

# 2

## East End Planning Strategy

This chapter introduces the Planning Strategy and describes the Pedestrian Realm/Mobility Plan, the Land Development Concept Plan and Infrastructure Plan.

### A2.1

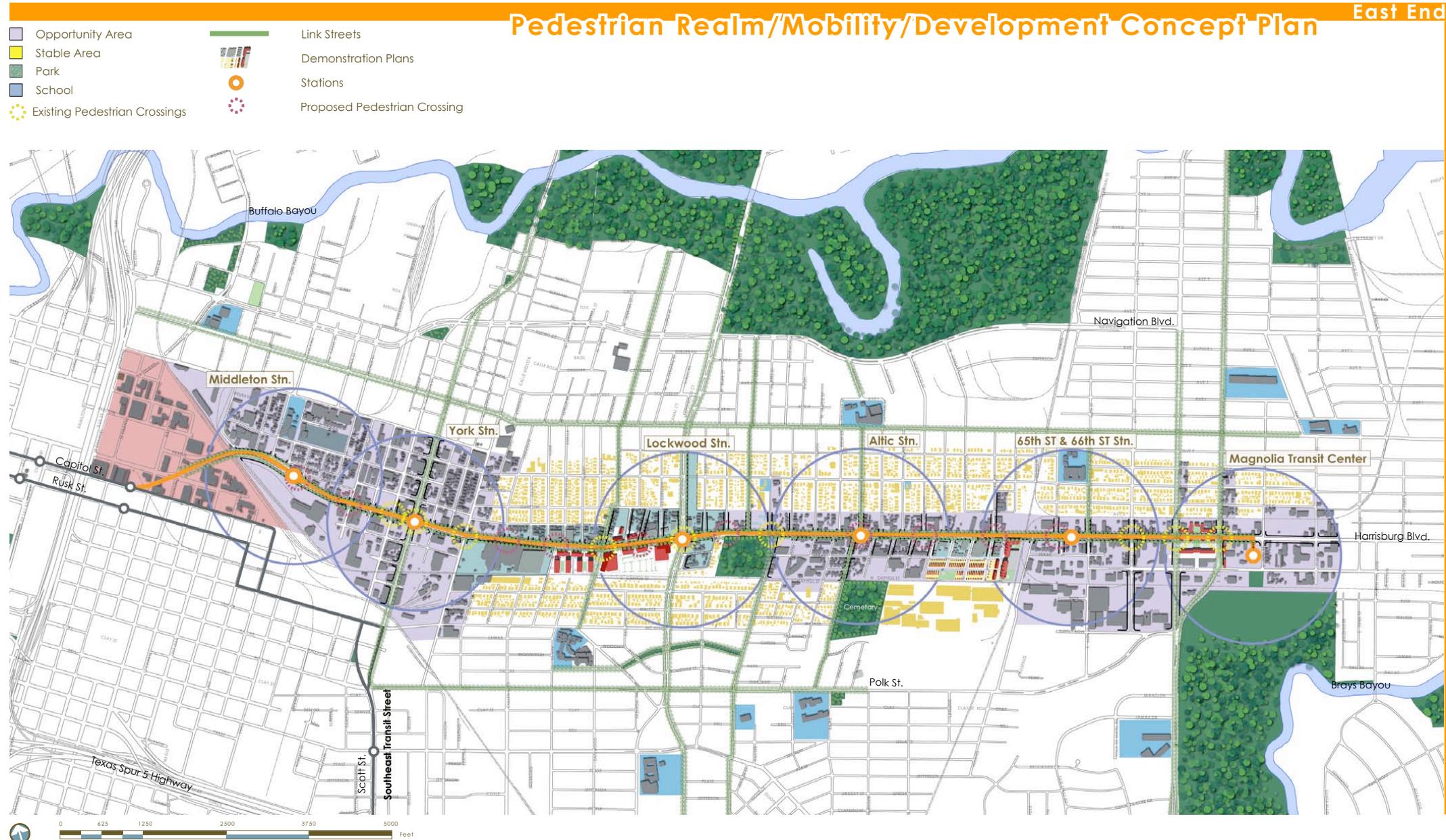
## The Combined Pedestrian Realm/Mobility/Land Development Concept Plan

The diagram on the facing page overlays the Pedestrian Realm/Mobility Plan and the Land Development Concept Plan, which are described individually in more detail in the sections following. The Combined Plan brings into focus the broader elements along the Corridor that will eventually result in Transit Oriented Development and the potential linkages to the surrounding community.

In addition to illustrating Development Opportunity Areas where redevelopment associated with the Urban Corridors should be focused, it also delineates Stable Areas that should be protected for the impacts of redevelopment.

The Combined Plan, through the illustration of the “built to” line, also provides a sense of the scale of the street resulting from future Transit Oriented Development.

Finally, the Combined Plan illustrates the importance of a developed and connected pedestrian realm that includes a system of open spaces linked to transit. The early development of sidewalks and landscape reinforces the linear nature of the Corridor as a Linked Transit Line.



## A 2.2

### Pedestrian Realm/ Mobility Plan

The Pedestrian Realm/Mobility Plan illustrates recommendations to improve and enhance the pedestrian realm and mobility conditions within the East End Corridor. The goal of these recommendations is to provide a safe, vibrant, attractive and highly functional pedestrian experience along the East End Corridor Transit Line (Harrisburg Boulevard), adjacent to proposed Transit Stations/Transit Centers and along key connecting streets.

Beautiful, tree-lined, pedestrian-focused streets are the framework of the Pedestrian Realm/Mobility Plan. Collector streets comprise the largest percentage of public space, and as such, must be enhanced and treated as important public places. When they function well, they are lively places where cafes, flower shops, gardens and public art create a vibrant outdoor space. They are the places where the eyes of the community are on the activities of the street, the frontage for development and the addresses of businesses.

Harrisburg Boulevard is the main spine with key north/south connecting streets also identified for streetscape enhancement. The connecting streets, such as York, North Eastwood and Baywood, provide important links to adjacent community destinations such as parks, schools, community facilities and trails.

Streetscape enhancements should include street tree planting, with an ambition to create a continuous canopy. Street trees would clearly identify the important streets and public places and would provide shade to clear, wide, continuous sidewalks extending from back of curb to building fronts along Harrisburg Boulevard and adjacent to a tree boulevard on connecting streets. In addition, pedestrian level lighting and street furnishings are appropriate.

Lighting along the Southeast Corridor Rail Line is recommended to be consolidated, as possible onto the catenary poles to be installed for the electrical service to the light rail cars. Both street lighting and pedestrian lighting can be attached to these catenary poles effectively. Consolidating lighting on these poles will avoid the visual clutter and expense of multiple poles.

The intent of the pedestrian oriented street hierarchy is to provide an integrated, multi-modal transportation network for all residents and businesses that is safe, convenient and efficient.

Ample pedestrian crosswalks are crucial to the perception of accessibility to both sides of the Harrisburg Transit Street. Great care must be taken to provide safe, well-marked, and unimpeded crossing opportunities especially within retail zones. Bulb-outs reduce crossing distances and should be designed where on-street parking is proposed.

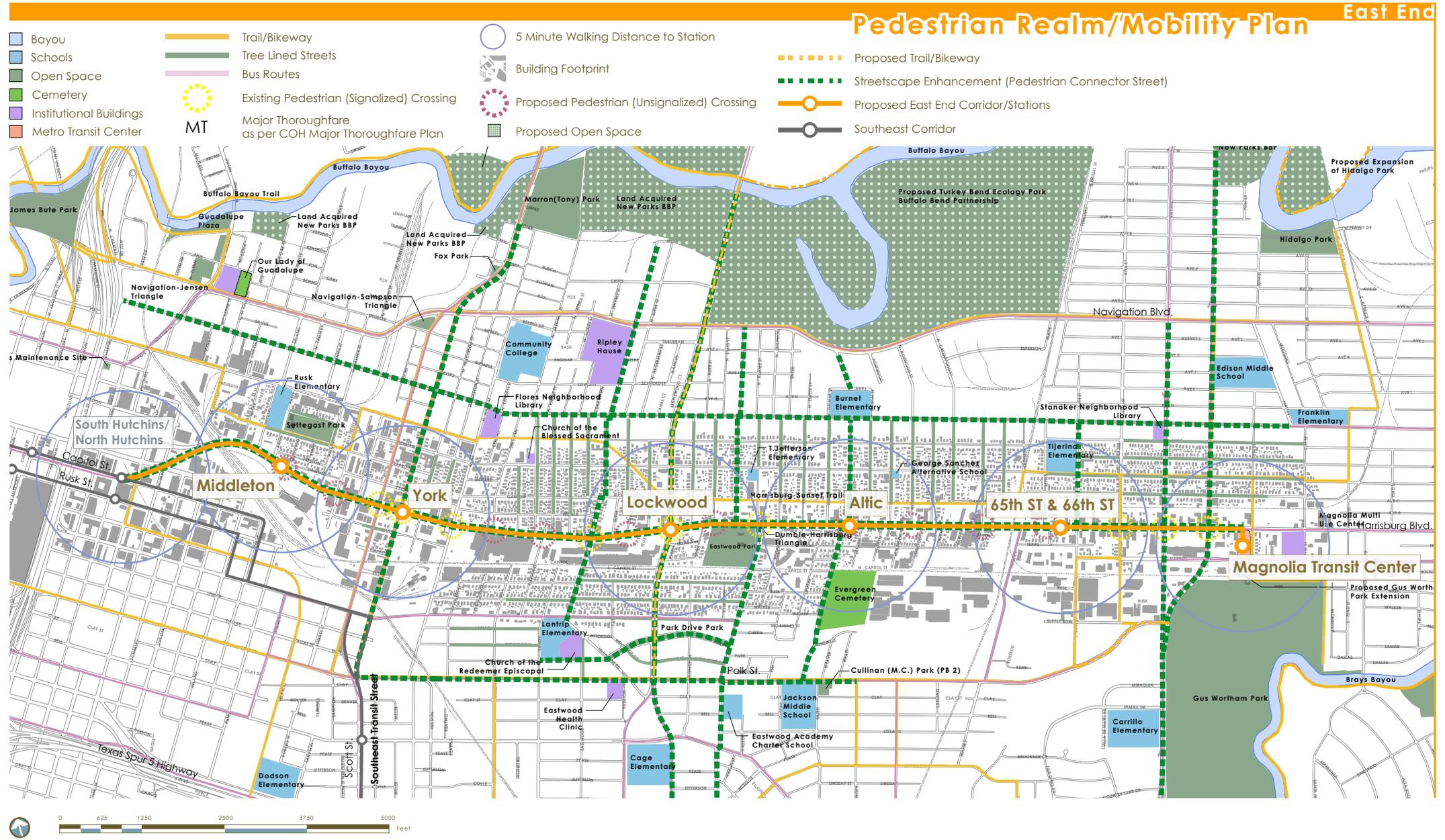
Current bike lanes serving the East End Corridor area should be connected to Transit Stations. These existing bike

lanes are also recommended to be widened to AASHTO standards to improve their functionality and safety for bikers.

