

AGENDA – WORKSHOP OF THE PLANNING & ZONING COMMISSION OF THE CITY OF PEARLAND, TEXAS, TO BE HELD ON MONDAY, NOVEMBER 1, 2010, AT 6:00 P.M., IN THE COUNCIL CHAMBERS, CITY HALL, 3519 LIBERTY DRIVE, PEARLAND, TEXAS.

I. CALL TO ORDER

II. PURPOSE OF THE WORKSHOP:

- 1. COMMISSION INPUT AND DISCUSSION:** REGARDING UPDATE ON THE SPECTRUM AREA MASTER PLAN STUDY BY GATEWAY PLANNING GROUP ON DEVELOPMENT OF LAND WITHIN THE SPECTRUM MANAGEMENT DISTRICT AND THE PEARLAND MANAGEMENT DISTRICT NO. 1. *Mr. Bill Eisen, City Manager.*

III. ADJOURNMENT

This site is accessible to disabled individuals. For special assistance, please call Young Lorfing at 281-652-1653 prior to the meeting so that appropriate arrangements can be made.



Memo

TO: Mayor & City Council, City Planning & Zoning Commission, Pearland Economic Development Corporation, Spectrum Management District and Pearland Management District #1

FROM: Matt Buchanan, PEDC, Executive Director

DATE: October 26, 2010

**SUBJECT: Spectrum Area Master Plan Update Workshop
6:30 PM, Monday, November 1, 2010
Pearland City Hall – 3519 Liberty Drive**

The Pearland Economic Development Corporation (PEDC), in the summer of 2009, hired Gateway Planning to develop a market-based master plan and implementation strategy for the Spectrum area that creates a unified identity and maximizes its regional location advantages. The key issues to be addressed by the plan include: drainage; transportation access, linkages and transit; revision of the existing zoning and development standards; incorporating new development with existing uses; evolving the existing municipal management districts; and incorporating public parks and open spaces.

A series of design workshops were held in December 2009 that resulted in the Gateway Planning team developing two options for the Master Plan Framework for the Spectrum Area. Since then, the Gateway Planning Team has met with City Council and PEDC during a work session, as well as with staff, property owners and potential developers. Based on the feedback and input received from these meetings, Gateway Planning has finalized the Master Plan Framework and has developed a regulatory framework to implement the plan. The Gateway Planning team has also finalized the market feasibility and target industry analysis in addition to conceptualizing the major infrastructure network required to implement the plan. A summary of these items will be presented during the November 1st joint workshop.

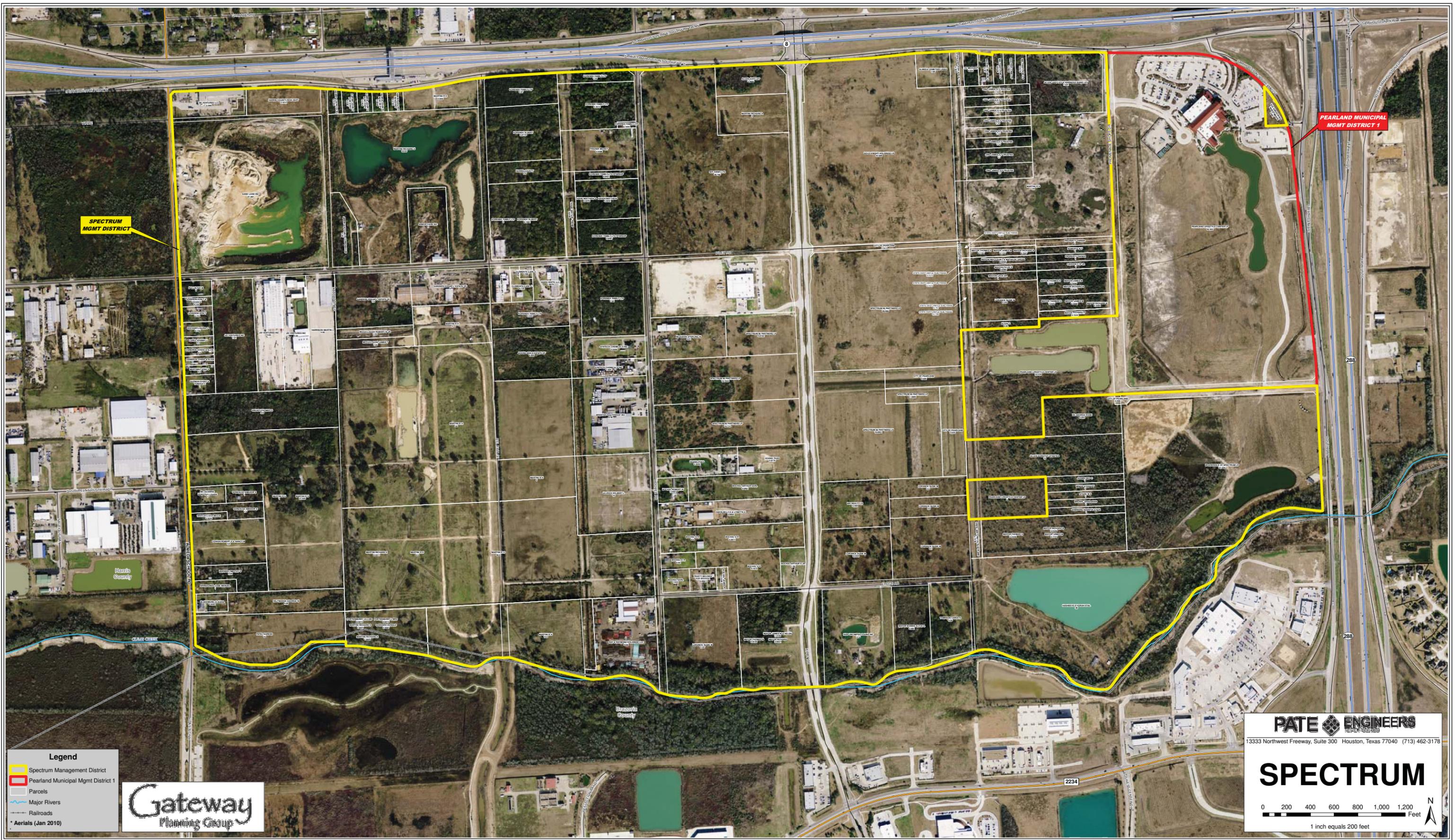
The goal of the meeting on November 1st will be to review the final recommendations on the Master Plan and Regulatory Framework, overall infrastructure strategy, and the results of the market and target industry analysis. This will provide guidance to the Gateway Planning team as they develop the changes to the city's Zoning Ordinance, develop cost estimates to prioritize the infrastructure investment, and undertake the fiscal analysis to implement the final Master Plan Framework.

The Master Plan and associated Regulatory Framework envisions a market-based approach and identifies different "character zones" of development, each implementing a vision for a unique neighborhood within the Spectrum District. This Regulatory Framework is then combined with the overall infrastructure strategy that identifies the major regional drainage and roadway improvements needed to bring the plan together. This Master Plan and Regulatory Framework are then evaluated against the final market and cluster analysis to ensure that the vision for the Spectrum District is feasible but flexible to address changing market conditions.

Please feel free to contact me if you have any questions at (281) 997-3002. Attached are copies of the Master Plan and Regulatory Framework, final market and cluster analysis report, and overall infrastructure plan.

Attachments:

1. Spectrum Area Map
2. Master Plan Framework and Rezoning Plan Map
3. Form-Based Code Regulatory Framework Descriptions
 - Character Districts:
 - a. Mixed Use Core
 - b. Urban Neighborhood
 - c. Research/Tech Campus
 - d. Commercial Transition
 - e. Highway Commercial
4. Market Feasibility Analysis and Target Industry Focus
5. Conceptual Street Network Plan Map
6. Street Cross Sections
7. Conceptual Stormwater Management Plan Map



SPECTRUM MGMT DISTRICT

PEARLAND MUNICIPAL MGMT DISTRICT 1

Legend

- Spectrum Management District
- Pearland Municipal Mgmt District 1
- Parcels
- Major Rivers
- Railroads
- Aerials (Jan 2010)



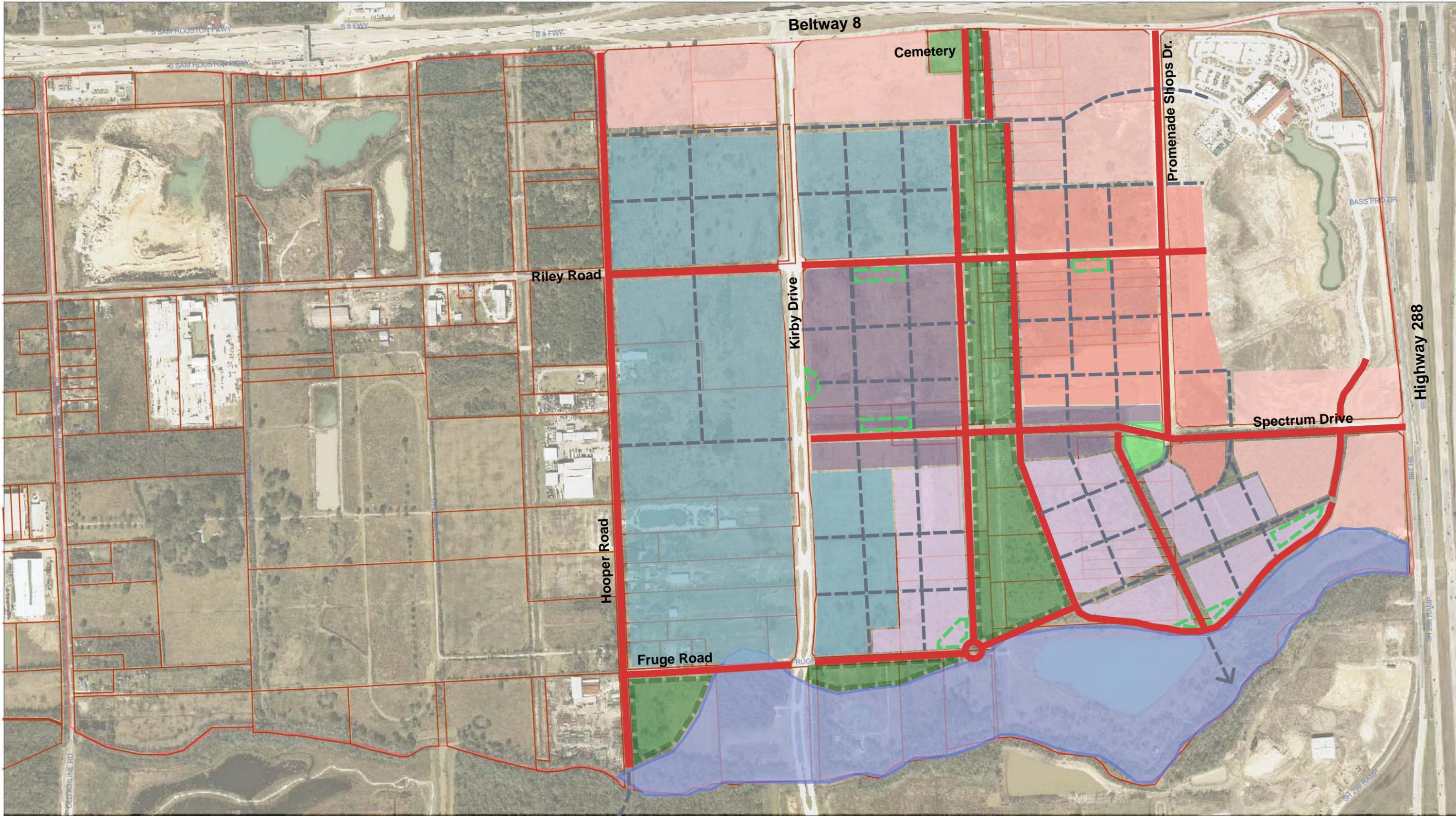
PATE ENGINEERS
 13333 Northwest Freeway, Suite 300 Houston, Texas 77040 (713) 462-3178

