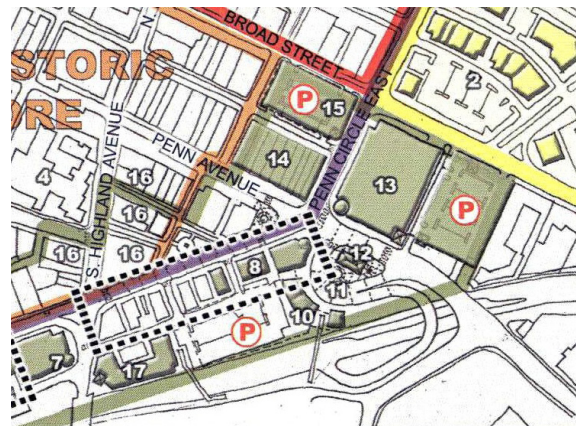
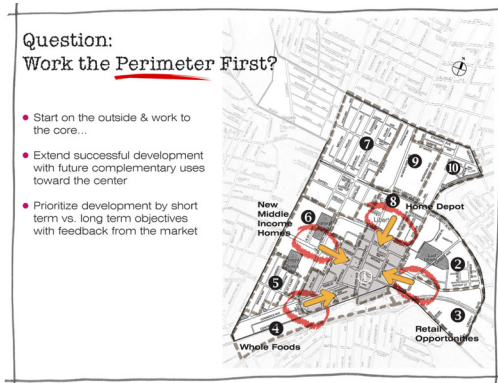
EAST LIBERTY 2010 COMMUNITY PLAN: DEVELOPMENT STRATEGY AREAS



In the 2010 update of the community plan ELDI has created goals for different zones of the neighborhood. East Liberty Station sits in the Eastern Gateway.

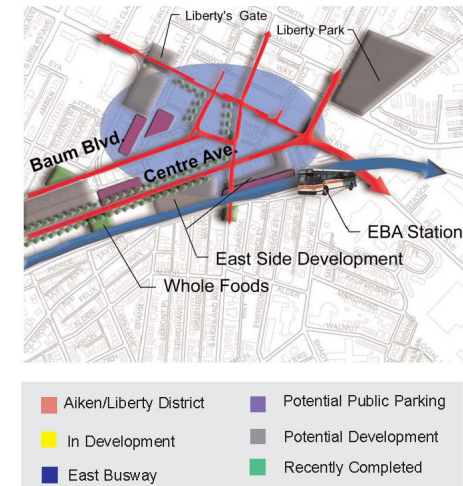
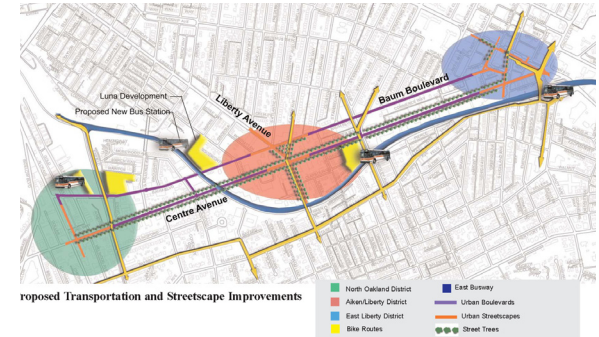
Planning & Development Studies

The 2010 plan is informed by multiple previous planning studies for the area around the station and was followed by a study on the redevelopment of the station and how it could be integrated into the Eastside III & IV development. Key urban design plans from previous studies completed by ELDI in collaboration with the URA, Mosites, PAAC and the Department of City Planning are shown on the following pages.



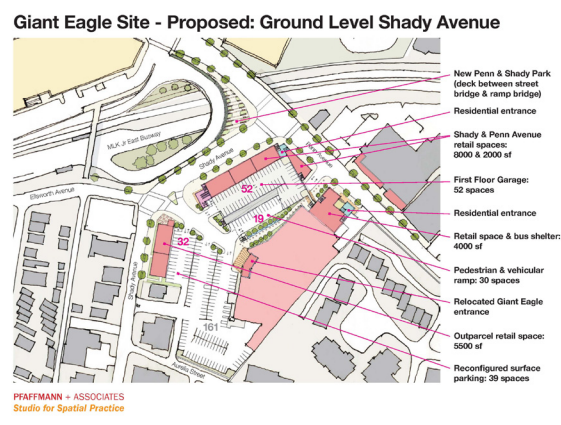
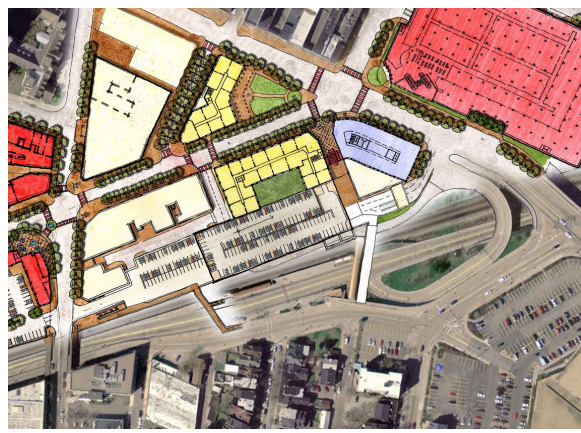
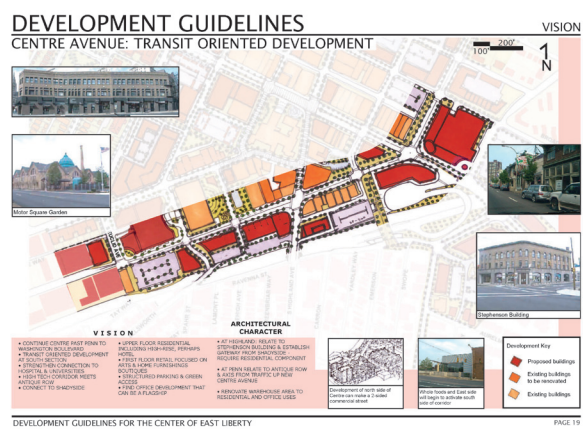
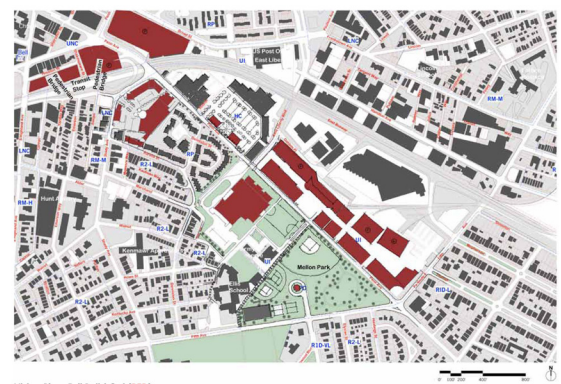
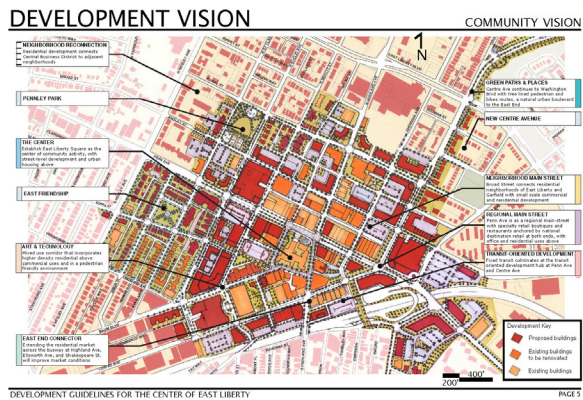
Street-Works Plan - 2003

In 2003, Street-Works consultants proposed a development strategy for East Liberty aimed at leveraging the market strength of surrounding neighborhoods to reestablish East Liberty as a retail destination. The Street-Works plan proposed focusing initially on bringing new retail uses to the edges of historic core, including a major new anchor at Penn Avenue and Penn Circle. The plan also proposed introducing a mixed of uses around a reconfigured transit plaza .



Baum-Centre Corridor Development Strategy - 2004

The Baum-Centre Corridor Development Strategy, led by the Pittsburgh Department of City Planning, focused on the corridor defined by Baum Boulevard and Centre Avenue. It examined the core of East Liberty in relation to other major development sites along the corridor, including the area adjacent to Negley Station. The development potential shown for East Liberty Station is consistent with other contemporary planning.



Development Guidelines for the Center of East Liberty - 2004

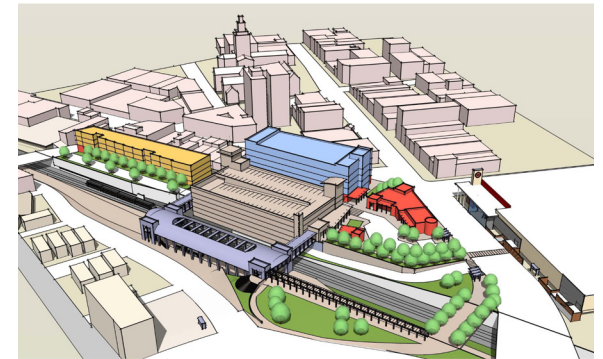
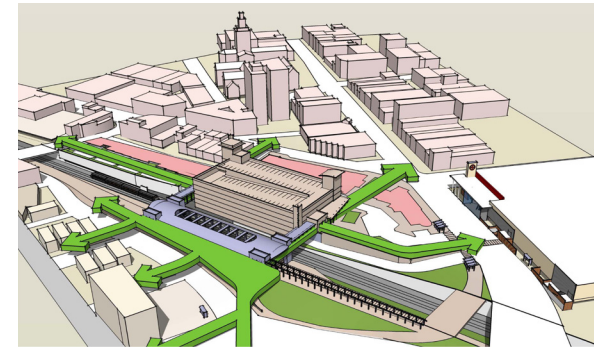
The 2004 plan by Rothschild Doyno Architects shows the introduction of new mixed-use TOD along Centre Avenue and at Shady and Penn. New buildings are shown at Penn and Centre that redefine and normalize the intersection. The station area itself is reorganized into an upper level transit plaza with a single major new pedestrian bridge connecting through the block from Ellsworth to Centre.

Street-Works Plan Update - 2007

The 2007 Street-Works plan updates the vision for development adjacent to the station reflecting the development of Eastside II and the new Target store. The plan shows new mixed-use buildings with retail, housing and office uses, and a parking garage in the blocks to the north of the station. A major pedestrian connection with ground floor retail leads to the existing eastern pedestrian bridge of the station. A bus layover area is provided below the parking deck for on-street bus routes.

Bakery Row Vision Plan - 2008

The 2008 plan by Pfaffmann Associates and Studio for Spatial Practice explores intensifying development on the Shady Hill Plaza site next to the station. New mixed-use buildings define the street edge of Penn and Shady and include retail and housing directly adjacent to the station. The plan also proposes a pedestrian plaza at Penn and Shady. Future development is also envisioned for the Penn Avenue corridor including scenarios for redeveloping Reizenstein school.



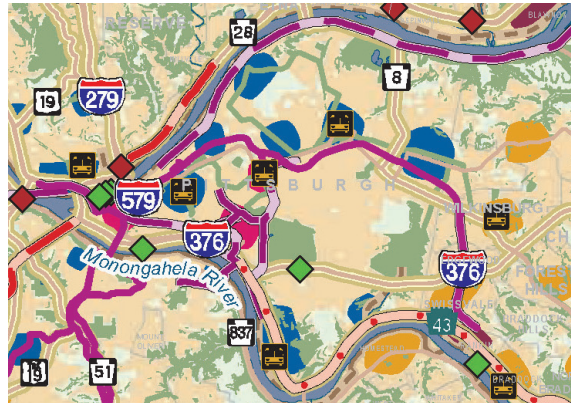
East Liberty Station Development Strategy - 2011

The 2011 plan by Urban Design Associates proposes reconstructing the busway station and integrating it into the development of Eastside III & IV through a pair of pedestrian bridges and a multimodal parking facility. The station remains in its current location, but is reconstructed as a partially enclosed transit hall. The Eastside development includes a mix of residential, office and retail uses with a major pedestrian connection to Penn and Centre intersection which is fronted by retail spaces. The design accommodates a bus layover space on the lower level of the garage, which has since been deemed unnecessary for operations.



Regional & Transit Planning Studies

Two recent regional studies of significance to TOD in East Liberty are Allegheny County's 2008 comprehensive plan *Allegheny Places* and PAAC's *Connections 09 Transit Development Plan*.



D. Encourage Transit-Oriented Development

Transit-oriented development (TOD) is an important national land development trend that promotes:

- Compact, relatively dense development within walking distance of a transit station
- A '24/7' mix of uses – transit origins (housing) and destinations (jobs, retail, schools, medical, civic)
- A safe, interconnected and inviting pedestrian environment – sidewalks, plazas, lighting, signage, and building transparency at the street level
- A new approach to parking – less of it, shared wherever possible, and (except for curbside spaces) out of view

Allegheny Places - 2008

The 2008 Allegheny Places Plan is the first comprehensive plan for Allegheny County. Key goals of the plan related to TOD in East Liberty include: targeting transportation investments to support job and housing growth, developing integrated multi-modal transit facilities, and promoting TOD at key stations including East Liberty.

Develop Transit Hubs

Outlying **transit centers** would:

- Act as focal points for local transit.
- Facilitate connections.
- Provide parking (where possible).
- Create neighborhood development opportunities (TOD).

Connect09 -Transit Development Plan - 2009

The Connections 09 Transit Development Plan examined the overall PAAC transit system and made recommendations to create simpler, more efficient, demand driven system. It made recommendations to consolidate underutilized routes, expand rapid bus service in major corridors and to develop key existing nodes including East Liberty Station as transit hubs.

DETAILED STUDY AREA ANALYSIS

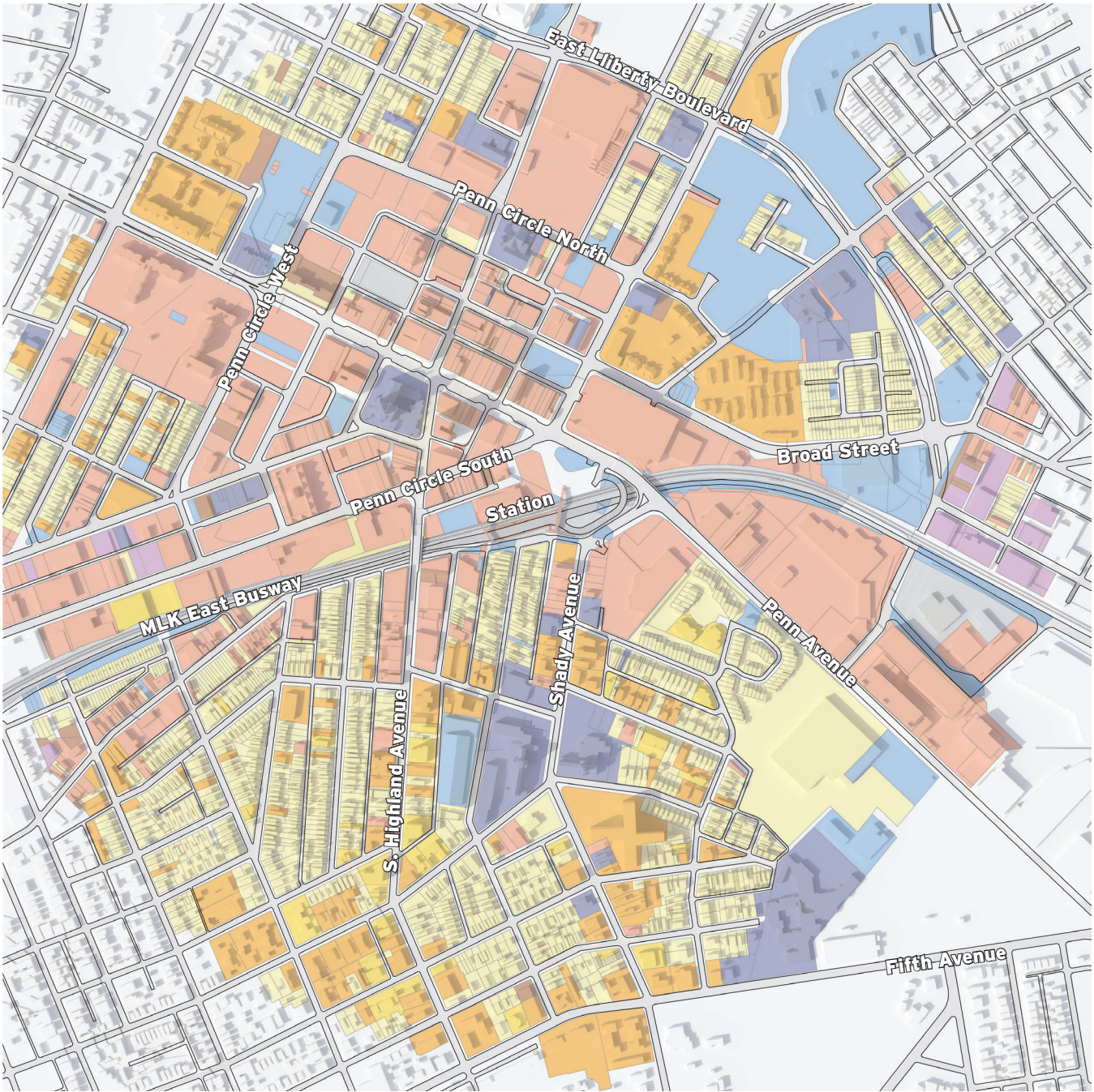
Study area aerial photograph with streets and new buildings overlay. Photo: Google



East Liberty Land Use

Key

- Commercial & Industrial**
 - Commercial
 - Vacant Commercial
 - Industrial
- Residential**
 - Residential
 - Residential Condominium
 - Residential Large-scale Rental Apartment
- Institutional**
- Government**
- Utilities**



Source: City of Pittsburgh & Allegheny County GIS | Studio fSP

Land Use Analysis

Today East Liberty already has many of the attributes of the idealized *Mixed-Use Center* TOD. The neighborhood contains a broad mix of uses including a variety of residential types and price points, complemented by main street retail, churches, office, industrial and government/school facilities. However despite this diversity, most of the activity occurs within segregated areas. Unlike an idealized *Mixed-Use Center TOD* East Liberty Station has only lower density residential use immediately adjacent to the primary transit station to the immediate south. Moving in other directions the adjacent land use is dominated by automobile oriented commercial uses, surface parking and commercial uses.

Density

The residential density of the half-mile radius around the station varies widely from block to block with an average of only 4.5 units per acre across the entire study area. While some blocks have no housing, others have densities upwards of 25 units per acre. The current residential density pattern is less than ideal, with entire areas around the station devoid of housing particularly to the north and east. These areas tend to be dominated by single use retail or office areas as well as large expanses of surface parking. Looking to the future of TOD in East Liberty, a more mixed-use pattern of development should be encouraged as should higher density residential uses particularly in the quarter-mile radius around the station.



Gross Residential density units / acre
 Source: U.S. Census Bureau Housing Units 2010 Census Blocks

< 2.5	10.1 - 15
2.5 - 5	15.1 - 20
5.1 - 10	20.1 - 25
> 25	> 25

Property Values

Considered in terms of property value, the half mile radius around the East Liberty Busway station comprises 390 acres currently assessed at approximately \$513 million. Within this study area, 33% of the acreage, currently assessed at \$139 million, is tax exempt. This represents approximately \$4 million of annual property tax revenue forgone by the local taxing bodies. The City, government authorities, and parking/utilities control 60% of this exempt land area (40% of exempt assessed value) with the majority of the rest utilized for religious purposes. Current annual property tax revenues of

Current Annual Property Tax Revenue:	
City of Pittsburgh	\$3,998,717.97
Pgh School District	\$5,153,903.16
Allegheny County	\$1,736,480.30
Total	\$10,889,101.44*

Parcel Sizes	Taxable	Exempt
< 1 acre	2,139	284
1-2 acres	21	14
2-3 acres	3	2
3+ acres	12	7

Source: Allegheny County Office of Property Assessments

*Does not include exempt property including parcels designated KOZ or within active TIF Districts

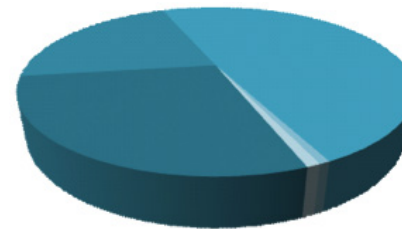
approximately \$11 million are generated by taxable properties within the study area.

The study area contains nearly 2,500 tax parcels with approximately 90% currently generating property tax revenue. Less than 3% of these parcels are larger than 1 acre. Of these sizable parcels, only 15 have been estimated as suitable for development given their current status or use. Property assemblage will be necessary for large scale redevelopment initiatives.

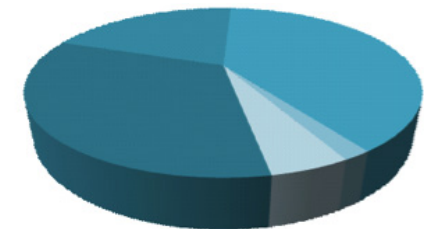
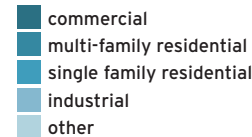
A rather high percentage of parcels are currently underutilized. Approximately 15% of parcels within the study area have an improvement to land value ratio of less than .95. Much of this area is currently poorly utilized surface parking, or larger parcels with inefficient development

	Study Area	City of Pittsburgh
Total Housing units	11,167	156,165
Single family detached	1,678	73,751
% Single family detached	15.03%	47.23%
% Owner occupied	27.15%	47.6%
% Rental	72.85%	52.4%
Vacant units	1,721	19,948
% Units vacant	15.41%	12.77%

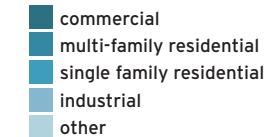
Source: US Census American Community Survey 2005-09; City of Pittsburgh



Taxable Land: Assessed Value



Taxable Land: Acres



patterns. Over 10% of the total land area is currently classified as vacant.

Approximately 75% of the land area is currently utilized for owner occupied or rental residential use. A much higher percentage of rental properties exist within the study area as compared to City-wide averages due to a concentration of subsidized housing. Of the 11,000 total housing units within a half mile of the transit station, over 15% are currently vacant.

Single family residential use accounts for approximately half of the total taxable assessed value and 40% of acreage within the study area. Many of those units are located within the heart of Shadyside to the south of the Busway. Portions of the primary residential area of East Liberty are captured within the northern boundary of the study area. Other pockets of single family residences can be found west of Penn Circle to the north of Baum Boulevard

and Centre Avenue towards Friendship and to the northeast in Larimer.

Approximately 20% of the taxable land area and assessed value comes from commercial multi-family rental properties. As mentioned, the concentration of rental units within the study is much higher than the ratio throughout the City. Multi-family units appear along much the same geographic areas as single family residences. Though once again, differences exist between the product types in Shadyside versus East Liberty and Larimer. A few larger complexes exist within Shadyside especially along the 5th Avenue, Shady and South Highland corridors. Many of the multi-family units however are within large former owner occupied residences that have been renovated. Both are traditionally offered at market rents.

Within the historically low income neighborhoods to the north, several large subsidized housing towers have

been recently demolished. These were replaced with modern apartment and townhouse complexes that still cater to low income residents. Most of the multi-family development occurs in larger 25+ unit structures or larger redevelopment sites as opposed to smaller renovated residences in Shadyside.

Commercial retail, office and mixed-use parcels comprise the majority of the rest of the land use within the study area. The primary commercial corridor runs between Baum and Center Avenues to the West into the Penn Avenue corridor including the central business district within the former Penn Mall loop. To the south of the Busway, ancillary commercial areas can be found along Ellsworth and South Highland Avenues. A small cluster of industrial buildings is situated behind the Busway in Larimer to the east of East Liberty Boulevard.

