

Ordinance adopting “Tax Increment Reinvestment Zone #3 Traffic and Planning Analysis” Specific Plan; and amending the Comprehensive Plan.

WHEREAS, the Planning Commission has forwarded to City Council its reports and recommendations concerning the adoption of the Tax Increment Reinvestment Zone #3 Traffic and Planning Analysis.

WHEREAS, with proper notice to the public, public hearings were held on Wednesday, April 4, 2018, during a meeting of the Planning Commission, and on Tuesday, April 17, 2018, during a meeting of the City Council, in the Council Chambers, at City Hall, in the City of Corpus Christi, during which all interested persons were allowed to appear and be heard;

WHEREAS, City Staff invited the public to workshops and public meetings that were held on October 2, 2017, November 28, 2017, and March 19, 2018 to give input to help develop recommendations for public investments and incentives downtown, and to receive public feedback.

WHEREAS, City staff coordinated with various community agencies and organization throughout the process of developing the Tax Increment Reinvestment Zone #3 Traffic and Planning Analysis.

WHEREAS, the city shall use the Tax Increment Reinvestment Zone #3 Traffic and Planning Analysis as a guideline to facilitate other plans that the city considers necessary for systematic growth and development.

WHEREAS, the City Council has determined that these amendments would best serve public health, safety, necessity, convenience, and general welfare of the City of Corpus Christi and its citizens.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CORPUS CHRISTI, TEXAS:

SECTION 1. That the “Tax Increment Reinvestment Zone #3 Traffic and Planning Analysis” Specific Plan, including: Project Prioritization, Two-Way Conversions, Capital Improvement Program Recommendation, Program and Policy Refinements, and Appendices, are adopted by this ordinance to read shown as exhibits attached and incorporated by reference:

- A. Tax Increment Reinvestment Zone #3 Traffic and Planning Analysis
- B. Tax Increment Reinvestment Zone #3 Appendix: Traffic and Planning Analysis

SECTION 2. To the extent that the amendment made by this ordinance represents a deviation from the Comprehensive Plan, the Comprehensive Plan is amended to conform to the amendment made by this ordinance. The Comprehensive Plan, as

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amended from time to time and except as changed by this ordinance, remains in full force and effect.

SECTION 3. The City Council intends that every section, paragraph, subdivision, clause, phrase, word or provision hereof shall be given full force and effect for its purpose. Therefore, if any section, paragraph, subdivision, clause, phrase, word or provision of this ordinance is held invalid or unconstitutional by final judgment of a court of competent jurisdiction, that judgment shall not affect any other section, paragraph, subdivision, clause, phrase, word or provision of this ordinance.

SECTION 4. This ordinance takes effect after final passage.

SECTION 5. Publication shall be made in the official publication of the City of Corpus Christi as required by the City Charter of the City of Corpus Christi.

That the foregoing ordinance was read for the first time and passed to its second reading on this the 17th day of April, 2018, by the following vote:

Joe McComb	<u>Aye</u>	Ben Molina	<u>Aye</u>
Rudy Garza	<u>Aye</u>	Lucy Rubio	<u>Aye</u>
Paulette Guajardo	<u>Aye</u>	Greg Smith	<u>Aye</u>
Michael Hunter	<u>Aye</u>	Carolyn Vaughn	<u>vacant</u>
Debbie Lindsey-Opel	<u>Aye</u>		

That the foregoing ordinance was read for the second time and passed finally on this the 24th day of April, 2018, by the following vote:

Joe McComb	<u>Aye</u>	Ben Molina	<u>Aye</u>
Rudy Garza	<u>Aye</u>	Lucy Rubio	<u>Aye</u>
Paulette Guajardo	<u>Aye</u>	Greg Smith	<u>Aye</u>
Michael Hunter	<u>Aye</u>	Carolyn Vaughn	<u>vacant</u>
Debbie Lindsey-Opel	<u>Absent</u>		

PASSED AND APPROVED on this the 24th day of April, 2018.

ATTEST:

Rebecca Huerta
Rebecca Huerta
City Secretary

Joe McComb
Joe McComb
Mayor

EFFECTIVE DATE
4/24/18

031420



TAX INCREMENT REINVESTMENT ZONE #3

TRAFFIC AND PLANNING ANALYSIS

CORPUS CHRISTI TX | APRIL 2018



RCLCO

Kimley»Horn

GATEWAY
PLANNING

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no predictability about what the area will look like in the near-term, which limits the immediate development potential versus waiting for investment after the Harbor Bridge is completed.

FIGURE 3: PROJECT PURPOSE



THE PROCESS

In April 2017, this initiative kicked off with a detailed strategy work session and stakeholder meeting to understand the outcomes desired, the current issues and opportunities, as well as the potential projects. The Team returned in July and October 2017 to conduct a design and project workshop where scenarios and phasing strategies were discussed and then results presented to the TIRZ #3 Board and community at-large for additional feedback and input. Both online and in-person feedback was gathered and then integrated into key projects and deliverables for this initiative. Detailed results from the stakeholder meetings and open house are included in the Appendix of this report.

FIGURE 4: ENGAGEMENT SUMMARY + PROCESS



Preliminary Recommendations Presented at Town Hall

11/28/2018, 78 People

TIRZ #3 Board Meeting

11/28/2018

PUBLIC INPUT

What is the most important project to you? (1-3 words, use hyphens if typing a phrase or multiple words)

🔒 Poll locked. Responses not accepted.

Total Results: 38

GREATEST SUPPORT

- Water Taxi
- Two-Way Conversion
- Pedestrian Improvements
- Wayfinding
- Sea Wall
- Staples Street Extension
- Agnes/Laredo Gateway

MOST CONCERN

- Two-Way Conversion
- TxDOT Lipan Street Overpass
- Chaparral Street Phase II
- TxDOT SEA District Reconnection

REVISED RECOMMENDATIONS

MARKET ANALYSIS

The market analysis undertaken by RCLCO in conjunction with the potential infrastructure project prioritization set forth a greater understanding for development potential and needs in the Downtown TIRZ #3 area over the next 10 years. A detailed report and analysis is included in the Appendix of this report, but several key themes are important to consider in context of the recommendations made in this document:

1. Downtown Corpus Christi sits on an accessible and active waterfront lined with a park, marina, aquarium, museums, convention center, ballpark and entertainment/dining options.
2. Visitation is predominantly event and tourist-driven with Downtown lacking a consistent level of local daytime or nighttime population to support an 18-hour environment.
3. A lack of Downtown residential housing options is likely the primary inhibitor to the Marina Arts District, SEA District and greater downtown area reaching its full potential; however, there is sufficient demand for steady annual absorption of residential housing over the next 10 years, especially as more neighborhood services are delivered to serve the growing household base downtown.
4. A key opportunity, and a major factor to improving the retail and office environments, is to first attract more full-time residents.

These four key assessments need to be considered in the context of transportation improvements and future development plans and how they relate to supporting quality growth in Downtown. The potential redevelopment and infill opportunities identified later in this report show various areas in Downtown where additional growth could occur in conjunction with the infrastructure and transportation improvement projects.

ALIGNING INFRASTRUCTURE WITH DEVELOPMENT

In conclusion, this combined roadmap for investment and development in Downtown utilized a detailed analysis based on market realities and work completed to date, as well as feedback gathered from the community to create a critical path of implementation. The project prioritization matrix identifies projects, phasing, area of impact, and the potential planning cost over the course of three different time frames – 2018 to 2020, 2021 – 2028, and 2029 beyond. These time windows align with City bond funding as well as the start and completion of the Harbor Bridge project.

Subsequently, these projects were utilized to identify corresponding catalytic development opportunities that could result from the economic development, urban design and transportation projects. A detailed concept for the SEA District as well as descriptions of additional neighborhood contexts is included to show how successful infrastructure and transit investments can align planning and development projects to generate sustainable neighborhood economics.

PROJECT PRIORITIZATION

Projects throughout the downtown area were identified by existing planning documents, such as the recently adopted Downtown Area Plan, direction by City Staff, and extensive public input. Identified projects were then prioritized into time frames determined by the new Harbor Bridge construction (2018 – 2020), post-Harbor Bridge removal (2021 – 2028) and long term (2029+). The prioritization of the projects takes into consideration the approximate order of magnitude costs based on input from City staff, professional judgment, and correlation to catalytic investment opportunities downtown.

