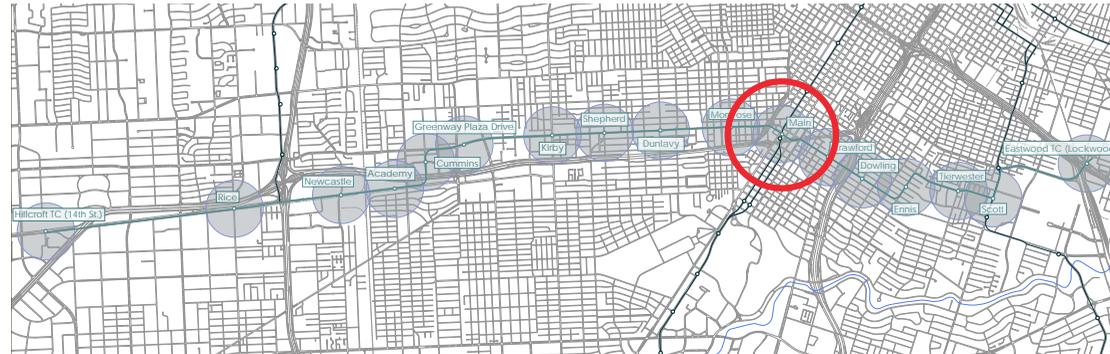


4 Large Through Lot

Main St at Wheeler St
 Located by S US 59 Freeway, this site is an example of large through-lot development.



Existing Conditions



Location of site in corridor



Workshop Demonstration Plan

Site Characteristics

- The site comprises approximately 1,122,716 sf of area (25.76 acres);
- The site has 1,600 linear feet on Main Street and 1,445 linear feet on Wheeler Street;
- The area surrounding the site is primarily residential, vacant land with some retail; The site is also the location of the historic Sears and an inter-modal transit station; and,
- The existing Wheeler station is on the site and it is here where the Main Street line will cross.

The Program

- A program for the site contains a mix of transit supportive office and multi-family residential over retail and structured parking. The objective for the site is to create a major node of development at this important site.

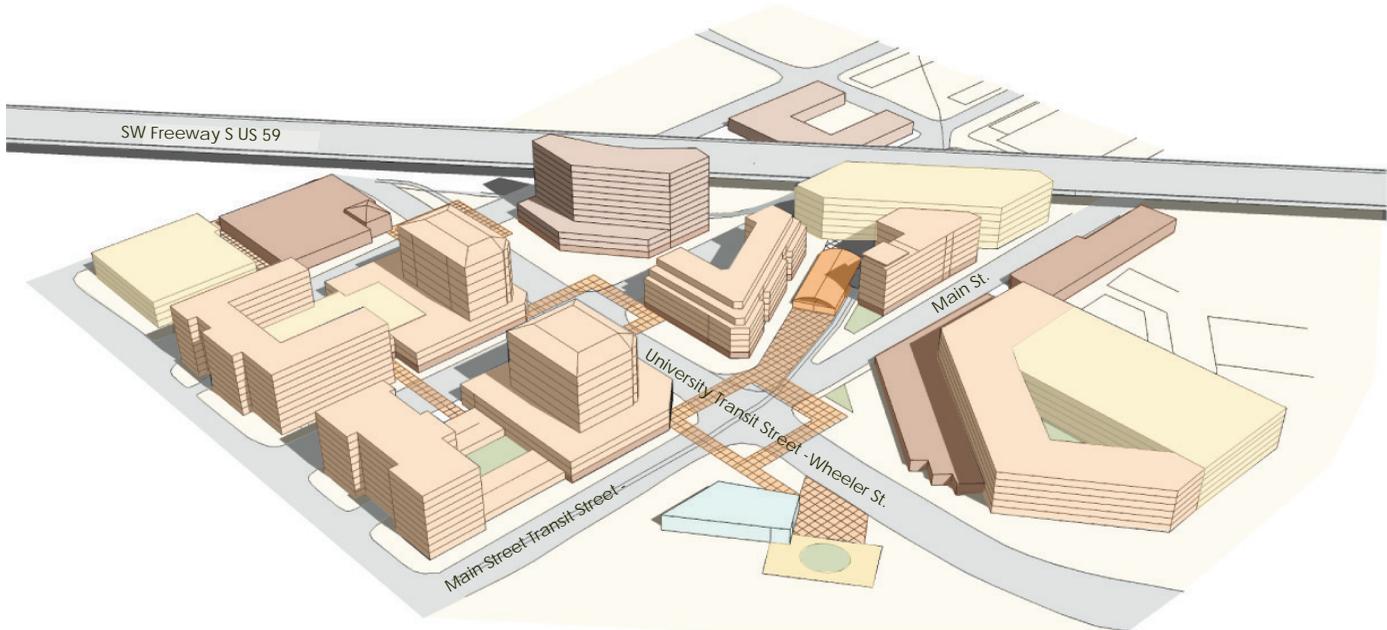
The Design Solution

- A site plan including 4 mixed use, multifamily blocks and 1 office block serving the inter-modal transit station. The station will be an important transit focus for the city.

The Results

- 1,600 linear feet of frontage on the Transit Corridor;
- 222,609 sf of office;
- 215,959 sf of retail;
- 1,200± apartments; and,
- parking structures at 212,124 sf.

Demonstration Plan University



3D model of demonstration plan



Precedent - Transit station surrounded by range of uses



Precedent - Mid-rise residential structures



Photomontage illustrating the potential enhanced streetscape and built form at Main Street and Wheeler



Precedent - Retail facing street creates a pedestrian friendly condition

F2.3.2 Development Analysis

The following analysis is intended to test underlying development economics in the University Corridor market context. A development proforma is generic in nature and not intended to represent specific site feasibilities. The form and scale of development (a mixed use residential condominium and commercial office project), is indicative of the type of residential and commercial Transit Oriented Development one would expect could expand over time in this area, particularly with the proposed transit enhancements.

Development Scenario 1 Residential Condominium Project

Description of Development

A generic development proforma was prepared for a 415-unit, 10-storey (excluding underground parking) condominium apartment project. Ground floor commercial-retail space could be accommodated without any meaningful adjustment to the financial proforma. There is a proposed mix of 1-bedroom units (average 850 sf) and 2-bedroom or 2-bedroom+ units (average 1,250 sf), for an overall unit size average of 1,010 sf. The site measures 4 acres (2.4 times site coverage), with a ratio of 1.0 parking stall per unit. The total development time horizon is 36 months from land acquisition to full occupancy. The proforma details are summarized on the following page.

Comparable Properties and Market Parameters

The University Corridor covers an extensive section of the southern portion of the Inner Loop, spanning neighborhoods of varying composition. For comparative purposes, condominium comparables have been drawn from different neighborhoods straddling the route.

Two existing high-rise apartment projects with units for resale were identified near the proposed Hermann Park and Dryden transit stops in the Main Corridor area, south of the point where it intersects with the University Corridor. The two buildings are known as 1400 Hermann Drive and The Spire, at 2001 Holcombe Boulevard. The Hermann Drive building had a 1,728 sf unit with an asking price of \$299,900 (2 bedrooms), while a 1,310 sf unit at The Spire had an asking price of \$279,900 (2 bedrooms). These prices equate to roughly \$174 psf and \$214 psf, respectively.