East Liberty Zoning

Key

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Mixed-Use Districts

- UNC - urban neighborhood commercial
- LNC - local neighborhood commercial
- HC - highway commercial
- UI - urban Industrial
- AP- residential/commercial planned unit development
- CP - commercial planned unit development

Residential Districts

- RM-H - residential multi-family, high density
- RM-M - residential multi-family, moderate density
- R3-M - residential three-unit, moderate density
- R2-H - residential two-unit, high density
- R2-L - residential two-unit, low density
- R1A-H - residential single-unit attached, high density
- RP - residential Planned unit development

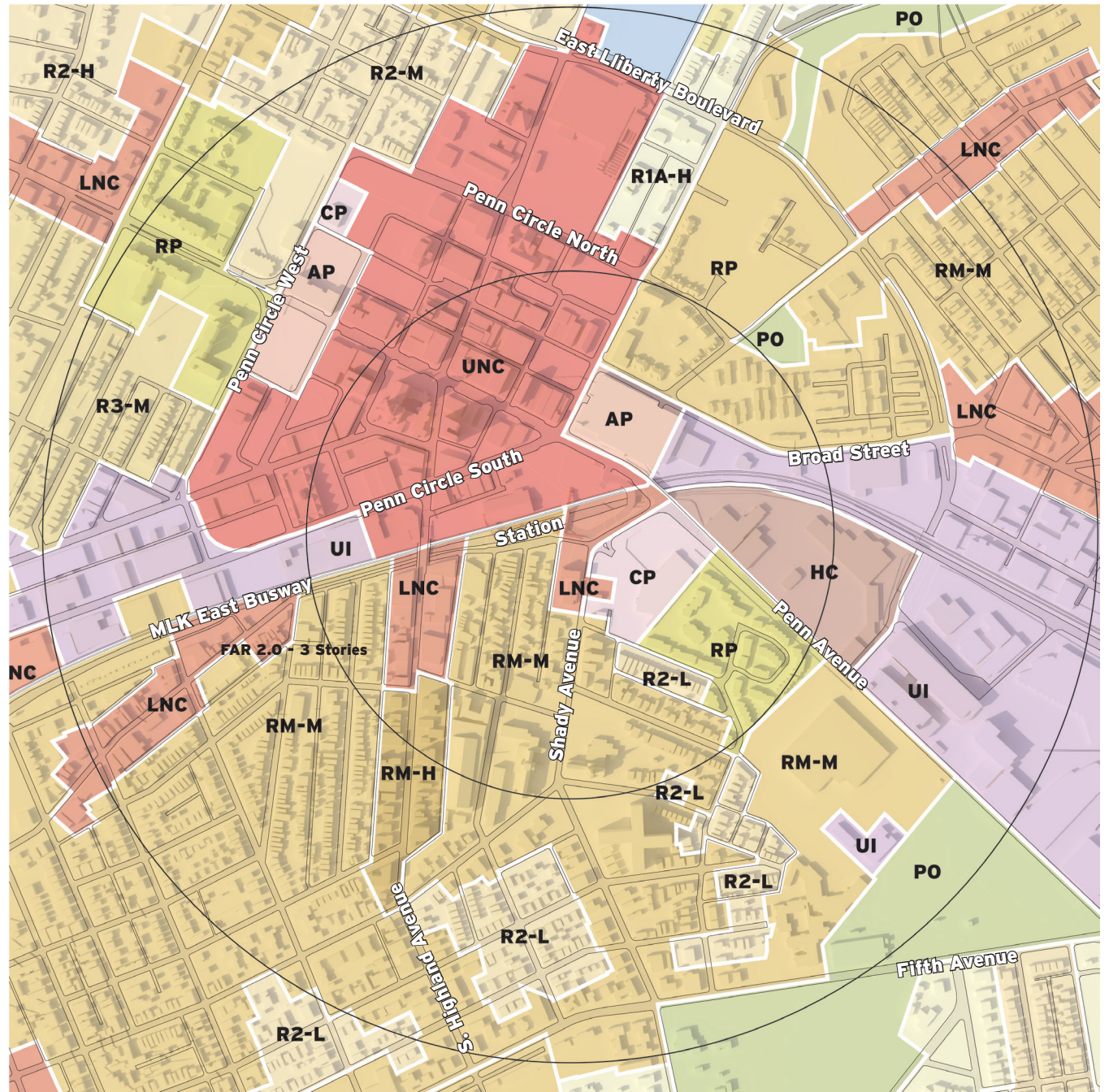
PO - parks and open space

Allowable Height & Density for key classifications:

- LNC FAR 2.0 - 3 Stories
- UNC FAR 3.0 - 3 Stories
FAR 4.0 - 4 Stories (1500' from station)
- HC FAR 2.0 - 5 Stories
FAR 3.0 - 5 Stories (1500' from station)
- UI FAR 3.0 - 4 Stories
FAR 4.0 - 4 Stories (1500' from station)
- RM-M 4 Stories
- RM-H 9 Stories

Planned Unit district height and intensity is generally regulated by that of the adjacent districts.

Source: City of Pittsburgh GIS & Zoning Code | Studio FSP



Zoning Analysis

The zoning around East Liberty station reflects the diversity of uses already discussed and explains some of the lower density land uses found in the study area. In general, the zoning is compatible with the intent of TOD, although some areas would ultimately benefit from a different and/or higher intensity zoning classification.

Much of the land immediately adjacent to the station is already zoned for some form of mixed-use under the Urban and Local Neighborhood Commercial, Planned Commercial and Planned Commercial/Residential categories. These zoning categories allow for a mix of uses including retail, office and a range of residential types. Of classifications in the

Pittsburgh zoning code, LNC and UNC are designed to encourage the type of mixed-use pedestrian oriented development consistent with TOD principles.

Adjacent to the station there are also areas of Urban Industrial and Highway commercial which also allow for a mix of uses including retail, office, limited industrial uses and some types of multifamily housing. These categories are less ideal for encouraging TOD, particularly the Highway Commercial category, which allows automobile oriented development standards and disallows almost all residential uses.

The remainder of the areas around the station are zoned exclusively for residential at a variety of densities with the immediately adjacent areas zoned for

multi-family. In general the residentially zoned areas are built out with existing residential uses ranging from detached single family houses to apartment buildings of up to 9 stories tall often at lower densities than are permitted by right.

In the residential area to the immediate south of the station in Shadyside, there are areas of higher intensity residential zoning including RM-M and RM-H. While much of this area is built out with smaller one and two unit buildings, the current zoning would allow for higher density residential development around the station in the future.



Mixed-use buildings in the Highland Ave LNC district



Single Family Houses in the RM-M district



Apartments in the RM-M district

Transportation Analysis

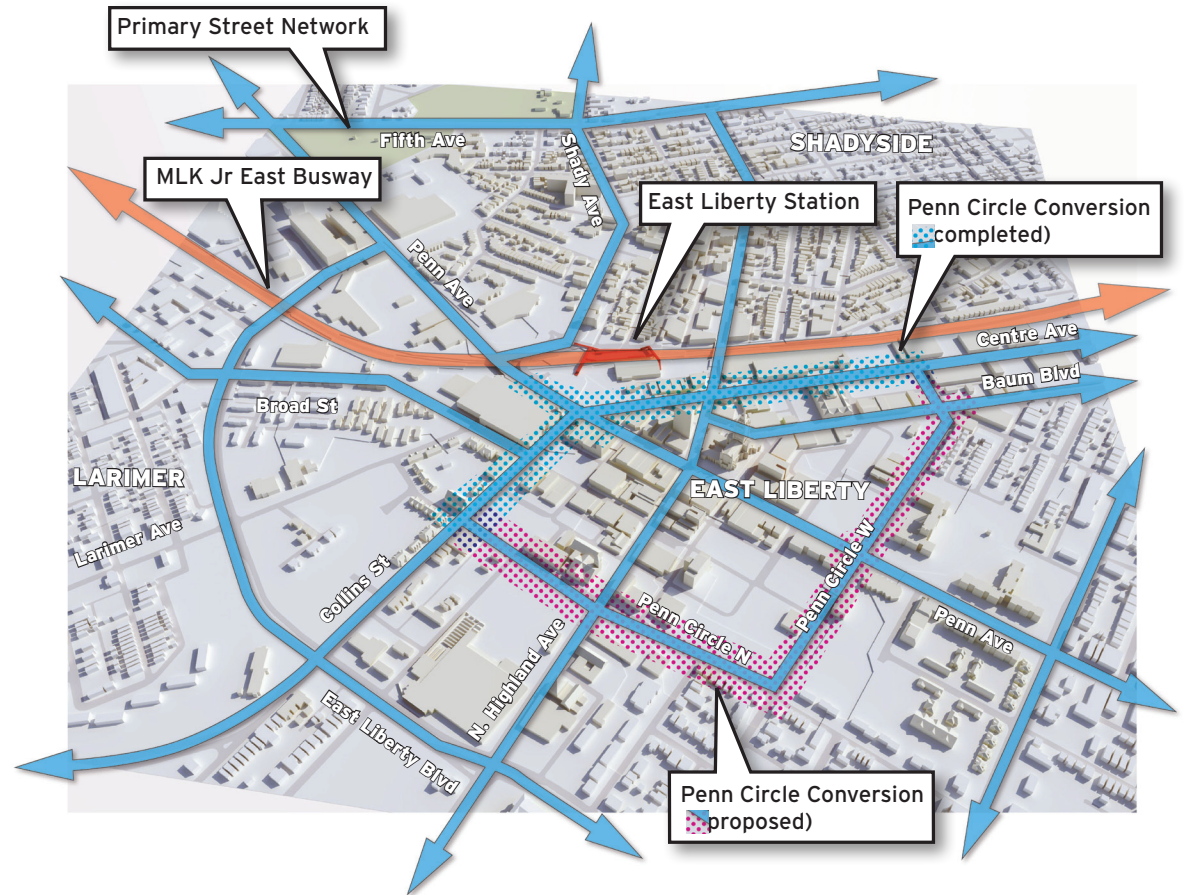
Pedestrian and bicycle mobility in the area immediately around the station have already been discussed as factors that limit the effectiveness of the station as driver for TOD.

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Despite these limitations of the station area, East Liberty is generally very well served by a range of transportation. East Liberty is a true multi-modal node in the transportation network including various roadway types, a high-density pedestrian environment and numerous bicyclists. It also features the highest ridership busway station outside of Downtown. Within the study area, resident workers travel on average 20 minutes to work. Approximately 73% of housing units have at least one automobile available. Workers utilize transit, carpooling, cycle and pedestrian networks to access their place of employment. Only 46% of commuters travel via a single occupancy vehicle.

Transit Serving East Liberty

East Liberty is very well served by transit with both on-street routes and numerous routes running on the MLK Busway. Over 66,000 people a day use the transit routes that serve East Liberty. A summary of the routes and ridership are provided on the following page. Popular on-street bus routes include the 64, 71A, 71B, 71C, 82, 86, 87 and 88. The 64 runs through Squirrel Hill to the Waterfront shopping area in Homestead. The 71A runs through Oakland to the Central Business District (Downtown), while the 82 runs from Wilkinsburg to Downtown



The intersection of Penn and Shady Avenues

through Homewood and the Hill District. East Liberty Station is one of the most heavily used stations on the Busway, and is a transfer point to numerous other on-street routes. At peak hours buses run 3-5 minutes apart. The trip between Downtown Pittsburgh and East Liberty Station is just over ten minutes.

East Busway Routes	
63A North Braddock Express	388
68B Blackridge - Laketon Express	364
68F Trafford Express	222
68J Lincoln Highway Express	925
EBA East Busway All Stops	10,216
EBS East Busway Short	2,103
P3 East Busway Oakland	3,289
P7 McKeesport Flyer	498
P10 Allegheny Valley Flyer	789
P11 Middle Road Flyer	174
P12 Holiday Park Flyer	1,926
P16 Penn Hills Flyer	774
P17 Lincoln Park Flyer	363
P67 Monroeville Flyer	419
P68 Braddock Hills Flyer	741
P71 Swisshelm Park - Rankin Flyer	601
P78 Oakmont Flyer	498
Subtotal: East Busway Ridership	24,290
On-Street Routes	
71A Negley	8,642
71C Point Breeze	4,183
74A Homewood - Squirrel Hill	1,347
74B Highland Park - RIDC	521
75 Ellsworth	1,778
77 Penn Hills	2,518
87 Friendship	2,595
81B Lincoln	4,763
86 Liberty	3,588
88 Penn	3,945
89 Garfield Commons	275
500 Highland Park - Bellevue	8,235
Subtotal: On Street Ridership	42,390
Total Ridership	66,680

Port Authority of Allegheny County, November 2010

Road Capacity

For the Penn Circle two-way conversion project, Trans Associates estimated future peak traffic volumes based on planned future development projects.* The current vision for development is presented in the next section. While the development program has evolved slightly, the Trans estimates are still a good prediction of future capacity needs.

Along Penn Avenue just east of Shady Avenue, traffic is expected to peak at about 1,100 vehicles per hour going westbound in the morning. Eastbound peaks in the afternoon with about 1,250 vehicles per hour. The volumes are likely less than predicted due to some changes to the development program, including projects like the Indigo Hotel which have not yet been realized. Even assuming the high estimate, a single traffic lane in each direction should be sufficient to handle the demand. Instead, Penn Avenue east of Shady Avenue consists of two lanes per direction and the approaches to Shady Avenue are even wider, including a dedicated high-speed right turn lane from Penn Avenue to Shady Avenue.

Clearly, the need for multi-lane arterials in East Liberty is dependent on the storage space for vehicles waiting at traffic lights. Conventional traffic engineering practice focuses primarily on the improvement to vehicular mobility, however, the multi-modal nature of East Liberty suggests that vehicular movement should be

TransAssociates, 2010 Build Traffic Volumes, Eastside Development 2010 Opening Year Analysis

carefully balanced with other modes of transportation. If East Liberty is committed to TOD, and creating an environment that encourages cooperation over competition, then it should embrace the notion of capacity constraint.

Continuous optimization of traffic signals and lane configurations at intersections is a never-ending challenge for communities fortunate enough to be growing. The limiting factor in urban arterial road design is the intersection and not the number of lanes between intersections. Flowing freely, a single travel lane can carry 1900 vehicles per hour, but when interrupted by a traffic signal, the capacity of a lane typically falls to 600-800 vehicles per hour. Thus it is the capacity of a road's major intersections that dictates the number of vehicles that can easily be accommodated.

For these reasons, eTRID recommends that Penn Avenue from Penn Circle East to East Liberty Boulevard be reimagined as a multimodal corridor that places a greater emphasis on transportation system capacity over car capacity only. Constraining car-carrying capacity will better utilize the overall road network, encourage greater transit use, improve safety for all users, prioritize pedestrians and bicyclists, and provide an attractive environment for future land development opportunities. Traffic volumes through the station area will remain high, but the recommended improvements will calm traffic and offer a balance between cars, pedestrians, bicycles and transit.



Source: ELDI 2010 East Liberty Community Master Plan

◀ Major Recent Developments

1. Whole Foods Market
2. Spinning Plate Lofts
3. Tana Ethiopian Cuisine
4. Navarro Design
5. Carnegie Library
6. Werner Building
7. East Side
8. 100 Sheridan Square and Penn Avenue Shops
9. Liberty Building
10. Penn Highland Building (Star Optical)
11. Kelly-Strayhorn Theater
12. Laughlin Building
13. 5801 Penn Avenue
14. Penn Manor
15. New Pennley Place
16. First Niagara Bank
17. Fairfield Apartments
18. Retail Development
19. Station Street Hot Dog and Sandwich Shop
20. Trader Joe's
21. Village of Eastside
22. Staples
23. Bakery Square
24. Kingsley Association Community Center
25. Home Depot
26. Scattered Residential Developments
27. Sojourner House MOMS
28. Friendship Academy

Infrastructure Changes

- a. One-Way to Two-Way Conversion
- b. Bicycle Lanes

Source: ELDI 2010 East Liberty Community Master Plan

Real Estate Market Overview and Current Business Climate

Commercial: The neighborhood saw its first spurt of commercial revitalization in the late 1990s with the construction of a new Home Depot retail store on the site of a failed Sears. Soon, Whole Foods Market followed on an abandoned stretch of Centre Avenue during the first phase of the Eastside project by the Mosites Company. Several buildings within the central business district were rehabilitated with a mix of offices above ground floor commercial space. Additionally, the restaurant and entertainment district along South Highland Avenue in Shadyside started to expand across into the East Liberty core.

Additional retail and entertainment space was added through the completion of the \$32.5 million 2nd phase of Eastside by Mosites adjacent to Whole Foods. Constructed on an assemblage of five parcels along the Busway to the South Highland Avenue bridge, this phase includes an 85,000 square foot, three-story multi-building development with a deck parking structure. Completed in 2007, the project features tenants including Walgreen's, TREK Bicycle shop, Wine & Spirits store, FedEx Office, Starbucks, a PNC Branch Bank, independent retailers and several restaurants. Mosites continued their efforts with development of a Target Department store on Penn Avenue which recently opened in the summer of 2011.

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Eastside II - Photo: The Design Alliance



Bakery Square - Photo: Pittsburgh Urban Redevelopment Authority

Around the same time as Eastside opened, the former East Liberty Station development along Penn Avenue rebranded itself as the Village at Eastside. Revitalization of the 130,000 square foot suburban style plaza commenced with the addition of the Pittsburgh area's first Trader Joe's discount gourmet grocery store in 2006. The complex added national retailers Staples, Tuesday Morning and Petland soon thereafter along with a host of smaller commercial services and regional retail.

Redevelopment of the former Nabisco bakery on Penn Avenue continued this momentum. Constructed in 1918, Nabisco vacated the facility in the late 1990s. The Regional Industrial Development Corporation (RIDC) took control and leased space to the Atlantic Baking Company

for several years. It was eventually taken over by the Bake-Line Group who declared bankruptcy in 2004. RIDC commenced remediation in 2007 and the property was purchased by Walnut Capital shortly thereafter with plans for redevelopment.

Known as Bakery Square, the \$150 million LEED Platinum project combined rehabilitation of the bakery complex with new construction. The urban lifestyle center combines over 200,000 square feet of class A office space with 160,000 square feet of first floor commercial space, a fitness center and 110 room Marriott SpringHill Suites. A 900+ space parking structure was also provided with an additional 99 surface spaces. In 2010, Google commenced occupancy with its first office in the Pittsburgh region. Various

programs of the University of Pittsburgh followed along with UPMC's Technology Development Center. Major commercial tenants include Urban Active Fitness, Anthropologie, Jimmy John's and several boutique retailers.

Residential: New higher quality mixed-income rental and affordable housing projects commenced alongside the commercial revitalization led by the efforts of ELDI, the URA and The Community Builders. In a little over a decade, 1,400 public housing units within three high rise structures - Liberty Park, East Mall Tower and Penn Circle Apartments - have been replaced with 450 new mixed-income units.

New Pennley Place, a \$23 million, mixed-income 174-unit apartment complex on Penn Avenue and Broad Street marked the first major housing investment in the troubled neighborhood in more than a generation. The project redeveloped a severely distressed, HUD-insured residential "superblock" created as part of the sweeping urban renewal. Phase I of New Pennley Place opened in late 1999 with 102 new and renovated apartment units in a mid-rise building, townhomes and duplex style residences. The next two phases followed in 2001 and 2002 with additional townhomes and duplexes, as well as a 38 unit low-rise apartment building for low income seniors. In total, New Pennley created 146 units reserved for low and moderate- income households along with market rate options.

Complementing New Pennley Place, Penn Manor Apartments was the first housing to replace the former East Mall Apartments demolished in 2005. Penn Manor features 55 attractive one and two bedroom apartments, with fully equipped kitchens, wall-to-wall carpeting, and energy-efficient heating and cooling systems. Additional amenities include on-premises laundry, storage spaces, and community room. With units leased at both income-based and market-rate rents, Penn Manor creates an economically diverse new address and complements the adjacent development providing a cornerstone of quality new mixed-income rental housing in East Liberty. The project provided space for 23 former East Mall residents while the other 32 units went from construction completion to fully leased status within 60 days.

The next wave of redevelopment focused on the former Liberty Park high-rise apartment site at Broad Street and Collins Avenue. The initial phase of the \$20 million Fairfield mixed-income complex consisted of 124 garden, townhouse and low-income units. Over 80 units were reserved for low income individuals including 48 former residents of Liberty Park Apartments, East Mall Apartments and Penn Circle Tower were placed into new apartments. The development includes a management office, community room, fitness room, and three tot lots. The apartments include individually controlled heating and air conditioning, carpeting, fully equipped kitchens, washers and dryers and digital accessibility among



New Pennley Place Apartments - Photo: The Community Builders

other features. An additional \$15.7 million phase, Liberty Park II, broke ground in 2011 and will add another 71 units.

Commencing in 2007, Negley Neighbors brought an additional 49 new low income rental units to East Liberty. Let by ELDI, the \$8.3 million scattered site housing initiative features a combination of new construction and property renovations on Jackson Street, Mellon Street and North Negley Avenue. The project offers units with central air conditioning, digital access, dishwashers, disposals and mini-blinds. Onsite community buildings house a management office, computer learning lab and community room. Individual case management, supportive services and activities are available to help families achieve stability and prepare to become homeowners. This additional

housing ensures that long-term affordable housing remains available as East Liberty and the southwest quadrant of Highland Park is revitalized.

More recently, redevelopment of the East Mall continued with the mixed-use, mixed income East Liberty Place North. The \$12.3 million project provided 54 apartments above 11,000 square feet of retail space. Amenities in each apartment home include central heating and air conditioning, plush carpeting and tile floors, an all electric kitchen, washer/dryer and some paid utilities. The building achieved LEED Gold certification and is the region's first LEED for HOMES multifamily certified project. Constructed in scale with the Penn Avenue streetscape, the building provides an anchor to the western gateway of the central business district.

Market Conditions

Commercial: Early successes of Home Depot and Whole Foods, followed by Eastside II, proved the market potential of East Liberty. They also contributed to the aforementioned expansion of the South Highland entertainment district in conjunction with renovation of the former Regent Theater (now the called the Kelly Strayhorn). The main street former pedestrian mall now features several popular venues including Shadow Lounge, Spoon, BRGR Kitchen, Abay, Tana and the Waffle Shop with several other eateries along Penn Circle South as well. This entertainment district provides evening vitality for both residents and visitors alike while providing a key component of the popular live/work/play dynamic.

Redevelopment efforts helped attract shoppers from the nearby affluent neighborhoods of Shadyside, Friendship and Highland Park. These three adjoining communities contain significant concentrations of households with incomes over \$81,000 a year. Continued retail development within the study area, especially the addition of Target in 2011, has expanded the trade area even further as more consumers are commuting to the area from outside the immediate region. Attraction from national retail tenants continues.

The central business district is relatively stable with only sporadic vacancy based upon visual inspection, internet searches

and interviews. Over 100 businesses reside within the core. Tenants include independent small retail businesses, neighborhood services and bar/restaurants. Many cater primarily to the low income segment of the local population though, especially services such as rent-to-own and payday check cashing. Many of the buildings in the core are older structures with floor plans that do not accommodate the demands of modern retailers. The structures are predominantly single story, though some multi-story units exist as well. These can potentially accommodate office or residential use above ground floor commercial. Most buildings have historically suffered from a lack of investment beyond minor renovations.

Other commercial districts impact the market within the study area. Besides

South Highland Avenue, the Shadyside retail and restaurant corridors of Ellsworth Avenue and Walnut Street lie to the southwest of the transit station. Walnut Street, a 3/4 mile walk from the transit station, is home to several national retailers intermixed with smaller independent boutiques and restaurants. Additional entertainment venues exist a 1/4 mile from the station along Ellsworth Avenue, with more of a focus on locally owned retail and services.

To the northwest, the Penn Avenue Arts Initiative (PAAI) focuses on community development through the arts. Led by Friendship Development Associates and the Bloomfield-Garfield Corporation, the PAAI seeks to increase the amount of artists living and working along the corridor to the west of Negley Avenue. This highly



Target in relation to the core of East Liberty - Photo: Pittsburgh Urban Redevelopment Authority



Garfield Artworks is one of many galleries that are part of the Penn Avenue Arts District.

successful strategy has converted over 150,000 square feet of vacant space for use as live/work space since the late 1990s.

The core of East Liberty lies at the heart of several successful commercial districts. Situated at the intersection of the various galleries along Penn Avenue and the entertainment district that has extended itself across the South Highland Avenue bridge, the central business district's strategic location provides an opportunity to capitalize on 24-hour activity. In addition, the influence of successful retail along the two other Shadyside corridors, Eastside and Bakery Square will continue to drive demand in the study area.

Currently, the hotel supply is limited to the 110 rooms within Bakery Square. Nearby institutions drive much of the demand for hotel spaces given the lack of rooms throughout the greater East End of the City. Additional hotel development can also be supported by any potential new larger corporate office tenants within the study area.

Office: The study area is conveniently located in close proximity to an abundance of educational institutions and other medical facilities. More than 350,000 people reside within 5 miles of the study area and three of the region's top employers are located nearby - UPMC Hospitals, the University of Pittsburgh and Carnegie Mellon University. Together they account for 270,000 employees and 41,500 students within a 5 mile radius. Within



The Penn Avenue business district in East Liberty's core.

the central business district, the largest local employer, Novum Pharmaceuticals, operates a center providing clinical research, data management, statistical and reporting services to the pharmaceutical and related industries

According to Emerging Trends in Real Estate 2011 published by the Urban Land Institute, Class A office buildings in primary 24-hour markets remain highly coveted by tenants. Developers will shift focus more on infill locations near vibrant downtown cores and urban districts. The demand for 'green' space will only continue to grow. Sustainable building concepts will become standard in next-generation projects and many existing buildings will need to increase efficiencies and retrofit new systems in order to compete effectively.

The institutions' expansion toward East Liberty has been prompted by a shortage of Class A office space in Oakland, the region's primary institutional district. Oakland had a zero vacancy rate for the fourth quarter of 2009, when the City's overall commercial real estate market was ranked as the healthiest in the nation by Moody's Investor Services. It is anticipated spill over from the Oakland office market can continue to drive the market for Class A office within the study area given the proximity and public transit connection. Bakery Square represents the only significant new Class A office development within the study area in over a decade.

Specifically, medical office continues to lead niche office type categories. UPMC Shadyside and the Hillman Cancer Center along Centre Avenue dominate the corridor

and will continue to drive activity. As baby boomers continue to age, physician visits will soar. Those locations in proximity to senior housing or with high levels of public transit access will become most desirable.