The following sections outline the short, mid and long-term projects identified throughout this process as well as the planning level costs associated with each project (if available). This matrix is intended to serve

as a tool for implementation and prioritization that the City can utilize to make the most impact over the next ten years and to ensure the significant transportation investments occurring in downtown support economic development and quality of life for residents and visitors.



Additionally, unique redevelopment and infill opportunities were identified throughout the downtown area and in relation to each of the infrastructure investment projects over the next ten years. These areas exhibit development in neighborhood contexts and are intended to show revitalization opportunities to reconnect the neighborhoods, employment centers, and entertainment destinations as well as make downtown more walkable and pedestrian friendly so that it may support additional residential and commercial development in the future. These opportunities are detailed in this section along with the corresponding infrastructure projects recommended around each. As an example of potential build-out, a detailed concept plan of the SEA District has also been included.



Public Town Hall Presentation - November 2017

As stakeholder feedback and input has reiterated, connectivity and accessibility in downtown is a priority. These projects and potential infill areas show how one does not need to be exclusive of the other and focusing on transportation investments alongside neighborhood

and development improvements sets the stage for longer term sustainable values and desirability for downtown as not only a neighborhood, but as a destination.

It is important to take into consideration that as these projects are designed and implemented, it is imperative that each project includes pedestrian accommodations and improvements to bring the pedestrian pathway around downtown Corpus Christi up to ADA standards.

SHORT-TERM PROJECTS (2018 - 2020)

The following projects identified in Table 1 are short-term projects that will happen in the years leading up to the New Harbor Bridge coming online (2018 – 2020). These projects, shown in Figure 5, and could be implemented in the near future.

FIGURE 5: SHORT TERM PROJECTS (2018 - 2020)

- S1** Chaparral St. Pedestrian Improvements (Funded)
- S2** Brewster Street Phase 1 (Funded)
- S3** Shoreline Blvd. Pedestrian Safety
- S4** Chaparral St. Ph. 2 Two-Way Conv. (Under Construction)
- S5** Artesian Park Botanical Gardens
- S6** Upper + Lower Broadway Preliminary Feasibility Report
- S7** Doss/Mestina St. (TxDOT)
- S8** Lipan St. (Under Construction)
- S9** Comanche St. (Under Construction)
- S10** Starr St. Two-Way Conv.
- S11** Peoples St. Two-Way Conv.
- S12** Schatzell St. Two-Way Conv.
- S13** Lawrence St. Two-Way Conv. Phase 1 (Completed)
- S14** Lawrence St. Resurfacing
- S15** William St. Two-Way Conv.
- S16** John Sartain St. Two-Way Conversion
- S17** Coopers Alley Sidewalk
- S18** Kinney/Chaparral Intersection
- S19** Agnes Street Feasibility Study
- S20** Agnes/Laredo Gateway Beautification (Funded)
- S21** Flood Wall Flood Protection
- S22** Salt Flat Levee Repair
- S23** Marina Breakwaters Improvements



Table 1: Short Term Project Matrix

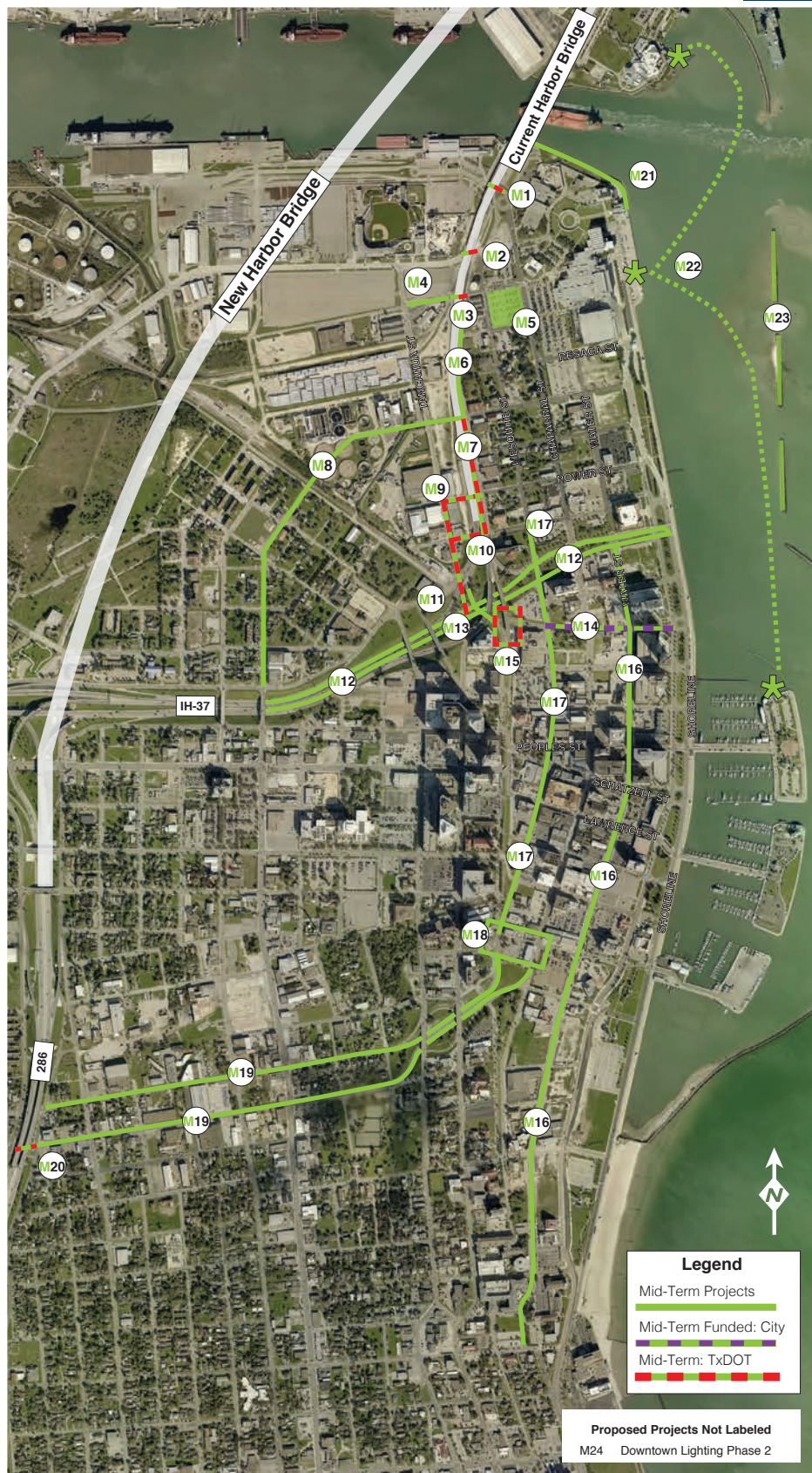
Project	Street Name	Limits	Description	Planning Level Costs
S1	Chaparral Street	Brewster St. to Hirsch St.	Pedestrian Improvements	\$1,170,000
S2	Brewster Street (Phase 1)	N Broadway St to Mesquite Street	Phase 1 improvements - sidewalks/shared pedestrian/vehicle street	Included in S1
S3	Shoreline Blvd	Furman Avenue to IH-37	Pedestrian safety improvements, crosswalks, and signage at IH-37, Twigg, Kinney, Park, Furman, and Lawrence	\$974,000
S4	Chaparral Street	Coopers Alley to IH-37	Phase II resurfacing and streetscape improvements and two-way conversion	\$4,900,000
S5	Artesian Park	Artesian Park	Upgrade to Botanical Garden - structured gardens, walkway resurfacing, lighting, art, and a wrought iron fence	\$150,000
S6	Upper and Lower Broadway Street	Lipan Street to Twigg Street	Preliminary Feasibility Report with signal warrants analysis, slope stability, and historic restoration	\$200,000
S7	Doss Street/Mestina Street	Leopard St. to Crosstown Access	Street connectivity with Harbor Bridge Project	TBD
S8	Lipan Street	SH 286/Crosstown Freeway to Upper Broadway Street	Reconstruction	\$1,100,000
S9	Comanche Street	SH 286/Crosstown Fwy to Waco St.	Reconstruction	\$1,300,000
S10	Starr Street	Water Street to Shoreline Blvd.	Two-way conversion and surface treatment (fog seal)	\$33,000
S11	Peoples Street	Water Street to Shoreline Blvd.	Two-way conversion and surface treatment (fog seal)	\$349,000
S12	Schatzell Street	Water Street to Shoreline Blvd.	Two-way conversion and surface treatment (fog seal)	\$66,000
S13	Lawrence Street	Water Street to Shoreline Blvd	Two-way conversion and surface treatment (fog seal)	\$25,000
S14	Lawrence Street	N. Lower Broadway to Water St.	Repair damage due to Cosmopolitan construction (Mesquite to Chaparral); fog seal and restripe	\$130,000
S15	William Street	Water Street to Shoreline Blvd	Two-way conversion and surface treatment (fog seal)	\$33,000
S16	John Sartain Street	Water Street to Shoreline Blvd	Two-way conversion and surface treatment (fog seal)	\$191,000
S17	Coopers Alley	Shoreline Blvd to Sea Wall	Sidewalk from Shoreline to the Sea Wall, crosswalks, sidewalk to public restroom and two ramps	\$50,000
S18	Kinney/Chaparral Intersection	Kinney/Chaparral Intersection	Evaluate intersection for improvements to traffic flow and implement improvements	\$25,000
S19	Agnes Street	14th Street to Chaparral Street	Feasibility study of street configuration and reconstruction, appropriate bike facility for corridor, pedestrian improvements and landscaping	\$50,000
S20	Agnes Street/Laredo Street Corridor	Carrizo Street to Chaparral St.	Gateway Beautification	\$25,000
S21	Science and History Museum Flood Wall	By Corpus Christi Museum of Science and History	Flood protection; and replace structurally deficient flood wall	\$2,500,000
S22	Salt Flats Levee	From the wharf at the Port of Corpus Christi to W Broadway St.	Flood protection; repair structural deficiencies	\$2,351,500
S23	Marina Breakwater	McGee Beach Pier to approximately 1,800 LF north	Repairs/improvements to the Marina Breakwater at McGee Beach	\$3,773,300
S24	Signal Timing	Downtown Wide	Downtown traffic signal analysis. Complete the four-way stop evaluation project prior.	\$100,000
S25	Micro Transit	Downtown Area	On-Demand Service	\$100,000/Year
S26	Four-Way Stop Evaluation	Downtown Area	Evaluation to convert traffic signals to four-way stop	-
S27	Wayfinding	Downtown Area	City wayfinding signs; check with TxDOT for signage related to new Harbor Bridge Project	\$500,000