Eastwood Park is ideally located on Harrisburg Boulevard to provide a key focal point and existing public space. It can provide an amenity for adjacent Transit Oriented Development.

Urban Squares are smaller scale publicly accessible open spaces that should be located in association with Transit Oriented Development. These small plazas are more urban in nature and do not include active/sports facilities. Urban Squares are generally accessible to public use, often privately owned and may be gated or well lit for night security. These squares are primarily paved with planting areas, shade trees, planters, public art, fountains and seating for passive, outdoor enjoyment.

The East End Corridor is framed by two major open space systems: one planned along the Buffalo Bayou, and one existing along Brays Bayou. The Buffalo Bayou Partnership is working to secure and develop a linear park facility along the Bayou extending from Guadalupe Plaza to Hildalgo Park. This future linear park will provide an enormous amenity to the East End as well as to the City. Even in its undeveloped state, Buffalo Bayou provides canoeing, fishing, hiking and biking within an amazingly densely vegetated area. An extension of the Buffalo Bayou hike/bike trail, from Lockwood east to Hildalgo Park, is recommended to provide access to future Buffalo Bayou park facilities to the eastern half of the Corridor. A second



## A2.3

### Land Development Concept Plan

The Land Development Concept Plan divides the East End Corridor into three categories based on their development potential:

#### **Development Opportunity Area 1 - Downtown**

– The Downtown is likely to experience large-scale redevelopment activity as a result of the planned transit facilities and proximity to the City center. It includes existing employment, office and commercial uses – uses that are typically subject to more frequent redevelopment. The Downtown also includes vacant and underdeveloped lands within the 1/4 mile station radius where Transit Oriented Development is most probable.

#### **Development Opportunity Area 2 - Corridor**

The Development Opportunity Area 2 is concentrated at the eastern end of the Corridor and comprises mainly older underdevelopment industrial and employment lands. Development Opportunity Area 2 flanks the entire length of the Corridor, covering a narrow portion (1/2 block depth) along the north side of Harrisburg between Harrisburg and the existing Hike and Bike Trail which consists primarily of smaller scale commercial and retail uses. The identified Development Opportunity Area 2 – Corridor also covers a wider portion (3-4 block depth) along the south side of Harrisburg which consists of a mix of larger

scale employment and industrial blocks. Development Opportunity Area 2 also extends along some of the north-south roadways north of Harrisburg where commercial uses have encroached into Stable residential areas.

**Stable Areas** – Stable Areas are comprised of the predominately residential neighborhoods and parks on the north and south of the East Corridor Study Area. Stable Areas are those areas that are not likely to experience large scale redevelopment activity as a result of the planned Urban Corridor. Areas designated as Stable include existing stable residential neighborhoods, existing parks and open space as well as significant institutional uses both within and outside of the 1/4 mile stations radius.

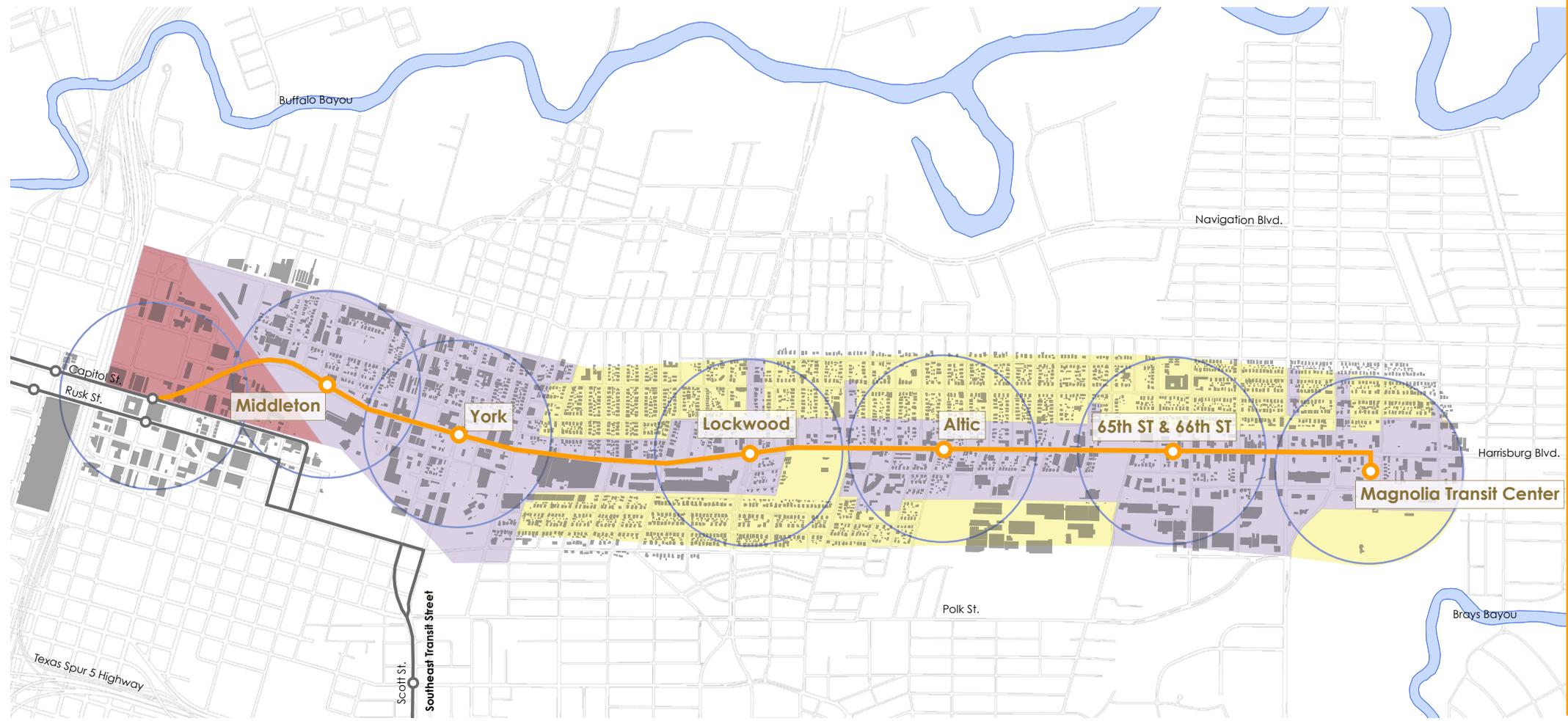
#### **A2.3.1 Demonstration Plans**

Three Demonstration Plans for prototypical sites were prepared to demonstrate, conceptually, how Transit Oriented Development could manifest itself given the context and condition of the East End Corridor.

The following diagrams provide a collection of images including a site plan, photographs of development precedents and photo simulations of large lot redevelopment, a large lot with minimum frontage on the Transit Line and a large through lot.

# Land Development Concept/Infrastructure Plan East End

-  East Corridor
-  Southeast Corridor
-  5 Minute Walking Distance to Station
-  Development Opportunity Area 1 - Downtown Shoulder
-  Development Opportunity Area 2 - Corridor
-  Stable Areas



# 1

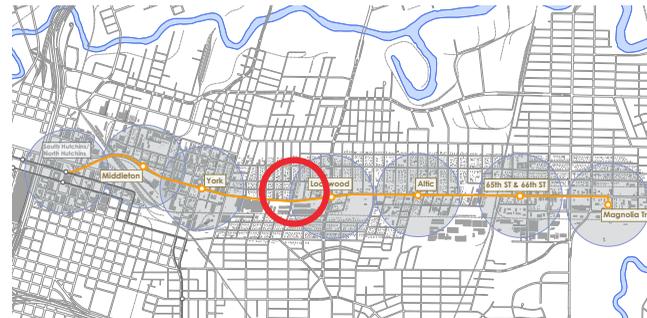
## Large Lot

### Harrisburg Boulevard at South Lockwood Drive

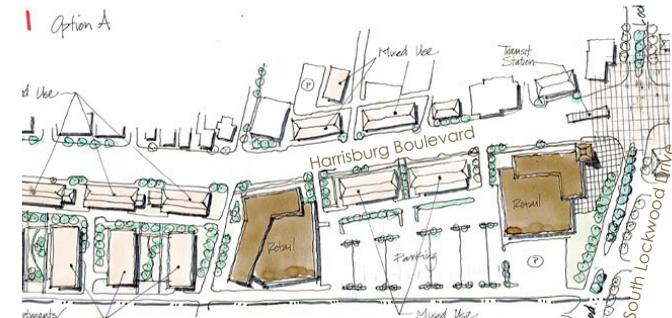
This site, sometimes referred to as the Stewart & Stevenson industrial site, is an example of a large site prototype.



Existing Site Conditions



Location of site in corridor



Demonstration Plan created during the workshop

#### Site Characteristic

- the site encompasses approximately 416,545 sf of land (9.5 acres);
- an extensive length of frontage on Harrisburg Boulevard (1,490 linear ft);
- a proposed transit station adjacent to the site;
- full lot depth backing onto a railway;
- the surrounding area includes industrial (on adjacent lands), the Eastwood community (to the north) and low rise residential (on the south side of Harrisburg Boulevard); and,
- the site is privately owned.

#### The Program

- a program for the site includes residential, retail and "big box" retail stores;
- a second option develops the site as a mix of multi-family homes and mixed-use with residential over retail; and,
- the location adjacent to a proposed station lends itself to the creation of an open space focus for the site.