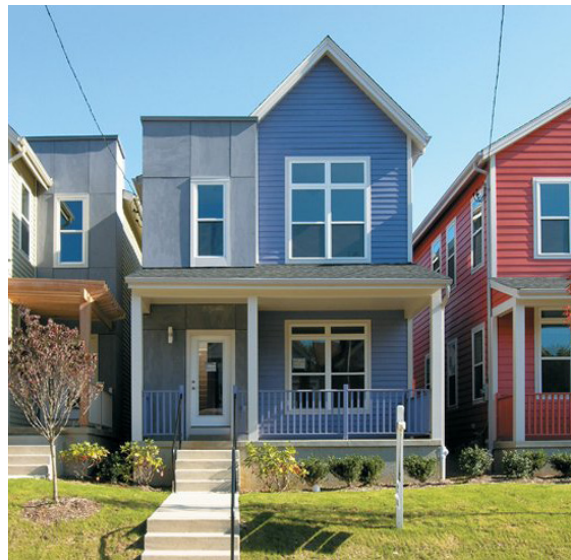
Additional office market demand is driven by technology oriented start-ups and entrepreneurial small businesses. As these segments often seek locations surrounded by a mix of uses and accessible via multiple transportation modes, the study area provides an ideal location. Historic renovations, such as the Liberty Bank Building, account for a significant share of recent submarket leasing activity outside of Downtown Pittsburgh. Small firms are attracted to both the lower rental rates of this Class B and C space, but also the live/work/play urban dynamic.

History shows that following a downturn projects 'early out of the ground' have the best success. Usually, they are completed into a wave of pent-up tenant demand. This does assume that companies move away from efficiency mode into growth stages. Attracting larger office tenants, such as Google at Bakery Square, could contribute to the market for smaller and lower rent spaces as well

Residential: There are several types of multi-family residential buildings in the study area, including 20+ unit structures, renovated buildings and upper floors in small mixed-use buildings. As discussed, Shadyside offers mostly market rate units, often catering to students, while East

Liberty historically features low-income rental properties (with a small mix of market rate). Many Shadyside rentals are within large formal single family homes that have been renovated for commercial residential use.

Because subsidized housing had been concentrated in East Liberty for decades, creating low income housing was a primary goal for the neighborhood. Redevelopment of the former high-rise housing structures resulted in the development of 450 new rental housing units. Many of these projects had rather long waiting lists for available units upon opening. While many affordable housing units were created by 2010, much of this new development only included small amounts of market rate/affordable market rate rentals.



*New Single Family Houses: East Liberty Prototype Houses
Photo: Pittsburgh Magazine*

With continued turmoil in the for sale market nationwide, overall demand for multifamily rental units will remain strong. The market for low income rental residential is expected to remain consistent as well, given local demographics. Likewise, demand for market rate units like those offered in Shadyside will be continually fueled by the neighborhood's perception and location to cultural/commercial amenities. Additional demand results from high quality affordable market rate units catering to young professionals and students. Given the proximity to the PAAI, potential also exists for live/work space within converted structures.

Significant opportunities exist for retirement units especially given the aging regional population. Additional nursing home and elder care facilities will be needed over the next 20 years as leading-edge boomers hit the 85-year-old threshold. Pedestrian-friendly, 24-hour neighborhoods provides for independence for ambulatory seniors to access the services they need.

Within the study area, few new market rate rental or affordable market rate for-sale units have been constructed either in Shadyside or East Liberty. Especially limited are new single family detached units. Within the core residential areas of each neighborhood, over 30% of the housing stock was built before 1940.³ Few opportunities for large scale new

3. TRF Policy Map, for years 2005-09.

construction exist in primarily built up and stable Shadyside. The focus on rental housing in East Liberty has somewhat detracted from the development of for sale units where the market demand has only recently picked up.

Sales prices of new infill homes in East Liberty have grown: a 2,000-square foot house that sold for \$100,000 before 2002 now commands \$170,000 or greater. Average sales price of an existing single-family home in that East Liberty climbed from \$75,000 in 2008 to \$146,000 in 2010. This included a recorded sale of \$315,000 by ELDI.

Median Sale Price (2008):⁴

- East Liberty - \$46,334
- Friendship - \$172,000
- Larimer - \$10,000
- Shadyside - \$285,000

Affordability of the Pittsburgh region as compared to major metropolitan areas extends into the for sale market of the study area as well. The market remains steady without either rapid growth or major cases of foreclosure. Over the last 9 months, 34 for sale transactions have been reported with another 34 units currently listed as available. In light of peripheral costs such as transportation, urban infill redevelopment remains strong. Attached homes and condos within mixed-use buildings are expected to become even more favored.

4. PGHSNAP Neighborhood Profiles

The principles of TOD are expected to drive real estate market activity across all segments. Twenty-something echo boomers want to experience more vibrant urban areas, and their aging baby boomer parents look for greater convenience in downscaled lifestyles. Driving costs and lost time make outer suburbs less economical, while the big-house and office park wave dissipates in a rough economic climate. To echo the popular theory of the 'creative class,' those places where educated, energetic, creative young people want to be, complete with 24-hour attributes, will continue to succeed. New commercial and residential development is expected to continue over the next decade assuming infrastructure improvements, such as restoring the street grid, allow for transportation mode shifts and increased density with a mix of uses.

2011 Market Summary

Current Market Summary	Units	Lease Range / Sale Price
For Sale Single Family Residential	34 Listings Current 34 Recently Sold	\$4,500-599,000 \$23,000-640,000
Rental Residential	20 Units of Various sizes available	\$775-1,965 per month
Retail	163,221 SF Available	\$13.58-28 per SF/Year
Office	82,056 SF Available	\$11-29 per SF/Year
Mixed-Use Commercial	56,575 SF Available	\$14-18 per SF/Year
Industrial/Warehouse	82,859 SF Available	\$3-12 per SF/Year
For-Sale Commercial/Industrial	2 Industrial Buildings & 2 Commercial Sites available	\$80-90 per SF n/a

3.

TRID RECOMMENDATIONS

East Liberty is experiencing a long-delayed rebirth in both the historic business core of Penn Avenue, and along the busway edge through projects like Eastside and Bakery Square. Development efforts over the last decade are transforming the half-mile area around the station and have now reached the parcels adjacent to the station which have been slated for transit-oriented development in neighborhood planning studies for over ten years. For TOD to reach its maximum potential in the immediate area of the station and in the larger district beyond, key infrastructure improvements are needed.

The station and surrounding public realm are not conducive to TOD and would benefit from reconstruction in conjunction with new development. Key projects to reconfigure existing streets and improve the public realm are an essential part of the East Liberty Community plan and should be implemented to support development. Site improvements for major development sites are also needed. The creation of a TRID can be a key tool for capturing the value of transit to finance public transportation capital improvements, site development, other public infrastructure and maintenance needs to support TOD in East Liberty.

A VISION FOR TOD IN EAST LIBERTY

Recommended Infrastructure Improvements

Recommended public infrastructure and transit improvements focus on application of the TOD principles within the eTRID study area. The Busway and East Liberty station are existing transit assets that must be enhanced as the focus of the strategy to facilitate TOD. Areas outside of the immediate station vicinity should also incorporate these guidelines to further efforts to recreate a truly urban setting. Investments outlined in this report are necessary to foster revitalization led by key TOD opportunities.

The major infrastructure projects identified in this section are primarily proposals already envisioned in the current planning for the neighborhood. These key improvements were also vetted with the public and various stakeholders through the planning process. Recommendations focus both on district-wide improvements and those necessary for specific potential TOD sites. Reconstruction of the urban fabric will facilitate an estimated \$280 million of dense, mixed-use development in the study area.

As often occurs with urban projects, large scale redevelopment efforts will require new infrastructure or significant enhancements. These sites will require public improvements such as structured parking, internal street networks and on-site utility upgrades. eTRID identifies impediments to these specific sites that are most conducive to TOD and provides conceptual designs of the station area.

Much of the potential development identified here is dependent on key district-wide infrastructure that will allow for increased density. Improvement to the station and immediate areas are a top priority as primary contributors to the recognized goal of increased transit utilization. Significant improvements to major streets around the station will provide for alternative modes of transportation while still accommodating automobile use. Other recommended district-wide improvements include a coordinated district-wide parking strategy, public space and those that enhance other key parts of the road network. Detailed proposals are provided for a redesigned station, street reconfiguration options

for the Penn and Shady intersection and recommendations for bicycle improvements on segments of these roadways.

Infrastructure investments will be prioritized by their ability to facilitate further redevelopment and benefit multiple users in the study area. The strategy would remain flexible to accommodate various future scenarios, but maintain the ability to provide assistance to large scale redevelopment projects as well as district-wide improvements. Further planning, engineering and design related to infrastructure improvements are expected beyond the recommendations outlined by eTRID.

RECOMMENDED INFRASTRUCTURE IMPROVEMENTS

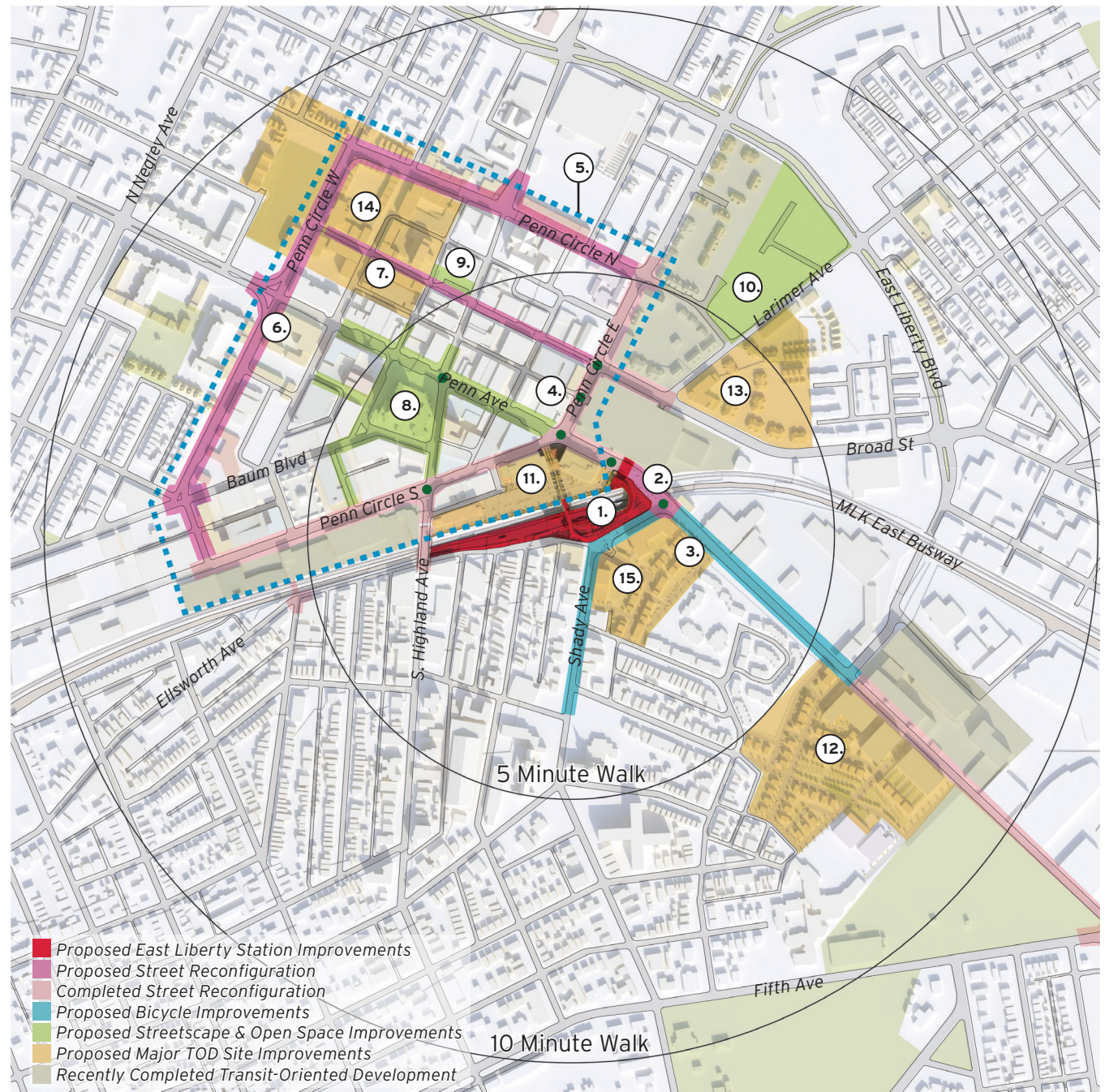
Transportation, Streetscape & Open Space

- ① East Liberty Station Improvements
- ② Shady & Penn Intersection Reconfiguration
- ③ Shady & Penn Bike Lanes
- ④ ITS Infrastructure & Signalization Upgrades*
- ⑤ Coordinated Smart Parking District*
- ⑥ Penn Avenue 2-Way Conversion*
- ⑦ Broad Street 2-Way Conversion*
- ⑧ Town Square Streetscape*
- ⑨ Broad Street Plaza*
- ⑩ Larimer Avenue Park*

TOD Site Improvements

- ⑪ Eastside III & IV*
- ⑫ Bakery Square II*
- ⑬ Larimer Avenue Housing*
- ⑭ Mellon's Orchard
- ⑮ Shady Hill Plaza

* Recommendations based on existing neighborhood plans & known proposed development and infrastructure projects



Applying the TOD Principles:

1. Maximize location efficiency

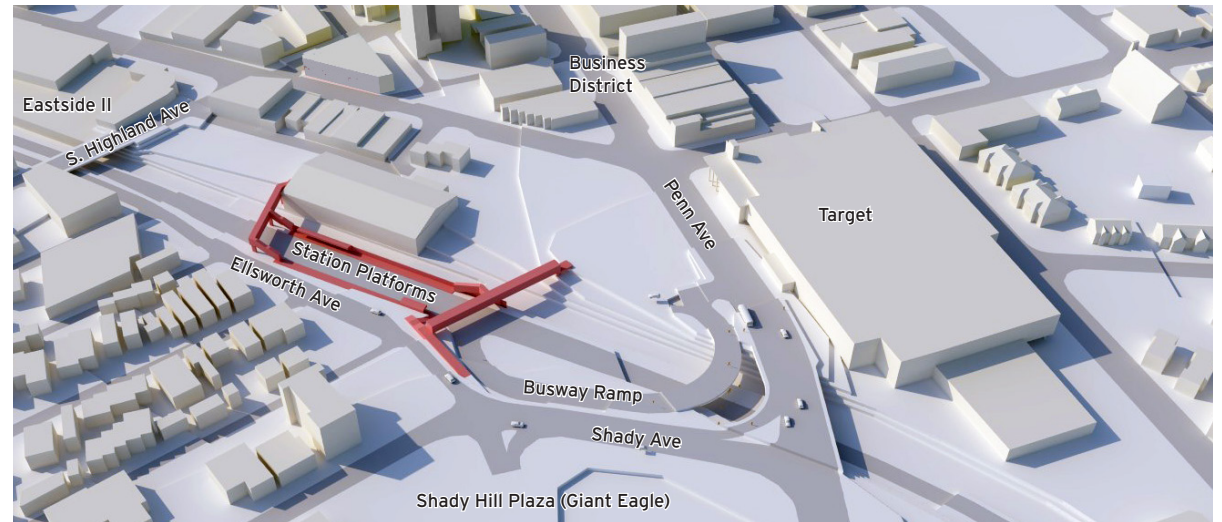
The station is already surrounded by a mix of uses including, housing, offices, shopping and civic uses. Enormous potential exists for future mixed-use development adjacent to the station. To maximize this potential and to achieve greater visibility and connectivity, it is recommended that the station be relocated slightly to the east with a new front door at the Penn & Shady intersection. This change to the station location and entry sequence will allow a greater number of development sites to be considered for TOD.

2. Build a mix of housing choices and complementary uses

New housing should be a key component of the development adjacent to the station. Residential units should accommodate a variety of household types at a range of price points including long term strategies for including and maintaining affordable housing options. Residential development in a *Mixed-Use Center* TOD, should have a minimum density of 25 units/acre, and is ideally significantly higher.

3. Create walkable places for people.

New development and the redesign of the station should be integrated so as to create a seamless high-quality pedestrian realm which connects the streets in East Liberty and Shadyside directly to the station. The proposed design includes a new public plaza and major connection thorough the private development site to the north of the station.



Existing conditions around East Liberty Station

4. Maximize station connectivity and visibility.

In keeping with the East Liberty planning goals for the Eastern Gateway, the redesign of the station should create major pedestrian connections to key public street frontages and intersections to maximize pedestrian connectivity and station visibility especially along Penn and Shady Avenues. Adjacent private development should respond to the major station entry routes and organize building entries and pedestrian paths through the development to reinforce the station circulation, particularly on the parcels to the north of the station.

5. Design streets for all users.

The unimproved streets and intersections to the south and east of the station should be redesigned to better accommodate bicycle and pedestrian access to the station. Existing bicycle infrastructure should be extended to

reach the station entries and secure bicycle parking should be expanded. Realizing previously recommended streetscape improvements to the core East Liberty business district is also key to the success of TOD.

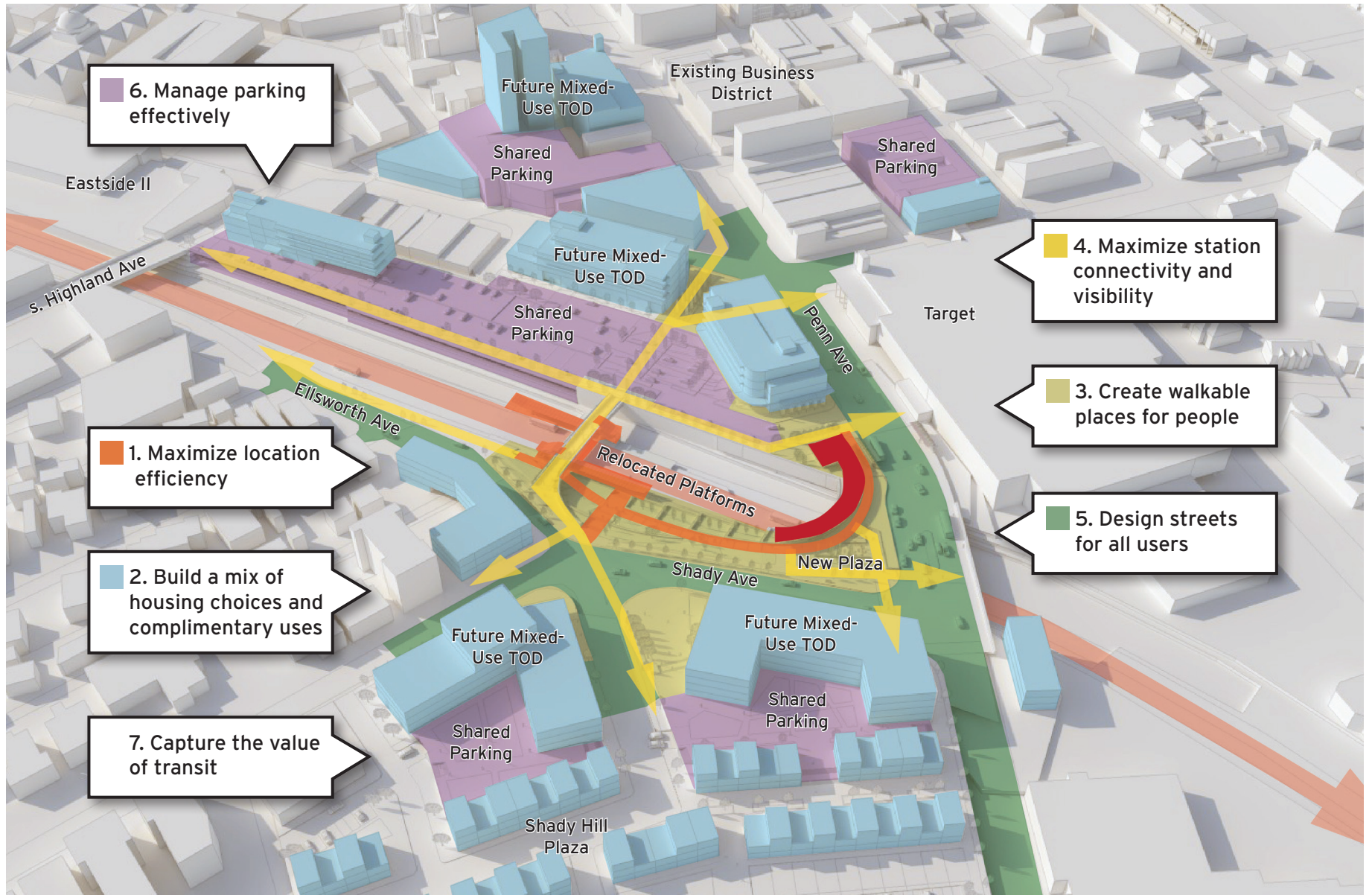
6. Manage parking effectively.

New parking should be shared to the degree feasible and folded into a larger coordinated district-wide parking strategy. Parking should be organized to encourage transit use. The parking strategy should include bicycle parking, car pooling priority, and ideally bicycle and car sharing services.

7. Capture the value of transit

A TRID should be established as a means to fund necessary infrastructure improvements, encourage higher quality development, and ensure community benefits such as affordable housing, small business opportunities and job creation.

APPLYING THE TOD PRINCIPLES TO EAST LIBERTY



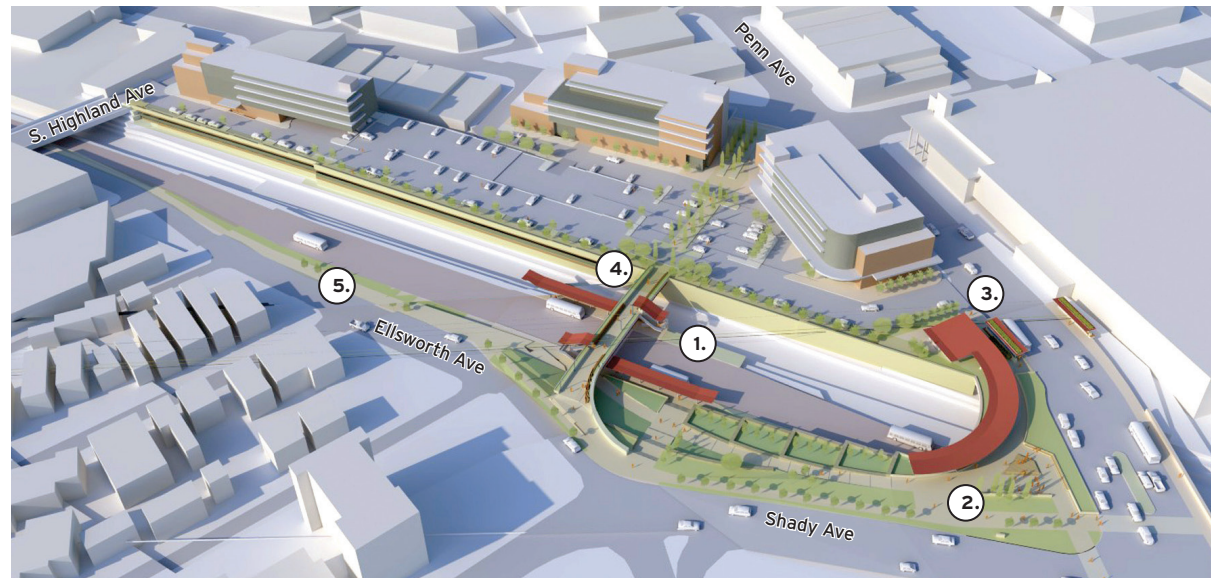
EAST LIBERTY STATION IMPROVEMENTS

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The recommended strategy for redesigning the station moves the station platforms 150' to the east towards its most public street frontage along Shady and Penn Avenues. The front door of the station is then moved to this major intersection by repurposing the existing busway access ramp into a new ADA accessible route to the station from a new station entry plaza. In addition, a single new pedestrian bridge is created that connects the intersection of Shady and Ellsworth Avenues



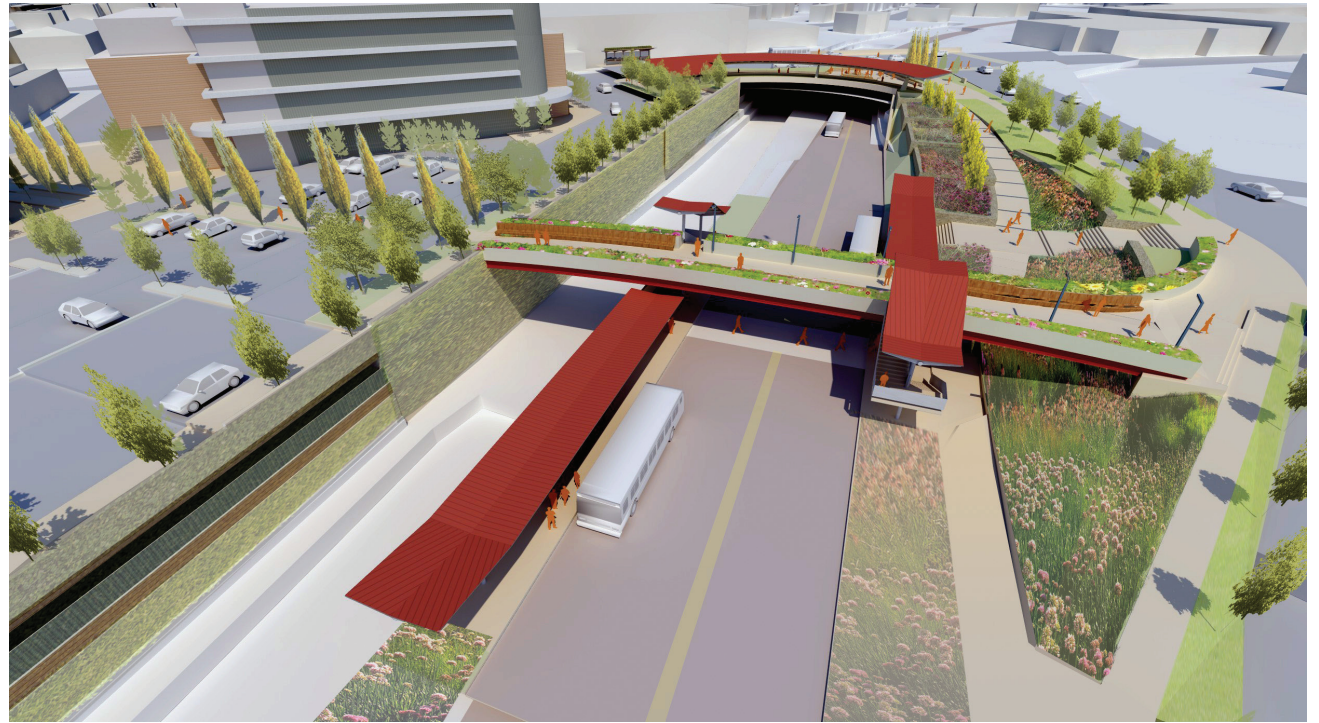
- ① New Relocated Platforms & Canopies
- ② Entry Plaza & Transfer Concourse
- ③ On-Street Shelters, Waiting Areas & Bicycle Garage
- ④ New Pedestrian Bridge & Stairs
- ⑤ New Emergency Access