Project	Street Name	Limits	Description	Planning Level Costs
S28	Downtown Lighting	Phase 1 North/South Corridors: Chaparral St. Coopers Alley to Harbor Drive; Water St. Kinney St. to Resaca St.; Mesquite St - to IH-37 to Hirsch Street	Lighting replacement, additions, or upgrades in the Downtown area (assuming High Pressure Sodium)	\$560,000
S29	Water Street Signalization	Coopers Alley to Twigg Street	Traffic signalization, signage, and street lighting	\$3,931,000
S30	Downtown Streetscape Improvements	Lower Broadway on the west; Shoreline Drive on the east; IH-37 on the north; Coopers Alley south	Adding streetscape elements such as trash cans, dog waste stations, vegetated planters, light pole medallions and signage	\$1,475,000
S31	Marina Arts Pavement Directional Markings	IH-37 to Coopers Alley and Lower Broadway to Water Street	Directional pavement markings for navigation	\$7,000

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FIGURE 6: MID-TERM PROJECTS (2021 - 2028)

- M1** Harbor Drive Repair (TxDOT)
- M2** Port Avenue Repair (TxDOT)
- M3** Brewster St. Repair (TxDOT)
- M4** Brewster Street Phase II
- M5** SEA District Parking Structure
- M6** North Broadway Street
- M7** N. Broadway Street (TxDOT)
- M8** Staples Street Extension
- M9** Power Street (TxDOT)
- M10** Belden Street (TxDOT)
- M11** Tancahua Street (TxDOT)
- M12** IH-37 Gateway Corridor Plan
- M13** Twigg Street Pedestrian and Bicycle Bridge
- M14** Twigg Street Two-Way Conv. (Reconstruction Funded)
- M15** Upper and Lower Broadway Street Connection (TxDOT)
- M16** Water Street Resurfacing
- M17** Mesquite Street Two-Way Conv.
- M18** Coopers Alley - Mesquite Street and Chaparral St. Intersection
- M19** Agnes/Laredo Streets Operational Improvements
- M20** Agnes Street - Crosstown Drainage (TxDOT)
- M21** Sea Wall Flood Prevention and Pedestrian Access
- M22** Water Taxi
- M23** SEA District Breakwaters
- M24** Downtown Lighting Phase 2



MID-TERM PROJECTS (2021 - 2028)

The projects identified in Table 2 are mid-term projects that will happen in the years immediately after the Harbor Bridge construction and the old Harbor Bridge is removed. It is important to distinguish between the projects that would occur immediately after the new Harbor Bridge is constructed and further into the future because the implications to infrastructure and development might be accelerated in the first half of the time period. These projects are shown in more detail in Figure 6.

Table 2: Mid-Term Project Matrix

Project	Street Name	Limits	Description	Planning Level Costs
M1	Harbor Drive	Under Current Harbor Bridge	Street Repair	-
M2	Port Avenue	Under Current Harbor Bridge	Street Repair	-
M3	Brewster Street	Under Current Harbor Bridge	Street Repair	-
M4	Brewster Street (Phase 2)	Tancahua St. to N. Broadway Street	Phase 2: Sidewalk/Shared Ped/Vehicle Street	\$1,550,000
M5	SEA District Parking Structure	City-owned parking lot	Parking Structure for SEA District	\$10,000,000
M6	North Broadway Street	Fitzgerald Street to Brewster St.	Reconstruction to improve access	\$1,725,000
M7	North Broadway Street	Belden Street to Fitzgerald Street	Improvements to access to SEA District	-
M8	Staples Street Extension	Martin Luther King Dr. to N Broadway	Street extension connecting W. Broadway to N. Broadway Street, includes railroad crossing and improvements to the existing Staples Street. Bicycle facility improvements and lighting included.	\$8,400,000
M9	Power Street	Tancahua St. to N. Broadway Street	Street Extension, Two Lanes	-
M10	Belden Street	Tancahua St. to N. Broadway Street	Street Repair	-
M11	Tancahua Street	IH-37 to Power Street	Extension to IH-37 Frontage Road	-
M12	IH-37	Staples Street to Shoreline Blvd.	Corridor Plan and Feasibility Study	\$100,000
M13	Twigg Street Bridge	Upper Broadway St. to Tancahua St.	Pedestrian and bicycle bridge over IH-37	TBD
M14	Twigg Street	Mesquite Street to N. Shoreline Blvd.	Reconstruction and area beautification; two-way street conversion; signalization improvements	\$3,951,000
M15	Upper and Lower Broadway St. North Connection	Taylor Street to IH-37	North Connection and Landscape Improvements	-
M16	Water Street	Buford Street to IH-37	Resurfacing	\$2,150,000
M17	Mesquite Street	Coopers Alley to Belden Street	Two-Way Conversion; Resurfacing; Lighting; Bike Boulevard; and Streetscape Improvements	\$6,195,000
M18	Coopers Alley	Intersections at Chaparral and Mesquite Street	Two-way conversion, proposed traffic signal, street pavement reconstruction and sidewalk improvements	\$2,300,000
M19	Agnes St. and Laredo St.	SH 286/Crosstown Freeway to Chaparral St/N Mesquite St.	Operational improvements without adding capacity (2015-2040 Metropolitan Transportation Plan, August); utility improvements.	\$11,000,000
M20	Agnes Street	SH 286 SBFR to SH 286 NBFR	Reconstruction to address drainage issues	-
M21	Sea Wall Ped Improvements and Flood Protection	The Art Museum of South Texas to Old Harbor Bridge	Flood prevention and pedestrian access	\$10,000,000
M22	Water Taxi	Water taxi service between Marina Arts District, SEA District, N. Beach	Feasibility study to identify stakeholders, partners and sources of funding	TBD
M23	SEA District Breakwater	Three Breakwater Segments	Repairs near SEA District; protects Sea Wall and Barge Dock	\$4,200,000
M24	Downtown Lighting	Phase 2 East/West Corridors <ul style="list-style-type: none"> MA District (between Lower Broadway and Shoreline) SEA District (between Tancahua and Shoreline) 	Lighting replacement, additions or upgrades	\$641,000