SPECTRUM

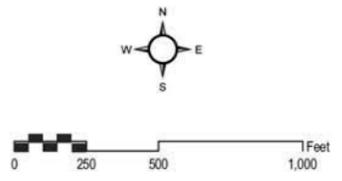
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PROPOSED REZONING BOUNDARY
Spectrum District - City of Pearland
 October 13, 2010



- Required Streets
- - - Recommended Streets
- Mixed Use Core
- Urban Neighborhood
- Commercial Transition
- Highway Commercial
- Research/Tech Campus
- Floodway
- Recommended Regional Detention Area
- Required Open Space
- Recommended Open Space

**Spectrum District, Pearland, Texas
Form-Based Code Framework**

Character District - Mixed Use Core	
Purpose and Intent	<ul style="list-style-type: none"> • Highest intensity of development in the Spectrum District • Maximize the locational benefits of the two regional highways and future light rail stop • Preserve the opportunity for higher intensity development when the market is mature
Building Scale and Massing	<ul style="list-style-type: none"> • 15 stories (maximum) • Clear distinction of a building ‘base’ that is 4 – 6 stories tall • Allow lower intensity buildings (1 – 2 stories) initially transitioning to higher intensity as market demand increases
Land Use Mix	<ul style="list-style-type: none"> • Ground floor commercial (retail, office, restaurant) and upper floors may be office, lodging or residential • Establish minimum height and intensity standards at key locations within the Mixed Use Core
Design Elements	
<ul style="list-style-type: none"> • Building articulation 	<ul style="list-style-type: none"> • Building base is articulated at a pedestrian rhythm/scale (20’ to 30’ bay/demarcation width) • Upper floors are more flexible
<ul style="list-style-type: none"> • Materials 	<ul style="list-style-type: none"> • Higher standards for building materials apply only to the building ‘base’ • Materials to be masonry (minimum 75%) of primary facades of building ‘base’ • Upper floor materials to be more flexible (include glass curtain wall, split face concrete, etc)
<ul style="list-style-type: none"> • Orientation 	<ul style="list-style-type: none"> • Buildings built to the edge of the sidewalk establishing a strong street wall (90% building frontage along Type ‘A’ Streets) • High pedestrian orientation • Ground floors of buildings along Type ‘A’ Streets to be built to commercial standards
<ul style="list-style-type: none"> • Transitions to adjoining uses 	<ul style="list-style-type: none"> • Establish building height transitions to adjoining Urban Neighborhood Zone
<ul style="list-style-type: none"> • Civic/Open Space 	<ul style="list-style-type: none"> • Require/recommend plazas and squares • Establish standards for plazas and squares
<ul style="list-style-type: none"> • Landscaping 	<ul style="list-style-type: none"> • Mostly in the public realm (street trees, plazas, and squares)
<ul style="list-style-type: none"> • Signage 	<ul style="list-style-type: none"> • Limited to pedestrian oriented signage palette • Allow building identity signs on high-rise buildings
Parking strategy	<ul style="list-style-type: none"> • On-street parallel or angled parking • Off-street parking in parking structures • Establish regulations for interim surface parking lots to be phased into urban development • Establish the same parking ratio for all non-residential uses • Establish one ratio for all residential uses

Block standards	<ul style="list-style-type: none"> • Urban block standards – generally block face dimensions not to exceed 400’ • Regular orthogonal grid • Allow for limited exceptions under certain design/performance criteria • Establish required and recommended street network on the Regulating Plan
Street Design Standards	<ul style="list-style-type: none"> • Establish a manual for the design of new streets within the Spectrum District to implement the goals of the plan. The Street Design manual would include context sensitive design standards for streets. • Standards will be established for cross sections, number of lanes, accommodate of pedestrians and bicyclists, parkway, development frontage, and streetscape standards based on the location and context of the street.
Approval Process	<ul style="list-style-type: none"> • Administrative approval for development that meets the standards established in the Code • Establish alternative legislative process with criteria for approval for development projects that do not meet the specific standards Code.
Phasing and Infrastructure	<ul style="list-style-type: none"> • Establish phasing plan for public infrastructure and infill of surface parking • Establish standards for any major civic venues such as the conference facility/convention facility

Characteristic Images





Character District – Urban Neighborhood	
Purpose and Intent	<ul style="list-style-type: none"> Encourage the development of a unique walkable neighborhood of urban lofts, apartments, townhomes, and live-work units Maximize frontage along the drainage features and creek
Building Scale and Massing	<ul style="list-style-type: none"> 6 stories (maximum)
Land Use Mix	<ul style="list-style-type: none"> Mostly residential with corner commercial uses and live-work uses Live-work uses to include artists’ studios and professional offices
Design Elements	<ul style="list-style-type: none"> Building rhythm of 20’ to 30’ Residential scale Simple roofs and facades with porches, stoops, bay windows and balconies Would allow for masonry, hardi plank, stucco as the primary building materials along Type ‘A’ Street facades (minimum 60%) Buildings to be built with shallow setbacks (less than 10’) Limit front loaded garages High pedestrian orientation NA Require/recommend greens, parks, play grounds Establish standards for the same Both in the public and private realms Live-work units and corner commercial to be permitted pedestrian oriented signage
<ul style="list-style-type: none"> Building articulation 	
<ul style="list-style-type: none"> Materials 	
<ul style="list-style-type: none"> Orientation 	
<ul style="list-style-type: none"> Transitions to adjoining uses 	
<ul style="list-style-type: none"> Civic/Open Space 	
<ul style="list-style-type: none"> Landscaping 	
<ul style="list-style-type: none"> Signage 	
Parking strategy	<ul style="list-style-type: none"> On-street parallel or angled parking Off-street parking in parking structures or surface parking in the rear of the lot (behind the principal structure) Establish the same parking ratio for all non-residential uses Establish one ratio for all residential uses
Block standards	<ul style="list-style-type: none"> Urban block standards – generally block face dimensions not to exceed 600’ Regular orthogonal grid or curved to match topography or address natural features Allow for limited exceptions under certain design/performance criteria Establish required and recommended street network on the Regulating Plan

Street Design Standards	<ul style="list-style-type: none"> Establish a manual for the design of new streets within the Spectrum District to implement the goals of the plan. The Street Design manual would include context sensitive design standards for streets. Standards will be established for cross sections, number of lanes, accommodate of pedestrians and bicyclists, parkway, development frontage, and streetscape standards based on the location and context of the street.
Approval Process	<ul style="list-style-type: none"> Administrative approval for development that meets the standards established in the Code Establish alternative legislative process with criteria for approval for development projects that do not meet the specific standards Code.
Phasing and Infrastructure	<ul style="list-style-type: none"> Establish phasing plan for public infrastructure

Characteristic Images



Character District – Research/Tech Campus	
Purpose and Intent	<ul style="list-style-type: none"> • Encourage the development of a regional employment center • Establish an overall “campus” like design vocabulary within which individual projects can vary • Link to regional highways and future rail transit
Building Scale and Massing	<ul style="list-style-type: none"> • 6 stories (maximum)
Land Use Mix	<ul style="list-style-type: none"> • Mostly office, research, flex-office, and supporting uses • Light industrial and assembly uses • Educational and other institutional uses • Ensure that the Kirby Drive frontage is consistently developed with the Mixed Use Core
Design Elements	
<ul style="list-style-type: none"> • Building articulation 	<ul style="list-style-type: none"> • Some building articulation required • Simple building and roof forms
<ul style="list-style-type: none"> • Materials 	<ul style="list-style-type: none"> • Allow a range of building materials
<ul style="list-style-type: none"> • Orientation 	<ul style="list-style-type: none"> • Buildings shall be set in a campus environment with landscaping and natural features • Pedestrian linkages and trails to be provided • Development to be both auto and pedestrian oriented (hybrid) • Emphasis on key linkage streets for more pedestrian oriented development
<ul style="list-style-type: none"> • Transitions to adjoining uses 	<ul style="list-style-type: none"> • Buffer/screen loading, unloading and service areas
<ul style="list-style-type: none"> • Civic/Open Space 	<ul style="list-style-type: none"> • More natural and unstructured spaces • Generally private yards
<ul style="list-style-type: none"> • Landscaping 	<ul style="list-style-type: none"> • Combination of private and public landscaping
<ul style="list-style-type: none"> • Signage 	<ul style="list-style-type: none"> • Unified wayfinding program with a palette of monument and building signs
Parking strategy	<ul style="list-style-type: none"> • Off-street parking in parking structures or surface parking • Screen surface parking from adjacent streets and development • Landscape surface parking lots • Allow shared parking
Block standards	<ul style="list-style-type: none"> • Allow larger block standards 800’ – 1,200’ • Establish a limited required/recommended street network
Street Design Standards	<ul style="list-style-type: none"> • Establish a manual for the design of new streets within the Spectrum District to implement the goals of the plan. The Street Design manual would include context sensitive design standards for streets. • Standards will be established for cross sections, number of lanes, accommodate of pedestrians and bicyclists, parkway, development frontage, and streetscape standards based on the location and context of the street.