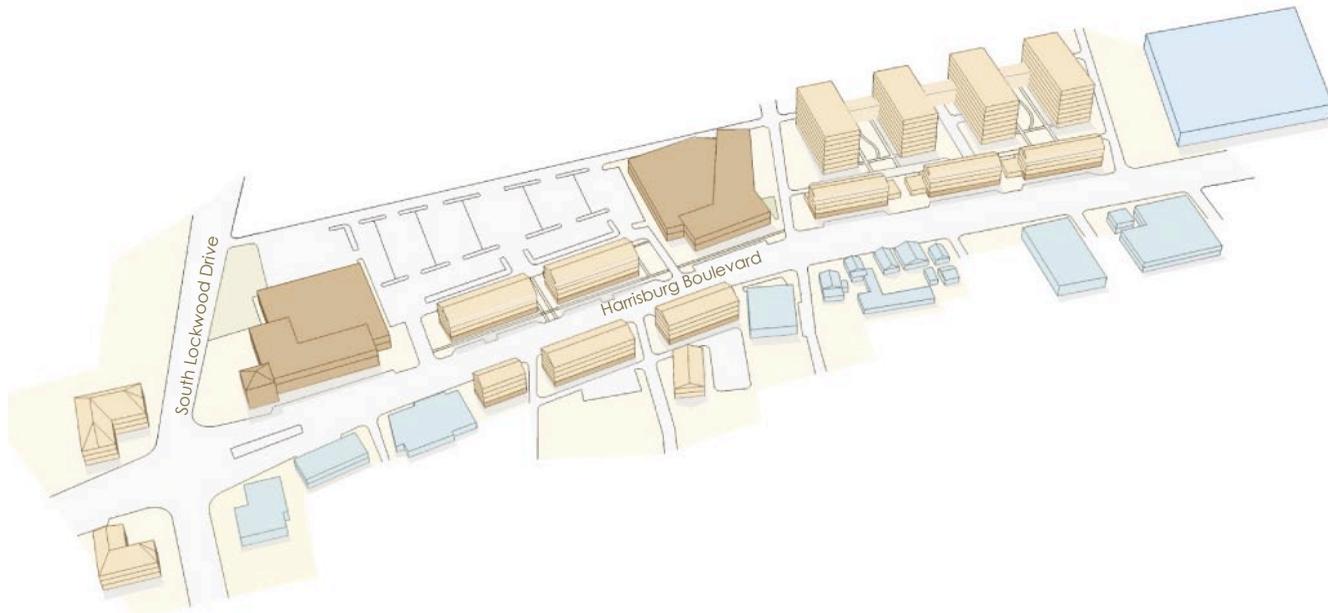
#### The Design Solution

- A phased site plan for the site includes two "box" retail stores, residential multi-family residential units and parking at grade. The second phase produces a site that is mixed use with residential uses over retail.

#### The Results

- a mixed-use TOD form of development adjacent to the Lockwood Station;
- retail stores adjacent to the street;
- a mix of housing;
- two large format retailers at 77,000 and 71,000 sf;
- 26,750 sf of mixed-use retail;
- approximately 100 apartments in mixed-use buildings;
- 136 apartments in stand alone buildings; and,
- 288 parking spaces at grade.

Demonstration Plan East End



3D model of demonstration plan



Photomontage illustrating the potential enhanced streetscape and built form on Harrisburg Boulevard just west of South Lockwood Dr.



Precedent - Grocery store with pedestrian activity at grade



Precedent - Mid-rise apartments



Precedent - 3 Story apartments over retail

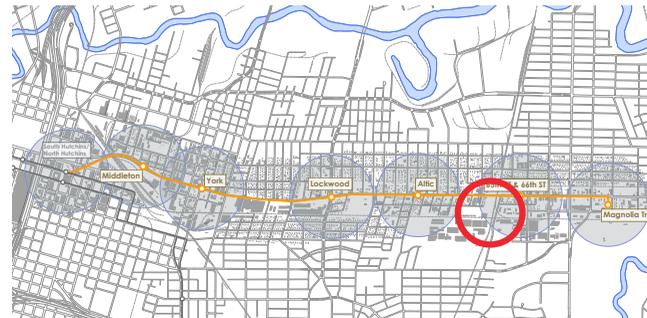
# 2 Large Lot with Minimum Frontage

## Hughes Tool Site

This site is located on the south side of Harrisburg Boulevard adjacent to the railroad tracks. The site is a portion of the former Hughes Tool site and is an example of a Large Lot with Minimum Frontage. In this case, it is a large interior site with limited frontage.



Existing Site Conditions



Location of site in corridor



Demonstration Plan created during the workshop

### Site Characteristic

- The site encompasses approximately 337,250 sf of area (7.7 acres);
- the site has 180 linear feet of frontage on Harrisburg Boulevard;
- the west edge of the site is formed by the railway line;
- the area surrounding the site is a mix of industrial to the north and residential to the north and across Harrisburg is a retail strip centre that is empty; and,
- the site is privately owned.

### The Program

- The program for the site is primarily residential with a mix of single-family homes on small lots, multi-family residential and mixed-use apartments over retail. The objective is to front Harrisburg Boulevard with development, locate parking structures adjacent to the railway as a buffer and create a community of mixed housing in a compact walkable neighbourhood.

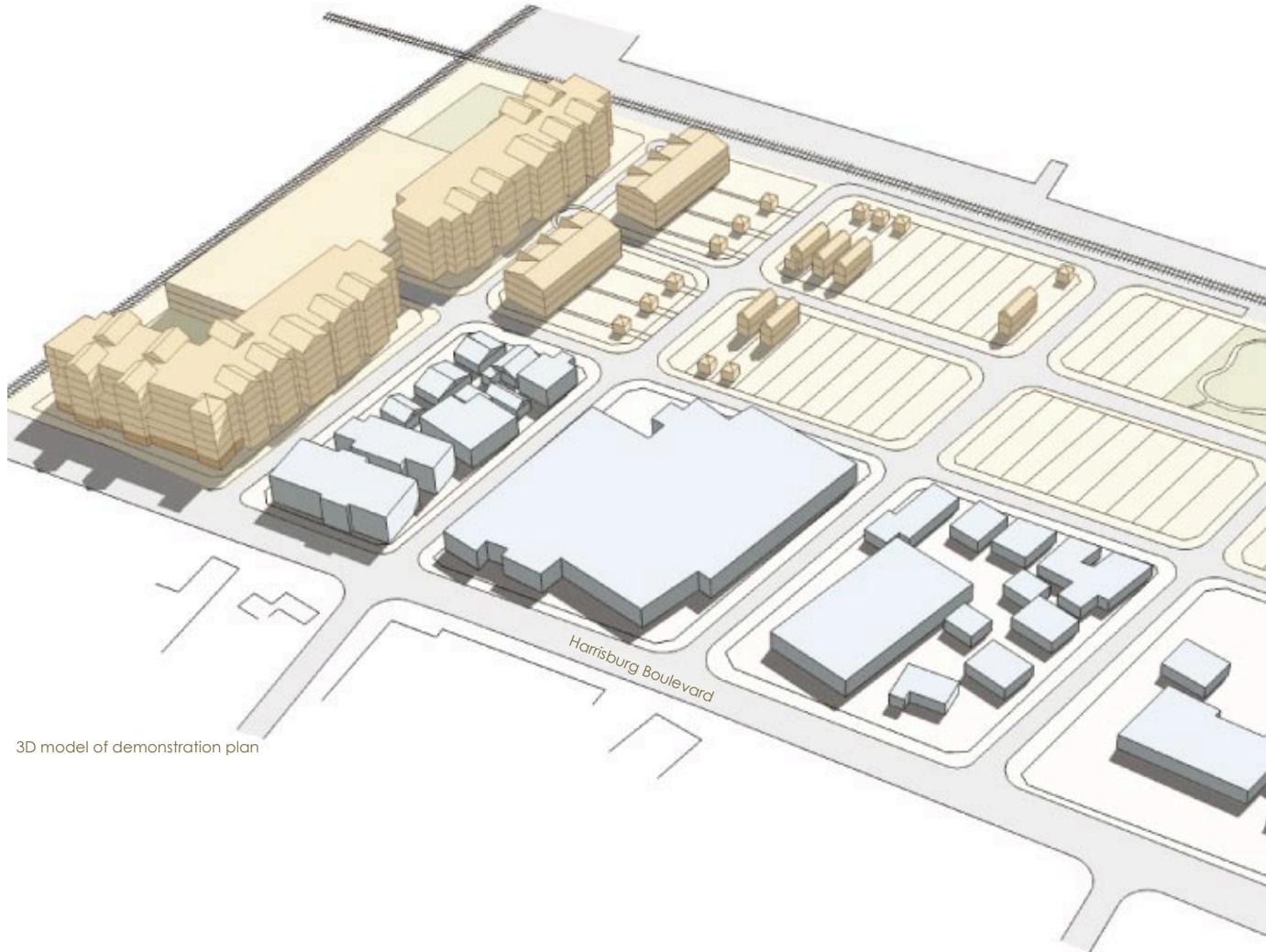
### The Design Solution

- A neighbourhood of single-family homes on small lots on the interior of the site;
- the extension of existing north/south streets into the new neighbourhood;
- townhouses adjacent to the single-family homes as a transition to the higher mixed-use buildings on the west edge of the site;
- mixed-use residential over retail on the west of the site and frontage; and,
- structured parking serving the mixed-use development and acting as a buffer to the railway line.

### The Results

- 5200 sf of retail;
- 217 apartments with one half acre of private open space;
- 12 townhouses;
- 50 single family lots;
- a half acre parkette; and,
- structures adjacent to the railway as a buffer and create a community of mixed housing in a compact walkable neighbourhood.

Demonstration Plan East End



3D model of demonstration plan



Precedent - Apartment building courtyard



Precedent - Townhouses as suggested on plan



Precedent - Small Lot single-family homes

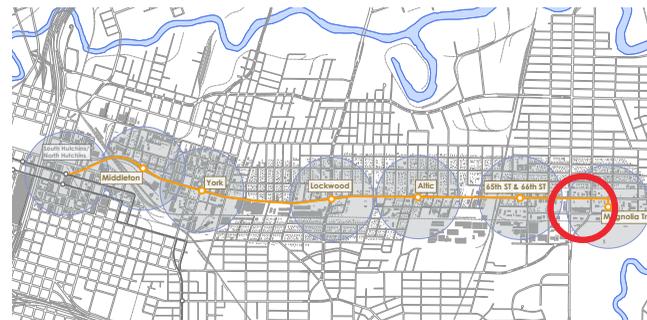
# 3 Large Through Lot

## Harrisburg at Wayside

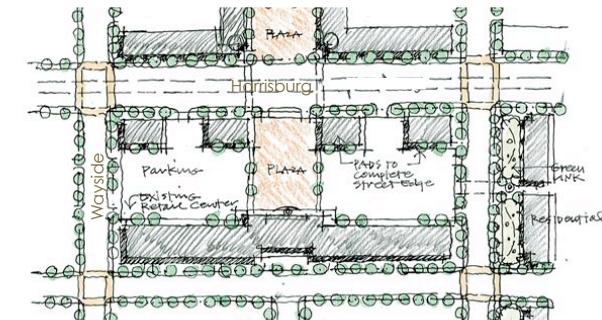
Located near the east end of the Corridor, the site is the location of a retail strip centre on the south side of Harrisburg Boulevard that includes some food pads. Across the street is a McDonald's restaurant. The site is a prototypical large through-lot site on the north and a series of narrow through-lots on the south.



Existing Site Conditions



Location of site in corridor



Demonstration Plan created during the workshop

### Site Characteristic

- the site encompasses both sides of Harrisburg Boulevard and includes approximately 194,900 sf of area;
- the area around the site is predominantly non-residential to the north with Gus Wortham Park in proximity;
- the south side of Harrisburg is restricted by a railroad right of way which limits the site depths to approximately 180 feet of depth; and,
- on the north side, the site is bound by Capital Street, which is a collector.