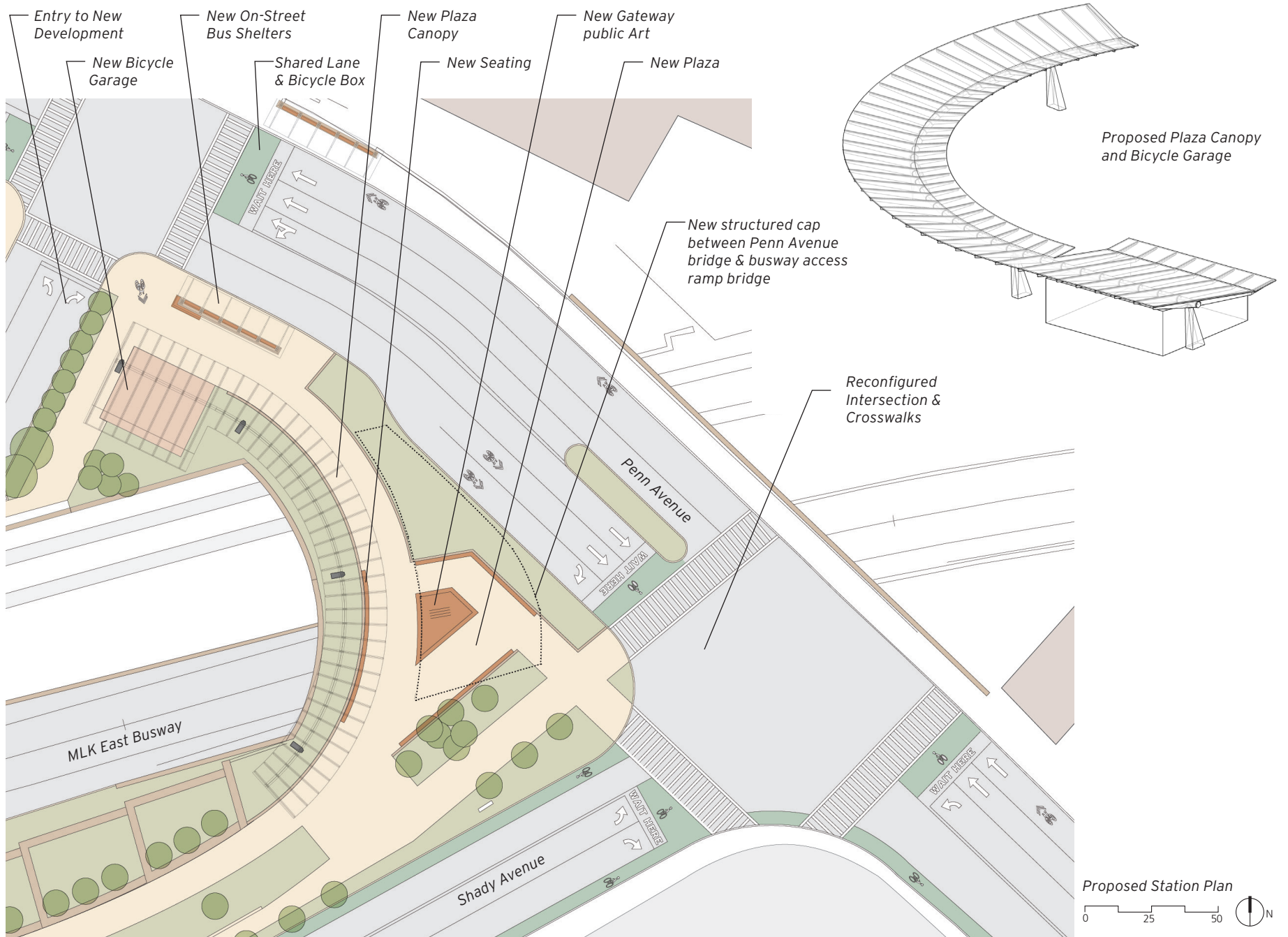


Reconfiguring the Station for Connectivity and Visibility



Top: The relocated Busway station including new platforms and canopies, connected to a new pedestrian bridge.

Bottom: Approaching the relocated station from a new staircase at the intersection of Shady and Ellsworth Avenues.

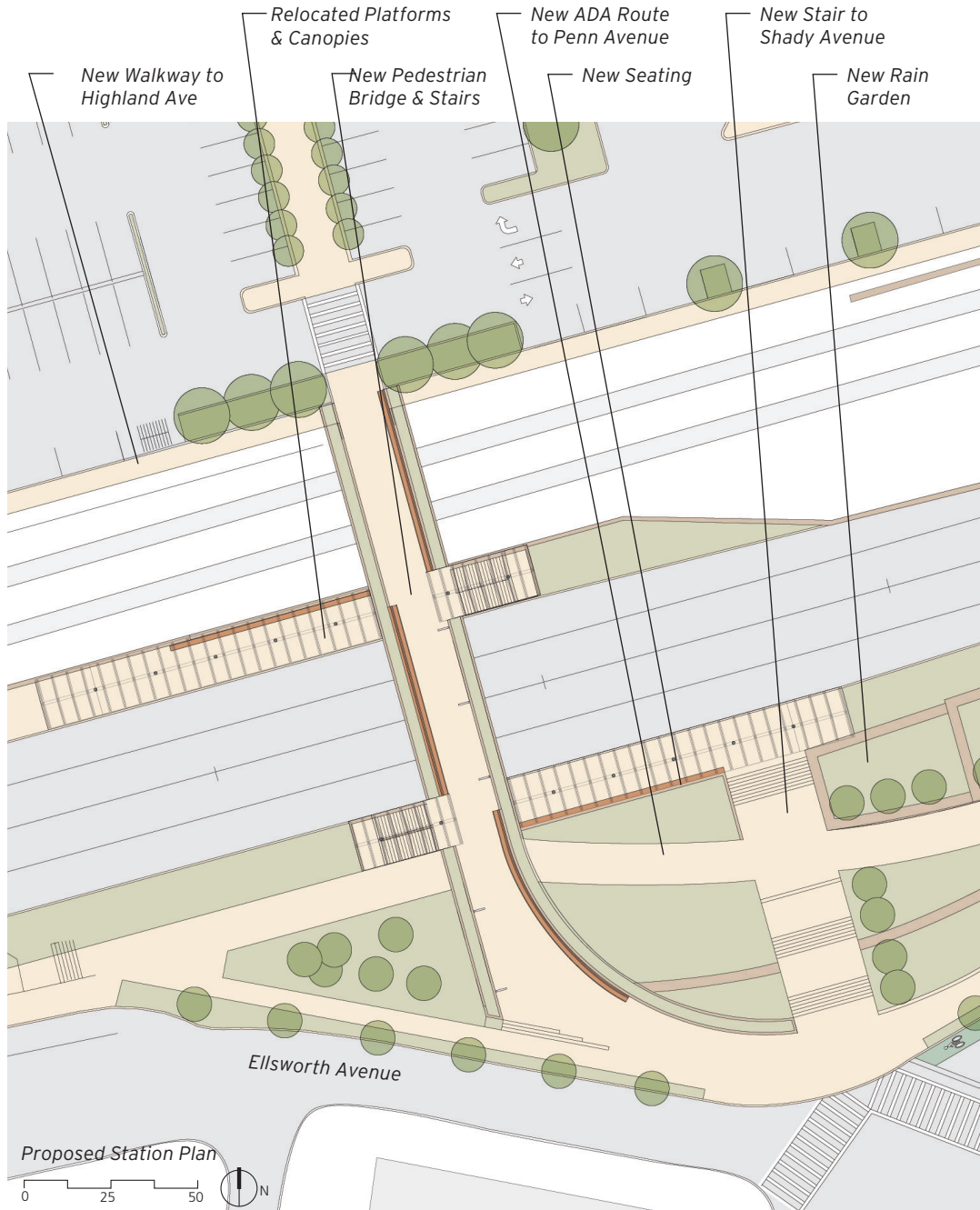


A New Gateway to East Liberty and the Station

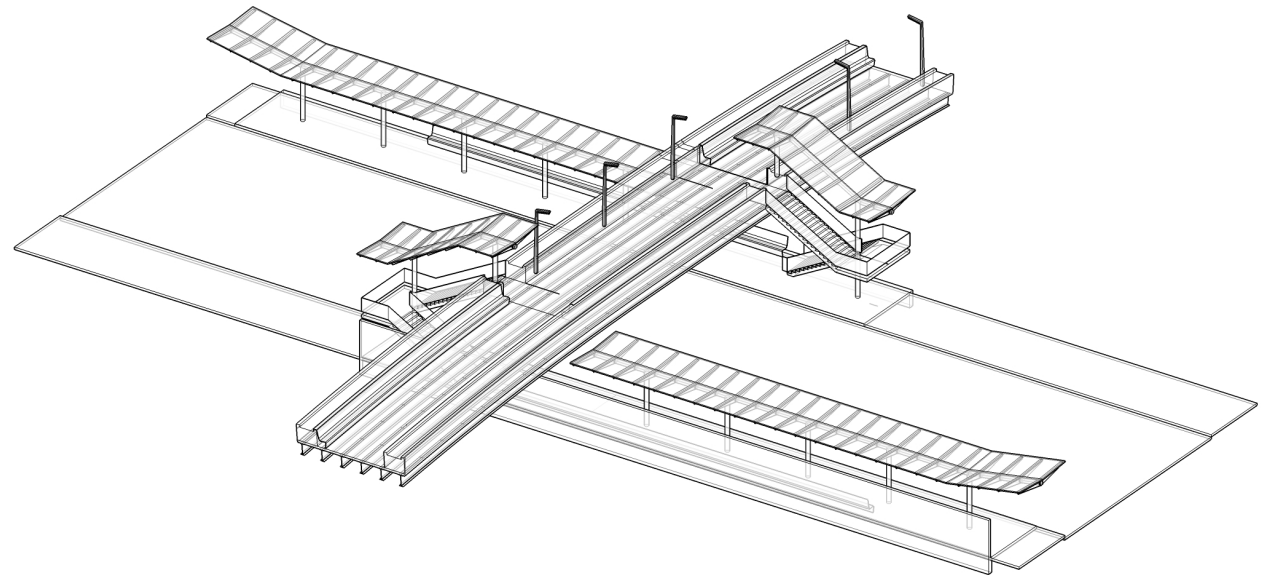


Top: The plaza looking west toward the station and the on-street bus shelters

Bottom: The on-street bus shelters and secure bicycle parking at the entrance to the new development



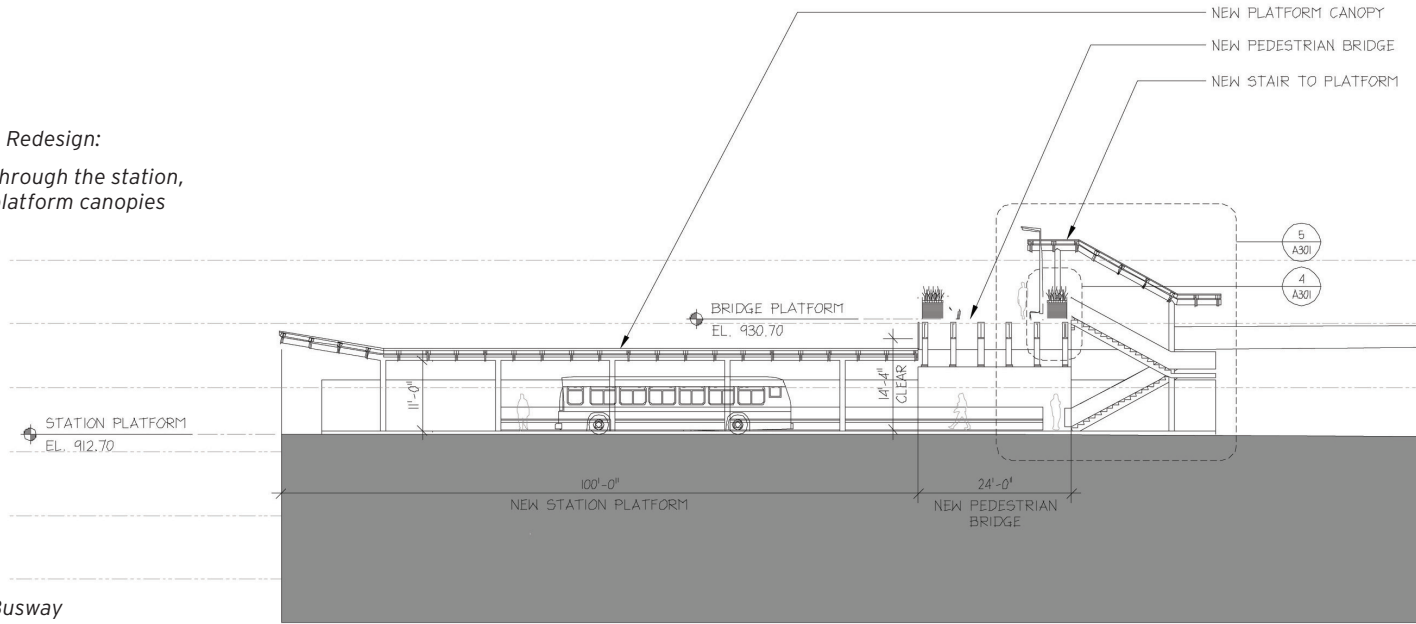
**Connecting East Liberty
and Shadyside Through the
Station**



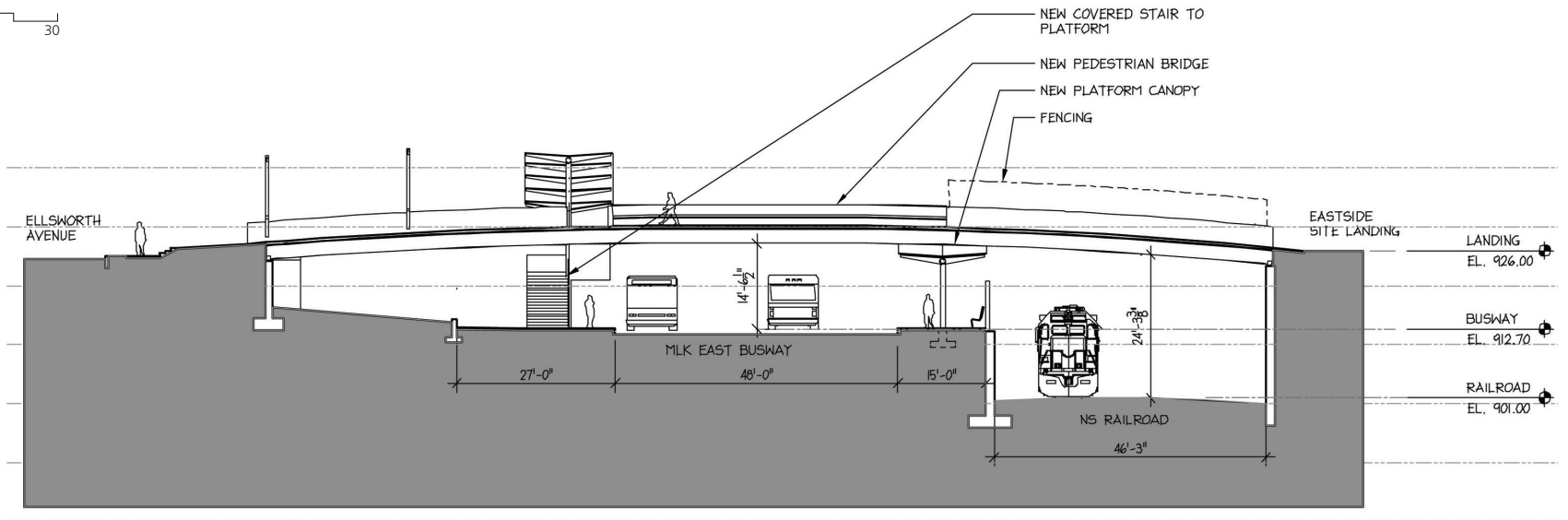
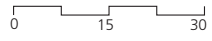
*Top: The new pedestrian bridge leading towards
East Liberty*

*Bottom: The proposed station integrates a new
bridge, stairs and platform canopies*

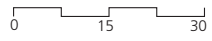
*East Liberty Station Redesign:
Proposed sections through the station,
pedestrian bridge, platform canopies*



*Section parallel to Busway
through new pedestrian bridge*



*Section parallel to new pedestrian
bridge through the Busway Station*

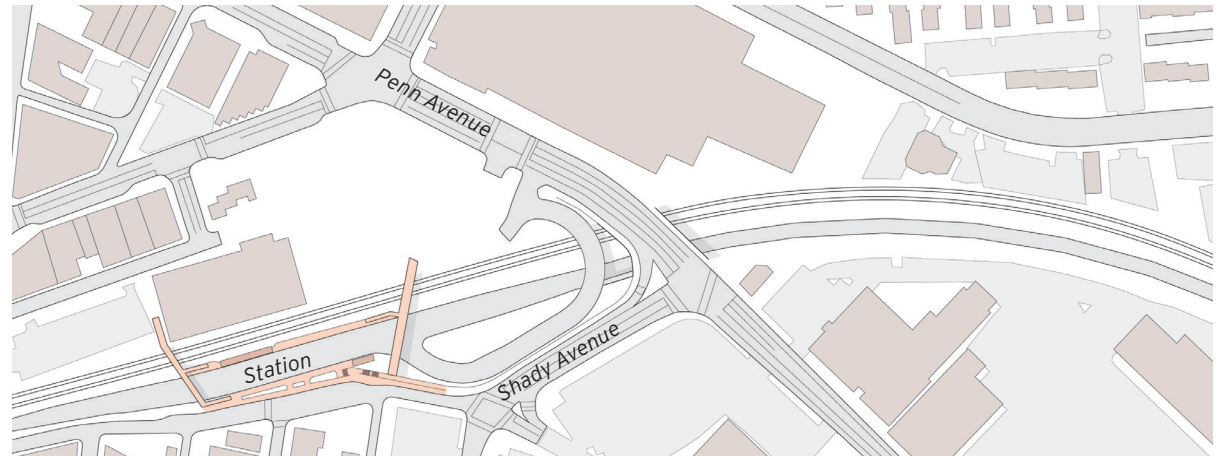


STATION AREA TRANSPORTATION RECOMMENDATIONS

Plan Initiatives

Creating an environment that is safe and appealing to all users and accommodating for all modes of travel, will likely require the implementation of a number of distinct, but complementary initiatives. It is recognized that early success of early TOD initiatives will likely require some near-term solutions that are cost effective and relatively easy to implement. As more development occurs in the study area, a more significant gateway to the community should be created. Both near and long-term concepts are detailed in the following sections.

eITRID recommends that Penn Avenue from Penn Circle East to East Liberty Boulevard be reimagined as a multimodal corridor that places a greater emphasis on transportation system capacity over car capacity. Constraining car-carrying capacity will better utilize the overall road network, encourage greater transit use, improve safety for all users, prioritize pedestrians and bicyclists, and provide an attractive environment for future land development opportunities. Traffic volumes through the station area will remain high, but the recommended improvements will calm traffic and offer a balance between cars, pedestrians, bicycles and transit. A variety of measures can be implemented to reduce automobile traffic on Penn avenue in this area.



existing conditions

Key Recommendations for Reducing Automobile Traffic on Penn Avenue

These recommendations could reduce traffic on Penn Avenue by up to 30 percent. This would improve conditions for bicyclists and pedestrians, and allow for the construction of a single-lane roundabout at the Penn-Shady intersection.

- Increase in mode shift to transit, especially from local residents/employees of East Liberty and Shadyside due to stronger/more appealing walk connections
- Increase in mode shift to bicycling due to dedicated amenities such as bike lanes and secure bike parking
- Increase in mode shift to transit, bicycling and walking as a result of creating an appealing transit hub with associated TOD,

and prioritizing those modes over cars in the immediate area of the station

- Diversion of traffic due to conversion of the remaining one-way segments of Penn Circle
- Diversion of traffic due to Traffic 21 route diversion technology
- Reduction of vehicles entering the Penn/Shady intersection by providing convenient access to area parking
- Parking management such as real-time and predictive parking supply information to reduce trolling for spaces
- Other travel demand management strategies such as telecommuting, flexible work hours, employer subsidized transit passes, higher parking costs, etc.

BICYCLE IMPROVEMENTS

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Example of an intersection Bicycle Box
Image: NACTO Urban Bikeway Design Guide

eTRID recommends bicycle facility improvements to both the station itself, and the corridors leading to it. Improved bicycle access and the provision of secure bicycle parking, will encourage transit users and district patrons to come to East Liberty by bicycle. Increased bicycle use can help ease congestion on the major corridors in East Liberty and contribute the goal of a 30% reduction in automobile traffic discussed on the following pages. Bicycle recommendations include the provision of secure covered bicycle parking integrated into the station design. The bicycle parking is located at the northern



Major Bicycle routes to and from secure bicycle parking at the station

edge of the street-level station plaza along Penn Avenue. This location is designed to maximize easy connection to on-street bicycle lanes on Penn Avenue, and to encourage cyclists to use the parking for both the station and adjacent development sites. In addition, eTRID recommends the creation of a mix of dedicated and shared bicycle lanes on the segments of Penn and Shady Avenues adjacent to the station. On-street improvements also include the provision of bicycle boxes at key intersections, as illustrated above.

SHADY & PENN INTERSECTION RECONFIGURATION

Existing Penn-Shady intersection

Combined with a road diet for Penn Avenue east of Shady Avenue, the Penn-Shady intersection can potentially be redesigned to make it more pedestrian and bicycle friendly. Replacing the high-speed right turn ramp from Penn Ave to Shady Ave will require vehicles to make the turning movement in a slow and controlled fashion. Textured crosswalks along all approaches will signal to drivers that pedestrians are to be expected. Also, bicycle lanes and bike priority treatments (including pavement markings and signage) should be used wherever possible to provide comfortable access through the intersection and to the busway station.

A review of signal plans along the Penn Avenue corridor revealed that the Penn-Shady intersection is not currently coordinated with the other traffic signals to the west. The redesign of this intersection should include new signal equipment and communication systems so that traffic along the corridor can be more efficiently managed. The following illustrations show some of the concepts that should be explored in greater detail for the Penn-Shady intersection.