Approval Process	<ul style="list-style-type: none">• Administrative approval for development that meets the standards established in the Code• Establish alternative legislative process with criteria for approval for development projects that do not meet the specific standards Code.
Phasing and Infrastructure	<ul style="list-style-type: none">• Establish phasing plan for public infrastructure

Characteristic Images



Character District – Commercial Transition	
Purpose and Intent	<ul style="list-style-type: none"> Intended as a transition between the Highway Commercial and Urban Neighborhood zones
Building Scale and Massing	<ul style="list-style-type: none"> 6 stories (maximum)
Land Use Mix	<ul style="list-style-type: none"> Mix of smaller professional/garden office and retail uses Some live work uses as a transition
Design Elements	<ul style="list-style-type: none"> Building articulation Building rhythm of 20' to 30' Residential scale Simple roofs and facades
<ul style="list-style-type: none"> Materials 	<ul style="list-style-type: none"> Materials to be masonry (minimum 75%) of primary facades of building
<ul style="list-style-type: none"> Orientation 	<ul style="list-style-type: none"> Buildings to be built to the edge of the sidewalk or with shallow setbacks (less than 10') Suburban orientation towards the Highway Commercial frontage and urban orientation towards the Urban Neighborhood frontage
<ul style="list-style-type: none"> Transitions to adjoining uses 	<ul style="list-style-type: none"> Transitions happen at the back of buildings
<ul style="list-style-type: none"> Civic/Open Space 	<ul style="list-style-type: none"> Require/recommend plazas and squares
<ul style="list-style-type: none"> Landscaping 	<ul style="list-style-type: none"> Both in the public and private realms
<ul style="list-style-type: none"> Signage 	<ul style="list-style-type: none"> Allows both pedestrian-oriented and auto-oriented signage (monument signs) when adjoining Mixed Use Core or Highway Commercial
Parking strategy	<ul style="list-style-type: none"> On-street parallel or angled parking Off-street parking in surface parking at the rear of the lot (behind the principal structure or along Highway Commercial zone frontage) Establish the same parking ratio for all non-residential uses
Block standards	<ul style="list-style-type: none"> Transitions from a suburban scale to the Urban Neighborhood scale. Block face dimensions not to exceed 600' Regular orthogonal grid or curved to match topography or address natural features Allow for limited exceptions under certain design/performance criteria Establish required and recommended street network on the Regulating Plan
Street Design Standards	<ul style="list-style-type: none"> Establish a manual for the design of new streets within the Spectrum District to implement the goals of the plan. The Street Design manual would include context sensitive design standards for streets. Standards will be established for cross sections, number of lanes, accommodate of pedestrians and bicyclists, parkway, development frontage, and streetscape standards based on the location and context of the street.

Approval Process	<ul style="list-style-type: none">• Administrative approval for development that meets the standards established in the Code• Establish alternative legislative process with criteria for approval for development projects that do not meet the specific standards Code.
Phasing and Infrastructure	<ul style="list-style-type: none">• Establish phasing plan for public infrastructure

Characteristic Images



Character District – Highway Commercial	
Purpose and Intent	<ul style="list-style-type: none"> • Intended for regional scale retail and employment uses that take advantage of highway frontage along 2 major roadways
Building Scale and Massing	<ul style="list-style-type: none"> • 15 stories (maximum)
Land Use Mix	<ul style="list-style-type: none"> • Mostly large format retail with restaurants and entertainment uses or high to mid-rise office buildings • May include lodging and related uses
Design Elements	
<ul style="list-style-type: none"> • Building articulation 	<ul style="list-style-type: none"> • Focus on minimizing the impact of a ‘big box’ look • Horizontal and vertical articulation to break up the building mass
<ul style="list-style-type: none"> • Materials 	<ul style="list-style-type: none"> • Allow a range of building materials; primarily masonry for retail/restaurant and masonry, glass, and more flexible materials for high to mid-rise office.
<ul style="list-style-type: none"> • Orientation 	<ul style="list-style-type: none"> • Buildings set back from the highway frontage roads • Low pedestrian orientation along the highway frontage, but higher pedestrian orientation on the cross streets and interior roadways.
<ul style="list-style-type: none"> • Transitions to adjoining uses 	<ul style="list-style-type: none"> • NA
<ul style="list-style-type: none"> • Civic/Open Space 	<ul style="list-style-type: none"> • Private yards
<ul style="list-style-type: none"> • Landscaping 	<ul style="list-style-type: none"> • Generally in the private realm • Screening of parking and service areas
<ul style="list-style-type: none"> • Signage 	<ul style="list-style-type: none"> • Auto-oriented palette of signs (generally monument and building signs)
Parking strategy	<ul style="list-style-type: none"> • Off-street parking in surface parking along the highway frontage • Soften surface parking lots with landscaping and shade trees
Block standards	<ul style="list-style-type: none"> • Allow larger blocks (greater than 1,000 block face dimensions)
Street Design Standards	<ul style="list-style-type: none"> • Establish a manual for the design of new streets within the Spectrum District to implement the goals of the plan. The Street Design manual would include context sensitive design standards for streets. • Standards will be established for cross sections, number of lanes, accommodate of pedestrians and bicyclists, parkway, development frontage, and streetscape standards based on the location and context of the street.
Approval Process	<ul style="list-style-type: none"> • Administrative approval for development that meets the standards established in the Code • Establish alternative legislative process with criteria for approval for development projects that do not meet the specific standards Code.
Phasing and Infrastructure	<ul style="list-style-type: none"> • Limited public infrastructure

Characteristic Images



Market Feasibility Analysis and Target Industry Focus for the Spectrum Development in Pearland, TX

Prepared for Pearland EDC and Gateway Planning Group

2009, Updated Fall 2010



PRESENTED BY 



TXP, Inc.
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DRAFT



Introduction

As part of Pearland's economic development initiative for the Spectrum District, TXP's initial tasks were to:

- conduct a market feasibility study to determine absorption capacity for the Spectrum District outlined in Figure One that follows; and
- identify likely target industries to supplement the analysis in the first task.

The analysis is broken into the following areas of discussion:

1. Market environment, including the current macro situation, overall economic and demographic forecasts, and projections of consumer-related real estate demand;
2. Review of development orientation;
3. Cluster analysis for target industry selection;
4. TXP projections for absorption
5. Conclusions

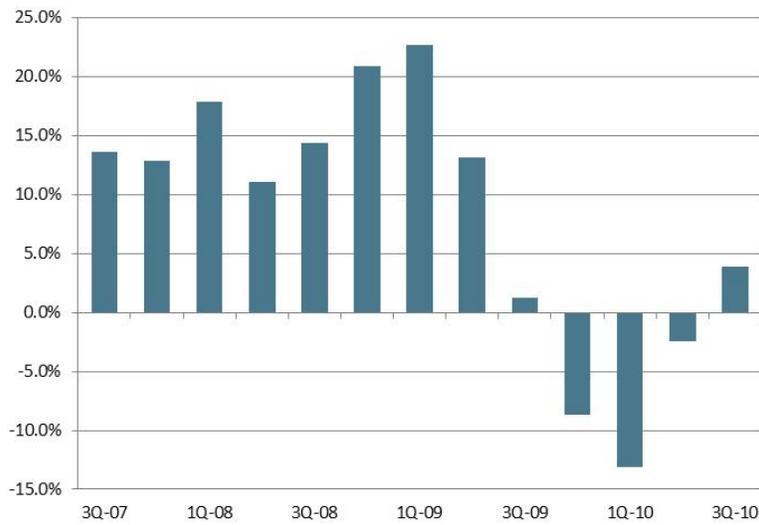
Given the Spectrum's location at two major highways (288 and Beltway 8), it could be ideally positioned to attract a significant proportion of the area demand if a cohesive, de-facto, "master developer" context can be created across multiple property owners. Unlike the tendency towards single-use development projects in this region, a "master developer" context could realize walkable mixed-use development with a significant employment component, urban living, entertainment, and retail. This orientation, in combination with a land-use plan that reflects market demand, regional access, potential for future rail transit along Kirby and the substantial growth in the market area, all make the Spectrum District a vibrant center in the region.

Table 1: Recent Pearland Indicators

	A. Taxable Sales	B. Population	C. Unemployment	D. Housing Units Permitted
2002	\$400,308,025	51,547	4.6%	1,430
2003	\$448,580,193	54,819	5.3%	1,694
2004	\$505,091,425	59,414	5.0%	2,102
2005	\$605,271,763	63,945	4.6%	2,622
2006	\$755,478,376	71,051	4.0%	2,096
2007	\$856,493,426	77,112	3.4%	1,693
2008	\$1,031,817,641	82,290	3.8%	1,209
2009	\$1,032,139,361	86,341	5.9%	826

Sources: A. Texas State Comptroller's Office; B. Census Bureau; C. Bureau of Labor Statistics; D. Census

Figure 2: Recent Pearland Sales Tax Revenue Growth



Sources: Texas State Comptroller's Office; TXP

As the Houston-area market begins to recover from the impact of recession and over-capacity, the Spectrum's location at the intersection of the emerging 288 and Beltway 8 Corridor, as well as its location between the Medical Center, the Port of Houston and Freeport, suggests that it will be a prime location for development at the point when growth and demand resume.