### The Program

- the program for the site includes intensified uses in a mixed use form;
- there is a desire to generate a "meeting place" on the development site in the form of a plaza or a park to be a focus for the neighbourhood as well as the site; and,
- the potential to connect the transit line with the open space to the north is to be accommodated.

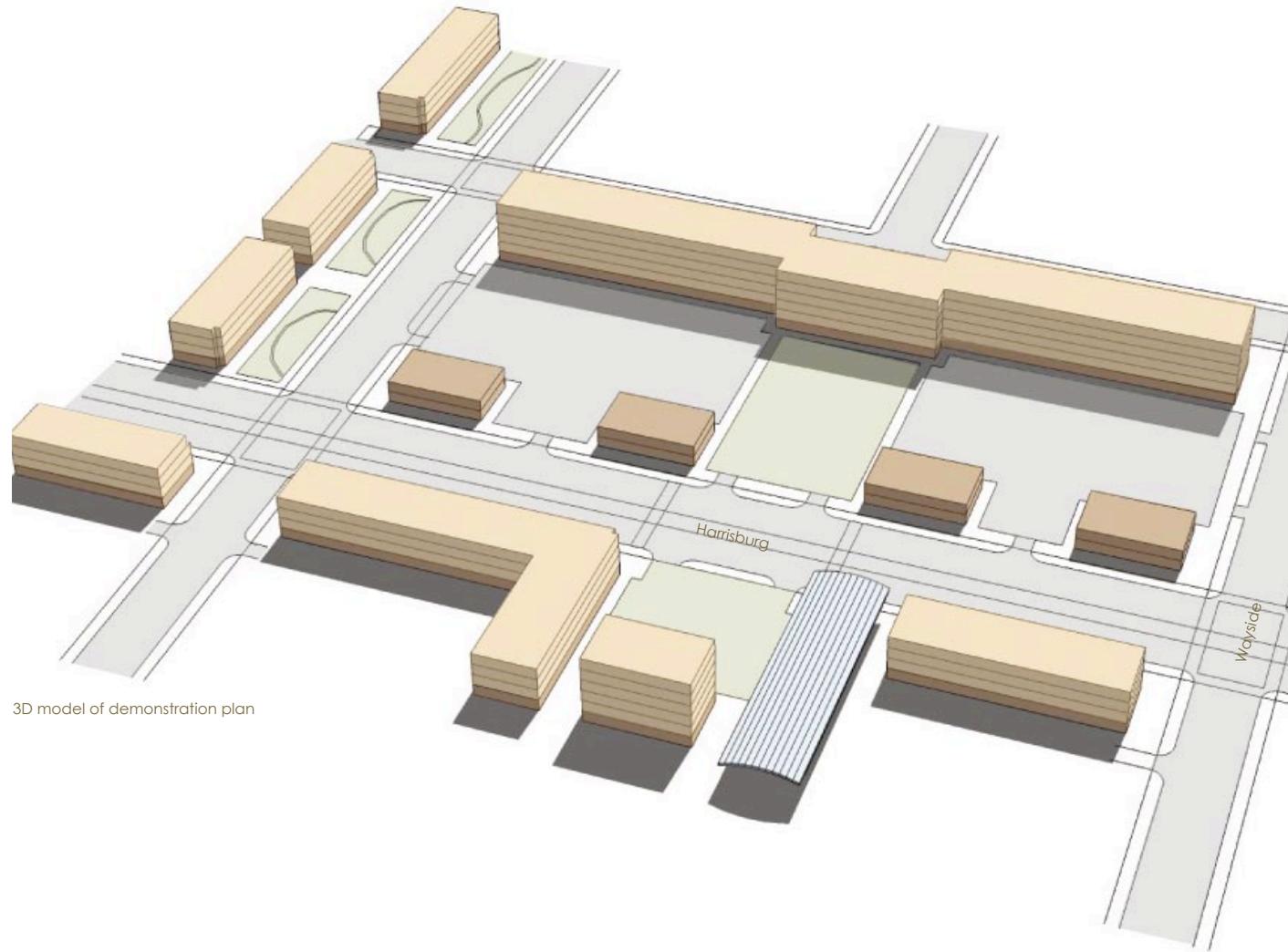
### The Design Solution

- infill retail development and mixed-use adjacent to Harrisburg Boulevard;
- structured parking in later phases to allow for higher density mixed-use;
- development of a small public space on the north side directly across from a semi-public space on the south to produce a neighborhood focus; and,
- green connections to Gus Wortham Park adjacent to Sgt. Marcia.

### The Results

- A TOD mixed use development near an intermodal station;
- Almost 700 feet of frontage on the Transit Corridor developed on both sides;
- South of Harrisburg Blvd. - 100 Apartments, 30,885 sf of retail in mixed-use on the south side, 16,000 sf of existing retail retained, an urban plaza; and,
- North of Harrisburg Blvd. - 71,000 of mixed use development and stand alone buildings, 300 apartments, 275 Parking spaces at grade, an urban plaza and gathering space.

## Demonstration Plan East End



3D model of demonstration plan



Precedent - Low-rise mixed-use



Precedent - Two story retail



Precedent - Urban Square

### A2.3.2 Development Analysis

The following analysis is intended to test underlying development economics in the East End Urban Corridor market context. The development proformas are generic in nature and are not intended to represent specific site feasibilities. The development scenarios (infill townhouses site and a mixed use mid-rise residential and retail project) may be indicative of the type of Transit Oriented Development that could be expected over time in this area. Office buildings, for example, are unlikely to drive denser development in the East End Urban Corridor given the absence of an existing nearby office node.

#### Development Scenario 1 Infill Townhouse Project

##### Description of Development

A generic development proforma was prepared for a 40-unit, 3-storey townhouse project. The assumed site measures 2 acres, and the units average 1,800 sf. There is one parking stall per unit, although additional surface parking may be available on a driveway, on-street parking or shared communal lot. The total development time horizon is 16 months from land acquisition to full occupancy. The proforma details are summarized on the following page.

##### Comparable Properties and Market Parameters

Two existing townhouse development projects were identified in or close to the East Corridor area; one at 93 Sidney Street, with the other known as Leeland Gardens, on Pease Street. The Sidney Street townhouse unit was 2,300 sf, and had an asking price of \$299,000. The Leeland Gardens townhouse unit was just less than 1,800 sf and had an asking price of \$249,000. The prices for the two comparable projects are \$130 psf and \$140 psf, respectively. These projects are generally equal to or larger than the units proposed in the development proforma illustrated below.

New projects in the area, however, face considerable pricing pressure from the existing housing stock. As outlined in the corridor overview above, based upon MLS data from the Houston Association of Realtors, the average resale townhouse/condominium price in early 2007 was in the range of \$225,000. In contrast, single family homes were in the range of \$125,000 (generally older supply compared to the newer townhouse/condominium units that transacted).

##### Proforma Results

Not surprisingly, the economic price required to justify new construction of townhouses in this area reflect current pricing at comparable projects. The development proforma presented below suggests a required sale price of around \$253,000, or \$141 psf, compared to current asking prices for similar projects (albeit closer to downtown) in the \$130 to \$140 psf range. There may be a potential

to downgrade the finish and corresponding price for the project, closer to the \$200,000 per unit range.

Some observations regarding the proforma for this type of project include the following:

- Hard construction costs (excluding parking) represent 57% of total project costs. The cost of parking accounts for an additional 4% of total end unit price. This represents a relatively small component since it is assumed the parking is at grade or structured underneath the units. Underground parking, although it can permit higher densities, results in considerably more cost.
- Total land costs represent roughly 14% of total end unit price – this represents land values of roughly \$630,000 per acres plus some carry costs. A more dense development, provided it can be successfully marketed, will generally achieve lower land costs per square foot, helping to reduce end unit prices (although for a different type of project).
- Municipal development fees are generally very minor in Houston and do not greatly impact end unit prices.
- Of course, a developer needs to profit from any development at a rate consistent with the risk. Taking into account total project costs of over \$9 million and assuming a 12% profit margin on the total project (higher when leveraged equity is considered), the required sale price per unit is \$253,000 – translating to \$141 per square foot.

Of note, the generic proforma outlined above can achieve relatively high densities (20 units per acre) and still provide at least one parking space per unit. There may be an opportunity to design additional surface parking, either in front of each unit, on a street or some communal parking lot. A key consideration regarding the market feasibility

**East End**

**Economic Rent/Price Calculation- East Corridor Townhouse Residential**

for this type of development project is the potential demand generated by proximity to the Transit Line. There are clearly a number of cost-competitive housing options in this area. In order to entice existing or new residents to a new development in the East Corridor, the availability of enhanced public transit and associated mixed use development as an amenity will have to be emphasized. The ability to reduce car ownership may also assist with affordability if efficient public transit can be utilized.

**Assumptions**

<b>Timing Assumptions</b>				
Land Acquisition			01-Jan-08	
Planning Period			4 months	
Construction Commencement			03-May-08	
Construction Period			12 months	
Occupancy			01-May-09	
<b>Total Development Period</b>			<b>16 months</b>	
<b>Interest Rate</b>				
Interim Financing			7.00%	
<b>Building Areas</b>				
Number of Units			40	
Average Unit Size			1,800 sq.ft.	
Number of Storeys			3	
Ground Floor Coverage			24,000 sq.ft.	
Gross Building Area			72,000 sq.ft.	
Site Coverage			0.83 times	
Land Area			2.00 acres	
<b>Residential Units</b>				
	<u>G.B.A.</u>	<u>Avg. Size</u>	<u>G.F.A.</u>	<u>G.L.A.</u>
Bach & 1 Bedroom	0%	0	0	0
2 & 2+ Bedroom	100%	1,800	72,000	72,000
Other	0%	0	0	0
<b>Total</b>	<b>100%</b>	<b>1,800</b>	<b>72,000</b>	<b>72,000 sq.ft.</b>
<b>Parking Ratio</b>				
			1.00 stalls per residential unit	40.0 stalls

**Project Costs**

	\$ 000's	Per Unit
<b>Land</b>		
Purchase Price	\$1,260	\$31,500
Additional Land Costs	\$63	\$1,575
Land Carrying Costs	\$123	\$3,087
<b>Subtotal</b>	<b>\$1,446</b>	<b>\$36,162</b>
<b>Construction &amp; Fringe</b>		
Hard Construction Costs	\$5,765	\$144,129
Parking	\$389	\$9,719
Architect. & Engineer.	\$400	\$10,000
Site Improvements	\$261	\$6,534
Const. Contingency	\$308	\$7,692
Municipal Fees	\$15	\$385
Development Interest	\$35	\$874
<b>Subtotal</b>	<b>\$7,173</b>	<b>\$179,334</b>
<b>Sales &amp; Marketing</b>		
Sales Commissions	\$324	\$8,100
Marketing & Advertising	\$100	\$2,500
<b>Subtotal</b>	<b>\$424</b>	<b>\$10,600</b>
<b>Total Project Cost</b>	<b>\$9,044</b>	<b>\$226,096</b>

**Required Price/Rent Calculations**

<b>Required Return on Investment</b>	<b>12%</b>
<b>Required Average Sale Price</b>	<b>\$253,227</b> Unit

## Development Scenario 2 Large Mixed Use (Residential/Retail) Project

### Description of Development

A generic development proforma was also prepared for a mixed use project on a 9.5 acre site with two apartment buildings (assuming 236 units) with internal above-grade structured parking, along with two retail pads (approximately 148,000 sf combined). Streetfront retail space is anticipated on the ground floor of the apartment buildings, plus potential landscaped open space at the site.