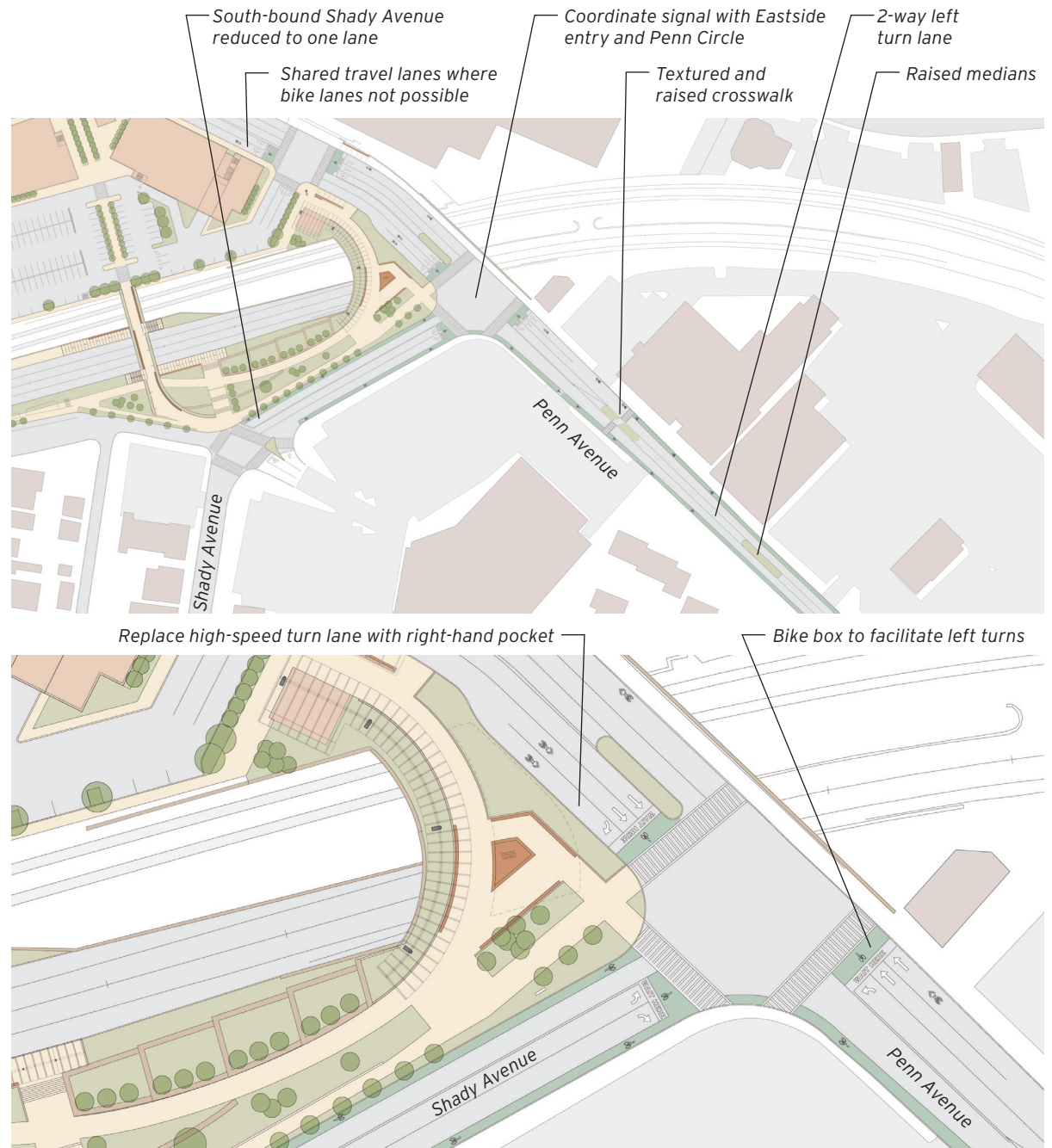
Near-term: Intersection improvement to Penn and Shady

As previously explained, Penn Avenue is a multi-lane arterial that is unfriendly to bicyclist and pedestrians. Eventually, Penn

Avenue is constricted to a single travel lane in each direction west of Penn Circle East; however, in the immediate vicinity of Shady Avenue it is two lanes in each direction with turn lanes. Numerous pedestrian crossings have been observed at this intersection. The following illustration shows the number of lanes on Penn Avenue.

The intersection alteration removes the island and channelized right-turn lane on Penn and instead adds a right-turn pocket for the east-bound Penn to Shady movement. This lane is only possible in conjunction with the new plaza and structured cap. The proposed changes improve both pedestrian and bicycle safety and mobility by creating a complete set of crosswalks and through the addition of bicycle boxes coordinated with the signal timing.

Vehicles approaching the intersection from the east should be visually encouraged to maintain safe operating speeds as they transition into a more urbanized and pedestrian-dense environment. A strong pedestrian desire line exists between the Giant Eagle and the Trader Joe's, and study team members observed numerous pedestrians running across Penn Avenue between these two sites. Facilitating these pedestrians should be an important part of the overall intersection improvement. Along with a road diet along Penn Avenue, providing a median so serve as a refuge for pedestrians crossing the street should be considered. Providing textured crosswalks and high visibility signage can also enhance safety for pedestrians in this area.

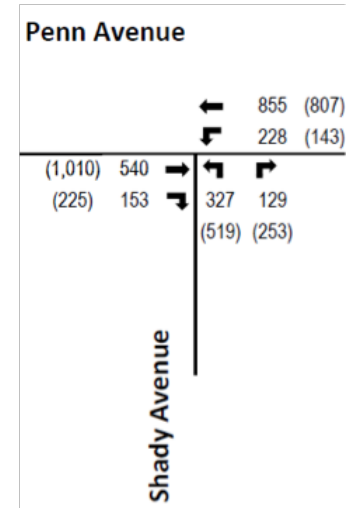


Long-term: Roundabout at Penn Avenue and Shady Avenue

Modern roundabouts in both the United States and other countries have achieved a 50 to 90 percent reduction in collisions compared with intersections using traffic signals. Studies have found a particularly significant reduction (up to 90%) in the number of crashes that result in death or disability, in good part because roundabouts eliminate the high-speed, severe angle crashes (such as T-bone and head-on crashes) which occur at traffic signals. In addition, the high capacity of the roundabouts is what makes it possible to remove lanes between intersections. This can potentially allow for the addition of bicycle lanes in lieu of the underutilized travel lanes.

Properly designed roundabouts provide large safety benefits for pedestrians, when compared to intersections controlled by either stop signs or traffic signals. For example, a Dutch study of 181 intersections that were converted to roundabouts found an 89 percent reduction in casualties (fatalities and injuries). Other studies have also found major improvements in pedestrian safety. This reduction in crashes occurs because roundabouts provide three key features that pedestrians need for a safe crossing: simple decision-making, short crossing distances, and low traffic speeds.

Decision-making is simple because pedestrians cross one direction of traffic at a time, traveling from curb to splitter island, then from splitter island to curb.



Forecasted traffic developed by
Trans Associates

Vehicle speeds are kept low by the physical constraints of the roundabout. On one side, pedestrians cross behind drivers who are waiting to enter the roundabout. On the other, drivers exiting the roundabout at low speed have room to pause outside the circle, while pedestrians cross the 13 feet from splitter-island to curb. By contrast, crossing Penn Avenue at a signal, pedestrians face conflicts from both right-turning and left-turning drivers who also have a green light, and also are at risk from drivers making a right-turn on red. In addition, pedestrians have to cross approximately 70 feet of pavement at the Penn-Shady intersection. All of the drivers at the signal are simultaneously searching for gaps in traffic. Because roundabouts reduce the large number of conflicts found at signals, they are able to provide safety improvements for pedestrians.

Roundabouts also slow traffic, and are particularly useful in areas where drivers should recognize the presence of pedestrians. They can also serve as an attractive gateway to a community. As East Liberty develops land adjacent to the busway station, a more visible transit node will emerge which can be greatly enhanced by gateway treatments in the center of the roundabout.

Based on forecasted traffic volumes developed for the Eastside Development project, a roundabout that could work at the Penn Avenue/Shady Avenue intersection is shown in the above diagram.

A conceptual illustration of this roundabout superimposed onto the station area plan is shown on the following page. This roundabout would need to be approximately 180 feet in diameter to

accommodate forecasted traffic and offer the proper vehicle deflection to keep speeds low and maximize safety. From the illustration, it is clear that such a roundabout would have impacts to property (the existing Giant Eagle site) and likely require some modification to the bridge structure that carries Penn Avenue over the busway and railroad tracks.

A roundabout of this geometric configuration would perform better than the existing traffic signal, and provide superior safety and traffic calming benefits. Perhaps the most significant downside to this concept is the impact to adjacent land use. This begs the question: Can the roundabout be smaller?

Based on a very conceptual analysis, a single-lane roundabout at this location would work with a 30 percent reduction in traffic. The roundabout would likely need to be elliptical to get the necessary vehicle deflection required for safe operations. With detailed design, the correct orientation of the ellipse, and the correct shape of the ellipse, the size of the roundabout could likely be reduced. An alternative design could make minor realignments of the approach roads or move the roundabout off-center, both of which can reduce the size of the roundabout. There are numerous geometric options that can, and should be, explored.

Successful application of a single-lane roundabout at Penn and Shady will likely be dependent on the conversion of Penn Circle



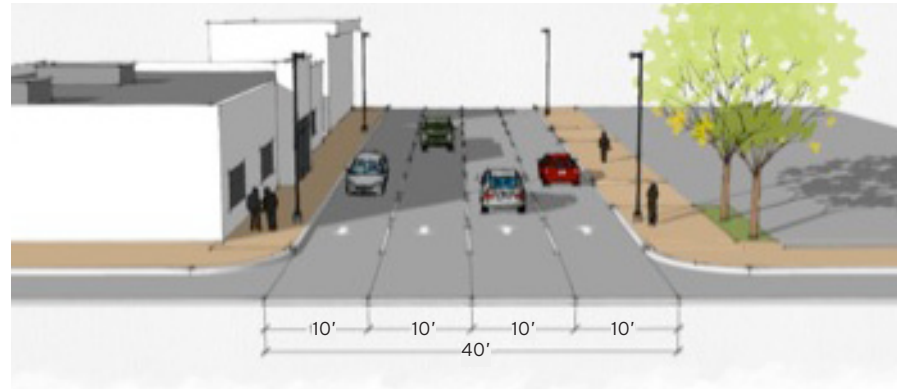
West and North to 2-way vehicular traffic. Preliminary analysis of the roundabout indicates that the afternoon peak hour is expected to exceed the capacity of a single-lane roundabout. In addition to overall higher traffic use in the afternoon, there is a heavy eastbound flow along Penn Avenue which will create a significant vehicle queue that could block the Eastside III driveway and the Collins Street/Penn Circle intersection. If Penn Circle West and North were opened to traffic destined toward the

northeast, it is possible that enough traffic could be distributed from Penn Avenue to Broad St. and East Liberty Boulevard to make the roundabout work during the PM peak. Improved bicycle infrastructure can also contribute to this reduction by increasing the bicycle mode share and reducing the number of cars entering the district. Confirmation of this assumption would require a much more detailed study of traffic patterns than can be provided in this study.

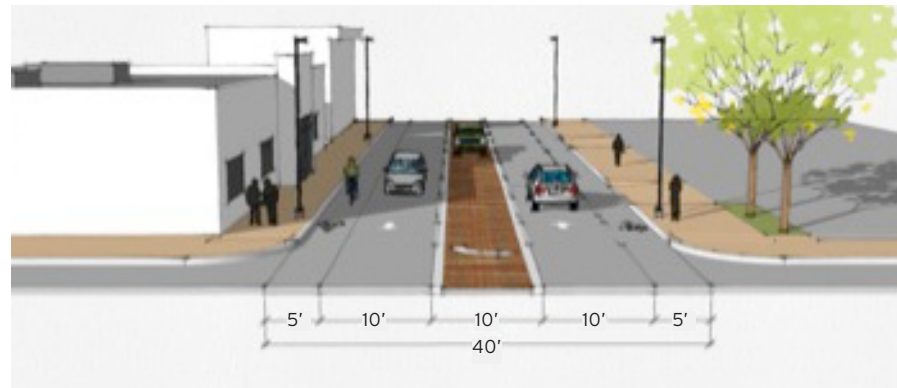
SHADY & PENN BICYCLE LANES & ROAD DIET

A road diet is the conversion of a wide street to a narrower one, such as the conversion of a four-lane undivided thoroughfare into a three-lane street composed of two travel lanes and a two-way left-turn lane. This conversion provides additional space to accommodate other desirable features such as bike lanes, wider sidewalks, pedestrian refuges, transit priority lanes, landscaping, or on-street parking. Case studies demonstrate that road diets reduce conflicts at intersections, reduce accidents and have minimal effects on traffic capacity and diversion on thoroughfares under 20,000 vehicles per day. According to 2011 traffic numbers maintained by PennDOT, Penn Avenue east of Shady Avenue carries about 13,600 vehicles per day .

Three-lane roadways can also improve emergency response by allowing emergency vehicles to bypass congestion by using the two-way left-turn lane. They create opportunities for pedestrian refuges at midblock and intersection crossings and eliminate the common “multiple threat” hazards pedestrians experience crossing four-lane roads. Other benefits include easier egress from driveways (improved sight distance), and smaller curb returns, improvements for transit (allows curbside stops outside of travel lane). Road diets can improve the flow of traffic and reduce travel speeds, particularly when used in conjunction with roundabouts.



*Existing Penn Avenue
Section: East Liberty
Boulevard to Shady Avenue*



*Proposed Penn Avenue
Section: East Liberty
Boulevard to Shady Avenue*



Penn Avenue looking east

IMPLEMENTING PREVIOUSLY IDENTIFIED INFRASTRUCTURE IMPROVEMENTS

Numerous essential infrastructure needs have already been identified for the eTRID study area through past planning. In some cases, such as the Penn Circle Conversion, aspects of these projects have been implemented. Completing infrastructure improvements in the larger district is key to realizing the TOD potential in East Liberty and the creation of a TRID can be a key mechanism for funding infrastructure improvements. Infrastructure prioritized in the plan are flexible and will need to be periodically updated as development occurs.

ITS Infrastructure & Signalization Upgrades

Traffic21 is a multi-disciplinary research initiative of Carnegie Mellon University. Its goal is to design, test, deploy and evaluate information and communications technology based solutions to address the problems facing the transportation system of the Pittsburgh region.

The Pittsburgh region will serve as a “learning lab,” deploying solutions that can be applied around the nation and the globe. Traffic21 will leverage Carnegie Mellon’s leadership in relevant areas such as critical infrastructure, transportation access, transportation routing, human factors, artificial intelligence, web applications and autonomous vehicles.

One of Traffic 21’s initiatives is the development of smart adaptive traffic

signals. This includes technology that will allow traffic signals to communicate with each other and adapt to traffic in real time. A simulation model was developed for downtown traffic, and it has demonstrated that adaptive signals are effective and if even only a few lights can be made to adapt their signal patterns to changing conditions, substantial reductions in congestion can be achieved.

A potential application of this technology could be to adjust traffic signals to prioritize routes around the TOD area and make better use of the larger roadway network. This could include roads such as Penn Circle West and North, Highland Avenue, Broad Street, Negley Run Boulevard, and East Liberty Boulevard. This technology can manage demand so that some of the through traffic is discouraged from using Penn Avenue, and directed to other routes. This would be advantageous to both the near-term intersection modification and the longer-term roundabout concepts.

Coordinated Smart Parking District

Currently parking in East Liberty is a mix of publicly owned and managed off-street surface lots, on-street metered parking, and private surface/garage parking some associated with large scale developments and individual businesses. Because

parking is inconsistently priced it remains underutilized. In accordance with TOD principles, parking should be managed with a coordinated district wide strategy. This should include improvements to existing parking resources such as the installation of shared pay stations for on-street parking and a coordinated graduated pay structure for both on-street and off-street parking.



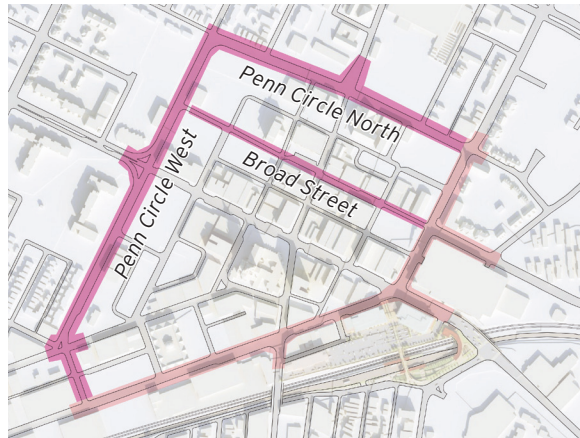
Mobile technology applications should also be employed to connect parking spaces and incoming drivers by providing real-time parking availability information. As new parking garages are constructed, strategies should be employed to create shared parking. Finally, provisions should be included for car sharing services and secure bicycle parking.

Penn Avenue 2-Way Conversion

To date, two of the four sections of Penn Circle have been converted back to

bidirectional traffic from the one-way loop implemented in the 1960s. While Penn Circle South and East have been converted back into two-way traffic in 2003 and 2011, Penn Circle West and North remain as sections of high-speed one-way street dividing the core of East Liberty from the surrounding neighborhoods.

Converting the remaining sections of Penn Circle to two-way traffic is essential for the implementation of the residential housing strategy envisioned for the western edge of the neighborhood in the community plan. The conversion will also diversify the available routes for PM peak traffic and relieve pressure from the segment of Penn Ave between Penn Circle South and Shady Avenue adjacent to the station.



Broad Street 2-Way Conversion & Broad Street Plaza

Like Penn Circle, Broad Street has also been identified as a candidate for conversion from one-way to two-way traffic to support Broad Street's revitalization as

a secondary commercial street. The plan includes changes to the cartway as well as streetscape improvements and a plaza at Broad Street and Highland Avenue.

Town Square Streetscape

Another key public realm improvement for East Liberty is the Town Square project to improve the streetscapes and facades in the core of the retail district. The Town Square Master Plan proposes minor street alterations and significant streetscape improvements in the blocks surrounding East Liberty Presbyterian Church.



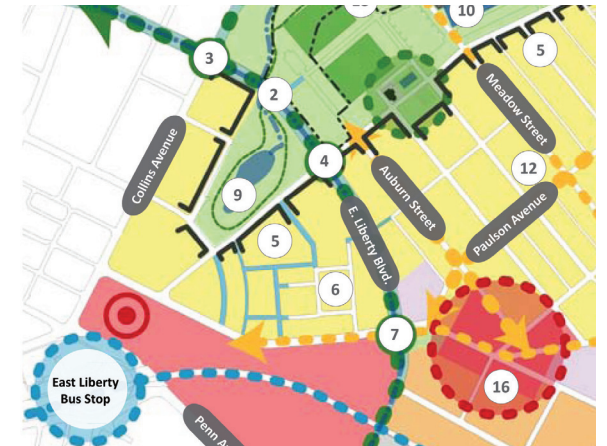
Town Square Masterplan - Semple Brown Design

The plan calls for new sidewalks, street trees and landscape, lighting, and street furniture, as well as special paving and new pavilions in key locations. In addition, key development and renovation opportunities in this area are recommended. The town square will form the centerpiece of East Liberty's public realm, and is essential to the community vision for a revitalized mixed-use district. The Master Plan's proposed streetscape improvements

for Penn Avenue would connect to the new pedestrian routes proposed for the station in this study, creating a seamless high-quality public realm leading from the station platform to the center of the neighborhood.

Larimer Avenue Park

A final major infrastructure improvement is the creation of a new park along Larimer Avenue to the north of the station. This park proposed in the Larimer Vision Plan, will create a new green address for continued residential development along Larimer Avenue. The park is also a key element in the larger green infrastructure strategy for East Liberty, creating a series of rain gardens for the collection of stormwater.



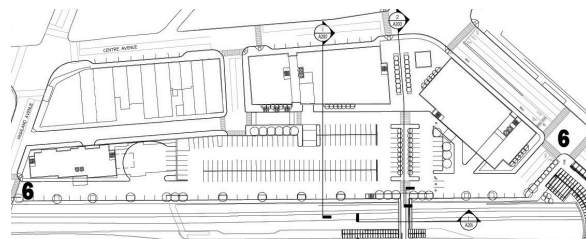
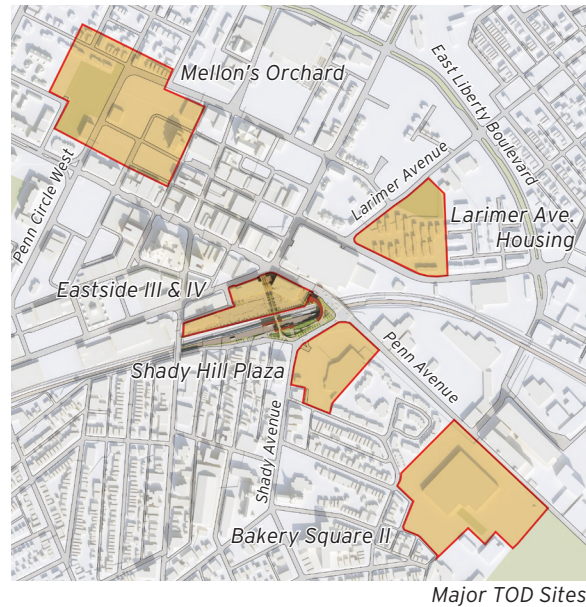
Larimer Vision Plan - Strada Architecture

TRANSIT ORIENTED DEVELOPMENT SITE IMPROVEMENT NEEDS

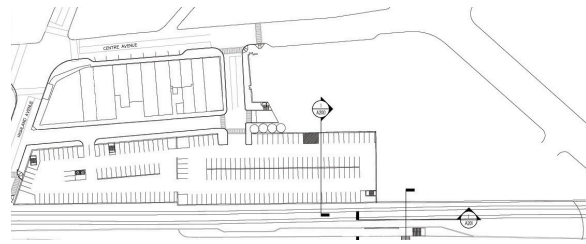
Some of the largest sites for future TOD in the study area are currently organized as large super blocks lacking internal site circulation or utilities. In order for these sites to be developed with a mix of uses including housing, these larger sites will require substantial infrastructure improvements. Needs will include new streets and sidewalks, new street lighting, new on-site utilities, and new parking, both surface and in some cases structured.

In most cases these sites are superblocks resulting from the Urban Renewal era reorganization of East Liberty's streets. Creating a finer grained network of circulation on these sites for pedestrians, bicycles and cars is essential to allow redevelopment in a mix-use pedestrian oriented manner consistent with TOD principles.

A private development site of particular importance to the station is the Eastside III & IV project adjacent to the station. The current proposal for Eastside III & IV, developed in conjunction with the proposed station design, creates a continuous upper level deck at the elevation of the new station pedestrian bridge and Penn and Highland Avenues. This new "ground plane" allows direct pedestrian routes to the station through the development block from the Penn, Highland and Penn



Eastside III & IV Upper Level - The Design Alliance Architects



Eastside III & IV Lower Level - The Design Alliance Architects

Circle South. The design creates an internal street along the railroad and busway edge ensuring that routes to the station are accessible and visible from key intersections in East Liberty. The deck also creates a new shared two-level parking reserve supporting the mixed-use Eastside development. The proposed new station pedestrian bridge is designed to connect to the pedestrian sidewalks through Eastside. The upper level deck and pedestrian realm of Eastside are essential to connections to East Liberty Station that will help maximize the impact of the TOD in the larger district.

Utility Infrastructure

Utilities (water, combined sewer for sanitary service, storm sewer, electric, natural gas, telephone, and cable/data lines) are available throughout the study area, and there are no known capacity issues with these utilities. Unless future developments are of a much higher density than the existing land uses, there should be adequate capacity within the utilities to serve future developments.

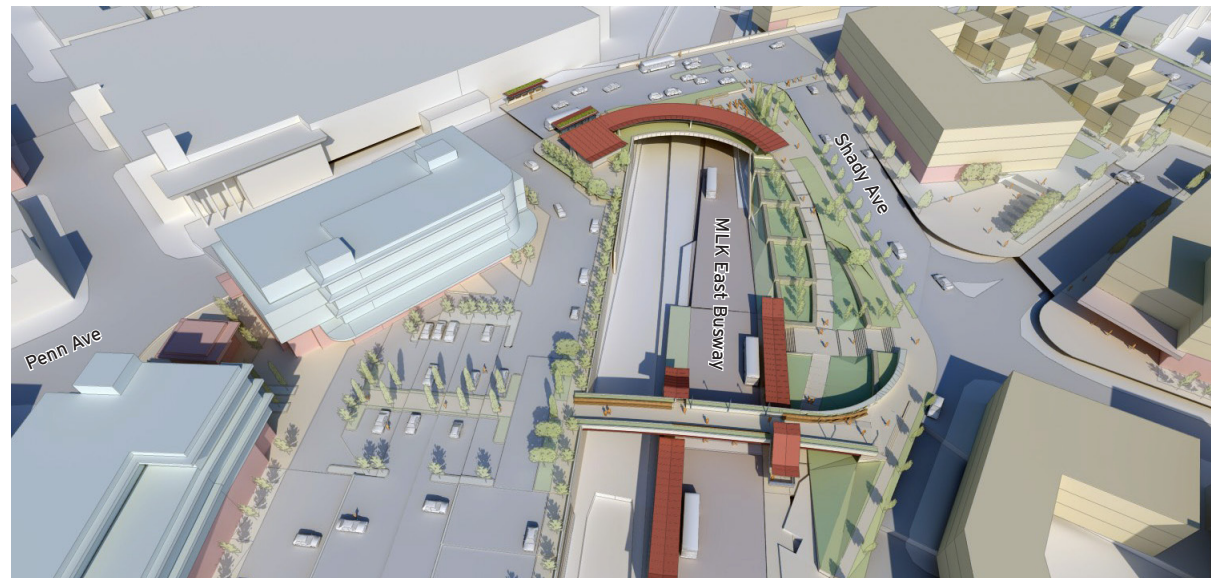
However, as the scope of any site-specific development is refined, an engineering assessment and design will be necessary to verify capacity and service availability. On-site utilities for TOD sites will need to be upgraded for major developments such as Eastside III & IV.

STATION AREA DEVELOPMENT VISION

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Significant opportunities exist for new TOD to transform the station area, integrating it into a new pedestrian oriented mixed-use district at the gateway to East Liberty's historic core. The renderings on this and the following page show how transit-oriented development could surround the station on all sides in the future. The developments pictured are a mix of projects which are already underway or are standing proposals, along with speculative proposals for how TOD best practices could be applied to sites like the Shady Hill plaza.

The proposed vision builds on the East Liberty Community plan, and TOD principles to transform the Eastern Gateway.