Towards the western end of the University Corridor, where it meets the Uptown Corridor, there are other condominium buildings that may be examined for comparative purposes. The Mark, located in the Galleria District, has 304 units (spread over 30 floors) ranging in size from around 790 sf to 2,800 sf (mostly in the 1,300 sf to 1,500 sf range). The prices are in the range of \$250 to \$300 psf. The Cosmopolitan is an 84-unit, 21-storey project with average unit prices above \$300 psf, and large suites ranging from 1,200 sf up to 9,300 sf. Lofts on Post Oak was completed in 2004 and is a good reflection of pricing in newer, high quality luxury developments. In reviewing units for sale, it appears that pricing is in the range of \$300 psf. Clearly, projects

in these neighborhoods are priced quite differently than other sections of the University Corridor and its adjacent neighborhoods.

In addition to resale product, there are several new mid and high-rise projects currently being constructed throughout the Medical District and in close proximity to the Main Street Corridor. By early 2008, over 900 condominium/apartment units (which have already begun construction and are listed for sale) will have completed construction. Each of these projects are within a 1.5 mile radius of Hermann Park and no farther than 3/4 of a mile from Main Street. Notably, Mosaic at Hermann Park is a high-rise condominium building with two towers totalling 788 units. Mosaic is located on the eastern side of Hermann Park, at 5925 Alameda Road. Other projects of note include 5001 Fannin, The Collective at Baldwin Park, and Serento, with Serento's units (high-end) being listed at prices of around \$265 psf. Overall, new condominium pricing appears to range from \$200 to \$300 psf across the market, depending upon location and building quality/finish.

As outlined in the market overview, based upon MLS data from the Houston Association of Realtors, the average resale townhouse/condominium price along the western portion of the University Corridor is in the range of \$246,000 (MLS Districts 16 and 17), while the eastern segment had an average value of close to \$221,000 (MLS District 4). Notably, the average resale single family house price exceeds \$650,000 in the western section, which is vastly different than the eastern portion, which is closer to \$127,000. This pricing structure indicates that condominium product

Economic Rent/Price Calculation- Residential Condominium University

represents a less expensive housing option for households in the western portion of the Corridor, while residents of the eastern portion would be faced with pricing well above the market average for existing detached dwellings.

Proforma Results

The economic price required to justify new construction of condominium apartments in this area is within the range of current pricing at comparable projects, and at a premium to resale product of similar character. The neighborhood housing market dynamics vary greatly along the extent of the University Corridor; this generic proforma is intended for illustrative purposes and does not represent a specific development site. The proforma presented below suggests a required sale price of around \$271,000, or \$268 psf. There is, of course, the possibility of upgrading or downgrading the quality of building finish to appeal to a certain target market, depending upon the depth of demand.

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

- Hard construction costs (including underground parking) represent some 62% of total project costs. The cost of underground parking itself accounts for roughly 8% of the total end unit price, but facilitates additional neighborhood density, which is a key element in supporting an enhanced transit provision.
- Total land costs represent roughly 26% of the end unit price – this assumes land values of roughly \$5.5 million per acre (\$13 per square foot buildable) plus some carrying costs. Notably, this development has

Assumptions

<u>Timing Assumptions</u>				
Land Acquisition		01-Jan-08		
Planning Period		6 months		
Construction Commencement		03-Jul-08		
Construction Period		24 months		
Substantial Completion		01-Jul-10		
Cost of Vacancy Period		6 months		
Full Lease-Up		31-Dec-10		
Total Development Period		36 months		
<u>Interest Rate</u>				
Interim Financing		7.00%		
<u>Building Areas</u>				
Number of Units		415		
Number of Buildings		1		
Average Unit Size		1,010 sq.ft.		
Number of Storeys		10		
Floor Plate		41,915 sq.ft.		
Gross Building Area		419,150 sq.ft.		
Site Coverage		2.41 times		
Land Area		4.00 acres		
<u>Residential Units</u>				
	<u>G.B.A.</u>	<u>Avg. Size</u>	<u>G.F.A.</u>	<u>G.L.A.</u>
1 Bedroom	60%	850	211,650	196,835
2 Bedroom +	40%	1,250	207,500	207,500
TOTAL	100%	1,010	419,150	404,335 sq.ft.
<u>Parking Ratio</u>				
		1.00 stalls per residential unit		415 stalls

Project Costs

		<u>\$ 000's</u>	<u>PSF</u>
<u>Land</u>			
Purchase Price	Note 1	\$21,780	\$51.96
Additional Land Cos	Note 2	\$1,089	\$2.60
Land Carrying Costs	Note 3	\$4,002	\$9.55
TOTAL		\$26,871	\$64.11
<u>Construction & Fringe</u>			
Hard Construction C	Note 4	\$54,720	\$130.55
Parking	Note 5	\$8,300	\$19.80
Architect. & Enginee	Note 6	\$3,466	\$8.27
Site Improvements	Note 7	\$523	\$1.25
Const. Contingency	Note 8	\$3,151	\$7.52
Municipal Fees	Note 9	\$437	\$1.04
Development Intere	Note 10	\$988	\$2.36
TOTAL		\$71,585	\$170.79
<u>Sales & Marketing</u>			
Sales Commissions	Note 11	\$2,766	\$6.60
Marketing & Adverti!	Note 11	\$1,038	\$2.48
TOTAL		\$3,804	\$9.08
TOTAL PROJECT COSTS		\$102,260	\$243.97

Required Price/Rent Calculations

Required Return on Investment	10%
Required Average Sale Price	\$268.37 PSF

smaller unit sizes (particularly in comparison to some resale units in older, established buildings) in order to test the viability/benefit of such a scenario.

- A developer needs to profit from any development at a rate consistent with the risk. Taking into account total project costs of approximately \$102 million and assuming a 10% profit margin on the total project (higher when leveraged equity is considered), the required average sale price per unit is \$268 per square foot.

A key consideration regarding the market feasibility for this type of development project is the potential demand generated by proximity to the enhanced transit Corridor. There are clearly a number of cost-competitive housing options in this area, including significant condominium supply at varying price points, both new and resale. The ability to reduce car ownership may also assist with affordability, if efficient public transit can be utilized.

Development Scenario 2 Mid-Rise Office Project

Description of Development

A generic development proforma was prepared for a 6-storey, 165,000 sf office building with ground floor commercial/retail space. The land area of the site measures 1.25 acres, and there is a parking ratio of 1.25 stalls per 1,000 sf. The envisioned development time horizon is 39 months from land acquisition to full occupancy, including 24 months of construction. The proforma details are summarized on the following page.

Comparable Properties and Market Parameters

The University Corridor does not traverse any of the major Houston area office concentrations surveyed by Cushman & Wakefield. The CBD market is located to the north of the central section of the University Corridor, but is removed from the actual transit route.

Achievable rents in the CBD are anticipated to be well above those achievable at an office development along the University Corridor, given the established nature of the area, local amenities, proximity to other businesses and clients, etc. For comparative purposes, a new project called Discovery Tower broke ground the last week of February, 2007, and has a present asking net rental rate of \$33.00 psf. This building is some 871,000 sf and 30 storeys in height, located in the CBD (near the intersection of the Main Street and Southeast Corridors).

For the CBD Class A office market, the average asking gross rental rate is approximately \$36.70 psf (\$24.70 net psf plus \$10.00 psf additional rent). Of course, new buildings would command a market rate at the top of the rental rate spectrum given their age, quality of building finishes, and other factors.

Notably, rising construction costs have impacted the viability of new office construction across the market, despite improving leasing market conditions that have supported higher rental rates.

Proforma Results

The development proforma presented below suggests a required net rental rate in the range of \$25.00 psf to economically support new construction. This represents a rent that is between the levels achievable in the CBD and those in suburban office markets, so the viability of such a project is marginal. Attracting a lead tenant/tenants to initiate the project at a favorable rental rate would be vital. However, there is significant new office supply in the development pipeline across the Houston market, that will be added to established office nodes in coming years, and a project along the University Corridor would face considerable competitive pressure that would impact potential achievable target rents.