There are roughly 750 surface and structured parking spaces serving the project including 3.5 spaces per 1,000 sf of leasable retail area, along with one parking space per residential unit. The residential proforma describes two, 6-storey buildings, but the built form could be converted to a 4-storey podium set back to an 8-storey tower, incorporating structured parking, with only limited (increased cost) impact on construction costs. Additionally, some of the parking could be accommodated one level below grade, lowering the overall building height, but this is a more costly alternative. In the development proforma the residential condominium units have an average size of 1,010 sf, but this includes a mix of one and two bedroom units ranging from 850 sf to 1,250 sf.

### Comparable Properties

Two mid rise apartment projects currently being marketed were identified in or near the East Corridor area; one known as Navigation Place, at 2424 Navigation Street with the other known as Keystone Lofts, at 1120 Texas Street.

The Navigation Place property has a 1,624 sf unit with an asking price of \$285,000 (2 bedrooms), while a 1,405 sf unit at Keystone Lofts has an asking price of \$259,900 (2 bedrooms). These prices equate to roughly \$175 psf and \$185 psf, respectively. Notably, these two examples are larger than the units proposed in the development proforma illustrated below.

There is a 5-storey apartment condominium project (redevelopment) currently under development called Herrin, located at 2205 McKinney that has 52 units (39 presently still listed for sale) ranging in size from around 700 sf to 1,300 sf (mostly in the 800 sf to 900 sf range). The prices range from roughly \$135,000 for smaller units on lower floors up to \$240,000 sf for large upper level units, equating to approximately \$180 to \$200 psf. Notably, this is the second time a developer has attempted to renovate this historic property into residential lofts.

*"In 2000, the former owner began building out units there and selling them for prices ranging from the high \$100,000s to more than \$600,000. But the Sept. 11 attacks halted sales. And the area never became the thriving residential district area developers had hoped."... "In addition to the condos having lower prices [than when originally marketed], Spencer Partnership Architects is redesigning the building to make the units smaller, with most of them containing one bedroom and having between 700 and 900 square feet." (Source: Houston Chronicle)*

### Proforma Results

Based upon the development proforma, a required sale price of approximately \$160,000 is established for the condominium apartment units, which equates to a price of roughly \$160 psf, which is near the lower end of the current market average range (in part due to savings on land and parking costs associated with a mixed use development). For the retail space, the proforma generates a required economic net rental rate in the range of \$17.00 psf net, which is within the asking market rent range (based upon a recent market survey of retail space across the local submarket), and recognizes the age and quality of the proposed construction.

As was presented in the proforma for the townhouses above, hard construction costs and land costs represent roughly 70 percent of the total project costs. While different grades of finish and construction quality can be considered, there is relatively little that can be done to influence these fundamental development parameters. The key cost saving in this development scenario, and one that can be used to help lower the end unit prices/rents, is the sharing of parking. The creation of a rapid transit alternative to private car use and the ability to share parking with different demand peaks, allows less land to be devoted to parking and higher development densities than could otherwise occur. It is still recognized that considerable parking is required (parking requirements have been reduced only partly). These elements have allowed pricing for the residential units, for example, to be near the lower end of the current market range for new projects in and near the area.

## Economic Rent Calculation - Mixed Use Residential & Retail Development East End

### Assumptions

<b>Timing Assumptions</b>				
Land Acquisition		01-Jan-08		
Planning Period		6 months		
Construction Commencement		03-Jul-08		
Construction Period		12 months		
Substantial Completion		01-Jul-09		
Cost of Vacancy Period		2 months		
<b>Total Development Period</b>		<b>20 months</b>		
<b>Interest Rate</b>				
Interim Financing		7.00%		
<b>Building Areas</b>				
		<b>Residential Units</b>	<b>Retail Space</b>	
Number of Units		236	-	
Number of Buildings		2	2	
Average Unit Size		1,010 sq.ft.	-	
Number of Storeys		6	1	
Floor Plate		29,959 sq.ft.	148,000 sq.ft.	
Gross Building Area		359,510 sq.ft.	148,000 sq.ft.	
Site Coverage		0.58 times	0.36 times	
Land Area		9.50 acres	9.50 acres	
<b>Residential Units</b>				
	<u>G.B.A.</u>	<u>Avg. Size</u>	<u>G.F.A.</u>	<u>G.L.A.</u>
Bach & 1 Bedroom	60%	850	120,360	111,935
2 & 2+ Bedroom	40%	1,250	118,000	118,000
<b>Retail Space</b>				
Retail	100%	-	148,000	148,000
<b>Total</b>	-	1,637	386,360	377,935 sq.ft.
<b>Parking Ratio</b>				
1.00 stalls per residential unit				236 stalls
3.50 stalls per 1,000 sq. ft. of G.F.A.				518 stalls

### Project Costs

	Residential Units		Retail Space		Blended Total	
	\$ 000's	Per Unit	\$ 000's	PSF	\$ 000's	PSF
<b>Land</b>						
Purchase Price	\$2,980	\$12,625	\$3,700	\$25.00	\$6,680	\$17.29
Additional Land Costs	\$149	\$631	\$185	\$1.25	\$334	\$0.86
Land Carrying Costs	\$328	\$1,392	\$408	\$2.76	\$736	\$1.91
<b>Total Land</b>	<b>\$3,457</b>	<b>\$14,648</b>	<b>\$4,293</b>	<b>\$29.01</b>	<b>\$7,750</b>	<b>\$20.06</b>
<b>Construction &amp; Fringe</b>						
Hard Construction Costs	\$21,493	\$91,073	\$10,503	\$70.97	\$31,996.56	\$82.82
Parking	\$3,066	\$12,991	\$715	\$4.83	\$3,780.67	\$9.79
Architect. & Engineer.	\$1,596	\$6,764	\$729	\$4.93	\$2,325.52	\$6.02
Site Improvements	\$828	\$3,507	\$745	\$5.03	\$1,572.52	\$4.07
Const. Contingency	\$1,228	\$5,203	\$561	\$3.79	\$1,788.86	\$4.63
Municipal Fees	\$8	\$32	\$26	\$0.18	\$33.92	\$0.09
Development Interest	\$138	\$586	\$372	\$2.51	\$510.09	\$1.32
<b>Total Construction &amp; Fringe</b>	<b>\$28,357</b>	<b>\$120,157</b>	<b>\$13,651</b>	<b>\$92.24</b>	<b>\$42,008.14</b>	<b>\$108.73</b>
<b>Sales &amp; Marketing</b>						
Sales Commissions	\$1,430	\$3.70	-	-	-	-
Marketing & Advertising	\$590	\$1.53	-	-	-	-
<b>Total Sales &amp; Marketing</b>	<b>\$2,020</b>	<b>\$5.23</b>	-	-	-	-
<b>Cost of Vacancy</b>						
	-	-	\$65	\$0.44	-	-
<b>Deferred Costs (Leasing)</b>						
Tenant Allowances	-	-	\$2,220	\$15.00	-	-
Leasing Costs	-	-	\$592	\$4.00	-	-
Financing Carry Costs	-	-	\$308	\$2.08	-	-
<b>Total Deferred</b>	-	-	<b>\$3,120</b>	<b>\$21.08</b>	-	-
<b>Total Project Costs</b>	<b>\$33,834</b>	<b>\$143,365</b>	<b>\$21,129</b>	<b>\$143</b>	<b>\$54,963</b>	<b>\$142</b>

### Required Sale Price Calculation

<b>Required Return on Investment</b>	<b>12%</b>
<b>Required Apartment Condominium Average Sale Price</b>	<b>\$160,569</b> Per Unit
<b>Required Retail Average Net Rent</b>	<b>\$17.13</b> Per Square Foot

## Conclusions Regarding Development Analysis

The above proforma analyses demonstrate the required sales price or rent for a selection of new projects. When assessing these development proformas, it is important to note they reflect new building costs which generally exceed market affordability for many area residents. In the East Corridor, for example, the income levels and stock of single-detached housing available for resale places a considerable constraint on market demand for new construction.

The average price of existing homes in the corridor is far below that required for almost any type of new housing development. The average single detached house price in the East Corridor area was \$126,000 in the spring of 2007. New townhouses require a sales price of roughly \$250,000, which can purchase a larger single detached house on a relatively sizeable lot.

With a median household income of roughly \$30,000, the affordable house price, at the median, is \$125,000 and the affordable monthly housing rent is \$800, far below the types of prices or rents to justify new construction. Of course, some new construction has and will continue to take place in this corridor, catering to a subset of the existing and potential new residents that can afford and are seeking the lifestyle associated with transit oriented development, but this appears to be only a smaller niche market at present.

The general inequities between economic feasibility and market pricing for higher density forms of housing suggest the following:

- Transit Oriented Development along the East Corridor is likely to be incremental. Substantial and broad market demand for Transit Oriented Development will not appear overnight even with the emplacement of new rapid transit along this Corridor.
- New rapid transit along the Corridor will likely increase demand but higher density forms of housing (and subsequently commercial space demand) is likely to remain a niche (hopefully a growing niche) market that appeals to users which have accepted (and can afford) a more urban housing lifestyle.
- In order to facilitate faster development of the medium and higher density development along this Corridor, considerable "assistance" might have to be considered – perhaps in the form of financial subsidies for development or ongoing occupancy costs and reduced parking costs.
- Lastly, although it is not explicitly examined in the proformas here, the availability of quality public schooling is clearly an important criteria within the City for attracting families to higher density forms of housing.

## A2.4

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### Infrastructure Overview

Based upon the research of the existing east corridor infrastructure, the base infrastructure is sufficient to serve the Corridor.

The existing infrastructure serves a community that is a mix of industrial and residential users along the Corridor. The size of the infrastructure that serves industrial users is sufficient to accept more intense infill development as the Corridor redevelops.

Even though there is adequate capacity in the system, the City has received several complaints about water quality in this Corridor. The water service needs to be improved in this area for new development with new small-sized (8"-12") water lines across the Corridor from Nagle to Lockwood.