- Retail
- Office
- Hotel
- Housing
- Parking

- Possible Shady Hill Plaza Housing & Retail
- Possible Ellsworth Housing
- Eastside III retail & office
- Proposed Odeon cinema, office & restaurant
- Eastside III retail & office
- Possible structured parking with retail & housing liner
- Target
- Eastside III hotel
- Highland Building housing, retail & garage
- Possible Office & Retail building



Above: The station area today

Below: The long term vision for transit-oriented development in the station area



Existing Zoning and TOD

While the existing zoning is relatively conducive to TOD in terms of allowable use mix, it is less than ideal in terms of allowable development intensity and height. Currently the highest intensity residential zoning near the station is along Highland Avenue in the RM-H district allowing 9 story apartment buildings. On the parcels adjacent to the station the maximum density is FAR 4.0 with a maximum height of 4 stories.

Best practice development targets for a *Mixed-Use Center* station such as East Liberty recommend higher intensity residential development than is currently permitted by zoning.

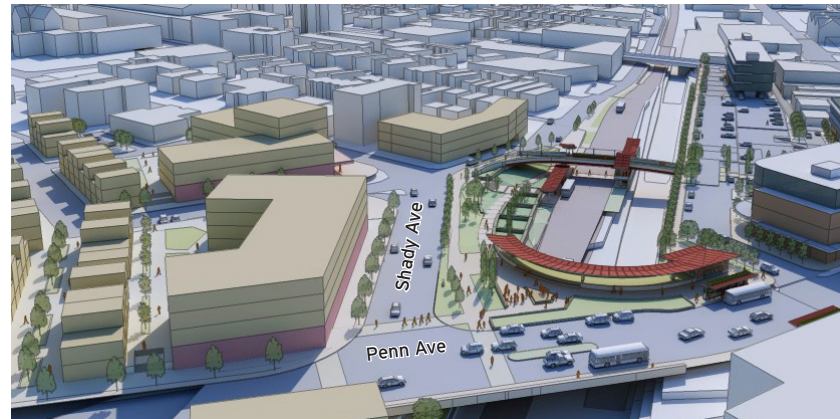
In the area immediately adjacent to the station in the East Liberty core and along Penn Avenue, higher intensity residential development zoning should be explored in the future. Creating an additional TOD zoning overlay allowing midrise residential development typologies of 6-9 stories (FAR 5.0-6.0) within 700' of major fixed guideway transit facilities would allow the residential density in the immediate station area to be significantly increased, creating a critical mass of transit friendly housing units and more appropriately capitalizing on the value of transit. Variations of this type are shown in the image of Portland at right and in the Del Mar Station case study. The implications of this for East Liberty Station are illustrated in the visualizations at right.

Zoning in some parts of the study area (sites located north of Centre Avenue/Penn Circle South in East Liberty) currently allows for a 50% reduction of the required off-site parking. As part of the establishment of a TRID, further parking reductions should be explored for all sites within the proposed TRID boundary proposed on page 89. Parking requirement reductions up to 100% could be offered in exchange for a graduated *transit-proximity* impact fee to be paid into the TRID fund. The feasibility of a fee-based parking reduction should be

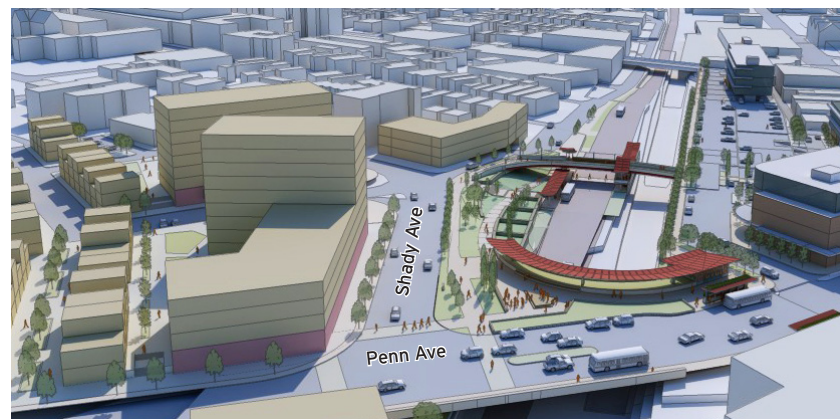
explored as part of the TRID implementation and future smart parking planning.

In addition, areas with zoning categories that are not conducive to TOD should be reconsidered as future development occurs. Parcels along Penn Avenue zoned Highway Commercial currently disallow almost all residential uses and allows site development standards which are automobile rather than pedestrian oriented.

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Visualization of 3-4 story mixed-use development on the Shady Hill Plaza adjacent to the station. Buildings are a mix of apartments, small retail spaces and town houses with structured parking



Visualization of the same development with limited additions of 8-9 story midrise buildings. Allowing higher intensity residential development would create more units close to transit and would help support retail uses around the station.



TOD POTENTIAL

Phase I

- (A) Eastside III Hotel
- (B) Eastside IV Retail/Office
- (C) Odeon Theater/Office/Rest.
- (D) Highland / Wallace Housing
- (E) YMCA Hotel
- (F) East Liberty Place II Mixed-Use
- (G) Bakery Square II Office

Phase II

- (H) Penn/Center Mixed-Use
- (I) Kirkwood Garage/Mixed-Use
- (J) Larimer Avenue Housing
- (K) Mellon's Orchard
- (L) Bakery Square II Housing

Phase III

- (M) Governor's Hotel Mixed-Use
- (N) Shady Hill Plaza Mixed-Use
- (O) Penn Circle North Sites
- (P) Penn Circle West Sites
- (Q) Penn Plaza Housing
- (R) Larimer Infill Housing

FUTURE DEVELOPMENT & THE PROPOSED TRID BOUNDARY

The identified TOD principles provide a guide to key improvements that will enhance the public realm, especially in the area surrounding East Liberty station. As detailed above, significant investment in site specific and district-wide public infrastructure is necessary in the effort to transform the eTRID study area into a place more conducive to TOD. These public improvements will increase the value of surrounding private properties, in part due to improved access to services and activities. Sites in close proximity to public transit investments often experience a 5-20% increase in sale prices and rents for example.

Funding such extensive public infrastructure from capital budgets alone has become more and more challenging. The TRID Act details a mechanism that provides for the capture of a portion of the new value created as private property in the vicinity of transit investments appreciates over time. Within the proposed TRID boundary, real property tax and other select tax revenues can be utilized for the purposes of implementing the improvements detailed in the planning study. Establishment of value capture areas within the boundary allows for the diversion of incremental tax revenues to finance public transportation capital improvements, site development, other public infrastructure and maintenance in accordance with the Act.



Eligible TRID locations cannot exceed a radius of one half mile of a transit stop or station. The eTRID study area contains this entire radius as previously discussed. When examining the potential TRID boundary, priority was given to the identified 5 and 10 minute walking sheds that are recognized as standard distance of TOD activity. These areas were then compared to the current development pipeline and identified TOD potential within the study area to develop specific value capture area boundary recommendations.

It is recommended the specific value capture areas within the TRID boundary be phased to allow for diversion of the maxi-

Potential TOD shown in blue in relation to the recommended station infrastructure improvements.

imum amount of revenue to finance identified improvements and maintenance. The following sections illustrate a scenario where the defined value capture area within the TRID boundary expands three times to accommodate development potential over the next decade plus. This method allows for the flexibility necessary in light of such uncertainty surrounding future development schedules. Later sections of eTRID address the collection of revenues and proposed infrastructure investments under a comprehensive value capture strategy.

Within the study area, the current 5 year development pipeline includes significant projects that will redevelop sites for a mix of new uses including residential, office, retail, hotels and a proposed movie theater. Much of this activity will focus on the core of East Liberty's commercial corridor and the area commonly referred to as the Eastern Gateway. The proposed Phase I TRID value capture area focuses on facilitating these opportunities.

Reconstruction of the East Busway station will help facilitate the next two phases of the Eastside project by Mosites. The closed former bus turnaround and transfer facility along with a surface parking lot will be redeveloped with several mixed-use office/retail structures and a hotel. Site infrastructure will transform 4 acres of disconnected property into a new ground plane to serve as a podium for high-density development. More importantly, these improvements will help physically and psychologically reconnect East Liberty to Shadyside as spatial barriers are overcome. New critical infrastructure constructed as part of the Eastern Gateway Intermodal Center will allow the project to be fully integrated with transit at this prime TOD location.

Another significant project is planned for vacant and underutilized properties at the corner of South Highland Avenue and Penn Avenue. A joint development of ELDI and Blasier Urban, the Odeon building will feature a 5 screen movie theater and café with additional restaurant space on the second floor. Levels 3-6 will each include 13,000

square feet of Class A office space. The redevelopment effort is seen as a significant catalyst for the core of East Liberty.

Walnut Capital and Massaro Properties will soon commence another key project within the central business district. The long vacant Highland Building designed by Daniel Burnham was constructed in 1909 by industrialist Henry Clay Frick. Rehabilitation of the historic building and adjacent Wallace Building will create 123 market rate rental residential units along with ancillary commercial space in to compliment the expansion of the South Highland Avenue entertainment district.⁵

ELDI is also negotiating with a 'trendy' hotel operator to occupy the former YMCA building on Whitfield Street. Public spaces within the unique structure can accommodate hotel amenities such as a ballroom, gymnasium and swimming pool. After a series of failed redevelopment attempts, the new concept will include approximately 65 boutique rooms.

The proposed initial value capture area extends along the southern side of Penn Avenue to Penn Circle West. Following their recently completed East Liberty Place North project, The Community Builders are also advancing plans for a second phase on the south parcel of the former East Mall apartment complex. It is anticipated the project would include 60 additional apartment units above approximately 13,000 square feet of ground floor commercial space.

5. This project is currently within the KOZ and not included in conservative value capture estimates. Potential increment could be collected in 2017 and dedicated to the eTRID VC Fund.

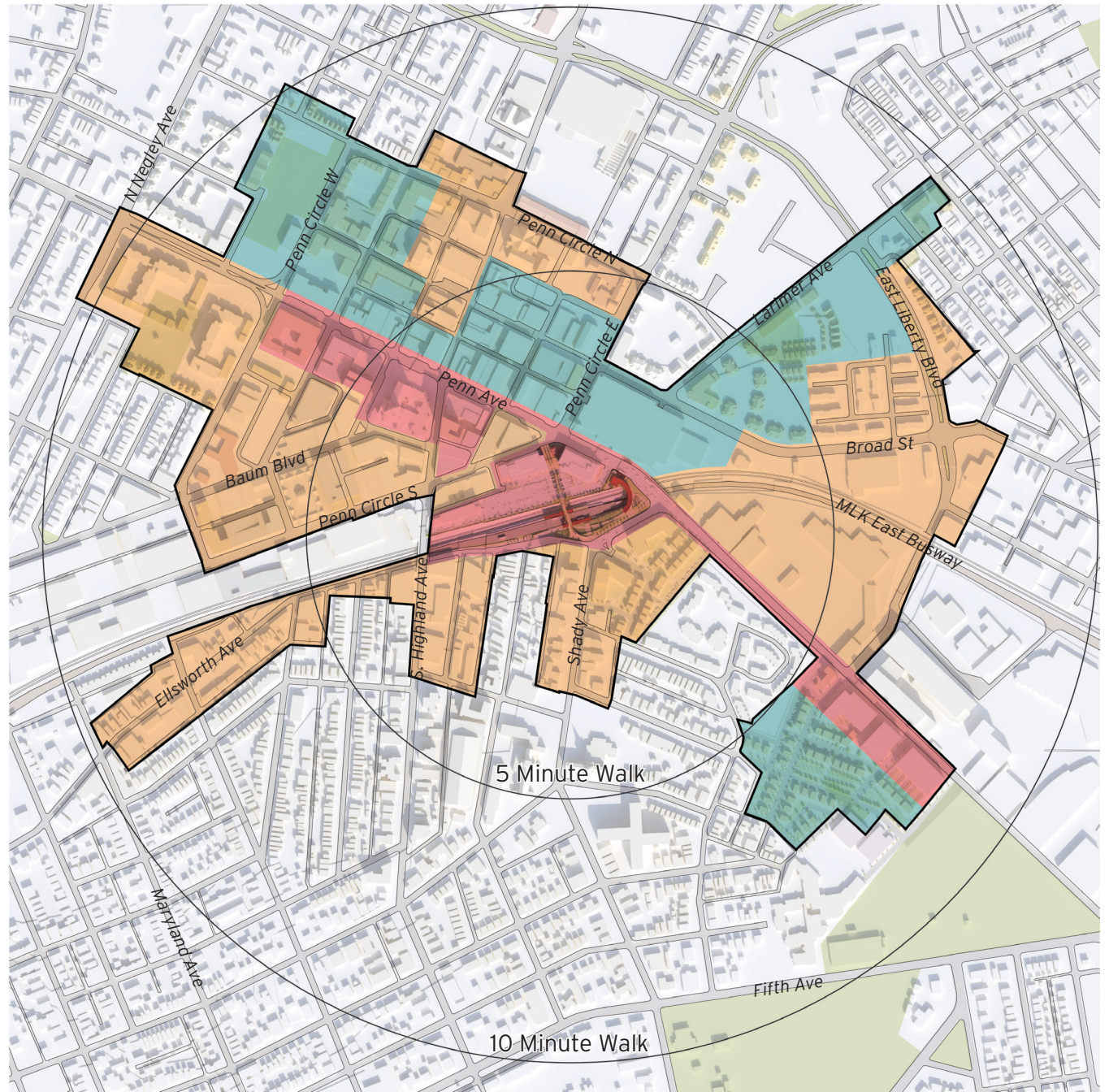
At the far eastern end of the Phase I area along Penn Avenue lies another significant potential development site within the eTRID study area. The former Reizenstein Middle School is now occupied by the Pittsburgh Public School District (PPSD) Barack Obama Academy of International Studies (Pittsburgh Obama). Born out of the closed Schenley High School in Oakland, the magnet school serves grades 6-12. PPSD announced plans to relocate the Pittsburgh Obama to the Peabody High School building in 2010 as part of a reconfiguration throughout the East End.

Faced with an estimated \$50 million renovation of the facility, PPSD decided instead to obtain bids for the prime location. The proposed development program includes a mix of office, retail and market rate residential uses. It is anticipated the initial phase would focus on redevelopment of the Penn Avenue frontage with the commercial components in an effort to build off the momentum of the adjacent Bakery Square project. This front portion of the Reizenstein parcel which will be the focus of the first phases of redevelopment is included within the boundary. The Penn Avenue Right of Way is also included so that the proposed value capture area remains contiguous with other areas in the core.

Phasing of the TRID value capture delineation in response to changing market conditions and development potential is a key component of the eTRID value capture strategy. It is anticipated the proposed TRID value capture area could be expanded by

PROPOSED TRID BOUNDARY & PHASING

- Phase I
- Phase II
- Phase III



the eTRID Management Entity at a later date in an effort to continue revitalization within the study area. The Act specifically includes provisions for the expansion of the specific value capture area based on local circumstances such as economic development and planning goals, community character, property boundary and scale variations. Expansion must be authorized by the Management Entity based upon the findings of the TRID Planning Study.

Based upon the findings of eTRID contained here within, expansion would focus on facilitating redevelopment of key sites not currently within the known pipeline. However, these areas are situated in close proximity to the first wave of investment and thus present opportunities where market forces are likely to drive redevelopment. The 2nd phase of the proposed TRID value capture area would remain contiguous with the initial area as well.

Proposed expansion would focus on similar areas within the central business district and Eastern Gateway. The Phase II area extends to the north of the commercial core between Penn Avenue and Harvard Square. The top floors of many structures along the northern side of Penn Avenue are currently underutilized. This area also includes the Broad Street Corridor which features the highest number of currently vacant and available properties within the study area. A PPAP surface parking lot lies between Kirkwood Street and Broad Street immediately adjacent to the new Target store.

Phase II of the proposed value capture area would also extend towards the traditional residential portions of the neighborhoods of East Liberty and Larimer. At the northwest corner of Penn Circle, conceptual plans call for redevelopment of surface parking lots and abandoned structures for new residential use including a mix of for sale single family detached houses and townhomes. The traditional neighborhood design being planned calls for new units to fit the existing context while maintaining the historic and architectural integrity of surrounding houses. In addition, the TRID value capture area would be extended on the eastern portion behind the Target to include the first phase of a planned residential development off Larimer Avenue in close proximity to other recent mixed-income residential initiatives along this corridor.

Expansion of the value capture area accommodates the likely phasing of redevelopment of the former Reizenstein school site as well. The recommended expansion in the 2nd phase would encompass the remainder of the parcel slated for additional development. It is likely the residential components of the proposed project would occur at a later stage to best respond to market conditions.

As the wave of revitalization continues, a 3rd expansion could capture value of longer term development potential. The final proposed TRID value capture area would encompass other fringe areas that present opportunities in the 10+ year horizon building upon early momentum within the study area. Beyond accounting for improved market conditions,

this phased expansion strategy allows for the greatest level of value capture to reinvest in TOD and other district-wide infrastructure improvements or maintenance.

The TRID value capture area would be expanded to Penn Circle North to encapsulate the remainder of the central business district. This includes many properties that are suburban in nature and totally oriented to automobile use. Improvements would target better connectivity to the residential portions of East Liberty to the north and Larimer to the east.

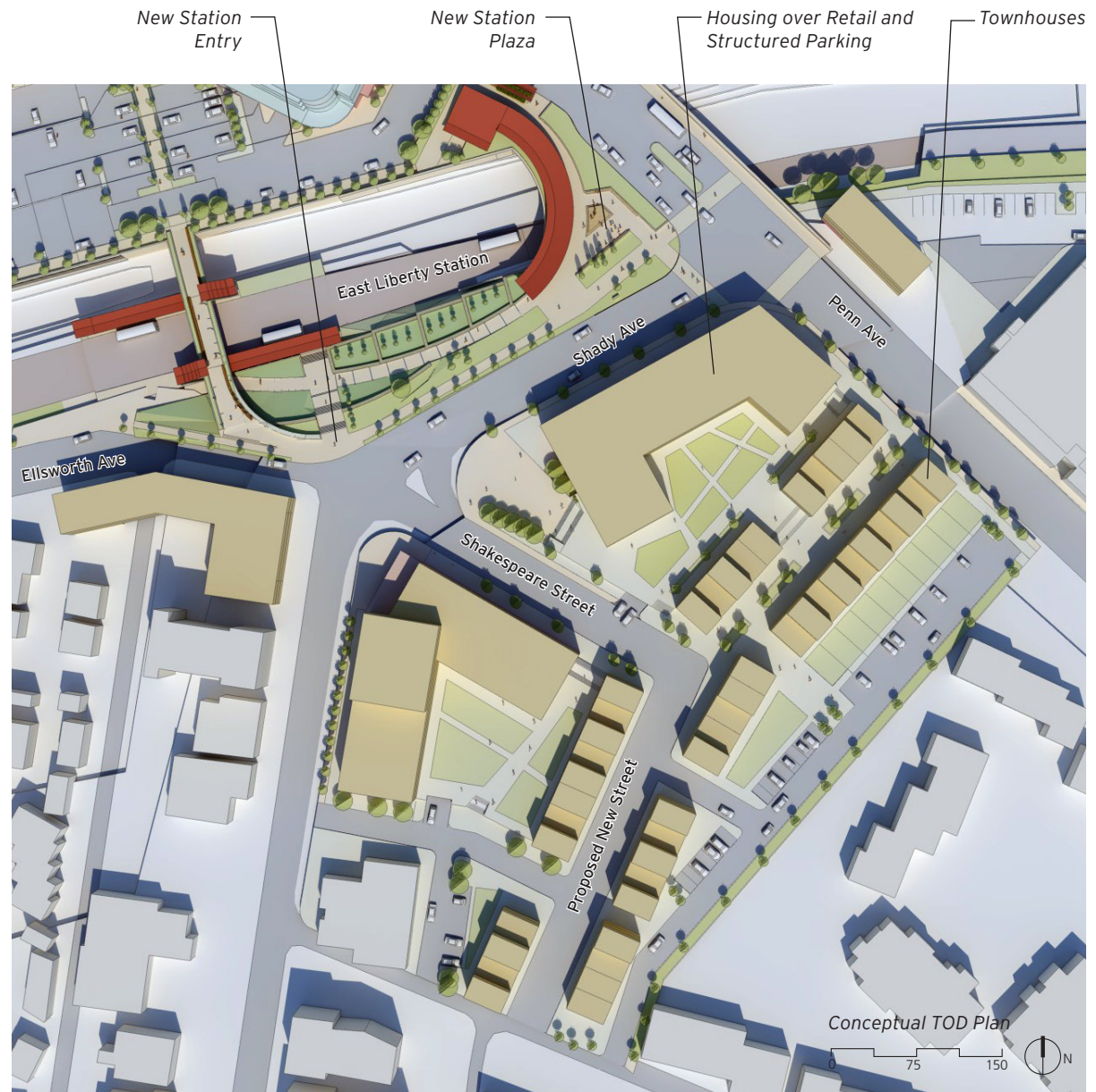
Also within this expansion is a block of vacant or underutilized structures in between North Highland Avenue and North Whitfield. These parcels, including the dilapidated former Governor's Hotel building, were originally targeted for a large scale redevelopment comprising of a hotel and commercial space. Significant opportunity still exists within this block including building rehabilitation and new construction.

Three key commercial areas would also be included in the final value capture area expansion. Underutilized properties across Center Avenue and the initial phases of Eastside present various opportunities to strengthen this corridor. Connectivity would improve with Friendship to the west and new residential developments along Penn Circle West. Although they are stable drivers of local market activity, Ellsworth Avenue and South Highland Avenue do present opportunities for investment that will continue their success over the longer term. Ellsworth

Avenue especially could benefit from an extension of economic activity from its current terminus under the South Highland Avenue bridge towards the new intermodal center and eventually connecting to Shady Avenue.

Properties along Shady Avenue, especially the Shady Hill Plaza, represent areas with the most significant TOD potential in the study area pending infrastructure improvements. Expansion of the TRID value capture area to include this suburban style shopping center would help facilitate its eventual reconfiguration into a more multimodal development at a pedestrian scale. Situated directly adjacent to the new Eastern Gateway Intermodal Center, the site can also be connected to new activity along an extended Ellsworth Avenue corridor.

Similarly, the recently upgraded Village at East Side is another suburban style shopping center that could benefit from future improvements aimed at multimodal use and pedestrian connectivity. The property benefits from tremendous access to the new intermodal center and significant on-street bus activity along Penn Avenue. Positioned between the central business district and Bakery Row developments, it could become another anchor TOD within the district.



A possible scenario for building a mix of medium density housing and retail across from the station on Shady Hill Plaza

TOTAL STUDY AREA DEVELOPMENT PROGRAM

Product Type	Units/SF	Development Cost	Estimated Assessed Value
Phase I			
Hotel	192 rooms	\$ 23,382,716	\$ 14,535,837
Office	447,630 sf	\$ 105,536,214	\$ 67,730,762
Mixed-Use Commercial*	153,995 sf	n/a	
Theater*	5 screens	n/a	
Multi-Family Rental	75 units	\$ 12,500,000	\$ 6,853,304
Stand Alone Commercial	10,000 sf	\$ 1,700,000	\$ 2,100,000
Total		\$ 143,118,930	\$ 91,219,903
Phase II			
Office	39,000 sf	\$ 7,485,000	\$ 5,365,000
Mixed-Use Commercial*	10,000 sf	n/a	
Single Family Detached	76 units	\$ 18,200,000	\$ 25,400,000
Single Family Attached	106 units	\$ 20,289,000	\$ 21,020,000
Multi-Family Rental	110 units	\$ 9,324,000	\$ 7,603,300
Multi-Family For Sale	14 units	\$ 3,430,000	\$ 2,152,500
Total		\$ 58,728,000	\$ 61,540,800
Phase III			
Single Family Detached	12 units	\$ 3,000,000	\$ 4,200,000
Single Family Attached	98 units	\$ 17,802,000	\$ 18,400,000
Multi-Family Rental	160 units	\$ 16,320,000	\$ 13,320,000
Multi-Family For Sale	80 units	\$ 19,600,000	\$ 12,100,000
Stand Alone Commercial	35,000 sf	\$ 5,950,000	\$ 7,350,000
Total		\$ 62,672,000	\$ 55,370,000
Grand Total**		\$ 284,518,930	\$ 233,897,776

*Cost included in office or residential component.