FIGURE 7: LONG TERM PROJECTS (2029 +)

- L1 Hirsch Street Extension
- L2 Starr Street
- L3 Peoples Street
- L4 Shatzell Street
- L5 Lawrence Street Two-Way Conversion
- L6 William Street
- L7 John Sartain Street Two-Way Conversion



LONG TERM PROJECTS (2029+)

The following projects identified in Table 3 are long term projects that the City has identified as projects that they would eventually like to see come to fruition (2029+). Although important to downtown and its development, these projects would require extensive additional study before they could be moved forward. Additionally, market trends and traffic needs could shift between the implementation of short and mid-term projects that the scope and need of the long-term projects could shift or evolve. These projects are shown in Figure 7.

Table 3: Long Term Projects Matrix

Project	Street Name	Limits	Description	Planning Level Costs
L1	Hirsch Street Extension	Chaparral St. to Shoreline Blvd.	American Bank Center Extension	\$660,000
L2	Starr Street	N. Lower Broadway to S. Shoreline	Resurfacing (Rehabilitation)	\$736,000
L3	Peoples Street	N. Lower Broadway to S. Shoreline	Resurfacing (Reconstruction) and Bike Blvd.	\$879,000
L4	Schatzell Street	N. Lower Broadway to S. Shoreline	Resurfacing (Rehabilitation)	\$838,000
L5	Lawrence Street	N. Lower Broadway to S. Shoreline	Resurfacing (Rehabilitation); Two-Way Conversion between Mesquite Street and Water Street, and bike boulevard	\$786,000
L6	William Street	N. Lower Broadway to S. Shoreline	Resurfacing (Rehabilitation)	\$627,000
L7	John Sartain Street	Mesquite Street to S. Shoreline Blvd.	Resurfacing (Reconstruction) and Two-Way Conversion between Mesquite St. and Water St.	\$748,000

FIGURE 8: SEA DISTRICT CONCEPT PLAN

- 1 Single Family Detached
- 2 Multi-Family
- 3 Single Family Attached
- 4 Retail/Office
- 5 Hotel/Hospitality
- 6 Mixed-Use
- 7 Restaurant/Destination
- 8 Cottage Homes
- 9 ABC Extension
- 10 Whataburger Field
- 11 Hurricane Alley Waterpark
- 12 Watergarden
- 13 Art Museum of South Texas
- 14 Heritage Park
- 15 Ferry Connection
- 16 Museum of Science and History
- 17 Sea Wall Extension
- 18 Parking Structure
- 19 Concrete Street Amphitheater
- 20 Staples Street Extension
- 21 Old Bayview Cemetery
- 22 American Bank Center
- 23 New Harbor Bridge
- 24 Old County Courthouse
- 25 Federal Courthouse



RECONNECTED NEIGHBORHOODS

The SEA District plays an important role within the greater downtown and TIRZ #3 area as not only the entertainment destination, but as the area with the greatest redevelopment opportunity. With significant development projects proposed around Whataburger Field and the American Bank Center, including the Historic Courthouse Redevelopment project that will bring even more tourists and residents to the district supporting reconnectedness as well as walkability is paramount. Restitching the street and block grid together where the old Harbor Bridge sits today will create additional blocks for redevelopment and allow the former neighborhoods to the west to be reconnected to the neighborhoods around Heritage Park and the museums. These homes could be small single family units with zero lot lines or cottage courts around intimate open spaces, or townhomes facing the streets and bringing a 24/7 human presence. Small pockets of retail and hospitality uses will support visitors and residents alike.

CONNECTING PLANNING + TRANSPORTATION

Considering prior downtown planning, the market study, stakeholder input and the Team's professional experience, the following neighborhood contexts were identified in addition to the SEA District, especially as existing, emerging and potential areas for alignment with infrastructure investment to tie together the recommendations for transportation, infrastructure and market need contained in this plan.

The SEA District concept plan detailed a full future build-out of short, mid, and long-term infrastructure projects detailed on the prior pages, but reinforces the importance of making sure these projects are completed in consideration of each other.

IH-37

The downtown gateway of SEA District and the Marina Arts District, the IH-37 corridor will undergo a significant transformation after the old Harbor Bridge is removed. Wayfinding and signage will support new infill development around the existing destination restaurants and businesses, fostering the sense of arrival into an area seeking vitality.

Peoples Street

Along the historic sea wall in downtown and one of the few direct connectors to Shoreline Boulevard and the T-heads from Uptown, the already popular Peoples Street can also become one of the Marina Arts District's key pedestrian corridors. The wide sidewalks, historic structures, large trees and opportunity for on-street parking support a pedestrian-friendly environment. It is recommended that this corridor remain one-way east of Water Street, but that redesign facilitates slower speeds so that this area transforms into a vibrant commercial destination.

South Shoreline Boulevard

Pedestrian improvements within and connecting through the southern portion of Shoreline Boulevard around the park and Bayfront District could enhance proximity to existing neighborhoods and underutilized commercial areas making the area attractive for infill residential.

Agnes and Laredo

The Agnes and Laredo corridor will serve as an important downtown gateway resulting from the relocation of the existing Harbor Bridge. The reinvention of the streets into pedestrian-friendly corridors that connect the existing single family and commercial fabric to downtown will enhance the burgeoning commercial services, artisan manufacturing and design businesses as well as support the upgrading of the residential fabric as well as improve the utilization of the park.

Medical District

With the expansion of the medical district, streetscape improvements will make area infill development more attractive as a result of improved connectivity to the Shoreline Boulevard corridor.

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TWO-WAY CONVERSIONS

The recommended project that generated the most diverse responses from stakeholders was the one-way to two-way conversions throughout downtown. Both one-way and two-way streets have their various advantages and disadvantages that are determined by the environment in which they serve. Historically, various streets in the Marina Arts District (i.e. Chaparral Street) operated as two-way traffic for some time



Historic Photo of Mesquite Street as Two-Way (Source: Corpus Christi Public Libraries Digital Archives)

before they were converted to one-way operations. In this case, it is recommended that the City consider converting certain streets in downtown from one-way to two-way in phases over the next decade. With each street conversion, there are design and construction costs, including the impact businesses will experience during construction.

Typically, one-way streets result in faster traffic flow with less turning movements at intersections and easier traffic signal coordination. Retaining the one-way operations with modifications could provide additional space for other improvements, such as bike lanes, wider sidewalks, curb extensions, landscaped islands and angled parking. On the other hand, converting to two-way streets would create a standard grid of streets that is more intuitive for drivers, particularly visitors unfamiliar with downtown. Two-way

streets can also reduce trip length due to improved accessibility to the destination. Unexpected one-way streets can lead to wrong-way driving and increased safety hazards if not designed and implemented properly; therefore, all two-way conversions should be designed and implemented under the supervision of an engineer. Proper implementation should include, but is not limited to, the recommendations listed in the Appendix and the visual cues discussed later in this chapter.

EXISTING CONDITIONS

The existing downtown street network consists of a multitude of one-way streets, with the exception of Shoreline Boulevard south of William Street, Water Street, Coopers Alley, Kinney Street and Mann Street. Figure 9 shows the existing one-way streets in the downtown area.