Some observations regarding the development proforma include the following:

- Hard construction costs (including underground parking) represent two-thirds of total project costs. These costs are projected, and would vary depending on the ultimate class/caliber of the building design and architectural features. Underground parking, a key consideration in developing a dense built form, comes at nearly a 50% premium compared to the equivalent provision of structured parking.
- As specified in the proforma, land costs represent roughly 10% of total project cost. Land costs will vary depending on location (prime sites) within the University Corridor, but have a relatively limited impact on project costs compared to hard construction costs.

Economic Rent/Price Calculation- Mid-Rise Office University

Understandably, a developer needs to profit from any development at a rate consistent with the risk. The proforma takes into account total project costs of approximately \$41 million (\$248 psf) and assumes a 10% profit margin on the total project (higher when leveraged equity is considered).

Assumptions

<u>Timing Assumptions</u>			
Land Acquisition		01-Jan-08	
Planning Period		6 months	
Construction Commencement		03-Jul-08	
Construction Period		24 months	
Substantial Completion		01-Jul-10	
Cost of Vacancy Period		9 months	
Full Lease-Up		01-Apr-11	
Total Development Period		39 months	
<u>Interest Rate</u>			
Interim Financing		7.00%	
<u>Building Areas</u>			
Number of Buildings		1	
Number of Storeys		6	
Floor Plate		27,500 sq.ft.	
Gross Building Area		165,000 sq.ft.	
Site Coverage		3.03 times	
Land Area		1.25 acres	
	<u>G.B.A.</u>	<u>G.F.A.</u>	<u>G.L.A.</u>
Office	95%	156,750	145,778
Retail	5%	8,250	7,673
Other	0%	0	0
TOTAL	100%	165,000 sq. ft.	153,450 sq.ft.
<u>Parking Ratio</u>			
1.25 stalls per		1,000 sq. ft. of G.F.A.	206 stalls

Project Costs

		\$ 000's	PSF
<u>Land</u>			
Purchase Price	Note 1	\$3,300	\$20.00
Additional Land Cost	Note 2	\$165	\$1.00
Land Carrying Costs	Note 3	\$606	\$3.68
TOTAL		\$4,071	\$24.68
<u>Construction & Fringe</u>			
Hard Construction Cc	Note 4	\$23,150	\$140.30
Parking	Note 5	\$4,125	\$25.00
Architect. & Engineer	Note 6	\$1,500	\$9.09
Site Improvements	Note 7	\$163	\$0.99
Const. Contingency	Note 8	\$1,364	\$8.27
Municipal Fees	Note 9	\$61	\$0.37
Development Interes	Note 10	\$1,700	\$10.31
TOTAL		\$32,064	\$194.32
<u>Cost of Vacancy</u>			
Cost of Vacancy	Note 11	\$340	\$2.06
<u>Deferred</u>			
Tenant Allowances	Note 12	\$3,300	\$20.00
Leasing Costs	Note 13	\$660	\$4.00
Financing Costs		\$504	\$3.06
TOTAL		\$4,464	\$27.06
TOTAL PROJECT COSTS		<u>\$40,940</u>	<u>\$248.12</u>

Required Price/Rent Calculations

Required Return on Investment	10%
Required Face Rent	\$24.81 PSF
Required Net Effective Rent (1)	\$22.56 PSF

Conclusions Regarding Development Analysis

The above scenario 1 analysis demonstrates the required sales price for a new, medium density condominium development. When assessing this development proforma, it is important to note it reflects new building costs which generally exceed market affordability for many area residents, although it would certainly be expected that such a development would draw upon a broad population base of Houston residents who would consider relocating to a more central location.

The average resale condominium price in the University Corridor area was approximately \$220,000 to \$250,000, based upon year-to-date sales activity data provided by the Houston Association of Realtors (the University Corridor spans multiple MLS Districts, which explains the range of pricing provided), while the proforma above generates a required sale price of around \$271,000 (based on an average unit size of 1,010 sf). This figure is roughly 10% to 20% above the resale market pricing, which is in line with expectations for a new project.

With a median household income of roughly \$43,250 across the whole University Corridor, the affordable house price, at the median, is roughly \$168,550. An annual household income of approximately \$69,500 is required to afford the condominium unit described in the proforma, and nearly 35% of area households meet this threshold. The affordability model incorporates a 6% interest rate, 30 year amortization, 20% down payment, and a calculation of

monthly principal, interest and taxes, with the assumption that 32% of gross monthly income can be dedicated to housing costs.

In order to facilitate more rapid, higher density development along this Corridor, considerable "assistance" might have to be considered. This might include financial subsidies for development in the form of reduced building permit and development fees for certain development density thresholds.

Lastly, although it is not explicitly examined in the proforma here, the availability of quality public schooling is clearly an important criterion within the City for attracting families to higher density forms of housing in established central areas.

F2.4

Infrastructure Overview

The University Corridor presents the widest range of development conditions of all of the Transit Streets. The existing state of the Corridor ranges from the most urban condition of Houston for much of Richmond Street to the widest roadway section along Westpark, and the most immediate residential area on Wheeler.

Based on the research of the existing University Corridor infrastructure, it appears that the watermains are near the end of their lifespans in much of the Corridor, and may be undersized to provide for more intense development.

Sanitary sewer lines for a majority of the Corridor are past their predicted lifespans. It is recommended that the condition assessment of sewer lines be done for sewers that are more than 30 years old, by closed circuit television inspection.

It is important to realize that development will occur over a period of time and the infrastructure design for renewal and replacement should take place over that same period.

The following recommendations should be carefully considered:

- All overhead wires should be buried as the corridors are being reconstructed to accommodate transit.
- Pedestrian level lighting should be provided on the sidewalk side of the poles for all of the corridor sections within ¼ mile of a station.

F2.5

Pedestrian Oriented Cross Sections

To better understand the urban design impact of the new transit on the existing streetscapes, cross sections have been developed through various locations along the University Corridor illustrating the existing condition of the street from the face of buildings on each side. A cross section showing the new streetscape has been constructed as a comparison. The cross sections have been selected to indicate typical and special conditions of the Transit Street to show the impact of the LRT.

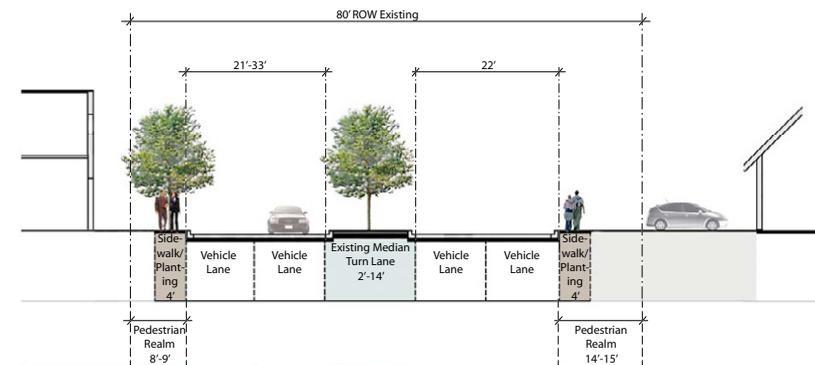
Additionally, cross sections have been developed to illustrate the existing and proposed improved pedestrian realm conditions of connecting streets. The importance of these streets as primary pedestrian ways cannot be overstated. These streets are envisioned as the principle links between the Transit Street and the surrounding neighborhoods, as well as the location of bus routes.

F2.5.1

Pedestrian Character Transit Street

The cross sections for the University Corridor have been drawn where the Transit Street crosses McDuffie, Academy and Delano Streets. Existing rights-of-way are narrow; therefore, accommodating transit, cars and the pedestrian realm is a challenge.