Market Area Real Estate Demand

Specific Assumptions

- Base data was derived from a number of sources, including County Business Patterns, the Bureau of Labor Statistics, the Census Bureau, and the Texas Real Estate Research Center.
- The market area is based on an estimate of the labor shed for the community, consistent with ZIP Code boundaries. Market area population projections were based on the 3.0 Migration Scenario from the Texas State Data Center (2000-07), updated to reflect base data through 2008 for the county and local cities and 2007 data for the ZIP Codes in the market area. The estimate of the number of people per household comes from the Census Bureau, and is very gradually reduced over time in line with both historical patterns and anticipated demographic trends.
- Non-commercial business uses are not included in this analysis, as demand for these categories is likely to be more project-specific, which could have a constraining effect on the ultimate level of residential development. The cluster analysis provides guidance as the level of non-commercial development that can be anticipated.
- Employment forecasts were developed using 2007 base data for the ZIP Codes referenced in the map and table that follows. A thirty-year time planning horizon was assumed.
- A blended American Planning Association (APA) ratio of 650 sq. ft./employee was used to estimate aggregate new development required for retail/restaurant/entertainment. Similarly, an adjusted APA ratio of 250 sq. ft./employee was used to estimate aggregate new development required to meet office/commercial demand.

Table 3: Projected Market Area Population, Households, & Employment

	Population	Households	Office-Related Jobs	Retail/Rest./Ent. Jobs
2010	653,474	246,519	75,517	64,503
2011	669,215	252,710	75,975	64,664
2012	685,336	259,057	76,902	65,472
2013	701,844	265,562	77,841	66,291
2014	718,749	272,231	78,790	67,322
2015	736,062	279,067	79,752	68,370
2016	753,139	285,828	80,675	69,395
2017	770,611	292,751	81,609	70,436
2018	788,488	299,843	82,554	71,492
2019	806,780	307,106	83,510	72,564
2020	825,495	314,544	84,476	73,652
2021	843,911	321,883	85,407	74,719
2022	862,736	329,393	86,349	75,802
2023	881,981	337,078	87,300	76,900
2024	901,655	344,942	88,262	78,014
2025	921,767	352,989	89,235	79,145
2026	941,571	360,934	90,168	80,251
2027	961,799	369,057	91,112	81,374
2028	982,462	377,363	92,065	82,512
2029	1,003,568	385,856	93,028	83,666
2030	1,025,127	394,539	94,001	84,836
2031	1,046,450	403,149	95,462	86,023
2032	1,068,216	411,946	96,946	87,226
2033	1,090,435	420,936	98,452	88,446
2034	1,113,116	430,121	99,982	89,683
2035	1,136,268	439,507	101,536	90,937
2036	1,159,335	448,878	103,114	92,209
2037	1,182,869	458,449	104,716	93,499
2038	1,206,881	468,223	106,343	94,806
2039	1,231,381	478,207	107,996	96,132
2040	1,256,378	488,403	109,674	97,477
Source: TXP				

Table 4: Projected Market Area Overall Real Estate Demand

	Housing Units	Office-Related Sq. Ft.	Retail/Rest./Ent. Sq. Ft.
2010	3,181	-85,384	-210,687
2011	4,161	102,958	104,817
2012	4,265	208,612	525,395
2013	4,372	211,158	531,963
2014	4,482	213,735	670,508
2015	4,595	216,343	680,941
2016	4,537	207,735	666,340
2017	4,646	210,140	676,331
2018	4,759	212,572	686,472
2019	4,874	215,033	696,765
2020	4,992	217,523	707,212
2021	4,917	209,450	693,688
2022	5,031	211,758	703,739
2023	5,149	214,091	713,937
2024	5,269	216,451	724,281
2025	5,391	218,836	734,776
2026	5,314	210,060	719,495
2027	5,433	212,258	729,558
2028	5,556	214,478	739,762
2029	5,680	216,722	750,108
2030	5,808	218,990	760,599
2031	5,750	328,676	771,237
2032	5,876	333,783	782,023
2033	6,004	338,970	792,961
2034	6,135	344,238	804,051
2035	6,269	349,587	815,297
2036	6,252	355,020	826,699
2037	6,385	360,537	838,262
2038	6,521	366,140	849,986
2039	6,660	371,829	861,873
2040	6,802	377,608	873,928

Source: TXP

Development Orientation

If the Spectrum and Pearland are to capture a significant share of the projections outlined above, a development orientation that reflects a changing market structure is desirable. For example, a number of trends are beginning to influence land development and urban revitalization in the United States, including:

- *Demographics*, specifically smaller household sizes;
- *Changes in the structure of the economy*, with a heightened emphasis on adding value through the provision of service and knowledge;

- *Shifts in consumer tastes and preferences*, including a greater acceptance of owner-occupied multi-family housing and a strong desire for “authenticity” and “experience;”
- *Technology*, especially as it enables decentralized work and informs consumer tastes;
- *Transportation*, including congestion and rising energy costs, and
- *Cultural/entertainment*, an element of society that is increasingly multi-faceted and diverse.

Underlying all of the above (which have an impact through all of society) is the desire for what has been termed *Walkable Urbanism*. According to the Brookings Institute, “since the rise of cities 8,000 years ago, humans have only wanted to walk about 1,500 feet (approximately a quarter mile) until they begin looking for an alternative means of transport: a horse, a trolley, a bicycle, a car. This distance translates into about 160 acres – about the size of a super mall, including its parking lot. It is also about the size, +/- 25 percent, of Lower Manhattan, Downtown Albuquerque, the financial district of San Francisco, Town Center Atlanta, and most other major Town Centers in the country.”

What makes Walkable Urbanism function is not merely distance, but the quality of the experience – a pedestrian trip where one encounters a mix of sights and sounds in the context of a range of land uses and a diverse built environment. The translation is that “critical mass” occurs when visitors can find enough to do for an afternoon or an evening, residents’ daily needs are largely met within easy access, and the underlying economics justify ongoing investment. When this happens (and is sustained), a dynamic system is in place that will create enhanced economic and fiscal value.

Accordingly, the southeast quadrant of the Spectrum District (formerly known as “Waterlights”) provides an opportunity to set a unique market dynamic in motion by establishing several hundred acres of walkable urbanism. This development context then would provide an opportunity to distinguish the Spectrum as a competitive location as an employment center anchored along the Kirby Corridor. It would also reposition the Bass Pro Shops to attract additional entertainment and restaurant uses that would be more sustainable in association with an urban destination as was originally envisioned for the “Waterlights” area.

Cluster Analysis and Target Industries

Overview

This analysis is designed to serve as guidance for Pearland in the targeting of industries as potential tenants of the Spectrum development. It builds on a cluster analysis, evaluation of the community and the site's particular attributes, previous local target industry work, and the overall planning effort lead by Gateway. The end product is a selection of fairly detailed target sectors for the Spectrum, with a focus on office-oriented sectors of the economy that are growing, fit well with local comparative advantage, and are consistent with the design of the built environment for the Spectrum. These include professional and technical services, with an emphasis on life sciences, certain selected services related to waste remediation and transportation support, education, and back office operations, with a likely focus on medical-related activity. The target list does not include warehousing or manufacturing per se, although each potentially could find a place in the Spectrum. The key would be actual location within the project (more likely on the west side) and integration with the overall project plan. By the same token, mixed-use development in this context is also a target, and should be a priority.

The above having been said, this list should not be viewed as either exclusive or exhaustive, as individual firms in sectors not identified could well make sense. Ultimately, the best measures of a firm's suitability will be tax base and economic impact (including job creation) along with integration with the existing and planned development within the project.

Methodology & Approach

Industry cluster analysis is a common approach used in economic development to evaluate the economic base of a region, usually at the county or multi-county level. Clusters are highly-integrated groups of businesses with strong vertical and horizontal linkages. Not only does industry cluster analysis describe the current state, but this technique is often used to identify areas of recruitment opportunity. Industry cluster analysis, however, is a broad concept rather than a precise term. There is not a unified definition of industry clusters or their subcomponents. In general, a cluster consists of firms and related economic actors and institutions that draw productive advantage from their mutual proximity and connections. First, linkages are established in which businesses build relationships with existing specialized supplier firms throughout a region. Second, these developing clusters attract additional supplier firms and supporting business from outside of the area. Finally, by creating a critical mass of production, labor, and information, related manufacturers and supplier firms are

attracted to these developing cluster regions to take advantage of the existing human and physical infrastructure.

A comprehensive analysis of industry cluster techniques released by The Brookings Institute (*Making Sense of Clusters: Regional Competitiveness and Economic Development, 2006*) highlights seven drivers called “micro-foundations” of clustering.

Table 5: Foundations of Clustering

Micro-foundations	Description
Labor Market Pooling	Strong market/supply for the distinctive skilled labor needed
Supplier Specialization	Large number of industrial customers in the nearby area create sufficient demand to enable suppliers to acquire and operate expensive specialized machinery
Knowledge Spillovers	Concentration of many people working on a similar set of economic problems produces a widely shared understanding of an industry and its workings
Entrepreneurship	Entrepreneurship includes both the willingness of individuals to form new businesses and the willingness of owners of existing businesses to undertake new ideas
Path Dependence and Lock-In	Set of opportunities available to any particular place will be shaped by the economic activities it has already established.
Culture	Culture may be particularly important in helping local economies and clusters adapt to change over time
Local Demand	Demanding local consumers can pressure firms to innovate and to maintain and improve product quality, which in turn improves their competitiveness in other markets

Source: Brookings, TXP

The Brookings study concludes, “It is difficult for public policy to create new clusters deliberately. Instead, policymakers and practitioners should promote and maintain the economic conditions that enable new clusters to emerge. Such an environment, for example, might support knowledge creation, entrepreneurship, new firm formation, and the availability of capital.”

Application of Industry Cluster Analysis and Pearland/Spectrum

To assess the strength of a cluster in a regional economy, the location factors are calculated by comparing the cluster’s share of total local employment to the cluster’s national share. Cluster location factors greater than 2.0 indicate a strong cluster agglomeration, while those less than 0.5 indicate very weak clusters.