PROPOSED CONVERSIONS

Although converting all the Marina Arts District streets to two-way operations is ideal, the City has recently implemented multiple street renovations and other projects that would be better left in place. This, along with the consideration of on-street parking for businesses in the area, has led to the selection of specific streets to potentially be converted from one-way to two-way:

- Chaparral Street from Coopers Alley to IH-37
- Mesquite Street from Coopers Alley to Belden Street
- Twigg Street from Mesquite Street to Shoreline Boulevard
- Starr Street from Water Street to Shoreline Boulevard
- Peoples Street from Water Street to Shoreline Boulevard
- Schatzell Street from Water Street to Shoreline Boulevard
- Lawrence Street from Mesquite Street to Shoreline Boulevard
- William Street from Water Street to Shoreline Boulevard
- John Sartain Street from Mesquite Street to Shoreline Boulevard

Figure 10 shows the proposed network changes in the downtown area.

FIGURE 9: EXISTING ONE-WAY STREETS

One-Way Streets

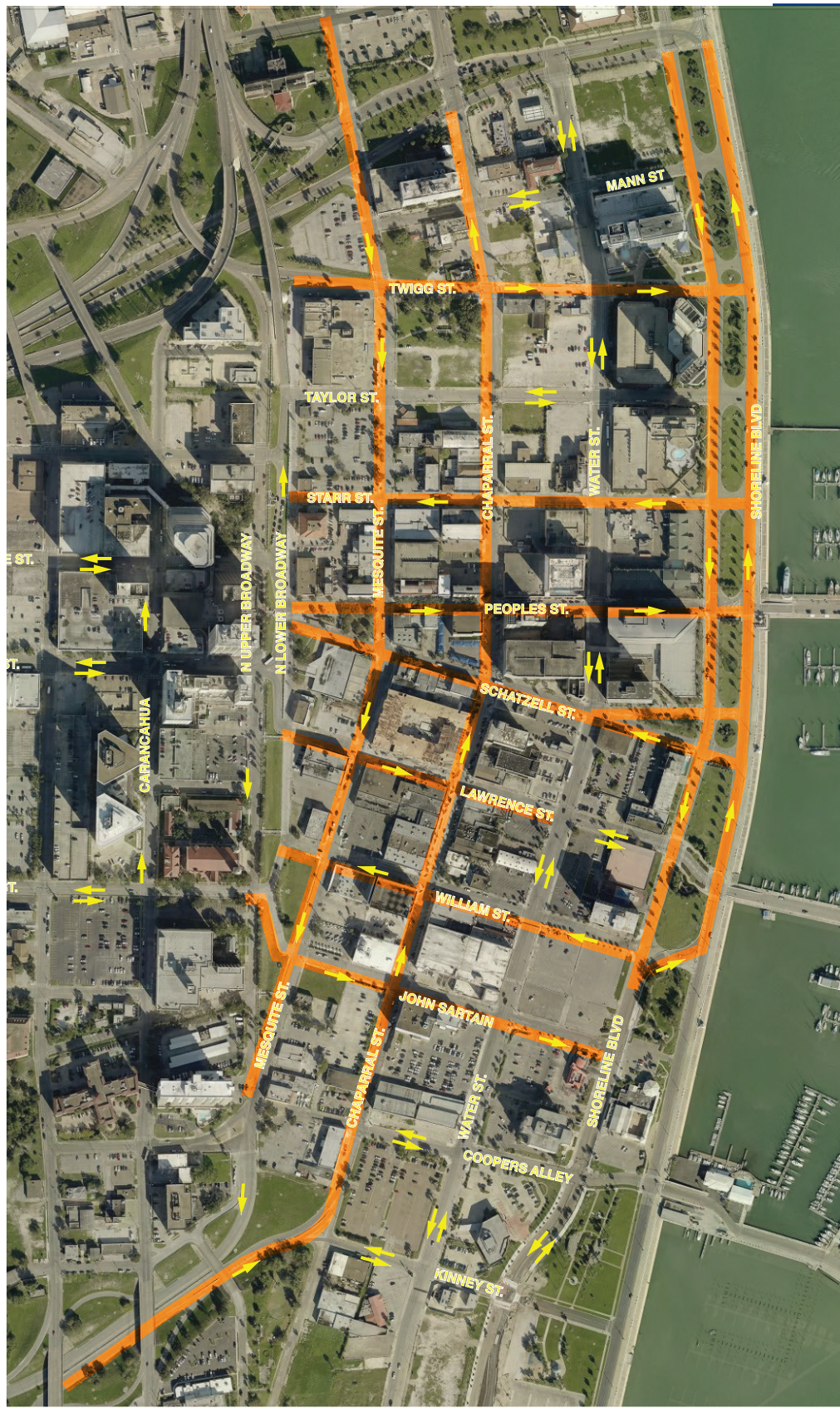


FIGURE 10: PROPOSED TWO-WAY STREET CONVERSIONS



- One-Way to Two-Way Conversion - Short Term
- One-Way to Two-Way Conversion - Mid-Term
- One-Way to Two-Way Conversion - Long Term
- Existing Signalized Intersection Impacted by Two-Way Conversion
- One-Way Streets

MOBILITY NETWORK IMPLICATIONS

The conversion of certain streets from one-way to two-way will create changes in the mobility, demand and functionality of the network. The tables in the Appendix provide details of the physical changes along each roadway and their implications and conceptual cost. A visual example of the potential changes at an intersection, specifically Chaparral Street at Twigg Street, can be seen on the following page. Although there are existing signalized intersections that can be impacted by the one-way to two-way conversion, Project S26: All-Way Stop Evaluation should take place prior to the conversions so that intersections that do not warrant a traffic signal can be converted to all-way stop intersections during the conversion process. If an intersection does need to be converted to an all-way stop, the City should consider using their signals as red flashers if possible instead. Therefore, the improvements to convert each intersection or segment provided in the Appendix is preliminary in nature and is based off the existing infrastructure.

IMPLEMENTATION

These changes to the network will require drivers to develop new behavior when traveling through the Marina Arts District. Visual cues to drivers and pedestrians will need to be upgraded to discourage wrong-way driving and help ease the transition between the existing network and the proposed network.

Visual Cues to Drivers

The improvements listed in the Appendix include updated signage and pavement markings to allow for simple and quick decision-making. The City should also consider implementing lane direction arrows, wrong way signs, red/white raised pavement markers and mid-block one-way signs where drivers may be confused about the direction of travel for the street they are on or trying to turn onto.

FIGURE 11: VISUAL CUE EXAMPLES FOR ONE-WAY STREET CONVERSIONS



CASE STUDIES

A recent case study review investigated the economic impacts associated with conversion of one-way streets to two-way traffic flow in six cities across the U.S. between 2004 and 2011. The researchers found that:

- Streetscape improvements that are undertaken in connection with larger economic development and livability strategies are more successful in arts and entertainment sectors;
- The arts and entertainment, recreation, accommodation, food, and professional services industries generally experienced positive growth in areas around new two-way streets;
- Residential units were also found to increase in several of the cities where conversions took place, especially when paired with downtown housing programs;
- Another pattern suggests that higher-income individuals move into areas around the converted streets as incomes around these improvements are shown to grow faster than surrounding areas.

¹William Riggs & Bruce Appleyard (2018) *The economic impact of one to two-way street conversions: advancing a context-sensitive framework*, *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 11:2, 129-148, DOI: 10.1080/17549175.2017.1422535

FIGURE 12: EXAMPLE INTERSECTION

CHAPARRAL STREET AT TWIGG STREET (CURRENTLY SIGNALIZED)

EXISTING CONDITIONS



PROPOSED CONDITIONS (AFTER TWO-WAY CONVERSION)



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MOVING FORWARD

These recommendations and strategies for investment over the next ten years have been outlined in this report for short, mid and long-term implementation. Timing these projects around available funding sources and the construction of the new Harbor Bridge project will be integral to making sure efficient protocols are put in place for development and traffic management during construction phases.

The City should work with land owners and private developers as projects arise to ensure that potential development and redevelopment is aligned with future infrastructure projects as much as possible. Additionally, educating the public and private sectors on these upcoming projects will help identify overlap and might accelerate some needed land development or investment as the public improvements come to fruition.