The new sections accommodate lanes of traffic in each direction, with the transit at the center. The pedestrian realm is shown as a 10 foot wide zone that accommodates planting and utilities and a 5 foot clearance for the pedestrian zone. Buildings are at the edge of the pedestrian realm and result in an urban cross section with a comfortable pedestrian scale. The cross section at Delano illustrates the use of turf in the track as a method of enhancing the residential character of the area.

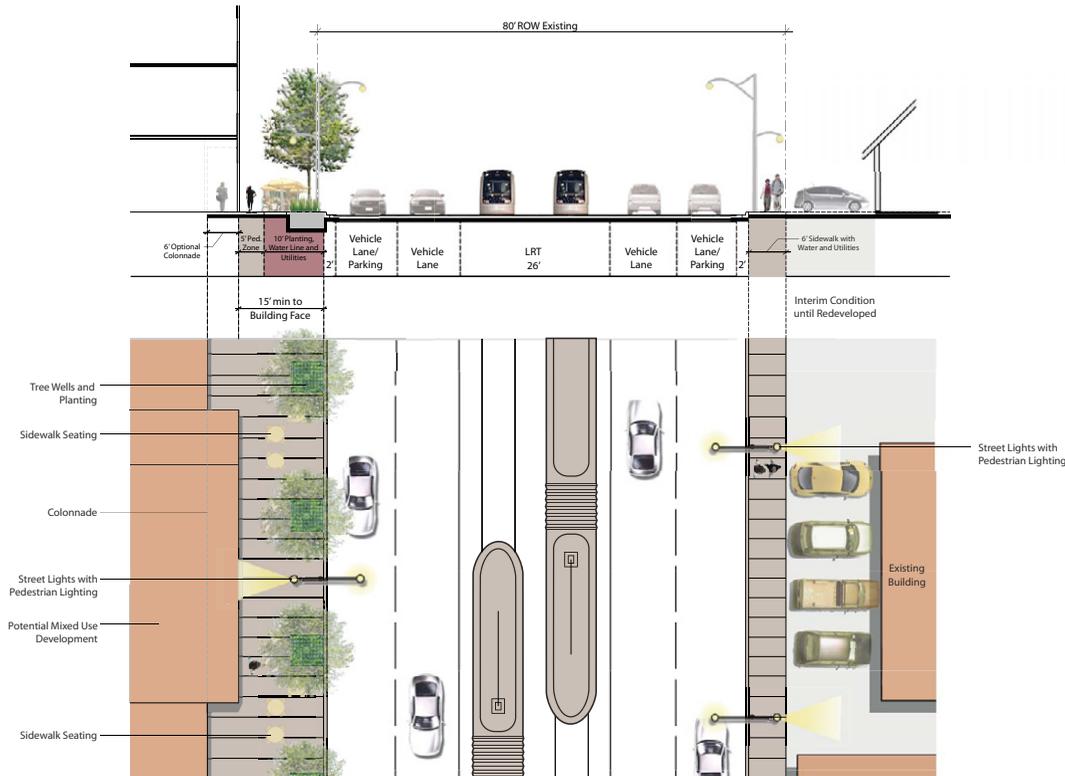


University Corridor Existing Section - Richmond Ave. at McDuffie St.

Pedestrian Character Transit Street, Richmond Ave. at McDuffie St. University



University Corridor Existing Conditions - Richmond Ave. at McDuffie St.



University Corridor Proposed Interim Section - Richmond Ave. at McDuffie St.

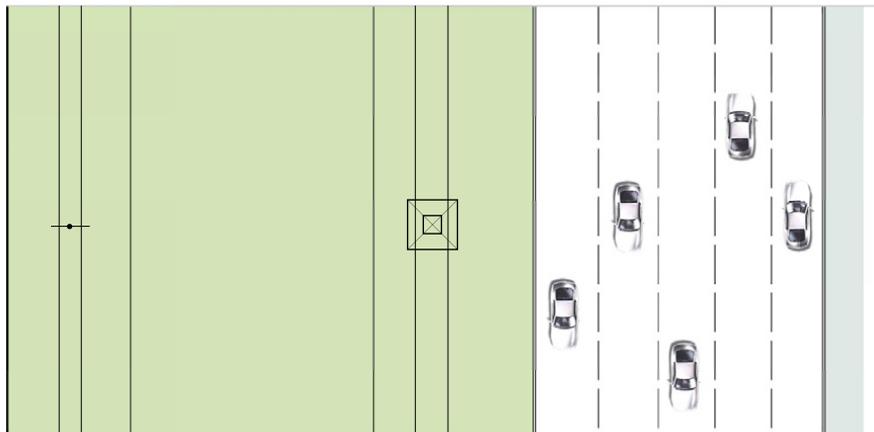
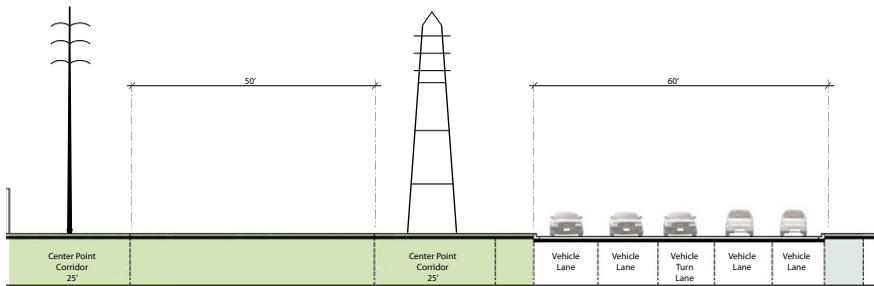


University Corridor Photomontage Illustrating Proposed Section - Richmond Ave. at McDuffie St.

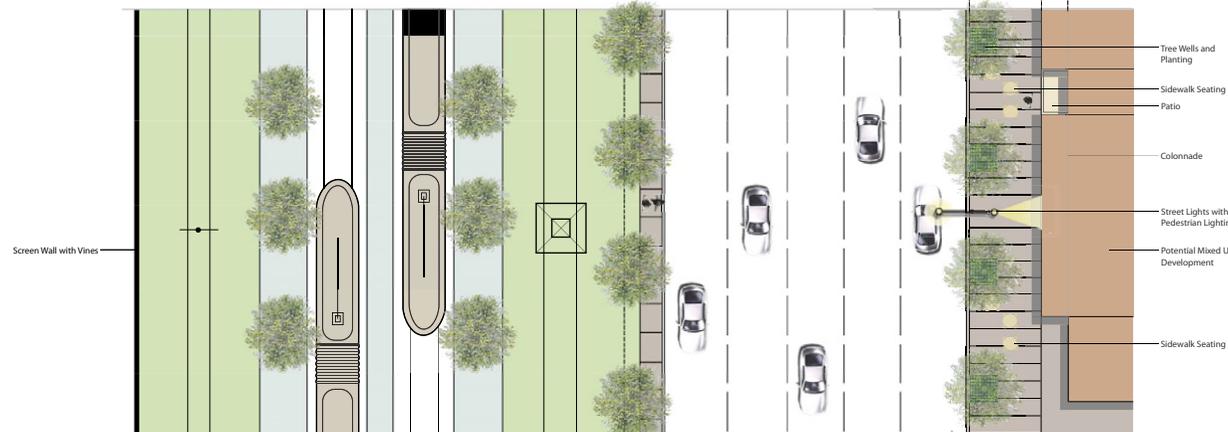
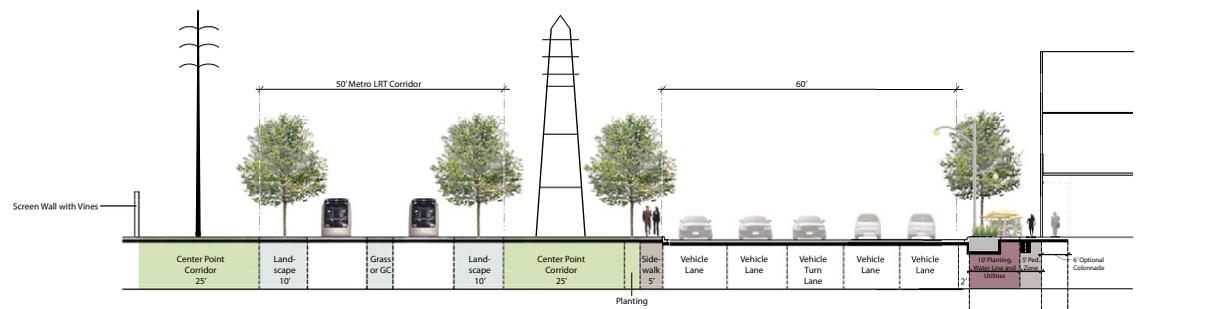
Pedestrian Character Transit Street, Westpark Dr. near Academy St. University