The biggest challenge for performing a cluster analysis on a sub-geographic area like the Spectrum is data availability. Clusters are typically defined using 6-digit NAICS (a business classification system). Given the employment base size of Pearland, detailed

data is not readily available because government agencies “suppress” data to protect the confidentiality of the businesses. Therefore, TXP performed an initial cluster analysis using location quotients at a higher NAICS level. The following table highlights the major segments of the economy where Harris County is more heavily concentrated than the state as a whole.

Table 6: Harris County Location Quotients, 2008 Data

	Location Quotient
NAICS 483 Water transportation	3.371
NAICS 486 Pipeline transportation	2.904
NAICS 211 Oil and gas extraction	2.620
NAICS 482 Rail transportation	1.982
NAICS 481 Air transportation	1.920
NAICS 333 Machinery manufacturing	1.872
NAICS 324 Petroleum and coal products manufacturing	1.799
NAICS 325 Chemical manufacturing	1.636
NAICS 488 Support activities for transportation	1.598
NAICS 335 Electrical equipment and appliance mfg.	1.408
NAICS 221 Utilities	1.366
NAICS 541 Professional and technical services	1.357
NAICS 213 Support activities for mining	1.304
NAICS 712 Museums, historical sites, zoos, and parks	1.299
NAICS 611 Educational services	1.257
NAICS 312 Beverage and tobacco product manufacturing	1.228
NAICS 562 Waste management and remediation services	1.219
NAICS 711 Performing arts and spectator sports	1.217
NAICS 531 Real estate	1.215
NAICS 236 Construction of buildings	1.205
NAICS 423 Merchant wholesalers, durable goods	1.190
NAICS 523 Securities, commodity contracts, investments	1.149
NAICS 561 Administrative and support services	1.119
NAICS 532 Rental and leasing services	1.118
NAICS 622 Hospitals	1.103
NAICS 238 Specialty trade contractors	1.097
NAICS 551 Management of companies and enterprises	1.085
NAICS 424 Merchant wholesalers, nondurable goods	1.043
NAICS 812 Personal and laundry services	1.004

Source: Texas Workforce Commission, TXP

Not surprisingly, energy and transportation are areas where Harris County has sizeable concentrations, as the port and the petrochemical complex create an outsized presence. Similarly, medical activity (especially hospitals) and management of

companies in part reflect the size of the region – as one of the largest metro areas in the nation, Houston and Harris County logically will have a greater concentration in this sectors than Texas as a whole.

Targeted Sectors Analysis

Identification Process

The location quotient analysis above suggests regional concentration in Energy and Energy-Related activity, Transportation, Professional & Technical Services, Educational Services, and Wholesale Trade. Because the Spectrum is a relatively small area within a larger regional economy, a target industry approach driven entirely by these location quotients likely would be incomplete. Instead, the community would be well served to identify targets by including the following additional criteria.

Evaluate the expected national performance of individual sectors over both the short term and the next ten years.

Essentially, supply and demand forces should be at work in identifying candidate business sectors for recruitment. Current and expected economic growth in a given sector is perhaps the best measure of demand, with national performance normally the most appropriate standard of measure (although local growth can be used to either confirm national trends or indicate a rising local share of a flat or declining national market).

Beyond the cluster analysis, review the local and regional economy to identify possible supply gaps.

Once sectors with rising demand have been identified, supply factors should be considered. For example, a supply gap may exist in the local market, where growing firms are forced to buy inputs from outside the region due to absence of local suppliers. Similarly, a concentration of interconnected firms (typically referred to as “clusters”) can create opportunities. In Pearland/Spectrum, interviews indicated no clear opportunities to recruit either upstream firms (suppliers) or downstream firms (those who used locally-produced products for further production).

Evaluate possible target businesses in light of the region’s comparative advantages/constraints.

A second “supply” consideration relates to comparative advantage. Workforce characteristics, transportation components (proximity to highway infrastructure and the presence of Hobby airport), the quality and scope of local infrastructure, and unique local factors (such as proximity to the medical complex) can create comparative advantage or reveal constraints. Niche opportunities may also be identified as part of

this review, such as back-office medical operations. By the same token, proximity to markets may also be a consideration, along with other measures of comparative advantage.

The net effect is that target business sectors normally fall into two broad categories: those industries which are growing rapidly, with the hope that the community will get a share of that growth, and those industries or projects in which the community has a comparative advantage, be it infrastructure-related, labor force, unique local considerations, existing local/regional economic linkages (including clusters), or proximity to markets.

Evaluate possible target industries in light of the region's competitors.

Once the target sector candidates have been identified, a final step is to compare Pearland/Spectrum to its logical competitors. Other communities throughout the Houston region could, in theory, offer many of the advantages that Pearland/Spectrum might provide to a relocating firm, although proximity to healthcare and strategic location are distinguishing assets.

Confirm that the target industries are consistent with Pearland/Spectrum's values, vision for its economy, and the plan for the Spectrum.

As referenced above, it is important that the above process could does not yield candidate industries that would be inconsistent with existing plans and strategies. Similarly, the community's commitment to development of a particular sector (perhaps based on factors that are not easily measured or quantified) could override an apparent impediment to success.

Targeted Sectors Recommendations

The following table delineates the areas identified for Pearland/Spectrum as targets for recruitment and expansion. Overall, the five focus areas include a total of thirteen specific targets.

Table 7: Pearland Spectrum Target Sectors

NAICS 488 Support Activities for Transportation	Location Quotients
NAICS 48832 Marine cargo handling	3.757
NAICS 488991 Packing and crating	3.024
NAICS 541 Professional and Technical Services	
NAICS 54133 Engineering services	2.147
NAICS 54136 Geophysical surveying and mapping services	2.810
NAICS 54138 Testing laboratories	1.871
NAICS 54162 Environmental consulting services	1.677
NAICS 54171 Physical, engineering and biological research	1.585
NAICS 54172 Social science and humanities research	1.518
NAICS 54169 Other technical consulting services	1.516
NAICS 54142 Industrial design services	1.248
NAICS 562 Waste Management and Remediation Services	
NAICS 56291 Remediation services	1.325
Non-Location Quotient Targets	
NAICS 611 Education Services	
Back-Office Operations, with a Focus on Medical	

Source: TXP

In reviewing each category above, several general points should be made:

- *New transportation capacity (especially passenger rail) and continued growth of the medical complex could create opportunities that would be viable at the Spectrum beyond those currently envisioned.* While back-office medical and educational services have already been identified, additional opportunities could emerge, especially related to specialty medical services (perhaps related to laboratories) and other niche office uses. Smaller firms likely will be a significant part of the mix, especially in sectors that can take advantage of both the quality of life amenities and the area's evolving demographics.
- *The targets make sense at this point, but shifting conditions (both external and local) will require ongoing reevaluation.* The impact of healthcare reform (either as currently slated for implementation or revised), for example, could have an impact on the flow of medical research dollars (positive or negative) that could, in turn, influence the prospects for research laboratories. Target industry selection is necessarily a dynamic process, as sectors that may make sense at one point may not be viable in the future. Telecommunications is a good example; after having appeared on virtually every target industry list in the mid-to-late 1990s, significant over-capacity led to massive industry lay-offs and restructuring in the wake of 9/11 and the dot-com crash.

- *Expansion represents the bulk of the near-term opportunity.* Conventional wisdom holds that local expansion and entrepreneurship creates approximately 4 out of 5 jobs nationwide, a trend that is likely to be the case (at least in the near term) for Pearland/Spectrum as well. By the same token, retention is an equally vital economic development task, as a job saved is just as valuable (if not more so) than a new job created.

An Additional Target: Project-Based Development

For a number of reasons, standard economic development practice does not typically include housing, retail trade, and consumer services as candidates for economic development and financial incentives. First, consumer activity is normally considered a secondary industry, meaning that it serves mainly local markets, rather than a primary industry, which sells its products and services to non-local customers. Importing of external funds by primary industries is traditionally considered the foundation of economic development, as a region's primary employers create spin-off effects that increase demand for small business services, promote consumer activity, and directly and indirectly enhance the community's tax base. Second, local competition is likely to be strong for a new retailer to a community in light of the Pearland Town Center, and it is politically challenging to provide a subsidy to a direct competitor to an existing local firm. Finally, the ripple effects associated with retail trade (and consumer-driven industries in general) are relatively lower than for production sectors of the economy, as the backward and forward linkages to other industries are not as extensive, reducing the multiplier effect. As a result, some communities have explicitly prohibited retail trade from receiving incentives under the city's economic development policy.

In the Spectrum, however, entertainment, retail trade, and consumer services (including certain types of housing) are valid targets for economic development, especially on the eastern side of the project. In particular, the strategic location at the intersection of key highway infrastructure, the possibility of passenger rail, the strong income demographics in the region, and the ability to build on the impetus provided by activity anchored by Bass Pro Shops makes the Spectrum an ideal site for destination retail/entertainment. As a result, the following benefits should accrue from this aspect of the project:

- Since this development is a "destination," it should draw shoppers from outside the local market, a pattern that would be amplified with the inclusion of a strong entertainment element. It could also include unique retail that is not currently available in the local market. This would clearly an opportunity

at the Spectrum, as the shopping “catchment basin” would extend well beyond City boundaries.

- Mixed-use developments tend to have a longer “shelf-life” than traditional developments, which will tend to create a greater fiscal impact over the medium and longer-term. This planning effort is largely about creating the conditions necessary for this type of sustainability, including implementation of the proper regulatory regime, identification of an implementation strategy for catalytic infrastructure, and targeting complementary land uses that will create inter-locking demand.

Pearland/Spectrum’s target industries should evolve based on market conditions, national and local economic trends, and specific regional issues. Because the needs of the target industries can vary year-to-years, TXP believes the community should continually refine and refocus this target industry list over time. However, core principles should remain in place; reflect broad economic trends, build on both the communities overall strengths and the specific attributes of the Spectrum, and be mindful of competitor activity.