**Grand Total includes cost of known public infrastructure and the incremental increase in assessed value of land

It is anticipated over \$280 million of mixed-use and residential development will occur within the TRID boundary over the 30 year timeframe illustrated here.⁶ Known projects within the pipeline are included as well as the conceptual development program for sites that have been identified as redevelopment opportunities. At full build out, this new development is expected to create over \$230 million of total assessed value.⁷ This conservative estimate does not include smaller projects, background assessed value growth or redevelopment of certain targeted sites that could be targeted following district wide infrastructure improvements. Assessed value projections are estimates only and based upon assessment of comparable properties both in and outside the study area as well as previous studies.⁸

The tables on the following page illustrate the assessed value growth over time along with projected real property tax increments that would be available for the eTRID value capture. Approximately \$125 million of incremental assessed value would be created by the development program at the peak of the third value capture area within the TRID boundary. The newly created value represents a 20% increase over the base assessed value of the entire TRID boundary. Within the half-mile study area, new

6. Construction costs obtained from developers, comparable projects and the Eastside TOD/TIF Analysis performed by ERA (April 2008)

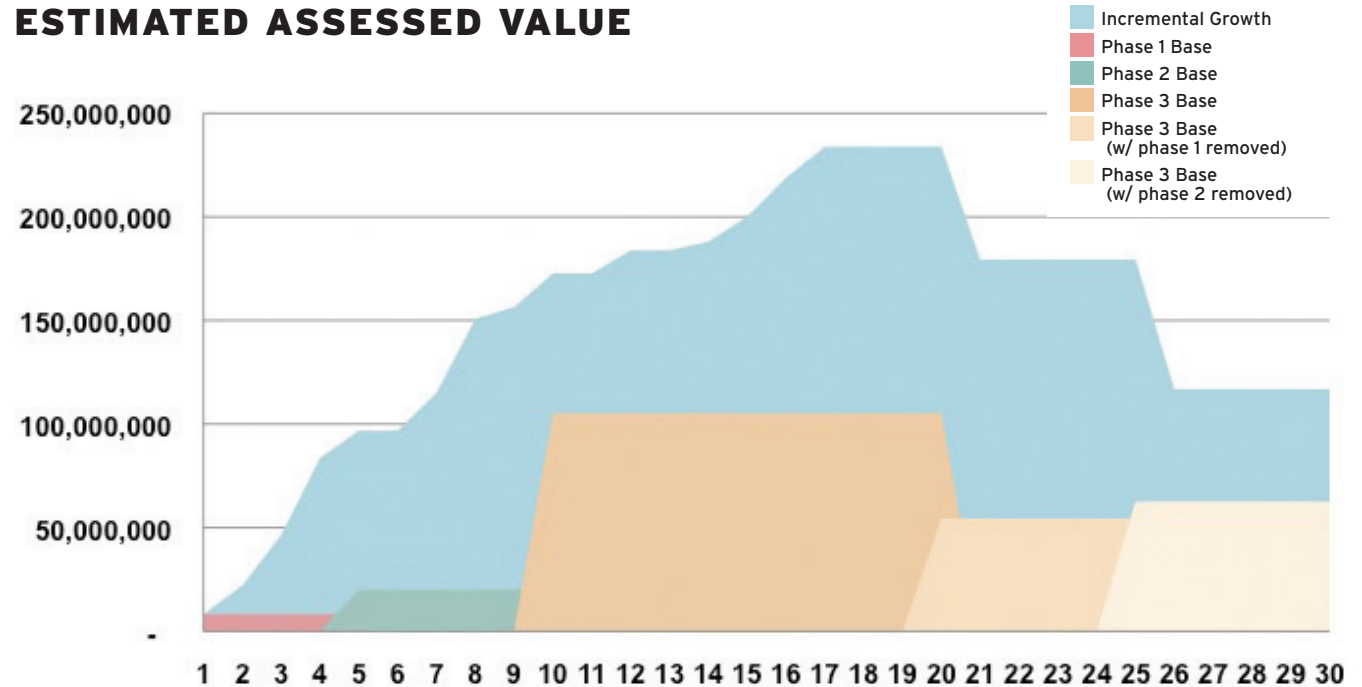
7. Assessed value estimates do not include potential residential exemptions available for owner occupied units and assume the study area is withdrawn from the LERTA Program.

8. Eastside TOD/TIF Analysis performed by ERA (April 2008)

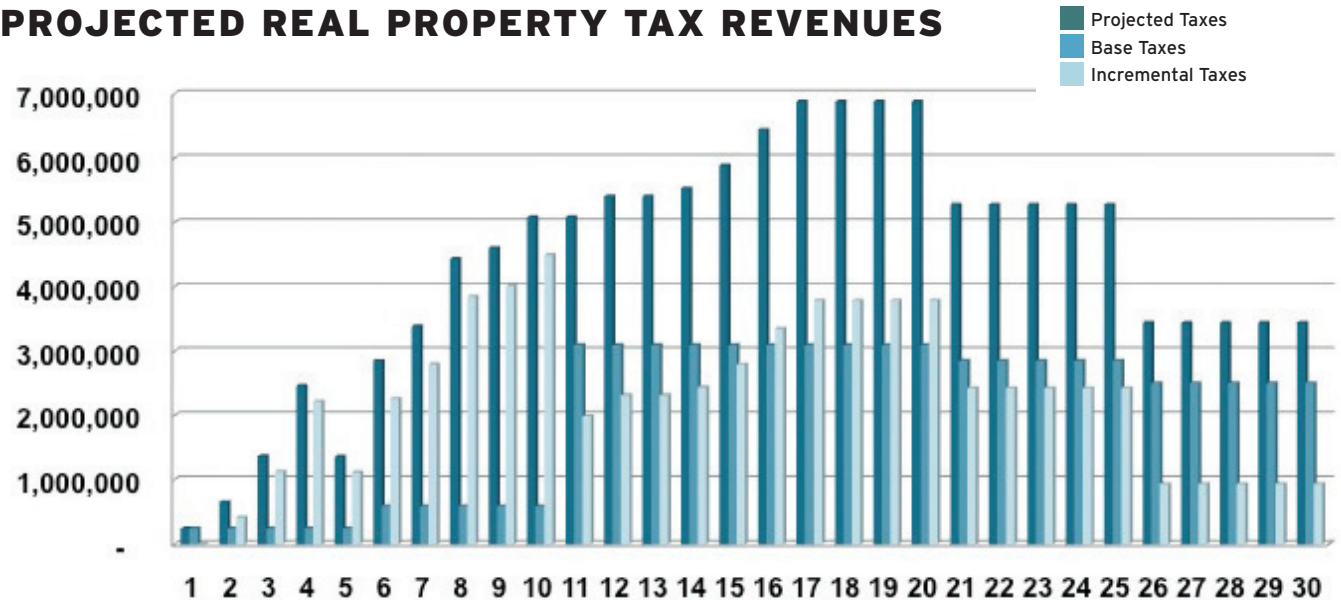
incremental value created in the TRID boundary would represent an approximately 33% increase in total assessed value after all value capture areas within the district expire.

Annual incremental real property tax revenue of \$3.8 million would be generated by this increase in assessed value during the peak. Approximate \$62 million of incremental revenues would be generated by new projects within the TRID boundary over 30 years if the value capture area is phased over time. A portion of these new revenues would be diverted to fund specific project infrastructure or district wide improvements as later outlined in the eTRID comprehensive value capture strategy.

ESTIMATED ASSESSED VALUE



PROJECTED REAL PROPERTY TAX REVENUES



FINANCING TOD

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Urban, mixed-use TOD projects are overburdened with higher costs when compared to competing suburban or even infill real estate investments.⁹ Projects faced with additional costs, especially related to upfront infrastructure, often require sophisticated financing structures that add to the time frame for completion. These TOD challenges demand a high level of expertise and patience on the part of the developer.

TOD	Other Real Estate
Urban Land	'Greenfield' Land
Upgraded Utilities	New Utilities
Environmental Remediation	Low Impact Past Use
Mid/High Rise Construction	Low Rise Construction
Mixed-Use Buildings	Single Use Buildings
Higher Interior Finish	Standard Finishes
Complex Street Network	Minimal Street Network
Multi-Modal Accommodations	Auto-oriented Design

Due to higher development costs, TOD often faces competition for investment dollars versus other products. This inherent gap often requires some type of subsidy/incentive to ensure TOD projects attract private financing and equity sources. TRID can provide the public financial assistance necessary to facilitate TOD projects within

⁹ *Fostering Equitable and Sustainable TOD, CTOD (Feb 2009)*

the study area. As illustrated below, financial assistance like TRID can be utilized to offset higher project cost and thus increase returns to levels comparable with suburban 'greenfield' development sites. Developer decision making is altered when a project attracts additional private investment and yields higher returns.

The figure at right illustrates a few of the numerous parties are involved in TOD implementation. This includes groups responsible for delivering transit, developing real estate and financing transactions. The process includes government entities at all levels as well as for-profit and non-profit organizations. Special interest groups throughout the community are often involved in

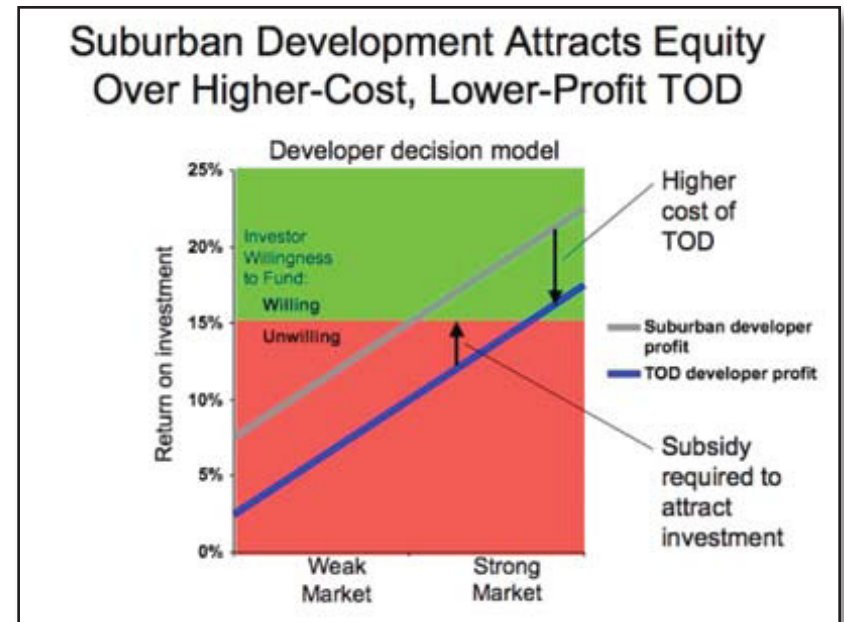


Chart Source: *Fostering Equitable and Sustainable TOD, CTOD (Feb 2009)*

transactions especially in their efforts to advocate for initiatives such as affordable housing, living wage jobs and other local benefits. Conflicting goals of all parties involved can further add to the cost or time frame necessary to implement TOD.

Ultimately, successful TOD requires good markets, good station areas and excellent coordination between numerous parties all dedicated to its success. With all of these ingredients, the study area is uniquely positioned to capitalize on TOD opportunities. However, the current infrastructure and urban fabric remains a hindrance to dense, mixed-use development in the vicinity of East Liberty station. Uncertainty as to how these improvements will be financed deters the development community from advancing projects despite improving market conditions. A financial strategy to address the site specific and district-wide impediments to TOD is critical to unlocking the estimated \$280 million of redevelopment potential in the eTRID study area.

TRID Background

eTRID represents the planning study mandated by Pennsylvania's *Transit Revitalization Investment District Act 238 of 2004* for municipalities, Counties and public transportation agencies seeking to implement a TRID based value capture strategy. Introduced with active participation by the Delaware Valley Regional Planning Commission,

this innovative legislation passed by the Commonwealth seeks to facilitate TOD, especially joint development opportunities with the transit agency. The Act defines the processes and procedures for the creation of a designated TRID whose intent is to:

- Coordinate transportation, land use and private investment by promoting TOD and joint development.
- Promote multi-municipal, cooperative approaches to generate new investment and community revitalization.
- Increase ridership on public transportation systems while generating additional revenues for current and expanded services, capital improvements and related ongoing maintenance.
- Establish appropriate mechanisms to capture the real property taxation and other values added by TOD activities for reinvestment in the transit system and local communities.
- Encourage greater community involvement in design, implementation and investment activities.
- Leverage existing Federal and State laws and programs.

The creation of a TRID itself does not represent a direct source of upfront funding for TOD, transit improvements or other public infrastructure. Though the Act directs the PA Department of

Community and Economic Development and other Commonwealth agencies to commit resources to assist with TRID implementation, the only TRID related funds currently available are for planning studies. No capital funding is currently committed directly and exclusively to TOD projects or other TRID initiatives. Developers or local public agencies seeking financial assistance must apply to other broad economic development programs.

As budgetary pressures mount at all levels of government, these funding programs are increasingly under scrutiny, continually faced with allocation cuts and thus more competitive than ever. The lack of a dedicated funding source has hindered the implementation of TRID's that have been studied throughout the Commonwealth. The Act however enables the use of a district-based tax increment financing mechanism to capture increases in real property taxes resulting from new assessed values to pay for necessary improvements detailed in the planning study. Although each features key differences regarding establishment and implementation, TIF and TRID are essentially the same financing tool based upon future tax revenues generated by projects that create new assessed value.

Significant redevelopment projects often face funding gaps that result from necessary public infrastructure. TIF assists these projects in the form of developer repayment of a portion of eligible costs incurred or by providing up front financing of certain

improvements. Financing districts are created either to facilitate single projects or various projects within a defined area. In southwestern PA, TIF is most commonly applied for specific known projects rather than the district-wide model used elsewhere in the country. Both the Bakery Square and Target component of Eastside within the study area benefited from TIF.

Due to the upfront capital need to fill funding gaps, TIF typically utilizes incremental tax revenues generated to finance debt incurred to construct a project. While TIF is nationally recognized as an instrument of economic development finance, TRID is not an established mechanism of municipal debt. Within a larger district, such as those defined for a TRID, much of the incremental revenue flow would be speculative at the time of establishment. The amount of upfront financing available would be dependent upon only known projects within the TRID or not available until construction is completed. These challenges limit the ability to raise initial capital funding through a TRID backed public revenue bond issuance.

Whether district-wide or project specific, TIF statutes across the country are constructed with the elimination of blight and community revitalization as primary goals. New development is expected to result in private investment and job creation. However, few TIF programs have a direct emphasis on single public policy goals such as TOD. TRID is unique in this regard with its promotion of

TOD and transit improvements through comprehensive, community based planning. The eTRID value capture strategy detailed below is driven by this specific policy as a means to facilitate revitalization within the study area.

TIF could be applied in an effort to foster TOD led redevelopment throughout the eTRID study area either for specific sites or on a district-wide basis. Though, there are several issues that limit the ability to implement TIF to achieve the development and infrastructure program outlined within this study. The City is limited in the value of taxable property within active TIF districts. Adding the full proposed TRID boundary to the existing parcels within TIF districts throughout the City would bring the URA close, if not over, the 10% statutory limit. Further, utilizing TIF for larger specific sites would limit the cohesive strategy between projects and momentum built through decades of planning.

TIF would also require a certification of 'blight' which is often contentious especially when including non-blighted parcels in a larger district. The legislative approval process for expanding a TIF boundary would be approximately twice as long per the terms of each Act. TRID can be utilized in areas regardless of the condition of property and the Act includes specific provisions for boundary expansion. With its focus on TOD principles and increased stakeholder participation, TRID is the preferred development finance tool to facilitate revitalization within the study area.

**eTRID Value
Capture**

**District-wide or
Project Specific
Improvements**

**New Increment
Created**

**Value Capture
Fund Increase**

eITRID Value Capture Strategy

Pursuant to Chapter 7 of the Act, a coterminous value capture area shall be simultaneously created at the time a specific TRID boundary is determined. Establishment of this value capture boundary allows the local taxing bodies and transit agency to share incremental tax revenues generated within the area boundary to implement projects identified in the planning study. As discussed, the value capture area essentially mirrors a 20 year TOD specific TIF District with revenues dedicated to fund specific improvements and maintenance. However, revenues may not be utilized by municipalities and counties for general government purposes or by transit agencies for capital improvements elsewhere in the system.

Under a district-wide strategy, improvements financed would most likely facilitate further development that would create new incremental revenue. The amount available to a set aside value capture fund would increase and allow additional district-wide or project specific improvements to be financed. This process would continue over the 20 year life of the TRID. Establishing a large value capture district up front, such as the full proposed eITRID boundary, would limit the total amount of increment available for planning study recommended improvements and maintenance beyond current development opportunities. For example, redevelopment of a site in year 10 would provide only 10 years of new increment dedicated to a value capture fund.

As previously discussed, the recommended value capture area within the eITRID boundary would be expanded over time to accommodate redevelopment of key sites not currently within the known pipeline. Much of this potential development is dependent on key district-wide infrastructure that will allow for increased density. The expansion would respond to local market conditions and provide the greatest degree of flexibility in terms of implementing the development, transit and infrastructure recommendations in this planning study. Proposed value capture area expansions are based upon maximizing the potential value capture to fund these improvements. The recommended eITRID value capture strategy will guide investment in project specific infrastructure, district-wide improvements and maintenance

Approximately \$65 million of incremental revenues would be generated by new projects within the TRID boundary over 30 years by phasing the value capture areas. Implementing the full boundary today would result in significantly less TRID proceeds available for the recommended projects. Nearly \$17 million of available increment would be generated after year 20 and not captured if the value capture area was coterminous with the TRID boundary. This amount would most likely be even larger as the redevelopment potential of several sites not included in the analysis above increase after significant future district-wide improvements, such as completion of the Penn Circle Two-Way conversion, are

completed. However, further revitalization efforts dependent upon this infrastructure would be limited without additional investment from the additional TRID proceeds realized only under the phased strategy.

The recommended eITRID value capture strategy combines elements of the project specific and district-wide approaches to provide a means for key investments that will facilitate TOD within the study area. To the extent possible, the strategy provides for upfront funding for larger projects to overcome challenges inherent in these urban, mixed-use developments. Other redevelopment projects will contribute to the newly created eITRID value capture fund (VC Fund) which will be utilized primarily to fund district-wide improvements. A guiding principal of the strategy will be to incentivize, not subsidize, TOD and infrastructure development within the study area. Investments will be prioritized by their ability to facilitate further redevelopment. Like with the local TIF program, the 'but-for' test should apply where projects should only seek assistance if they cannot proceed without a TRID investment.

Sections below detail an example of how the value capture strategy could be implemented for both projects in the immediate pipeline and those further on the horizon. As with the boundaries of the value capture area, the TRID Management Entity would be responsible for determining project financing structures and VC Fund investment priorities across the district. The strategy would remain flexible to accommodate

various future scenarios, but maintain the ability to provide assistance to large scale redevelopment projects as well as improvements that benefit multiple users.

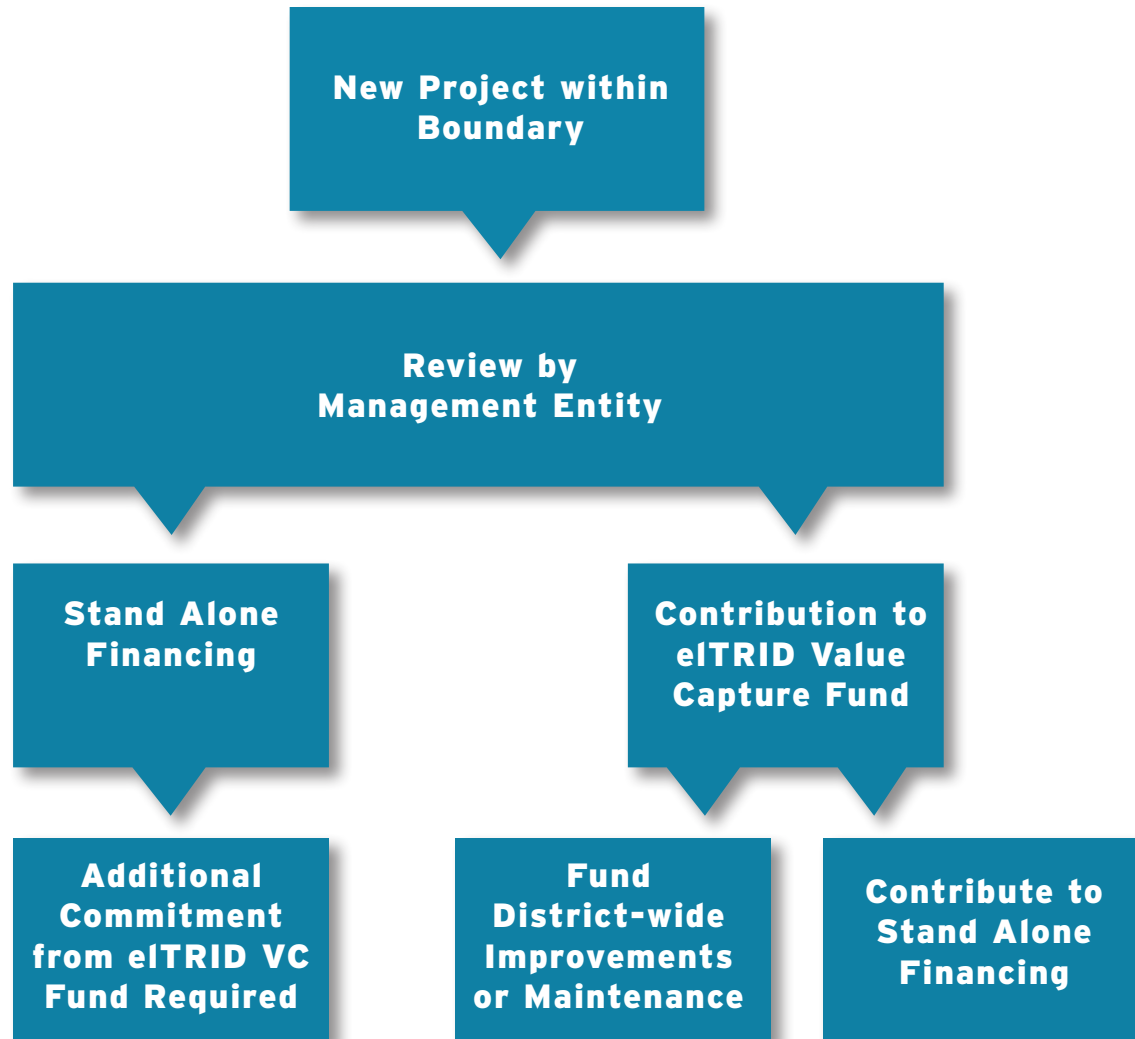
Phase I Strategy

As detailed earlier, the proposed Phase I value capture area within the eTRID boundary contains several major redevelopment projects expected to commence within the next 5 years. One of the most significant is the proposed expansion of Eastside in conjunction with reconstruction of the East Busway station. Site development and necessary public infrastructure for Eastside III & IV are expected to exceed \$12 million with approximately \$13 million of additional costs tied to the Eastern Gateway Intermodal Center (EGIC).

Public financial assistance is necessary to fill the funding gap that results from these improvements. A top priority within the study area, the EGIC and associated Eastside site infrastructure will enable mode sharing and vastly improve connectivity. More active land use in the immediate vicinity of the new station will yield numerous benefits, especially increase transit utilization. As identified in the 2010 Community Plan, the significant transit assets in this Eastern Gateway geographic zone can be built upon to facilitate further revitalization throughout the neighborhood.

At full build-out, the project will generate an estimated \$723,864 of annual incremental real property tax and an additional \$370,610

PROJECT ASSESSMENT PROCESS



of income tax for potential capture. The value capture strategy provides the option for a stand-alone financing specific to the project and its funding gap. These incremental revenues could support approximately \$3.25 million of TRID debt obligations or \$5.5 million if income taxes are also pledged to debt repayment. Due to required coverage, excess increment would be available annually after payment of debt service. These funds could be made available for contribution to the VC Fund or to reimburse eligible project costs. Under this scenario, an additional \$4.3 million could be provided to the developer over the term of the financing with \$1.4 million flowing back to the fund. Several district-wide TIF models across the country provide assistance only in the form of repayment for eligible project costs.

Due to the extraordinary public infrastructure cost associated with site development and the station area, this scenario assumes 100% of the City and County real property tax increment is pledged to the TRID. A diversion of 40% of annual School District revenues is assumed in line with the local TIF policy. Finally, if income taxes are also part of the TRID financing it is assumed the City and School District will each pledge 1%. These assumptions are for example only and subject to change pending review by the TRID Management Entity. Again, the implementation strategy aims to provide flexibility to account for circumstances such as the availability of other funding

assistance to off-set project costs. Appendix II includes a full analysis of incremental tax revenues generated by the project and potential TRID debt structure.

The other projects within the initial eTRID value capture area do not require such large site specific public infrastructure improvements as to warrant an upfront financing. Incremental revenues generated upon their completion would contribute to the eTRID VC Fund. Proposed projects by ELDI and East Liberty Place South will generate an estimated \$403,389 of annual incremental real property tax and an additional \$228,005 of income tax at full-build out for potential contribution to the fund. It is important to note this conservative estimate does not include incremental revenue derived from redevelopment of the Highland Building. The project is included in the Phase I boundary, and could potentially contribute to the fund after the KOZ exemption expires in 2017.¹⁰

This analysis assumes only 60% of incremental real property tax revenues are pledged to the fund by each taxing body. It is anticipated this amount will be sufficient to fund recommended Phase I improvements with participation by other funding sources attracted by the TRID investments. Initial infrastructure improvements should be prioritized on the basis of their benefit to

10 Based upon discussions with PA DCED it is unclear whether the new value would be considered 'increment' for the purposes of the TRID since the value would be created before the KOZ expiration. Additional follow up is required for clarification.

multiple users and ability to facilitate further redevelopment in the study area. Appendix III includes a full analysis of incremental tax revenues and contributions to the VC Fund over the life of the initial TRID boundary.

The eTRID value capture strategy examines the potential of dedicating a portion of the annual increment from other Phase I projects to provide additional support for Eastside III & IV, including the EGIC infrastructure. If an additional \$200,000 of stabilized annual incremental property tax revenues were diverted from the VC Fund to support the Eastside TRID debt, an upfront financing of approximately \$4.65 million could be made available to defray a portion of the cost of necessary public infrastructure (not including potential pledged income tax revenues). Further, approximately \$3.5 million of excess increment could be made available for developer reimbursement if appropriate.

Considering several significant projects are expected to commence within the next 5 years, the recommended value capture strategy provides yet another option for funding necessary public improvements. A pooled financing mechanism could provide funding for both site specific and district-wide infrastructure. Estimated annual increment of \$938,181 generated by Eastside III & IV, ELDI's two projects and East Liberty Place South could be pooled to support a larger TRID debt issuance.