CAPITAL IMPROVEMENT PROGRAM RECOMMENDATIONS

The cost estimates for each project is for planning purposes only and not for construction or bidding. Before projects can be implemented, initial efforts need to be focused on potential funding sources, including the City's Capital Improvement Program, TxDOT, TIRZ #3, and the Downtown Management District, etc. These investments will require coordination between all the entities and it is important that relationships among the organizations tie together to implement the needed investments.

The project matrices take these relationships and coordination strategies into account and the stakeholder engagement with multiple departments and organizations reaffirmed the need. Select stakeholders expressed desire to see expanded coordination between the City and the MPO or TxDOT as a measure to bring accountability to project implementation and overall success.

TxDOT Coordination Strategy

The Mayor and City Council made it clear throughout this process that the coordination with TxDOT on anything associated with the Harbor Bridge and the reconnection of city streets needs to be a priority at the onset. This project and these recommendations take advantage of bridging the relationship with TxDOT to ensure that there are no unforeseen gaps in construction and implementation timing as it relates to the Harbor Bridge.



Representatives from the City and from TxDOT were engaged during this project, but because it is such a large undertaking there needs to be additional engagement beyond what was done during this process in terms of where the former Harbor Bridge was located in the SEA District and how the connectivity between the Marina Arts District and SEA District is enhanced.

The recommended projects bring all parties to the table and demonstrate how TxDOT, the MPO and City funding sources are allies on these projects and if done in concert can have a greater economic impact to the community beyond straightforward roadway improvements; which, in the long run, will be more cost efficient and effective for all parties.

PROGRAM AND POLICY REFINEMENTS

In addition to the recommended infrastructure prioritization and capital improvement projects, several policy level projects should be undertaken in the short term to maximize public investment dollars and

support quality development within downtown. Each of these programs and policy recommendations would require additional study and evaluation.

Table 4 identifies recommended policy and program projects that should be implemented in the next two to three years.

Table 4: Policy Implementation Recommendations

Program / Policy	Recommendation
Implement MPO Bicycle Mobility Plan	As street improvements are made and one to two-way conversions occur, roadways should integrate recommended bicycle improvements and routes as identified under the MPO's plan.
Bus Routes – RTA Transit 20/20 Plan	Per the RTA's Transit 20/20 Plan, bus routes through downtown should be reexamined as infrastructure improvements occur to identify potential efficiencies and additional routes that might become available under the two-way conversions or street grid reconnections.
Extend TIRZ #3 to Agnes and Laredo	Maximize the value capture of Downtown by extending the TIRZ #3 boundary to the full extent of Agnes and Laredo from downtown to SH 286/Crosstown based on the recommendations in this report.
Sidewalk/Street Tree Management and Maintenance	<p>Within the Downtown Management District and greater TIRZ #3 Area, clarify responsibility for sidewalk maintenance and improvements that will:</p> <ul style="list-style-type: none"> • ensure consistency in quality, style and safety along all street networks; • reduce the burden on local businesses or owners; • enable more effective management of street tree care and preservation; and • explore cost-sharing program options
Downtown Parking Study Action Plan	The strategies identified in the recently adopted Downtown Parking Strategy by the City should be implemented.
Water's Edge Task Force	The City should work with the Downtown Management District and/or TIRZ #3 Board to create a water's edge task force that helps support maintenance, activation and programming of the shoreline and T-heads.
Construction Phasing and Management	The City should organize phasing of concurrent construction projects to minimize traffic impacts, as the Harbor Bridge construction is underway. This should also take into consideration truck traffic and operational standards that might be impacted during construction.
Amend Ordinance to Delete One-Way Streets	The City should amend its ordinance to remove the one-way streets from its policies and implementation strategies.
Amend Urban Transportation Plan	Delete redundant collectors on the Urban Transportation Plan.
Form Parking Alliance	Working with downtown partners and organizations, the City should form a parking alliance to encourage shared parking strategies and implement the recommendations from the downtown parking plan recently adopted.
Truck and Loading Zone Standards	The Downtown Management District should work with local businesses to develop truck and loading zone standards.

These recommendations are not all-inclusive and might result in additional policy needs, but they will help address the immediate needs identified during this process and during stakeholder interview sessions. The roadway improvements will help alleviate several complaints and frustrations for Downtown, however, without the proper planning for economic development and policy-level details, the adjacent owners will still experience frustration when it comes to day-to-day life in Downtown.

TAX INCREMENT REINVESTMENT ZONE #3

APPENDIX:

TRAFFIC AND PLANNING ANALYSIS

CORPUS CHRISTI TX | APRIL 2018



RCLCO

Kimley»Horn

GATEWAY
PLANNING

APPENDIX

MARKET ANALYSIS

PREPARED BY
RCLCO REAL ESTATE ADVISORS

CONTENTS

Economics and Demographics.....	A1
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OBJECTIVES

RCLCO's objective with this engagement is to inform the City of Corpus Christi about strategic areas of focus and timing of downtown redevelopment and revitalization. In addition to infrastructure improvements, the City of Corpus Christi hopes to coordinate policy and redevelopment efforts to create a vibrant downtown environment. In order to accomplish this objective, RCLCO analyzed the following land uses to inform redevelopment:

- » Rental Residential
- » For-Sale Residential
- » Retail
- » Office

ECONOMICS & DEMOGRAPHICS

Household Density

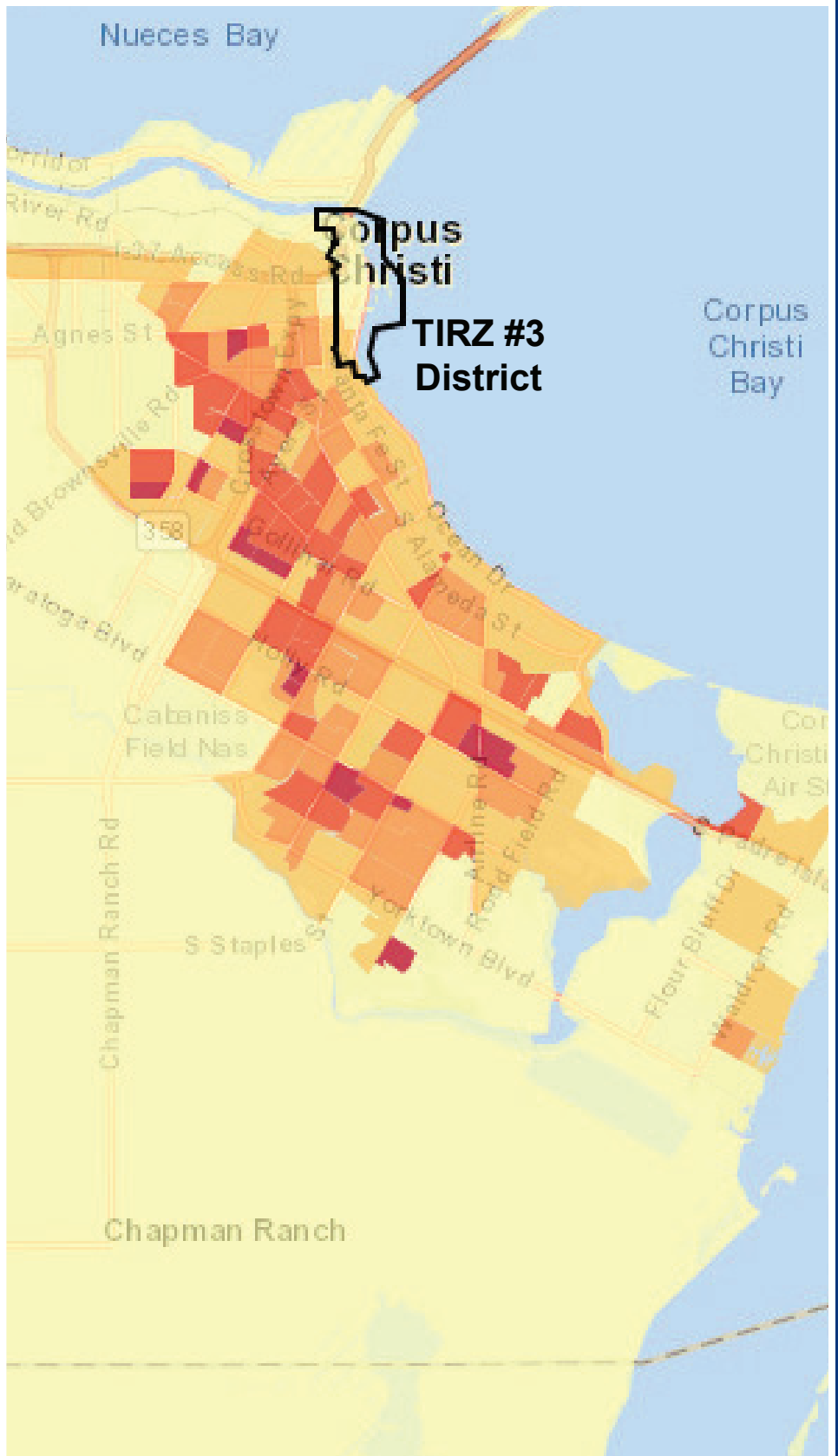
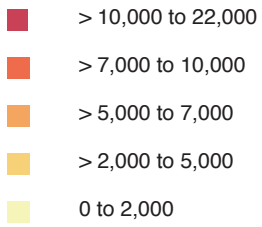
Over the past 10 years, the Corpus Christi Metropolitan Statistical Area (MSA) has grown at a moderate pace, with household growth averaging about 1.1% or roughly 1,850 new households, annually. Going forward, household growth in the MSA is expected to continue at this moderate pace.