Absorption Capacity

As discussed in previous sections, the Spectrum offers a unique opportunity to take advantage of a highly advantageous combination of location, transportation infrastructure, land use planning and regulatory environment to develop an integrated project that includes a regional employment center (along Kirby), destination mixed use urban living (along Spectrum Boulevard between Kirby and SH 288), and concentrated retail/entertainment (anchored by the Bass Pro Shop site). This capacity informs the estimate of the “market share” the Spectrum can absorb, as the emphasis will tilt toward commercial, as opposed to residential and industrial. That having been said, all three broad categories are accommodated, especially when more detailed land use categories are applied. For example, there likely will be a mix of residential units, including both owner-occupied and rental townhomes, live-work units, stacked flats, and urban residential buildings.

By the same token, the target industry analysis suggests that new industrial activity will be less about traditional production and more about the use of flex and/or warehouse space that could also be used for other commercial purposes. The “flexible” orientation also extends to the commercial side, as a given building or unit could easily transition from a storefront to a professional office to restaurant over time. With this in mind, distribution assumptions of specific land uses follow.

Table 8: Absorption Capacity

	Residential	Implied Market Share
Regional Market Demand	235,800 Units	
Spectrum Residential (Total)	5,000-7,000 Units	2.1% - 3.0%
Patio homes, townhomes, and live-work units	1,000 to 1,800	
Small apt. buildings/stacked flats	800 to 1,400	
Multi-family (condos, lofts over retail, mid-rise residential)	3,200 to 3,800	
	Commercial	Implied Market Share
Regional Market Demand	33.2 Million Sq. Ft	
Spectrum Commercial (Total)	2.9 to 4.9 million Sq. Ft	8.7% - 14.8%
Retail, restaurant, & entertainment (includes lodging)	2.2 to 3.6 million	
Other Non-Residential (Professional office, garden office, flex, light industrial/warehouse, and R&D)	0.7 to 1.3 million	

Note: Implied Market Share calculations are based on the assumed percentage ranges of the Spectrum totals for residential and commercial as a percentage of the regional market demand for each land use type.

Sources: Gateway Planning & TXP

The proposed Spectrum District Master Plan and associated regulatory framework anticipates a potential for build-out that is at the upper end (especially on the commercial side) of what a traditional market study would anticipate. Under conventional zoning, excess entitlement relative to the market potential can actually stunt the realization of any significant quality development. However, the proposed regulatory approach that uses “character zones” with flexibility in uses and design continuity from property to property provides the capacity for a more efficient absorption regardless of the ultimate proportion of relative uses. In other words, the proportion and distribution of uses can change over time and at the same time maintain efficient absorption without compromising the overall integrity of the design environment and character of the development. Thus, a preliminary assessment of the build-out potential as established in the Spectrum Master Plan Framework balances predictability with flexibility. Specifically, the District can absorb a greater than its implied share of development, if the market conditions are favorable.

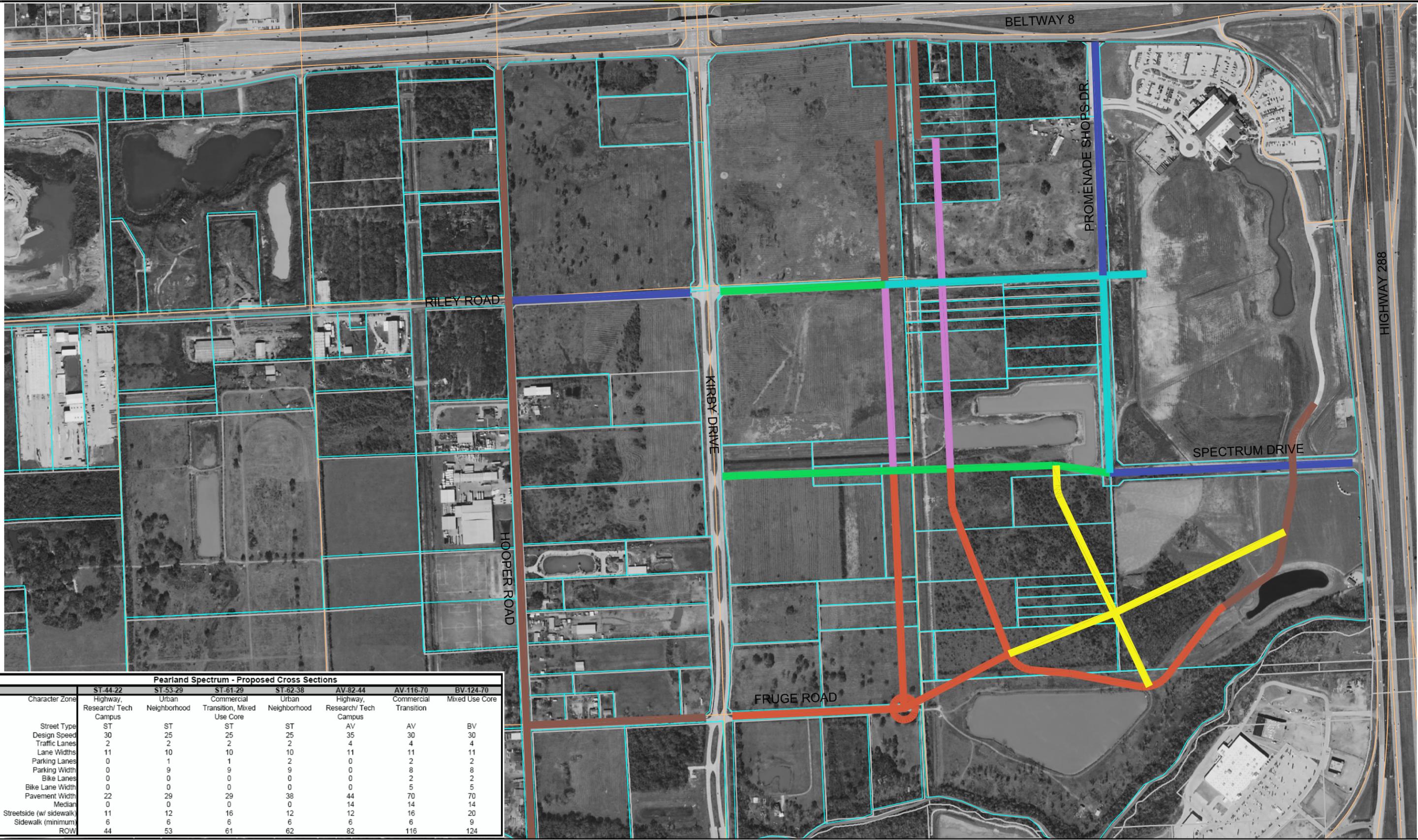
Conclusions About Market Potential

The potential development of the Spectrum promises to capture a significant share of region's future growth. Build-out calculations of the site's capacity indicate it could accommodate, as planned, between 5,000 and 7,000 housing units and somewhere between 3 and 5 million sq. ft. of total commercial (i.e., non-residential) space. These projections, while aggressive, are within the range of reasonable expectation as a share of demand through 2040.

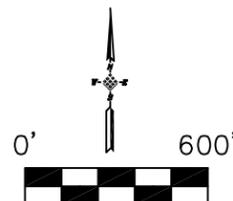
The timing and intensity of actual development is dependent on multiple factors, including:

- the type of commercial and residential development that occurs initially, and the proportion of urban residential versus lower density residential over time;
- development phasing;
- structured parking capacity over time;
- the potential for a hotel and related entertainment; and
- the level and timing of public participation in infrastructure necessary to achieve higher intensity development.

This last point is especially crucial, as the ability to prioritize and implement catalytic infrastructure is likely to be a key element in the Spectrum's ability to leverage its assets and realize its development potential. This is specifically true due to the need for major drainage and detention infrastructure to realize the plan. As a result, it is crucial that the various taxing authorities and the private sector work cooperatively to craft a financing approach that is both viable and provides shared benefit. Failure to implement policies, procedures, and investment decisions related to infrastructure along these lines puts the community in danger of missing this opportunity, and could heighten the risk of losing its "fair-share" to adjacent areas.