Areas that are presently predominantly residential in nature will require careful analysis to determine the level of increased capacity that might be needed. The incremental nature of redevelopment will allow for the renovation of watermains and sanitary sewers to occur as development is proposed. At this time, the City is unable to provide a detailed evaluation of available capacity along the Corridor. As the development progresses along the corridor, the City will assess the system capacity on a case-by-case basis. This is particularly important within 1600 feet of the station locations.

## A2.5

# Pedestrian Oriented Cross Sections

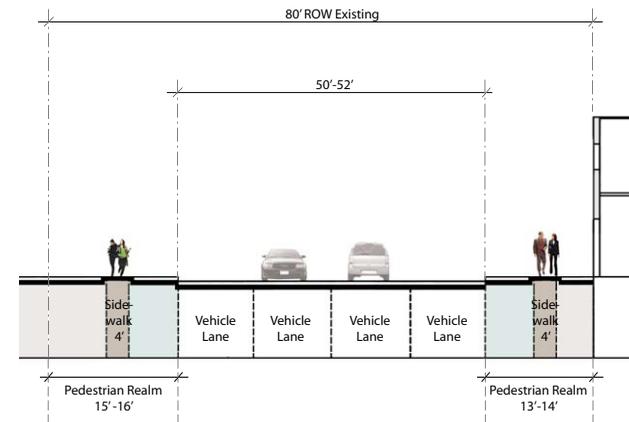
To better understand the urban design impact of the new transit on the existing streetscapes, sections have been developed through various locations along the East Corridor illustrating the existing condition of the street between buildings façades. A section showing the new streetscape has been constructed as a comparison.

The sections have been selected to indicate typical conditions on the Transit Street to show the impact of the LRT. Additional sections have been developed to illustrate the connecting streets and indicate both existing conditions and proposed improvements with a high level of attention to the pedestrian realm. The importance of these streets as primary pedestrian ways cannot be overstated. These streets are envisioned as the principle links between the transit street and the surrounding neighbourhoods as well as the location of bus routes.

### A2.5.1 Pedestrian Character Transit Street

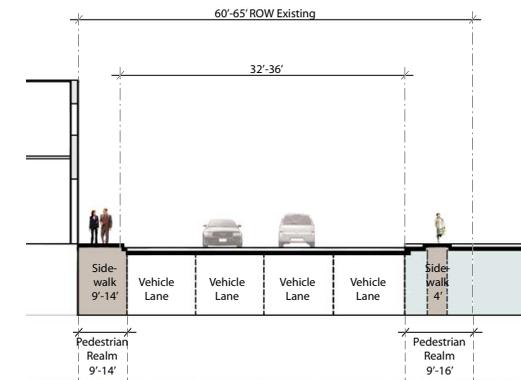
The sections that have been selected to illustrate typical conditions in the East Corridor are at key locations on Harrisburg Boulevard. The first is taken at Harrisburg Boulevard and Hutcheson Street. As can be seen in the image, the existing street accommodates four lanes of traffic in an 80' right of way. For the most part the sidewalks

are 4' wide and discontinuous. Buildings are low and set back from the street. The new street will continue to carry four lanes of traffic but with an LRT line in the middle of the street. The stations are between the two lines at this point and the pedestrian realm is 15' wide and is continuous. Locating buildings at the edge of the pedestrian realm generates a strong pedestrian zone along the street.



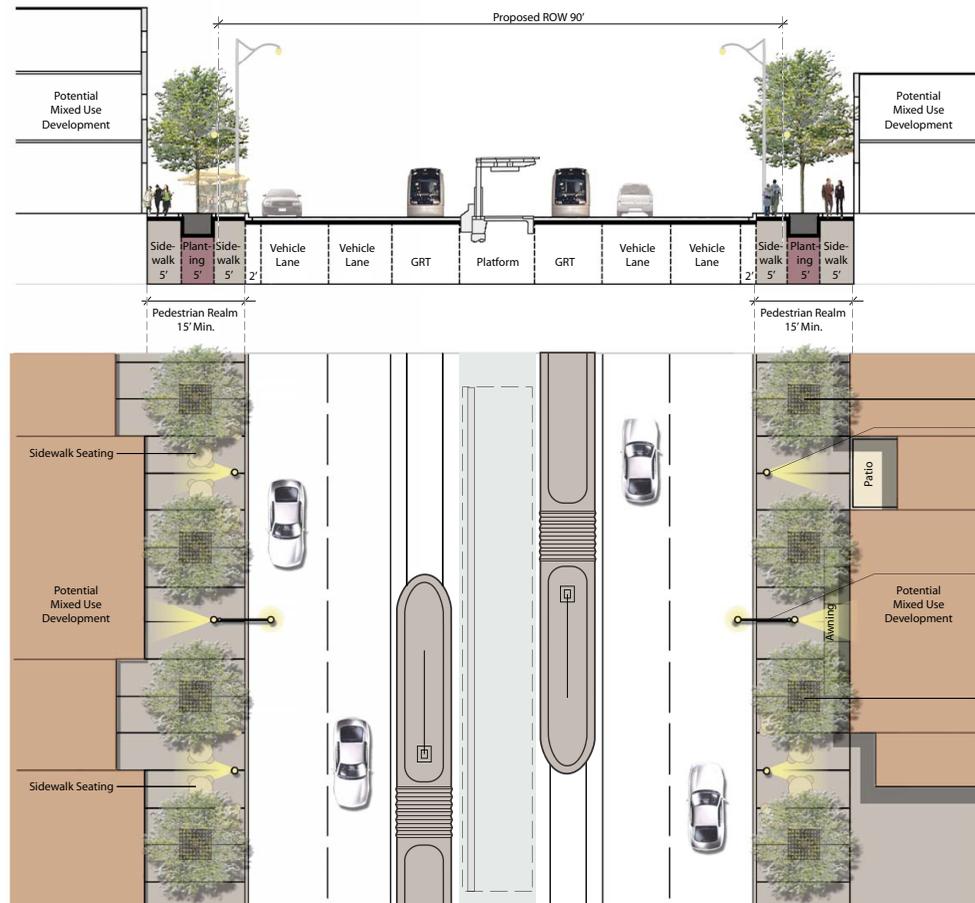
East Corridor Existing Conditions - Harrisburg at Hutcheson St.

The second condition is located at Harrisburg and Grace Street. The existing condition is an example of a narrow street with buildings in close proximity to the street edge. In this case, the new street will be widened to 76' in width and will accommodate four lanes of traffic with the LRT at the centre.

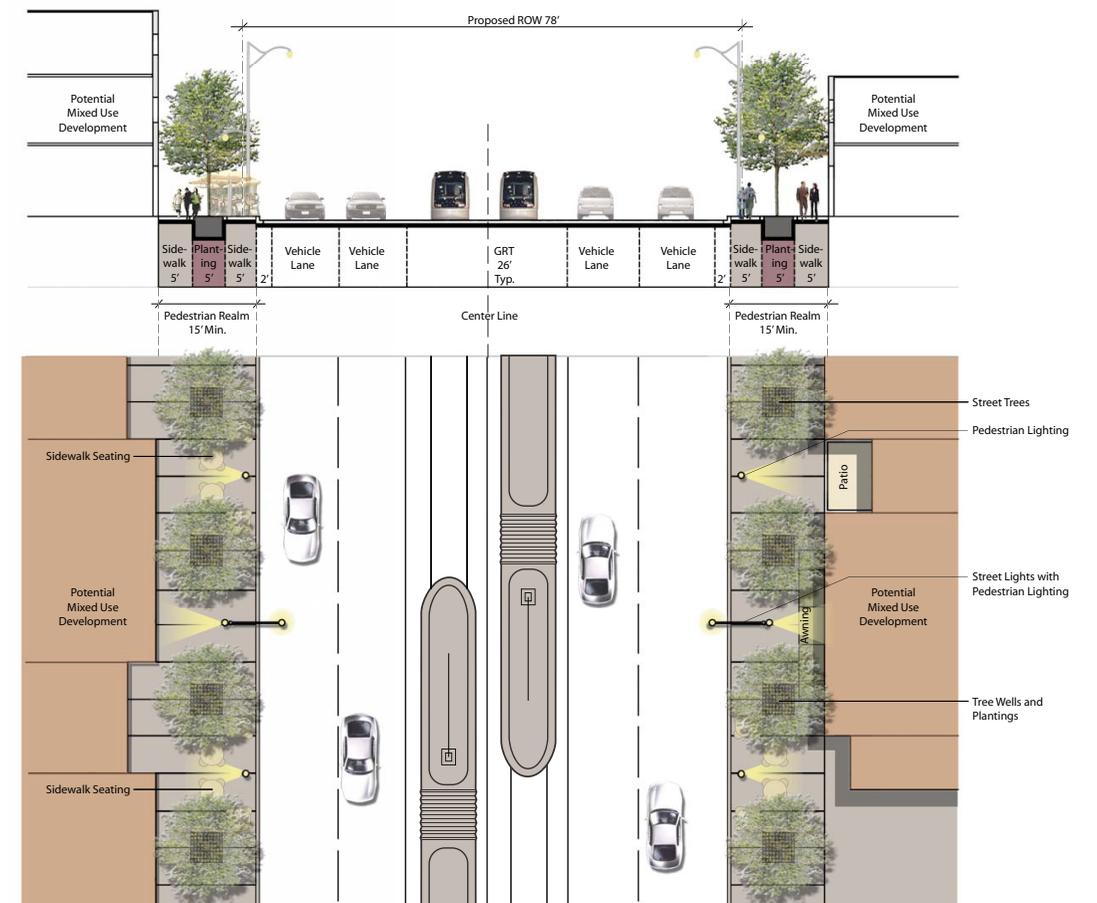


East Corridor Existing Conditions - Harrisburg at Grace St.

Pedestrian Character Transit Street, Offset Station Platforms East End



East Corridor Proposed Section - Harrisburg at Hutcheson St.



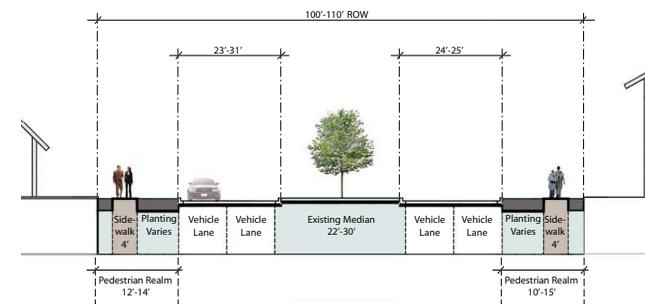
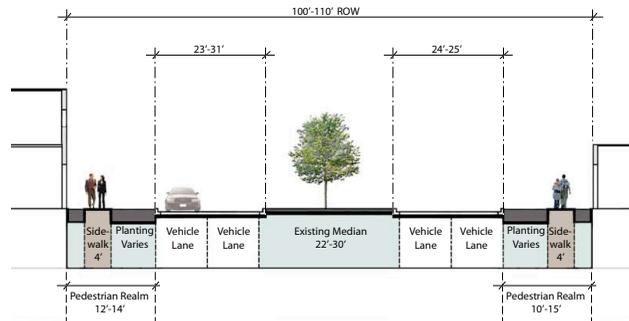
East Corridor Proposed Section - Harrisburg at Grace St.