In Corpus Christi, the majority of households are concentrated south of downtown along the Highway 358 corridor, between downtown and Flour Bluff. Unlike most other downtown districts, Downtown Corpus is one of the lowest household density blocks in the area, despite a relatively large concentration of employment (see page 32).

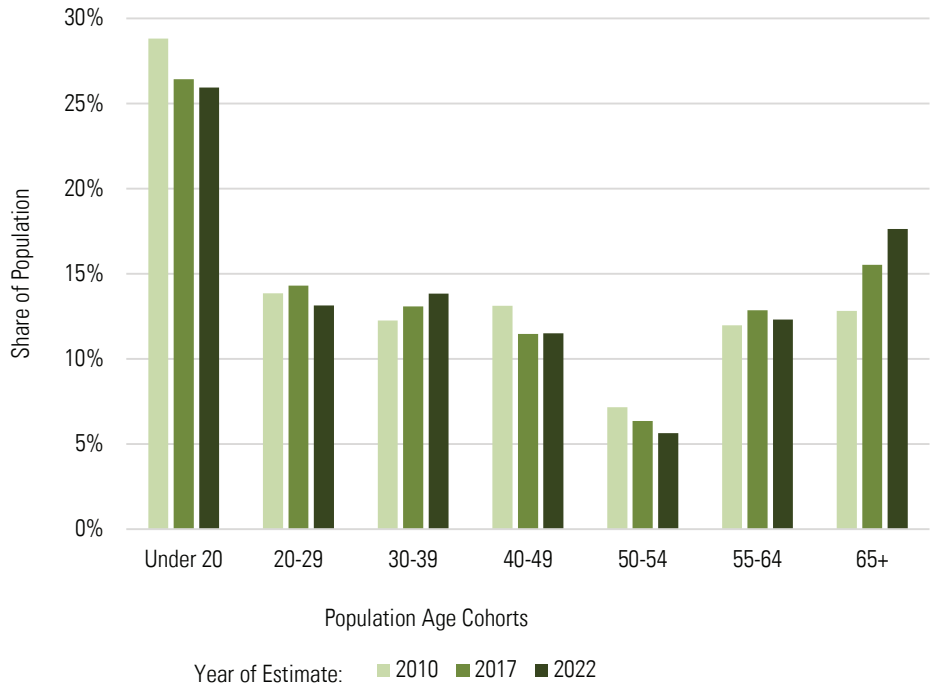
Currently, there are approximately 1,200 households in the Tax Increment Reinvestment Zone #3 (TIRZ #3) with significant opportunity for household growth downtown in the next five to ten years.

HOUSEHOLD DENSITY BY BLOCK GROUP

Corpus Christi, TX MSA; 2017



**Share of Total Population by Age Cohort and Year
Corpus Christi, TX MSA; 2010, 2017, & 2022**

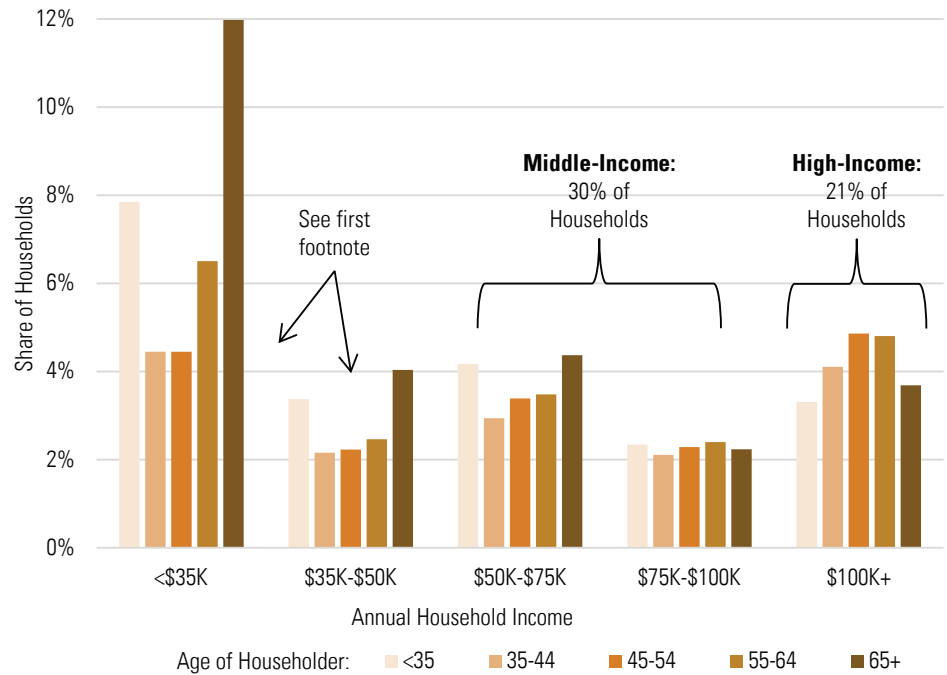


Age, Income, & Education

A increasing share of the Corpus Christi MSA population is aged 55+, suggesting growing support for age-targeted residential product to appeal to this demographic. Additionally, the only other demographic segment that is increasing proportionally is the 30-39 year old contingent. Though this group contains many family households, it also includes young professionals and pre-families which often demonstrate higher propensities for more mixed-use and walkable urban areas.

Though the large number of seniors and students skew the income distribution slightly lower, there is a high concentration of households are in middle-income brackets, with approximately 30% of MSA households earning between \$50,000 and \$100,000.¹ These income brackets can typically afford housing priced between \$140,000 and \$350,000² or \$1,250 to \$2,500³ per month in rent, providing strong support for moderately priced housing options in central Corpus Christi.

**Share of Total Population by Age Cohort and Year
Corpus Christi, TX MSA; 2010, 2017, & 2022**



Education: According to the Census Bureau, 27% of people over the age of 25 years old in the Corpus Christi MSA have an Associate’s degree or higher, this is compared to the state of Texas with 35% of people having at least an Associate’s degree.

¹ Though there is a large concentration of households earning below \$50K, this income bracket is largely comprised of households over the age of 55 who are retired (with income not indicative of household wealth) and households under the age of 35, which includes students.

² Based on mortgage payment sensitivities on a 30-year fixed rate mortgage with a 3.85% interest rate, 2.55% tax rate, 1.08% home insurance, 10%-20% down payment (1% PMI on loans under 20% down payment), and assumes typical households monthly debt payments of \$500.

³ Rental rate range based on 30% of household income, conservative compared to the usual 3x multiple required by apartment operators.