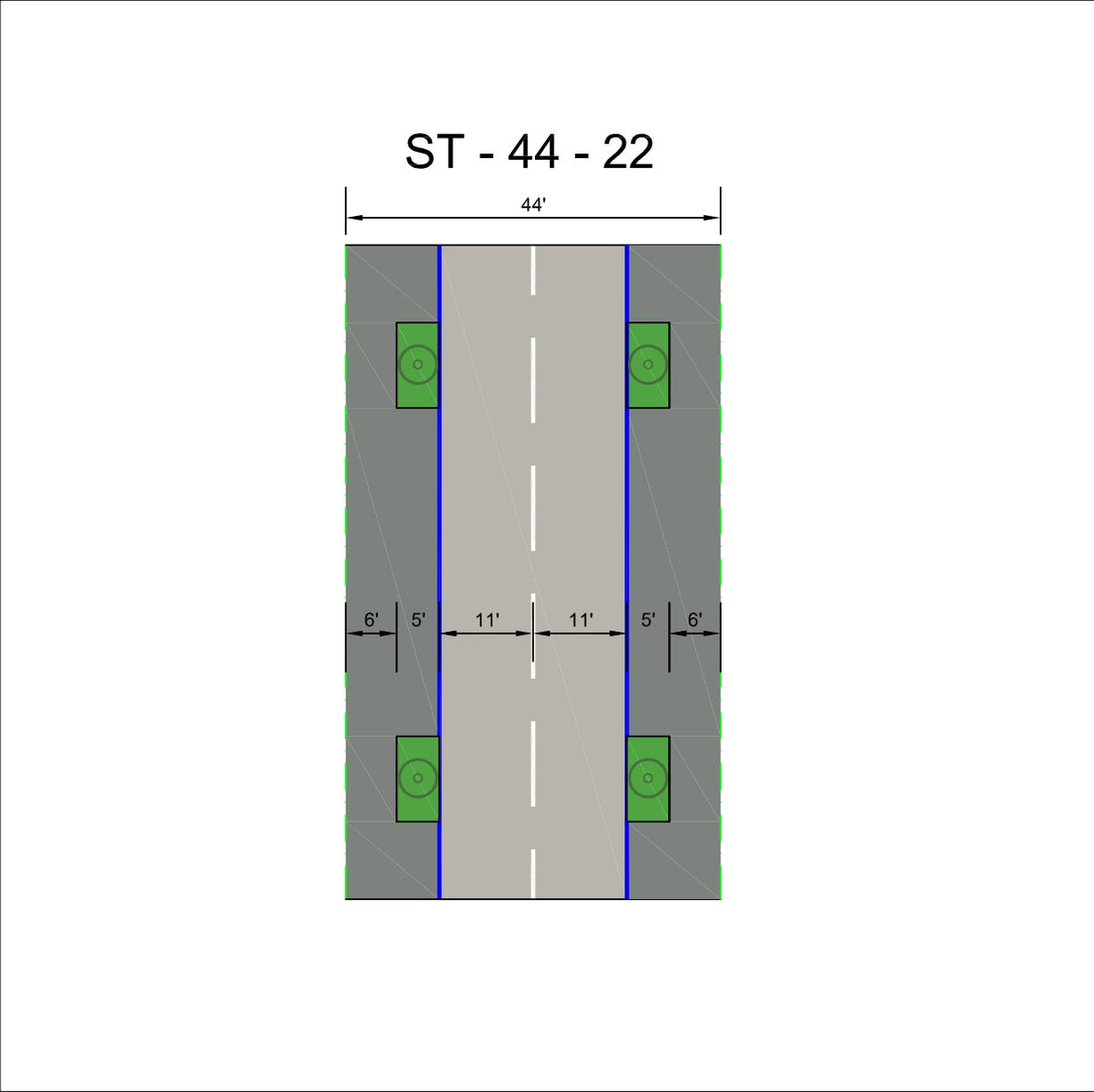
Pearland Spectrum - Proposed Cross Sections							
	ST-44-22	ST-53-29	ST-61-29	ST-62-38	AV-82-44	AV-116-70	BV-124-70
Character Zone	Highway, Research/ Tech Campus	Urban Neighborhood	Commercial Transition, Mixed Use Core	Urban Neighborhood	Highway, Research/ Tech Campus	Commercial Transition	Mixed Use Core
Street Type	ST	ST	ST	ST	AV	AV	BV
Design Speed	30	25	25	25	35	30	30
Traffic Lanes	2	2	2	2	4	4	4
Lane Widths	11	10	10	10	11	11	11
Parking Lanes	0	1	1	2	0	2	2
Parking Width	0	9	9	9	0	8	8
Bike Lanes	0	0	0	0	0	2	2
Bike Lane Width	0	0	0	0	0	5	5
Pavement Width	22	29	29	38	44	70	70
Median	0	0	0	0	14	14	14
Streetside (w/ sidewalk)	11	12	16	12	12	16	20
Sidewalk (minimum)	6	6	6	6	6	6	9
ROW	44	53	61	62	82	116	124



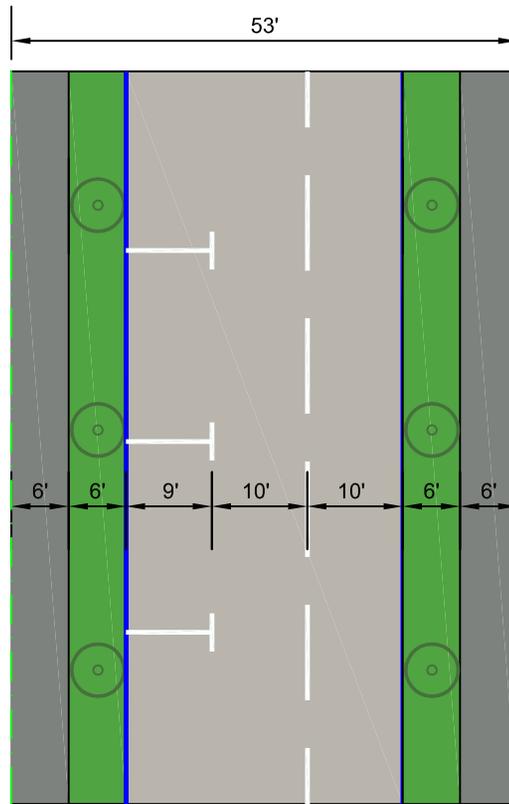
CONCEPTUAL STREET NETWORK PLAN
SPECTRUM DISTRICT - CITY OF PEARLAND

- LEGEND**
- ST-61-29
 - ST-53-29
 - ST-62-38
 - AV-82-44
 - AV-116-70
 - BV-124-70
 - ST-44-22

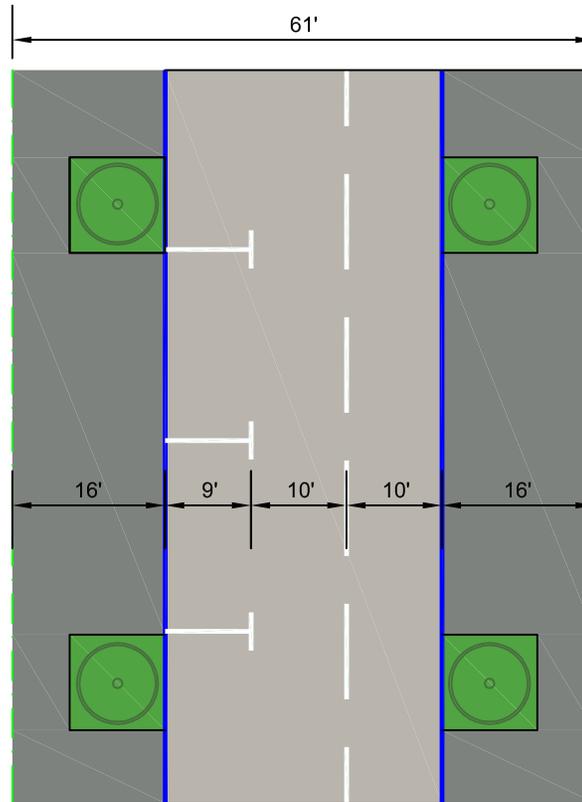
Street Cross Sections



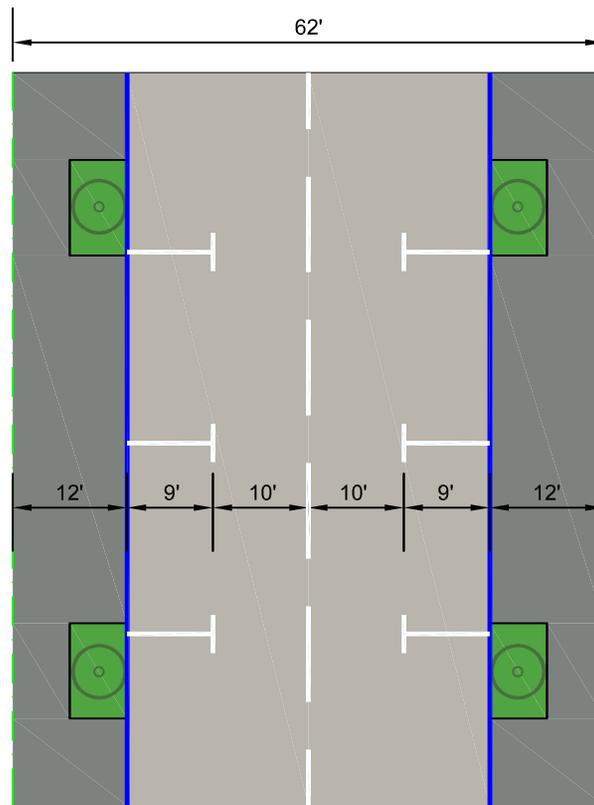
ST - 53 - 29



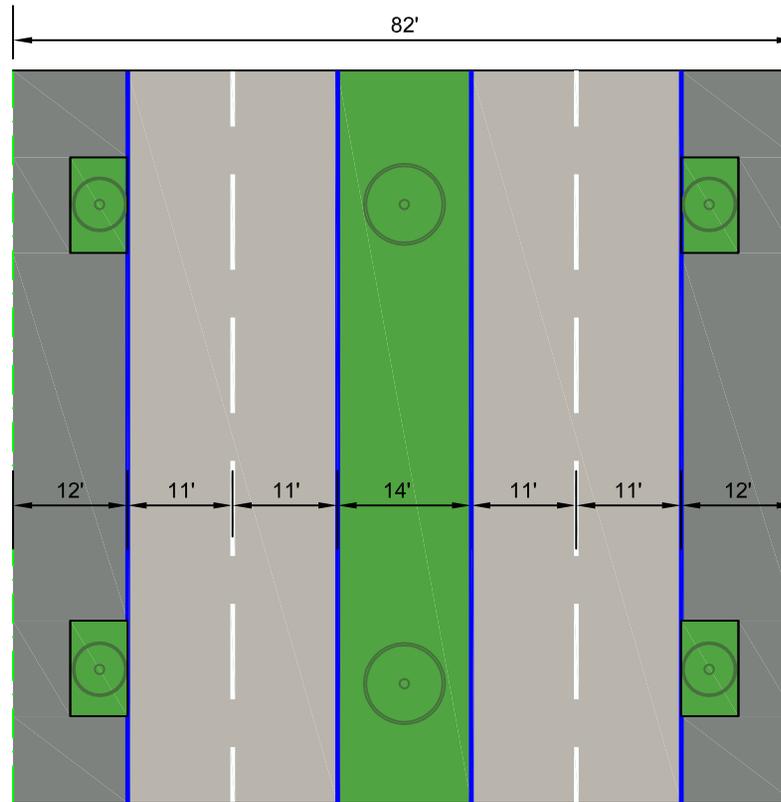
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ST - 62 - 38