These incremental revenues could support approximately \$5.5 million of TRID obligations or \$9.2 million if income taxes are also pledged to debt repayment. In addition, approximately \$5.7 million of excess increment, or \$7 million including pledged income taxes, could be made available for reimbursement of project costs in line with scenarios outlined above. Financing options would be similar to those for stand-alone structures. Linking these projects together results in larger annual cash flow and less investor risk as the tax base is more diversified. Station area improvements would remain a priority use of the net proceeds generated. Additional funds could be committed to district-wide infrastructure critical to facilitating further TOD. This approach allows for more immediate availability of funds for these initiatives as opposed to waiting for VC Fund revenues to stabilize.

Project Specific TRID Financing Options

It certainly would be challenging to do a large public bond issuance to finance all of the proposed infrastructure improvements within the study area. Even though a significant amount of incremental revenue will be generated, the development program will be built-out over at least a 15 year period. The phased value capture area within the eTRID boundary and value capture strategy provides a more realistic financing option. However, stand-alone projects such as Eastside II & IV could support issuance a public TRID revenue bond under certain circumstances.

Because the TRID debt would be nonrecourse to the taxing bodies, issuances would have to be offered in conjunction with enhancements such as ratings, letters of credit, developer guarantees or minimum payment agreements with credit tenants. Security or credit enhancement adds significant costs to the project however and might not always be applicable.

Various options beyond a public bond issuance exist for utilizing TRID to defray a portion of the project costs and facilitate TOD opportunities. Ideally, the entire TRID debt issuance for a project would be privately placed with one primary investor. Potential TRID investors would understand the fact that most of the default risk exists as the development is built out and structure a deal with cost effective security. It is important these sources 'buy in' to the ultimate vision of the project and support sustainable, infill urban redevelopment and TOD. In addition, they could appreciate the benefits of the likely tax-exempt nature of the TRID debt.

The following are sample potential TRID investors to be examined:

Project Conventional Lenders

- *Established relationship with developers*
- *Providing conventional financing for site development and unit construction so already understand project*

Other Banks/equity partners

- *Might be interested in potential equity investment in addition to the TRID*
- *Structured as pay-as-you-go option*

National Development Finance groups

- *National providers of structured debt (or equity) for urban projects including infill and TOD*

Local Pittsburgh Foundations

- *Strong commitment to the TRID's regional benefits*
- *TRID's potential to advance regional sustainability (and civic design) goals motivate foundations to invest in the TRID debt*

For a potential stand-alone TRID financing, it is anticipated cash flow would be available after debt service payments due to required debt coverage. These funds could be utilized for prepayment of the debt as in many TIF structures. However, another option would be to have the amounts split between repayment of eligible project costs and contributions to a value capture fund as illustrated.

The initial phase also includes the proposed redevelopment of the former Reizenstein School with a mix of office, commercial and residential uses. Phase I of the value capture area includes the front of the parcel along Penn Avenue which is likely to be developed first with mixed-use buildings. A future expansion would capture the residential components of the project as build-out continues. It is anticipated this significant project would be a candidate for a stand-alone financing as well with estimated infrastructure costs in excess of approximately \$10 million.

At full build-out of the commercial component, the project will generate an estimated \$1,067,104 of annual incremental real property tax and an additional \$882,000 of income tax for potential capture. These incremental revenues could support approximately \$6.25 million of TRID financing or \$10 million if income taxes are also pledged to debt repayment.

Diversion assumptions, including those for income tax revenue, match those of the Eastside project due to the funding need resulting from anticipated infrastructure costs. An additional \$6.5 million could be provided to reimburse the developer over the term of the financing if appropriate. Annual increment of \$558,703 from the future residential component is assumed to be made available for the VC Fund. Appendix IV includes a full analysis of incremental tax revenues generated by the project, contributions to the fund and potential TRID debt structure.

During Phase I alone, approximately \$3.7 million, or \$7.4 million of incremental revenues if income taxes are also diverted, would be contributed to the VC Fund by projects not seeking stand-alone financing (excludes potential revenues resulting from Highland Building Redevelopment). These incremental revenues would be available for district-wide improvements outlined in the planning study to facilitate further revitalization within the study area if not contributed to the pooled financing discussed earlier. Contributions to the eTRID VC Fund from future projects beyond the 5 year development pipeline would allow for even greater investment in planned infrastructure and transit facilities across the district continuing the cycle.

Strategy for Future Phases

As revitalization continues with the 2nd and 3rd recommended value capture area expansions, implementation of the eTRID value capture strategy would proceed. No project specific TRID financings were analyzed so it is anticipated all available increment flows into the VC Fund. This assumes only 60% of incremental real property tax revenues are pledged to the fund by each taxing body. An increase in this diversion rate could be requested depending on the investment strategy determined and the cost of necessary improvements.

Appendix V & VI include a full analysis of incremental tax revenues and contributions to the VC Fund over the life of the later

phases of the eTRID value capture area. The Phase II expansion adds another \$25.4 million of incremental revenue to the value capture fund over the 20 year period and another \$2.25 million if income taxes are also pledged. If the recommended final value capture area expansion is pursued, another \$15.7 million of incremental revenue would be available from those projects and another \$780,000 if incomes tax revenues are also captured.

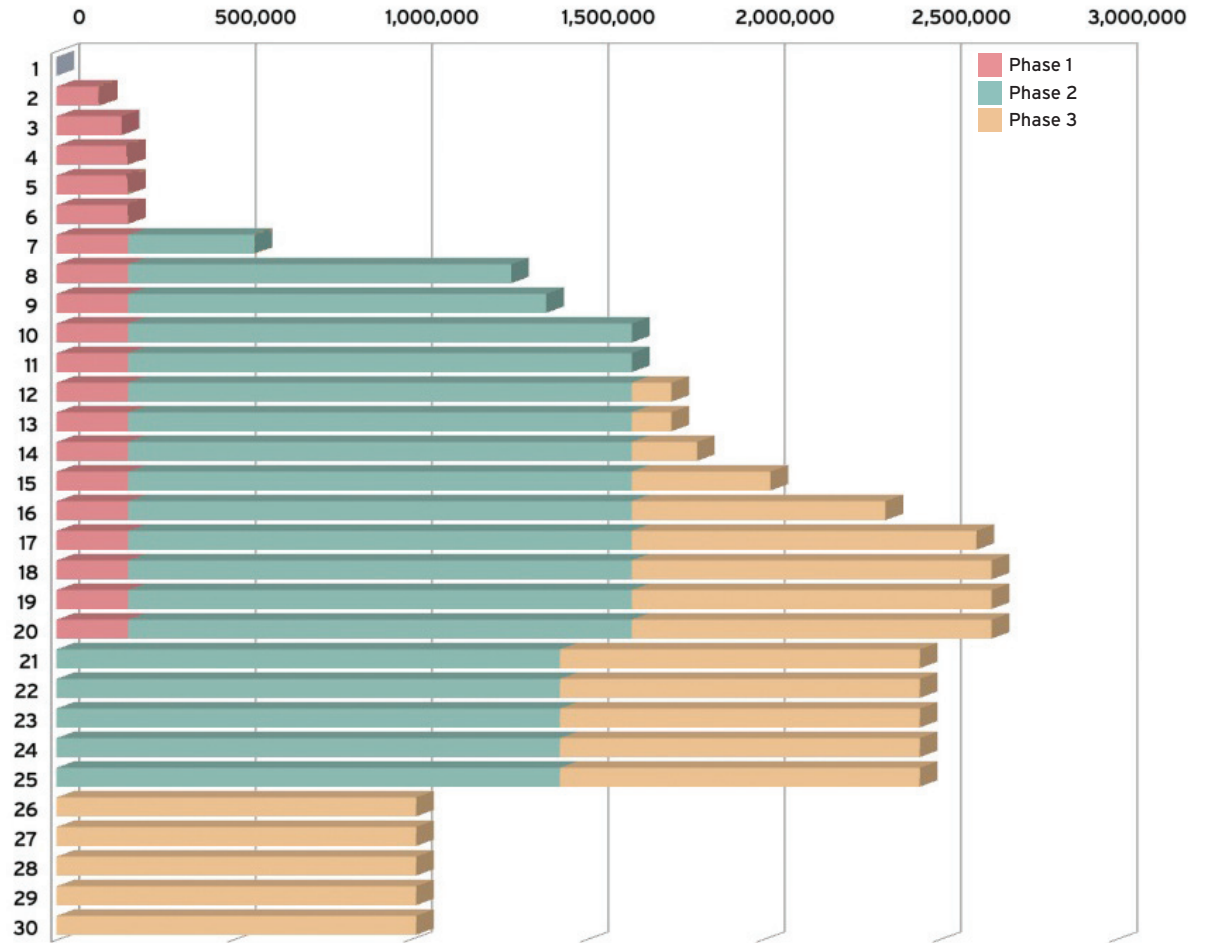
Implementation of Phase I only will result in capture of TRID proceeds insufficient to fund large scale infrastructure projects, such as the Penn Circle Conversion. For the first period until the 2nd expansion, the VC Fund should be utilized to fund additional infrastructure and other necessary planning studies that provide a level of detail greater than the recommendations presented here. Though, some small scale gap financing can also be offered for merit projects within the initial boundary. Retention of most of the eTRID VC Fund balance will allow those revenues to combine with more significant future revenues anticipated during Phases II and III of the value capture area. Once annual TRID revenues have stabilized, larger scale district-wide improvements become more feasible.

However, note it is likely that several potential large scale redevelopment projects noted earlier would pursue stand-alone financing, or be pooled together, in an effort to defray site development and infrastructure costs. Project specific

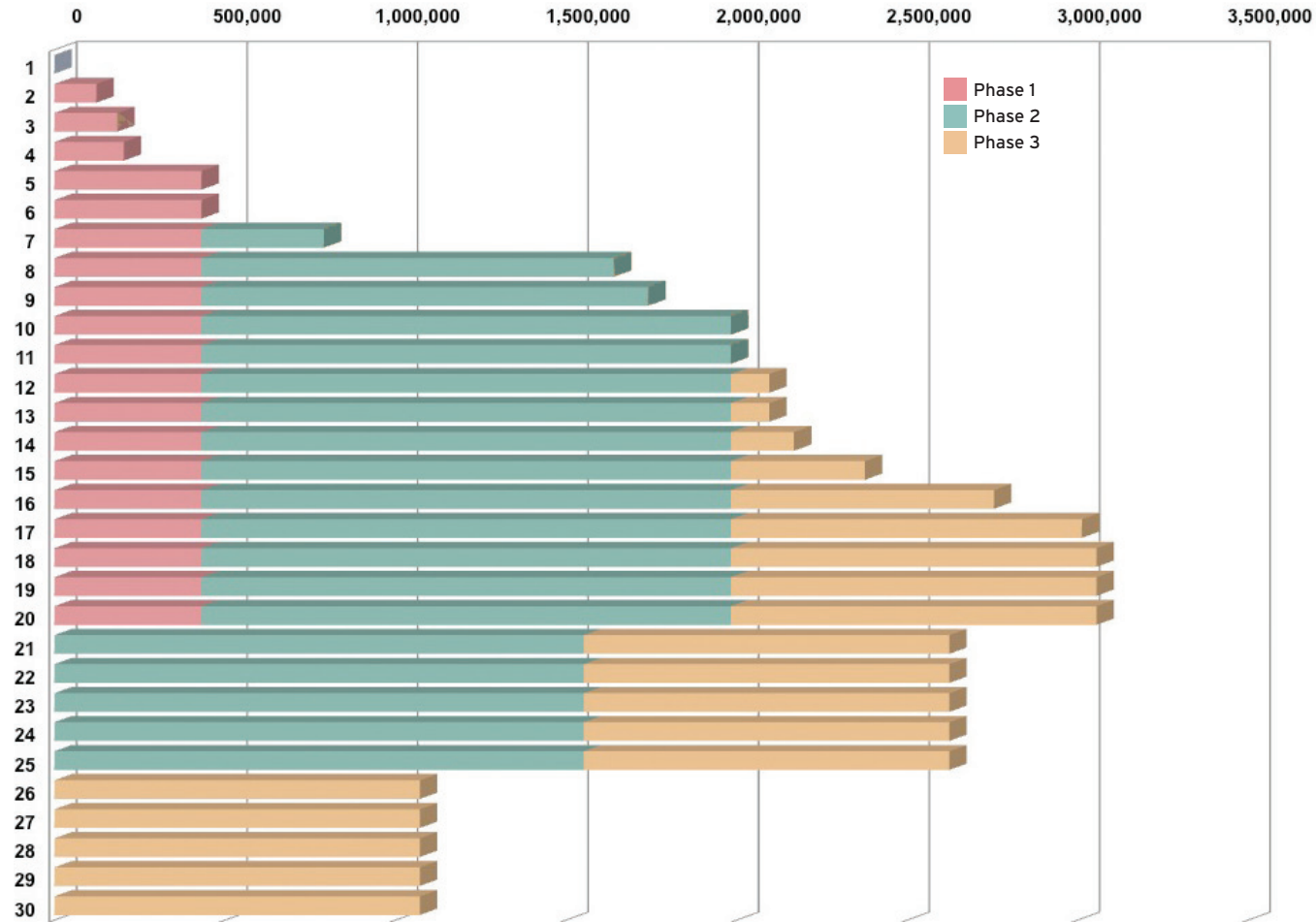
financings could in some cases utilize less than the full amount of increment available, with the remainder diverted to the VC Fund. A key component of the value capture strategy is use of the VC Fund as a means of leverage for other potential funding sources which could help limit the amount of fund proceeds required in these transactions. Any unencumbered revenues within the eTRID VC Fund could also be utilized to provide additional security to any project specific TRID debt or dedicated to pooled financing like the earlier example.

The graph at right illustrates the annual incremental real property tax revenue flows into the eTRID VC Fund. When income tax increment is also pledged to the fund, the annual flows increase as illustrated in the graph on the following page. The net present value of these annual revenues is \$12.3 million and \$14.7 million respectively representing a rough example of potential future financing capacity of the VC Fund. As the initial and Phase II value capture areas are retired, those tax revenues return in full to the taxing bodies and the annual amount available decreases accordingly.

eTRID VALUE CAPTURE FUND



eITRID VALUE CAPTURE FUND WITH INCOME TAX INCREMENT

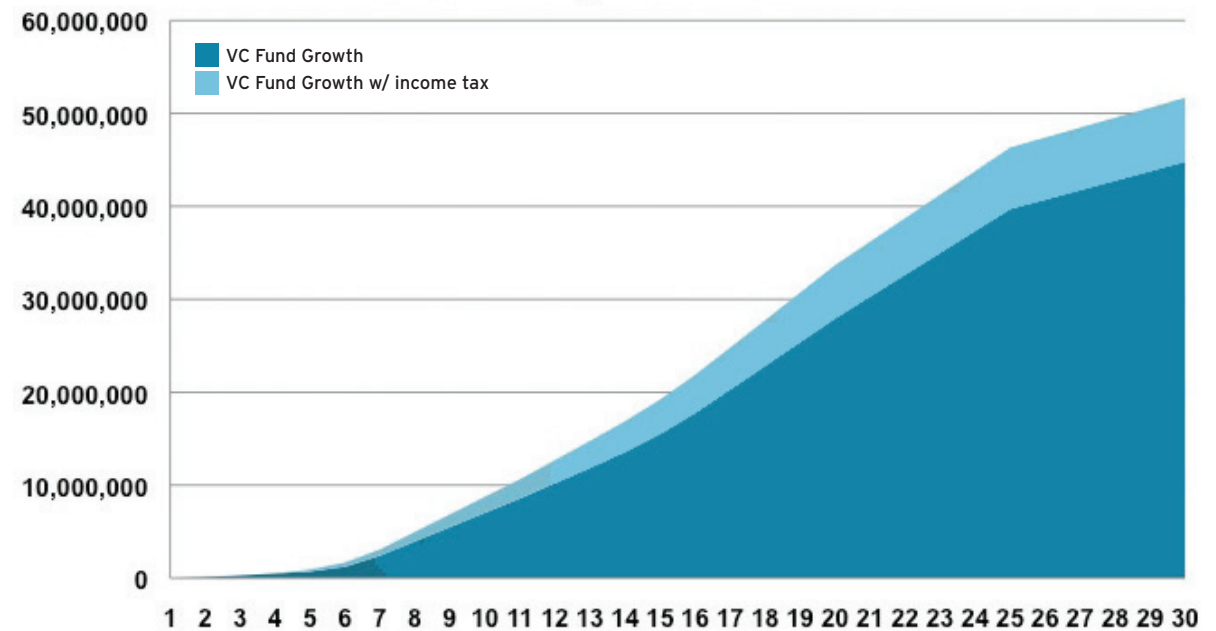


Over the 30 year period until the expiration of the 3rd TRID value capture area, the VC Fund is expected to collect approximately \$44 million of incremental revenues or \$52 million if all income taxes are also diverted to the fund. The graph at right illustrates growth of the eITRID VC Fund over time minus potential contributions to the Eastside III & IV projects. Again, this conservative estimate does not include smaller projects, background increment or redevelopment of certain targeted sites that could be targeted following district wide infrastructure improvements.

The annual amount revenue available to the fund would be decreased if projects pursue financing based upon site specific increment created or several projects combine for a pooled TRID debt issuance. Those projects could also seek additional contributions from the VC Fund to support TRID backed debt like the Eastside example. However, they could also return excess increment back to the fund if other funding sources are available. Remaining proceeds of the fund will be utilized for:

- District-wide infrastructure and transit improvements
- Infrastructure maintenance
- Development site assemblage and remediation
- Contributions to larger projects that require additional funding, including pledged security

eITRID Value Capture Fund Balance



- Gap financing for smaller scale redevelopment projects to stabilize commercial core and preserve local business¹¹

As mentioned, there is a potential to eventually issue public TRID revenue bonds once the proposed development within the future eITRID boundary has stabilized. The net present value amounts illustrated above do not factor in other potential large and small scale projects or background growth in assessed value over time. Marketability will increase significantly after full build-out once the new developments have an established history of assessments and tax payments. Any issuance could also be structured to include refinancing of stand-alone TRID debt as well.

Obviously a great amount of uncertainty exists with regard to potential increments available and use of the VC Fund beyond the first eITRID value capture area. It is recommended that the general value capture strategy remains in place to provide a balance between large scale redevelopment and smaller organic growth facilitated as the urban fabric and transit system within the study area is enhanced. Investment priorities for the VC Fund will be the responsibility of the eITRID Management Entity.

¹¹ Study assumes properties within the study area are not eligible for the existing or any future version of the LERTA Program. The TIF Act prohibits LERTA within a District because the increment is necessary to fund improvements. Given the similarities with TRID, it is recommended the same applies here. The gap financing provided from the eITRID VC Fund would provide benefit for smaller projects in addition to the district-wide improvements that enhance local market conditions.

eITRID MANAGEMENT ENTITY

Section 502 of the Act details creation of a management entity by the partnering municipalities similar to other municipal authorities established to support transit, redevelopment activities or infrastructure development. The recommended eITRID Revitalization Authority (eITRIDRA) would be charged with implementation of value capture areas within the eITRID boundary, the value capture strategy and the recommended VC Fund.

Membership on the eITRIDRA Board of Directors would be comprised of representatives from the participating taxing bodies, PAAC, ELDI, Shadyside Action Coalition and three at-large members from the local business community serving set terms. Representatives of the three taxing bodies would be the only voting members of the organization as all others would only serve in an advisory role. Additional advisory would come from agencies such as PA DCED and the Southwestern Pennsylvania Commission as needed. As with the Pittsburgh Industrial Development Authority, the eITRIDRA would be housed within the URA, whose management and technical employees would provide day to day staff on behalf of the Board. The URA Executive Director would serve a dual role as eITRIDRA Executive Director in preparing materials for review by the Board.

Suggested responsibilities of the eITRIDRA include:

eITRID Guidelines

- Based upon URA TIF Guidelines (including elements such as the Hiring Plan, MWDBE requirements and green building)
 - Set investment priorities for value capture
 - Guidelines for TOD design based on eITRID recommendations
- Market potential development sites within the study area
- Solicit developer interest and market TOD opportunities with assistance from URA, ELDI and Shadyside Action Coalition
 - Serve as the conduit through which the PAAC can enter into joint development agreements with private developers
 - Assemble and remediate development sites within the study area

Project Review

- TRID funding application similar to TIF for project requesting stand-alone financing to determine project feasibility
- Stand-alone projects can be project specific TRID financing or GAP financing from VC Fund

- Ensure market viability of proposed development
- Enter into development agreements to ensure goals of the local community
- Collect administrative fees for stand-alone financings

District-wide Improvements

- Prioritize infrastructure and transit within the study area
- Determine structure of pooled financings for district-wide improvements
- Choose agency responsible for implementation of district-wide improvements
- Solicit additional funding to offset liability of the VC Fund

Value Capture Area Boundaries

- Define areas of value capture within the proposed eITRID boundary, expanding the area over time to correspond to market conditions

Annual Reporting

- Review of eITRID stand-alone financings and VC Fund activity with the participating taxing bodies
- Potential return of any unutilized incremental revenues to the taxing body general fund

eTRIDRA will implement the value capture strategy which is critical to guide TOD led revitalization in the study area. Further, oversight will make certain that TOD elements are incorporated into the project design and that development builds off other investments in public infrastructure and the transit system. The strategy will blend asset preservation in stable portions of the study area while promoting development of weaker sections in an effort to benefit both current residents/businesses and those attracted to the district.

Obviously the capture of TRID revenues within the proposed value capture areas represents taxes foregone by the local taxing bodies. Every dollar of this public investment will leverage at least six dollars of private investment. The strategy includes the ability for some revenues to be retained for general government use and a return of excess TRID revenues at certain times. However, significant economic impacts are expected within the study area following implementation of the eTRID. Estimated benefits include private investment, job creation, retention of existing jobs and other non-real property or income tax revenues/fees.

eTRID Approval and Implementation

The Act includes specific instructions as to the process of advancing a TRID from a redevelopment concept around a transit station to implementation of the proposed value capture strategy and eventual financing of specific improvements. Once a location is identified, the process of planning, program management/ implementation and execution of the TRID begins over 16 defined steps. Some of these steps occur concurrently. eTRID represents the required Planning Study and includes a detailed discussion of future implementation through the Value Capture Strategy outlined above.

Planning

- Step 1. City and PAAC agreed to work cooperatively to create a TRID (in conjunction with other agencies on Steering Committee)
- Step 2. City selected Project Team for eTRID Planning Study to determine location, boundaries, and rationale
- Step 3. City and PAAC conducted community public meeting on eTRID facilitated by Project Team
- Step 4. eTRID is circulated to Steering Committee, revised and completed
- Step 5. City (through the Department of City Planning) and PAAC accept eTRID's findings and recommendations

Management and Implementation

- Step 6. City and PAAC hold a public meeting on eTRID Value Capture Strategy and Phase I improvements
- Step 7. City and PAAC coordinate with PPSD and the County on eTRID Value Capture Strategy (three taxing bodies authorize eTRID Resolutions)
- Step 8. City forms eTRIDRA within the URA to administer eTRID implementation
- Step 9. City, PPSD, County, URA, PAAC and eTRIDRA execute eTRID Cooperation Agreement and Tax Fund Agreements

Execution

- Step 10. eTRIDRA markets development sites and commences project review for specific redevelopment projects
- Step 11. eTRIDRA prepares project lists of public sector infrastructure improvements, including costs, phasing and maintenance based on findings of eTRID
- Step 12. Development proposals accepted by eTRIDRA

Step 13. eITRIDRA executes Development Agreement with Developer, including eITRID financed improvements and private sector commitments - or - eITRIDRA selects contractor to complete district-wide improvements

Step 14. Project construction and completion

Step 15. eITRIDRA administers captured revenues and project expenditures from the eITRID Value Capture Fund in accordance with the approved eITRID Value Capture Strategy

Step 16. Amendments to Agreement or eITRID for future phases of the value capture area

Appendix VII includes a draft of the cooperation agreement, including development agreement template, as referenced in this process. It is anticipated the eITRID VC Fund would be held with an escrow agent who would also act as paying agent with respect to the Fund or future TRID backed obligations. A trust indenture would establish the rights, duties, responsibilities and remedies of eITRIDRA, the trustee and holders of any TRID obligations. Stand-alone financings would require a loan agreement and additional documents such as those associated with a typical TIF issuance.

LINKS TO REPORTS REFERENCED

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<http://www.ctod.org/portal/sites/default/files/tod101full.pdf>

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CTOD - Performance-Based Transit-Oriented Development Typology Guidebook, 2010, Page 15.

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APPENDIX

Appendix I - eTRID Total Annual TRID Value Capture

Appendix II - eTRID Private Development Summary - Eastside III & IV TOD Project

Appendix III - eTRID Private Development Summary Years 1-5 Development Projects

Appendix IV - eTRID Private Development Summary - Former Reizenstein School
Redevelopment Project

Appendix V - eTRID Private Development Summary - Years 5-10 Development Projects

Appendix VI - eTRID Private Development Summary - Year 10+ Development Projects

Appendix VII - eTRID DRAFT Cooperation Agreement

Appendix VIII - eTRID Utility Assessment

Appendix IX - Tiger III Station Redesign Drawing Set

Appendix X - Town Square Masterplan - Semple Brown Design