### A2.5.2 Pedestrian Character Major Thoroughfare

Major Thoroughfare right-of-ways are typically 80 to 100 feet, and include 48 feet of pavement divided by a median of 14 to 32 feet. Rarely has a connected sidewalk system been provided. Major Thoroughfares that intersect with the Transit Street have been identified as Pedestrian Character Major Thoroughfares because they have the potential to provide a crucial connection from area focal points neighborhoods and schools to transit stations. A continuous and connected sidewalk system been provided. A prototype street cross section indicates the following:



Pedestrian Character Major Thoroughfares

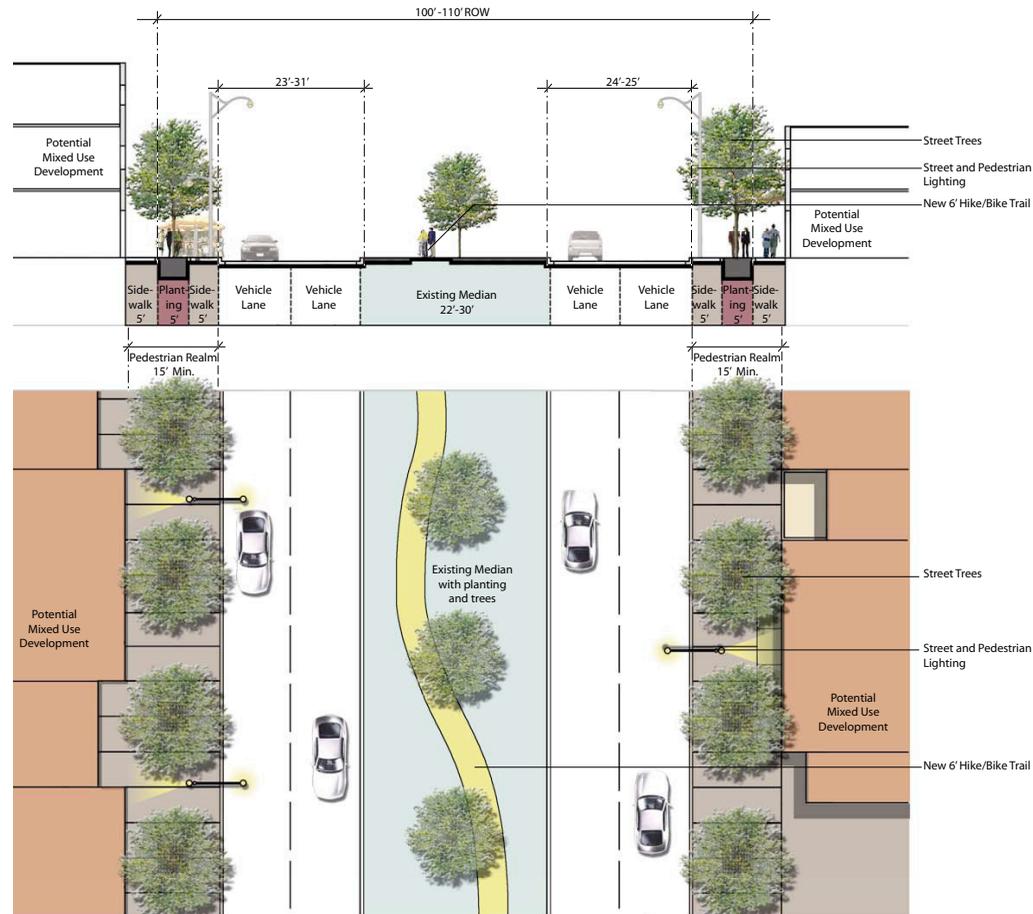


East Corridor Existing Conditions - Lockwood St. - Commercial Area

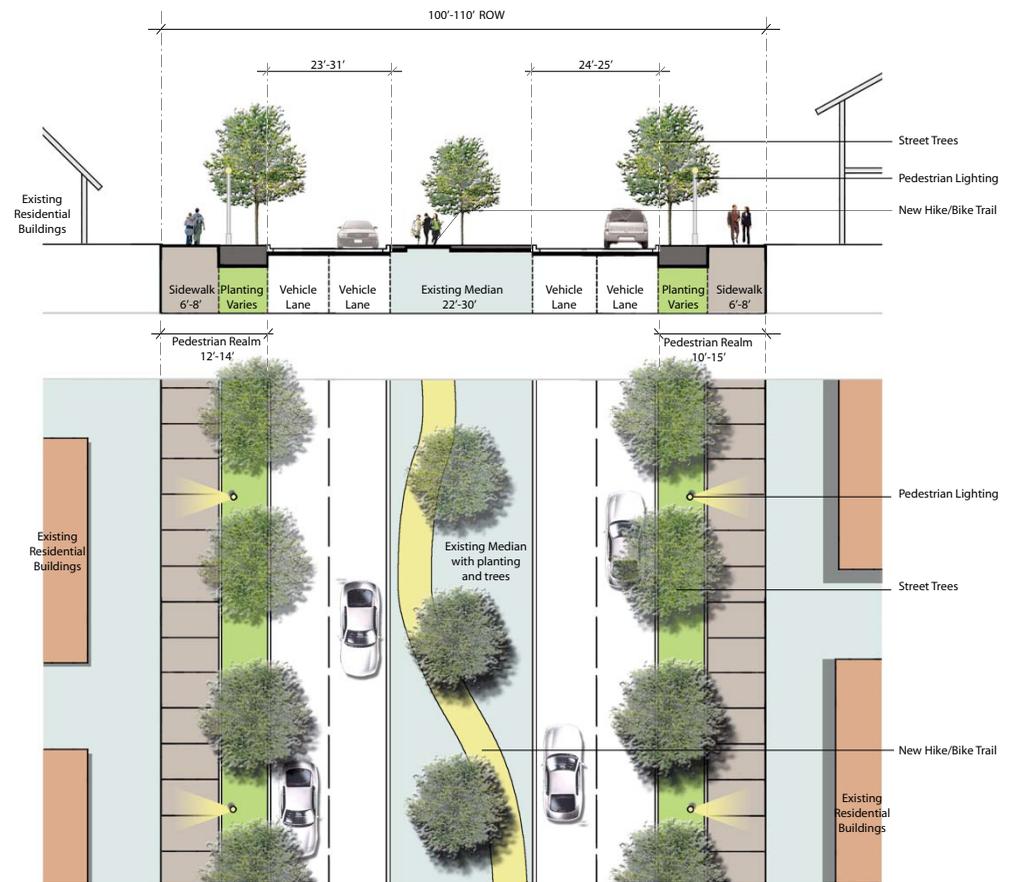


East Corridor Existing Conditions - Lockwood St. - Residential Area

# Pedestrian Character Major Thoroughfare, Commercial and Residential Areas East End



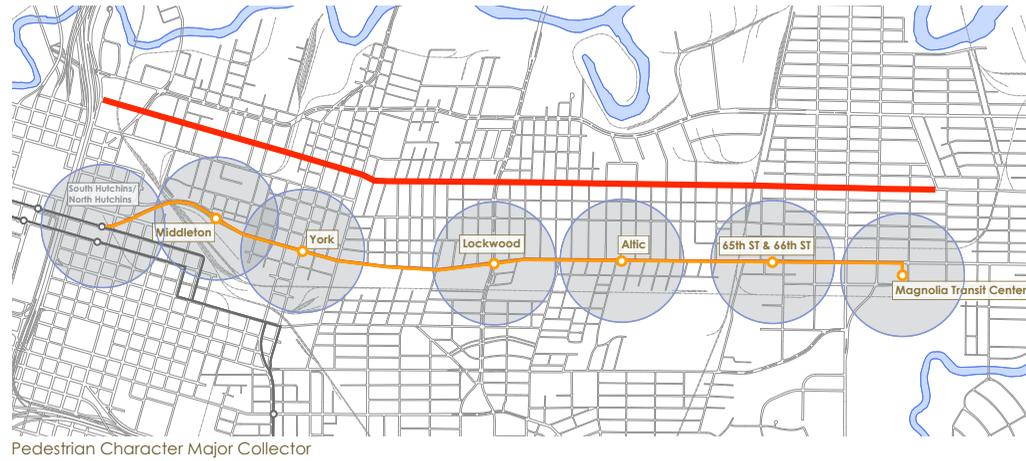
East Corridor Proposed Section - Lockwood St. - Commercial Area



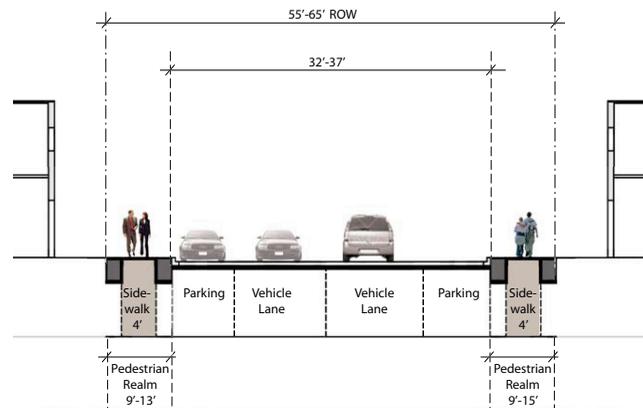
East Corridor Proposed Section - Lockwood St. - Residential Area