University Corridor Existing Conditions- Westpark Dr. near Academy



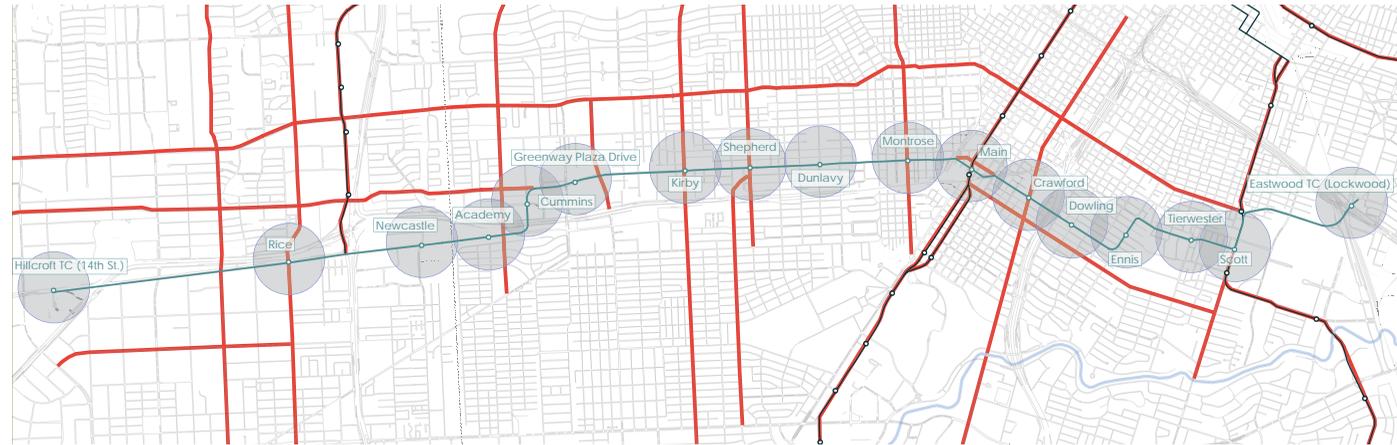
University Corridor Existing Section - Westpark Dr. near Academy St.



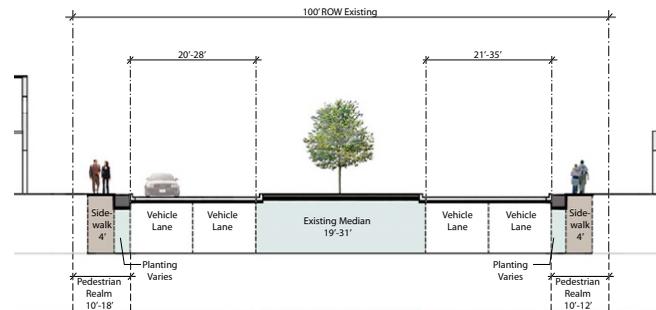
University Corridor Proposed Section - Westpark Dr. near Academy St.

F2.5.2 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 19 to 31 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 has been provided. A prototype street cross section indicates the following:



Pedestrian Character Major Thoroughfares



University Corridor Existing Section - Buffalo Speedway

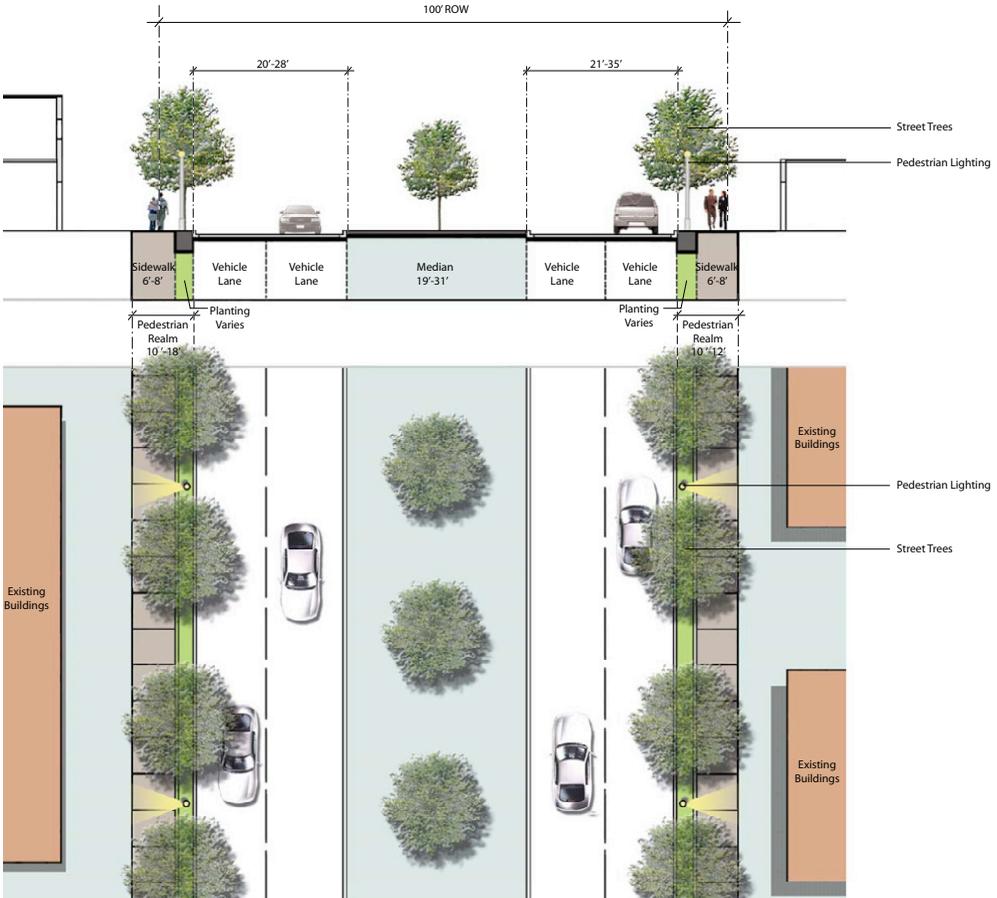


University Corridor Existing Conditions - Buffalo Speedway

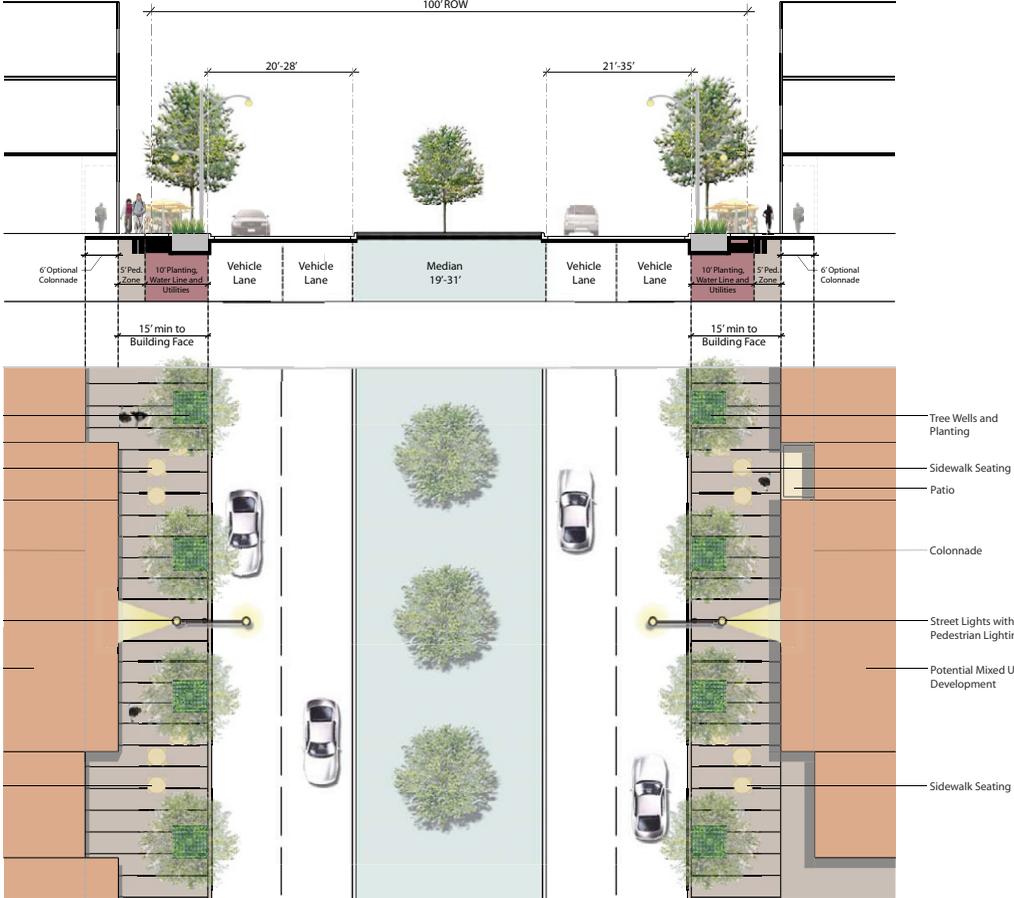


University Corridor Existing Conditions - Buffalo Speedway

Pedestrian Character Major Thoroughfare, Commercial and Residential Areas University



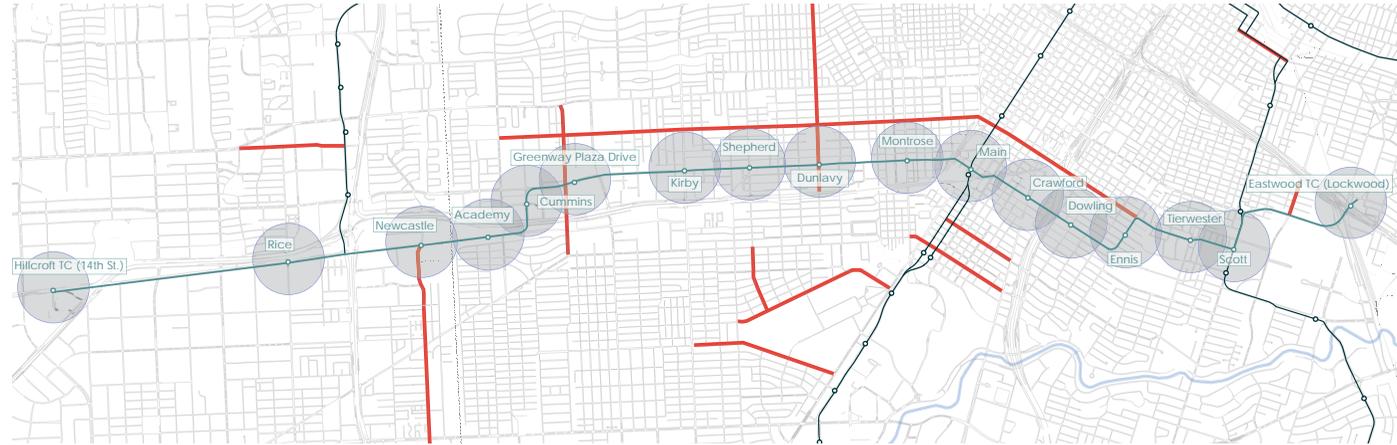
University Corridor Proposed Section - Buffalo Speedway



University Corridor Proposed Section - Buffalo Speedway (only in designated redevelopment areas)

F2.5.3 Pedestrian Character Major Collector

Major Collectors range from 60 – 80 feet, and include 33 feet of pavement. Rarely is a continuous and connected sidewalk provided. Dunlavy Street has been identified as a Pedestrian Character Major Collector because it is an important perpendicular collector to the Transit Street. A prototype street cross section indicates the following condition:

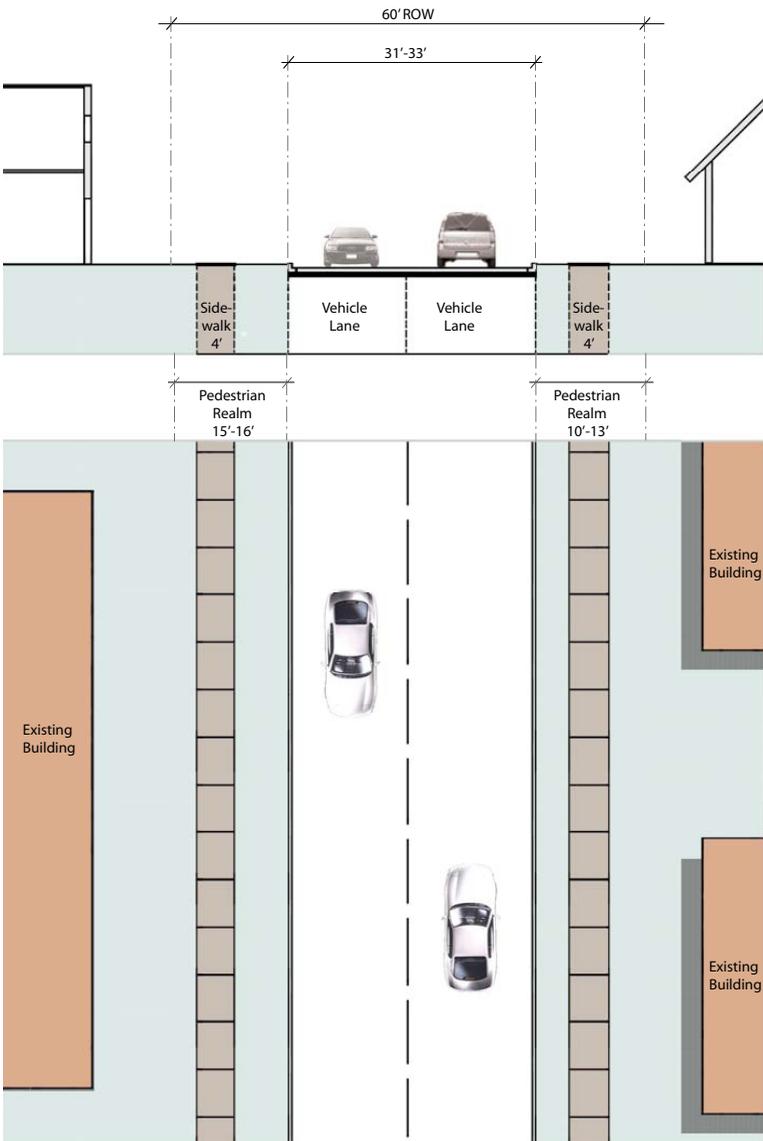


Pedestrian Character Major Collector

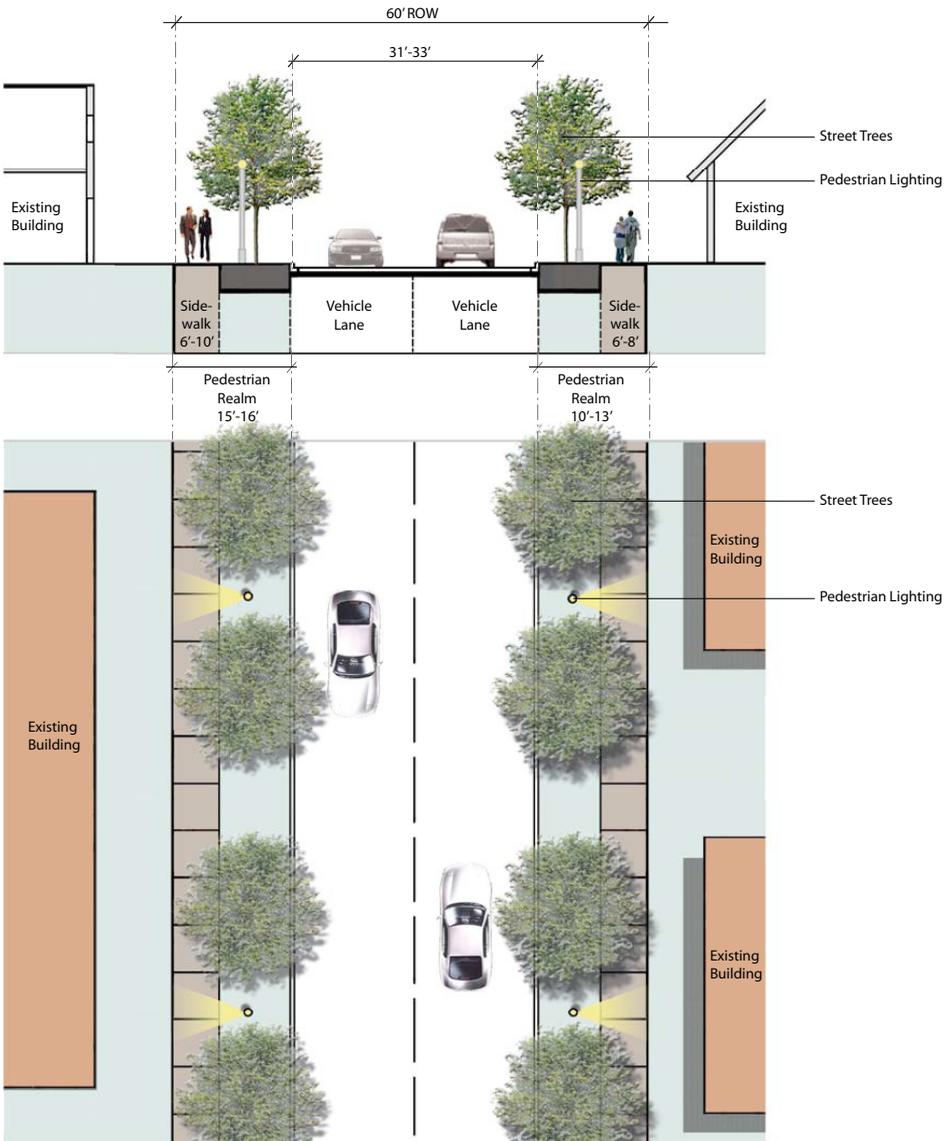


University Corridor Existing Conditions - Dunlavy St.

Pedestrian Character Major Collector University



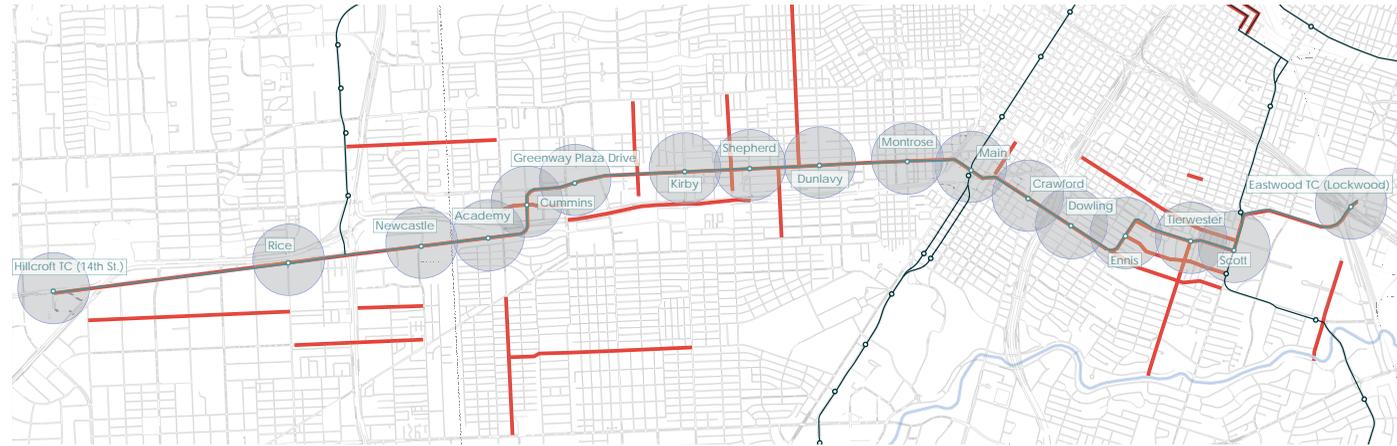
University Corridor Existing Section - Dunlavy St.



University Corridor Proposed Section - Dunlavy St.

F2.5.4 Pedestrian Character Local Street

Local street right-of-ways are typically 60 feet, and include 44 feet of pavement. Rarely are sidewalks provided. Some local streets that intersect with the University Corridor 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 indicates the following:

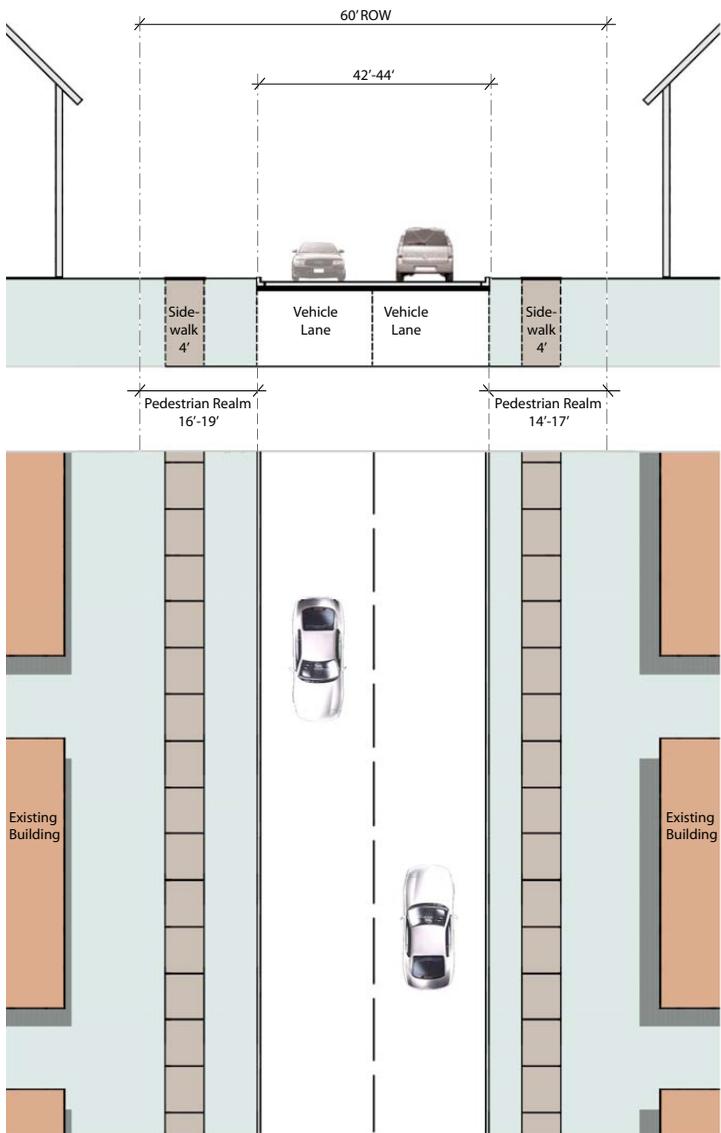


Pedestrian Character Local Street

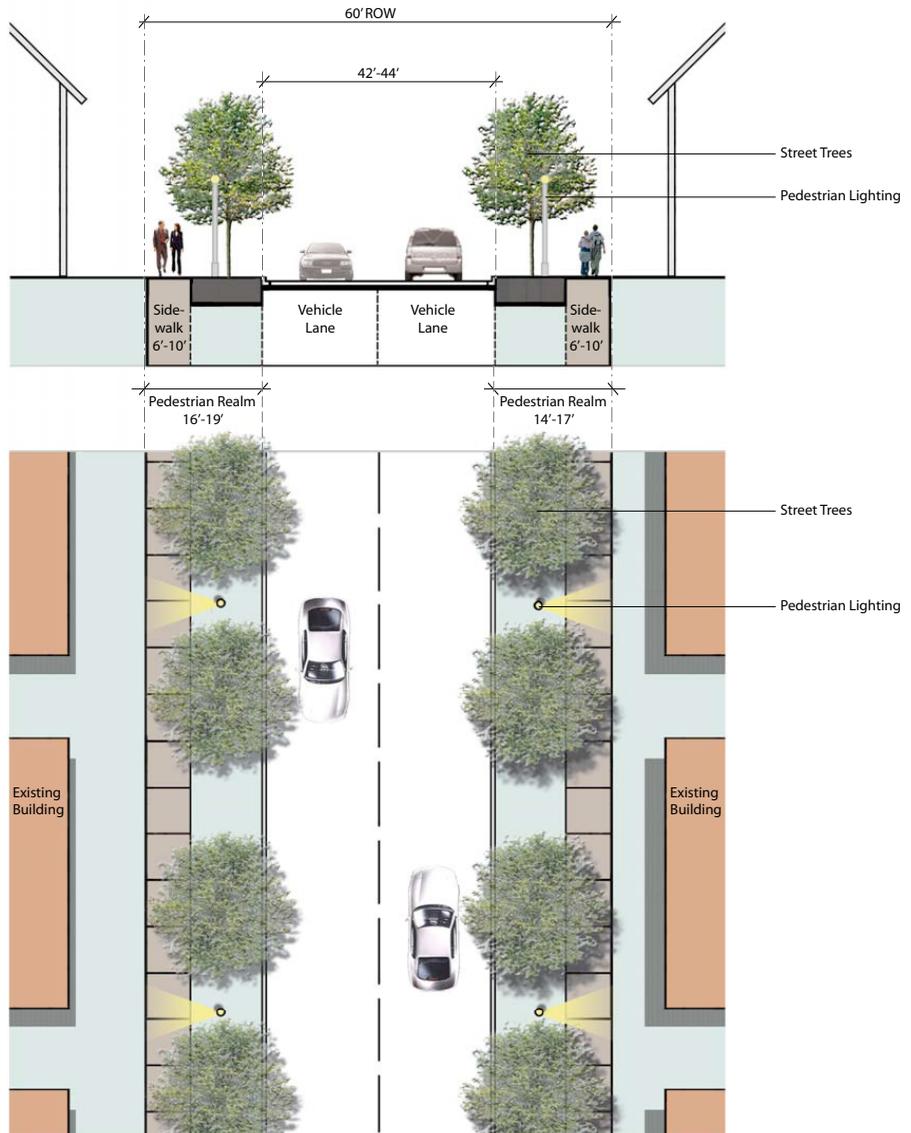


University Corridor Existing Conditions - Woodhead St.

Pedestrian Character Local Street University



University Corridor Existing Section - Woodhead St.



University Corridor Proposed Section - Woodhead St.

Appendix

University Implementation Strategy

Pending review

Key Implementation Terms

Abutting – two or more parcels sharing a common boundary of at least 1 point.

Block – all land fronting on one side of a street between the nearest streets, intersecting, meeting or crossing the aforesaid street.

Design Guidelines – discretionary standards to guide land development to achieve a desired level of quality for the physical environment.

Easement – a negotiated interest in the land of another which allows the easement holder specified uses or rights without actual ownership of the land.

Encroachment – a physical structure or partial structure that advances beyond established property boundaries into abutting properties.

Exterior side wall – the exterior side wall of a building or structure abutting a right-of-way or open space.

Facade – the exterior wall of a building exposed to public view or that wall viewed by persons not within the building.

Frontage – the minimum straight line distance between the intersection of the side lot lines and the front lot line.

Grade – the average elevation of the finished surface of the ground adjacent to the exterior walls of the building or structure.

Grandfathering - Application of the Ordinance Requirements shall begin on the date that the Implementing Ordinance comes into effect. It applies to New Development (see definition of New Development). It does not apply to minor additions or improvements that are not defined as New Development.

Gross Floor Area – the number of square feet of total floor area bounded by the exterior faces.

Main front wall – the main front exterior wall of a building or structure.

Mandatory Requirements – Mandatory requirements are those provisions that must be applied consistently on all new development in order to achieve the fundamental

Net Developable Site Area – the portion of a parcel or site that is remaining after requirements for minimum setbacks, yards, urban squares, easements and right-of-ways.

New Development - New Development refers to both the Redevelopment of existing properties or the construction of new buildings or structures on previously undevelopment properties.

Parcel/Lot line, front, exterior, rear – the legal boundary of a parcel or lot of land.

Pedestrian Realm – the pedestrian realm is the area from the back-of-curb to the face of the adjacent building.

Performance Based Standards – incentive-based discretionary standards designed to encourage development that meets established development objectives. Achievement of Performance Based Standards results in the reduction or dispensation of otherwise mandatory requirements.

Redevelopment – The removal of buildings or structures from land and the construction or erection of other buildings or structures therein or when the existing gross floor area on a parcel is increased by 25% or more through the construction of additions to existing buildings.

Setback – the horizontal distance measured at right angles to the boundary of the parcel, lot or block of land, between the main wall of the building and the main boundary.

Transit Street – a street along which the transit line currently exists or is planned to be located.

Variations - Variations to the Implementing Ordinance are subject to the current approvals process for variations of the City of Houston. Variations shall be approved by the City that meet the following three tests to the satisfaction of the City:

- The variance is considered minor in nature.
- The variance does not result in the achievement of a performance benefit, without achieving the basic density and urban design requirements of the Implementing Ordinance.
- The variance assists in achieving new development that is appropriate for its context and does not create any undue adverse impact on adjacent development.