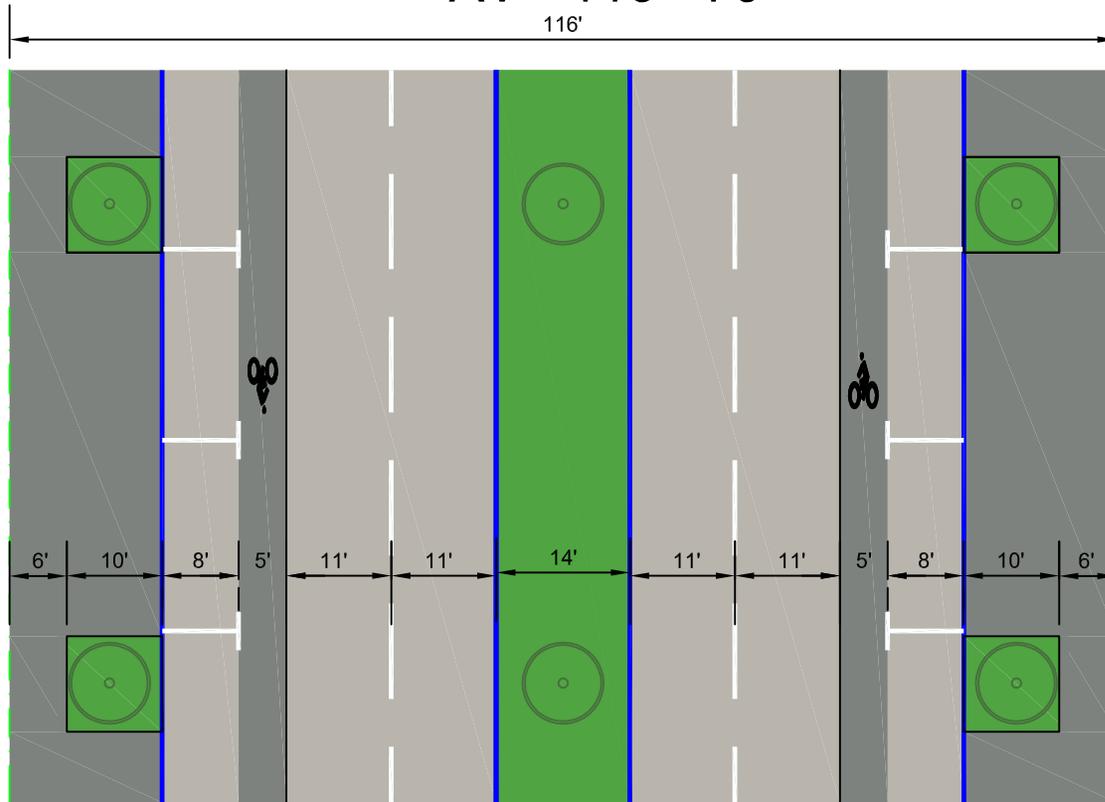


AV - 82 - 44



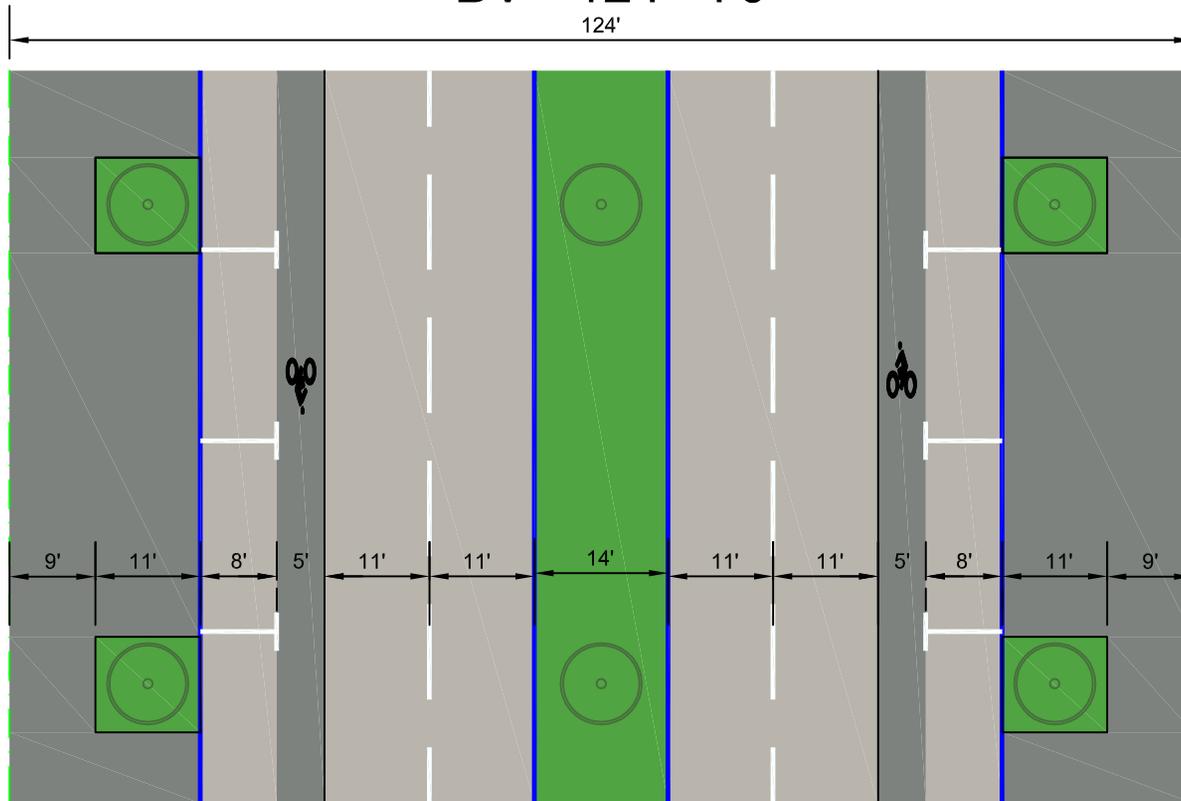
AV - 116 - 70

116'

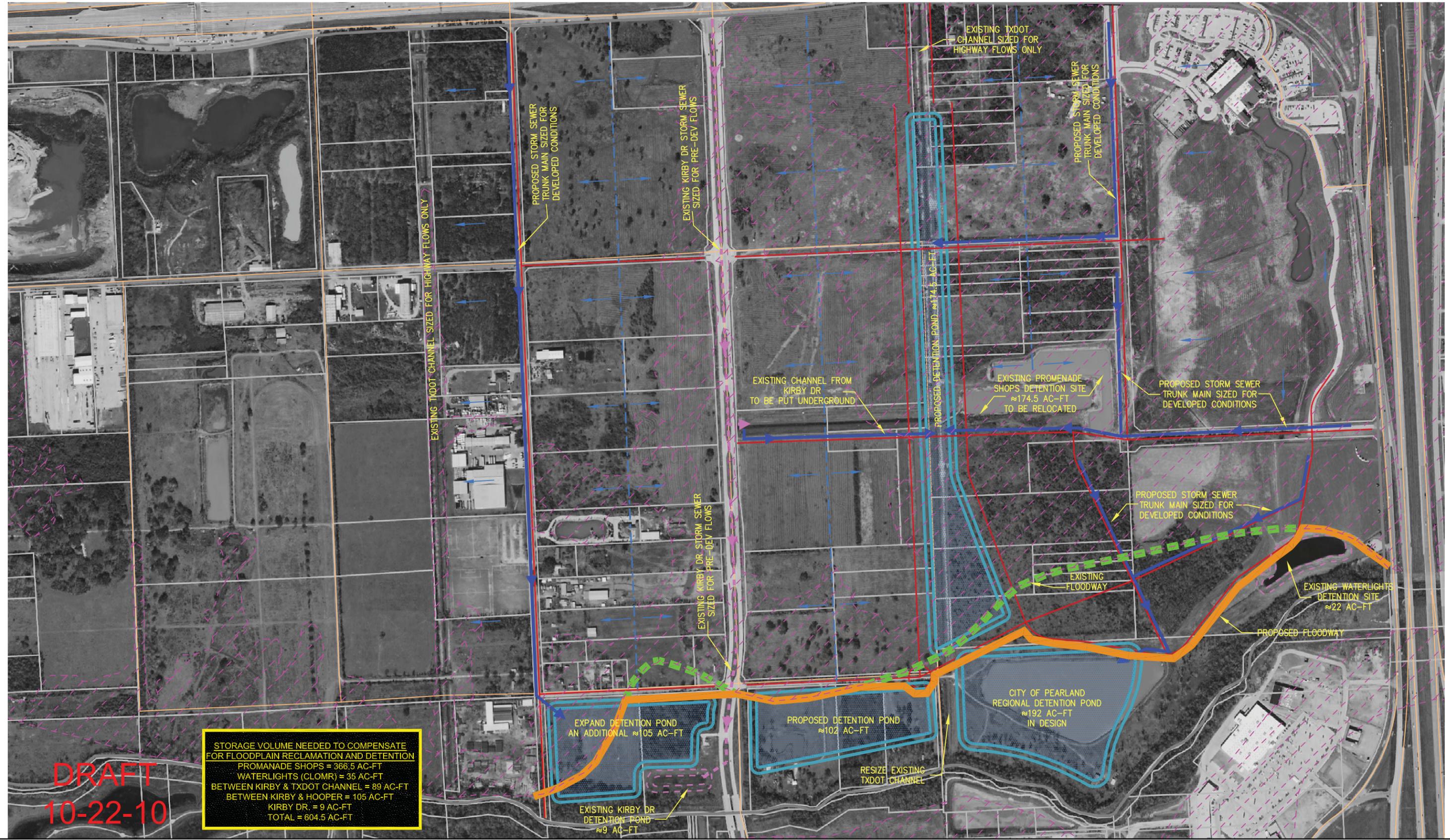


BV - 124 - 70

124'



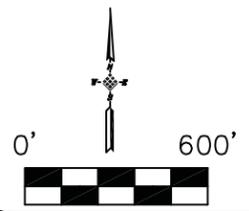
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DRAFT
10-22-10

STORAGE VOLUME NEEDED TO COMPENSATE FOR FLOODPLAIN RECLAMATION AND DETENTION

- PROMENADE SHOPS = 366.5 AC-FT
- WATERLIGHTS (CLOMR) = 35 AC-FT
- BETWEEN KIRBY & TXDOT CHANNEL = 89 AC-FT
- BETWEEN KIRBY & HOOPER = 105 AC-FT
- KIRBY DR. = 9 AC-FT
- TOTAL = 604.5 AC-FT



CONCEPTUAL STORMWATER MANAGEMENT PLAN
SPECTRUM DISTRICT - CITY OF PEARLAND

- LEGEND**
- FLOW ARROW
 - - - WATERSHED DIVIDE
 - ▨ 100 YR FLOODPLAIN