### A2.5.3 Pedestrian Character Major Collector

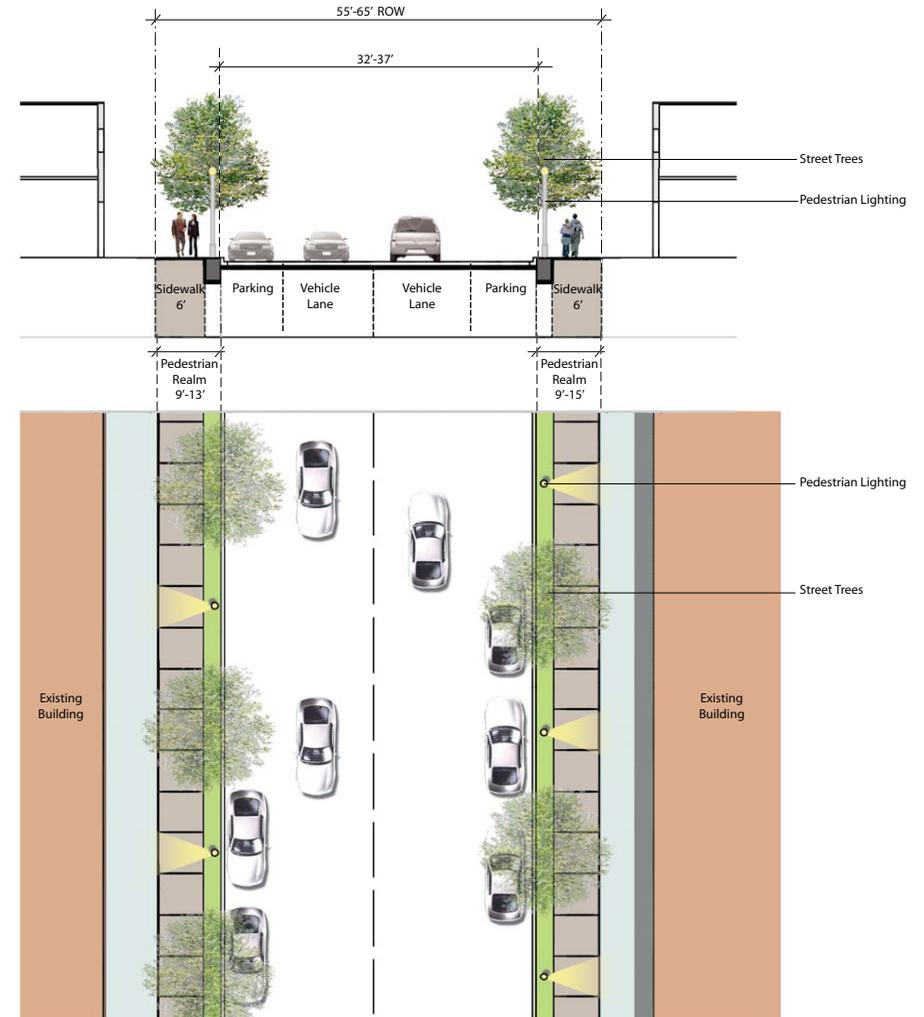
Major Collectors range from 60 - 80 feet, and include 44 feet of pavement, and ditches on both sides. Rarely is a continuous and connected sidewalk system provided. Canal Street has been identified as a Pedestrian Character Major Collector because it is an important parallel street to the Harrisburg Transit Line and edge to neighborhoods. A prototype street cross section indicates the condition:



# Pedestrian Character Major Collector East End



East Corridor Existing Conditions - Canal St.



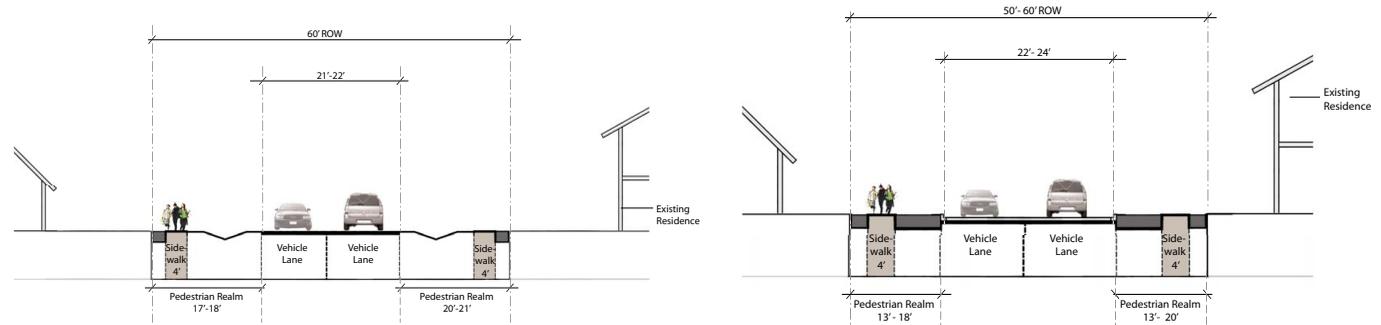
East Corridor Proposed Section - Canal St.

### A2.5.4 Pedestrian Character Local Street

Local street right-of-ways are typically 60 feet, and include 22 feet of pavement. Some local streets have ditches on both sides. Rarely are sidewalks provided. Some local streets that intersect with the Transit Lines have been identified as Pedestrian Character Local Streets because they have the potential to provide a crucial connection between the transit stations and a local pedestrian traffic generator, such as a school, recreation center, public park or place of worship. A prototype street cross section for a Pedestrian Character Local Street with and without a ditch indicates the following:



Pedestrian Character Local Street

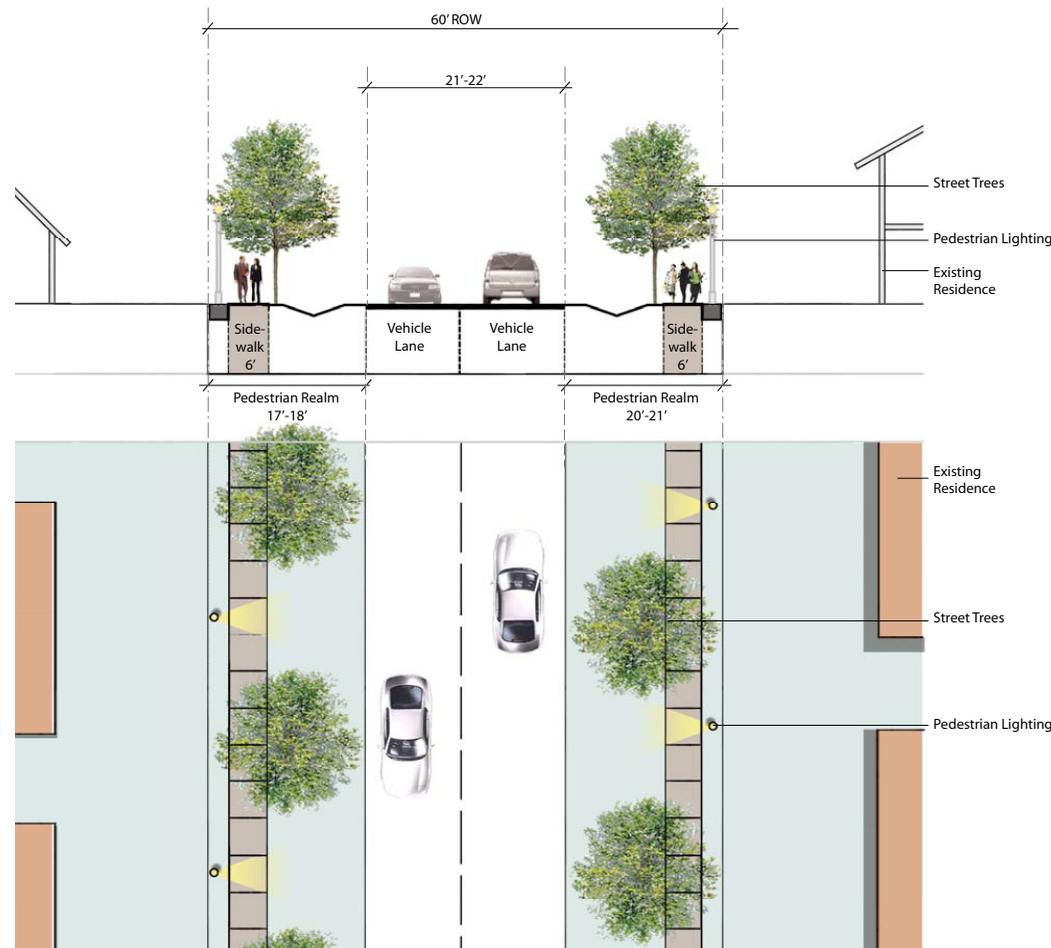


East Corridor Proposed Section - Eastwood St. with no curb

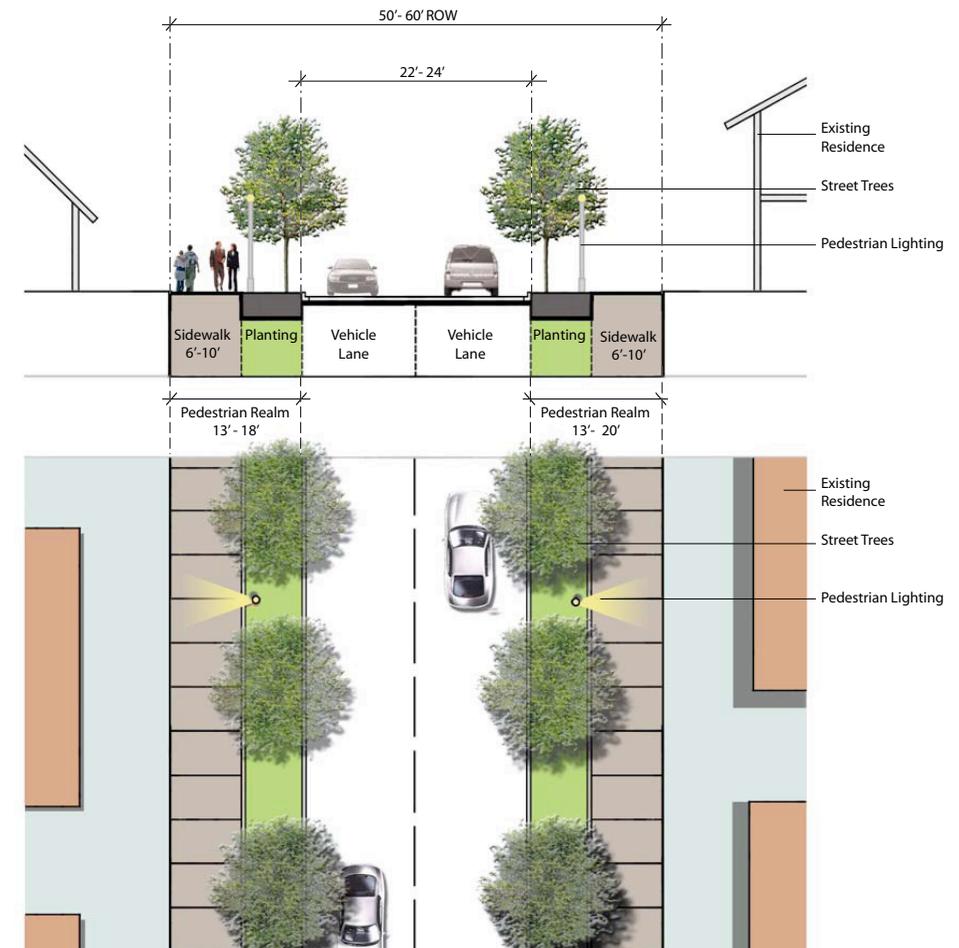


East Corridor Proposed Section - Eastwood St.

# Pedestrian Character Local Street Cross Section/Plan East End



East Corridor Proposed Section - Eastwood St. with no curb



East Corridor Proposed Section - Eastwood St. with curb