SOURCE: Demographics - ESRI Business Analyst (2010, 2017, 2022); Mortgage assumptions- Nueces CAD, Redfin, Bankrate, CNBC, RCLCO

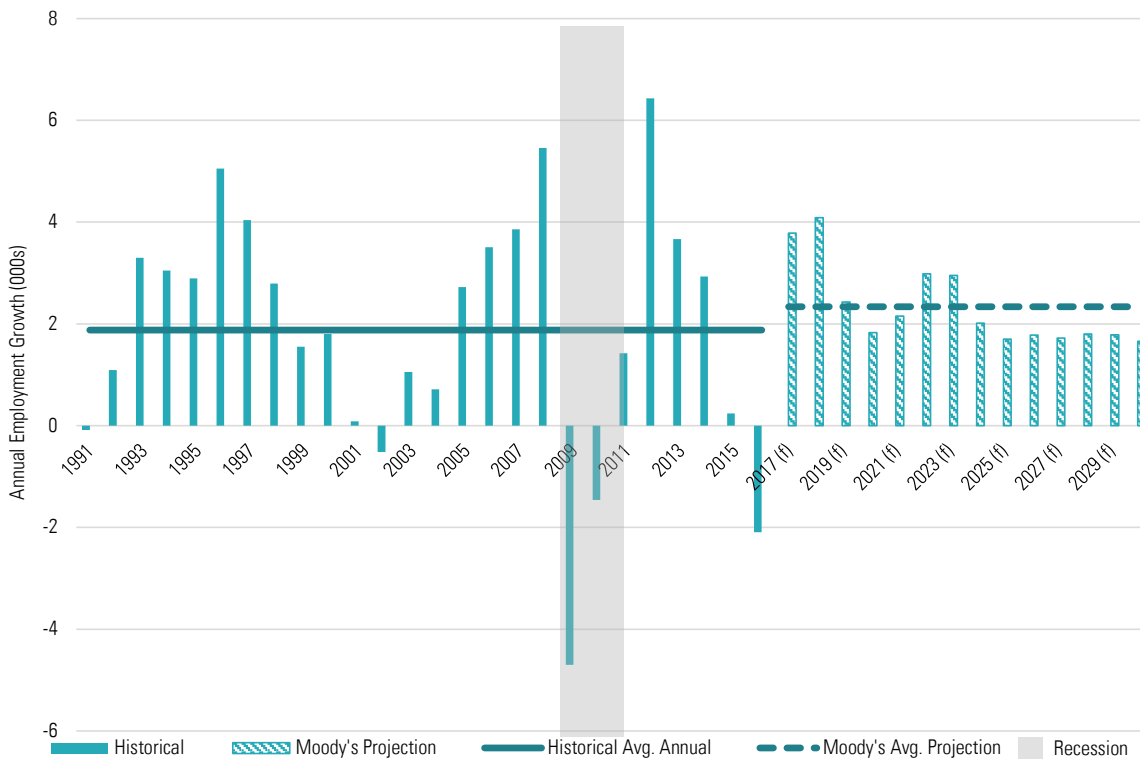
Employment

The Corpus Christi MSA was one of the fastest metros to recover from the Great Recession*, recapturing all job losses by April of 2012. Between 2011 and 2013, Corpus Christi added an annual average of over 5,000 jobs or a 2.8% compounding annual growth rate (CAGR), compared to the long-term average since 1990 of under 1,900 annual new jobs (1.2% CAGR).

However, the collapse of oil prices in 2014, with West Texas Intermediate (WTI) Crude Oil price dropping from \$106/barrel to a low of \$30.32/barrel in February of 2016 negatively affected the local economy with stagnate employment growth in 2015 and job losses in 2016. Corpus Christi's dependence on the oil and gas industry is apparent based on the strong linear relationship between WTI Crude Oil prices and MSA employment, as total MSA employment typically increases as crude oil prices rise.

Near-term employment projections are strong after Hurricane Harvey's landfall, with robust projected employment gains in the Education and Healthcare, Construction, and Professional and Business Services industries.

Historical and Projected Employment Growth Corpus Christi MSA: 1990-2030



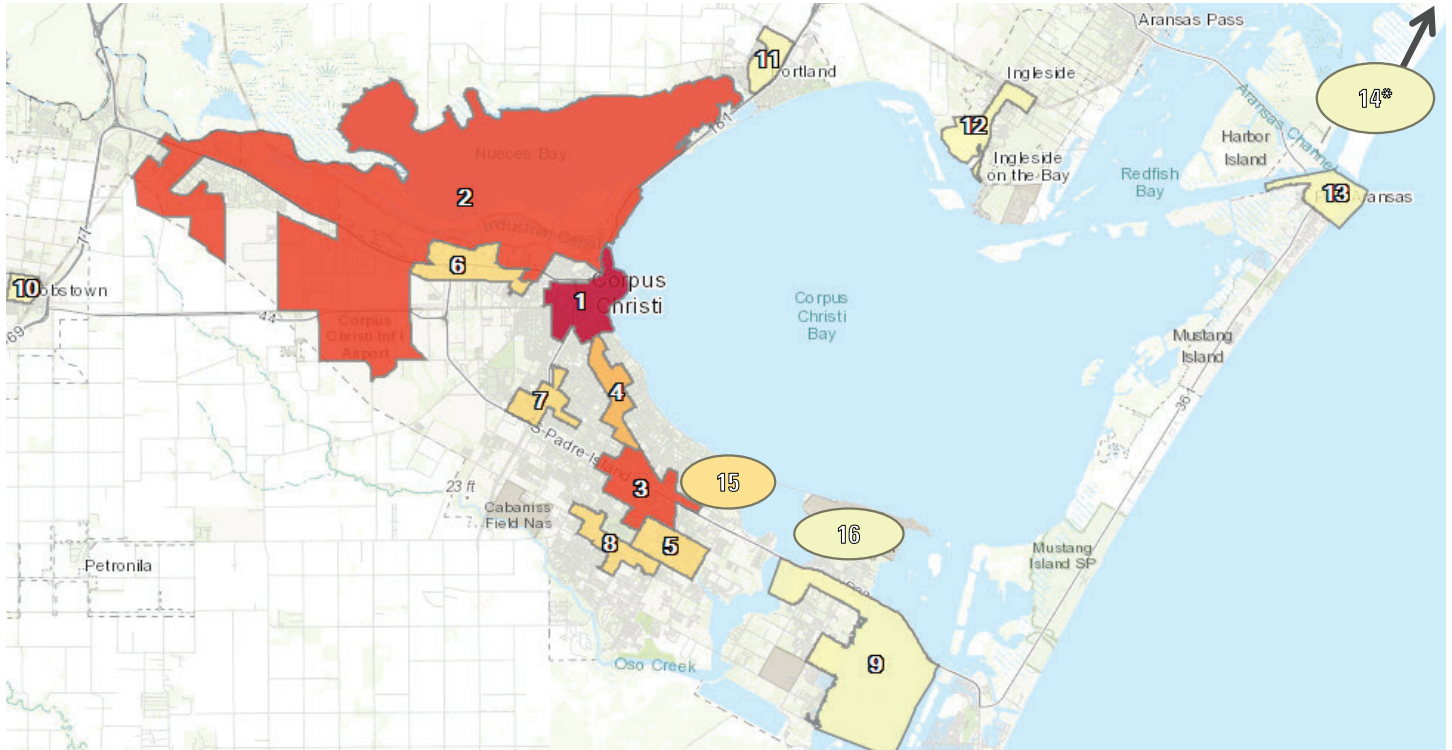
NOTE: *According to the National Bureau of Economic Research, "a recession is a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales." The financial crisis began in December 2007 and ended in June 2009, but the Great Recession is often associated with the period between 2007 and 2012.

SOURCE: Moody's Analytics; Bureau of Labor Statistics; RCLCO

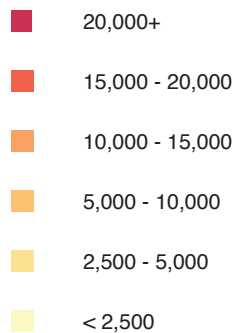
Employment Cores

Downtown Corpus Christi is the most significant employment core in the MSA and accounts for approximately 15% of total employment and over 25% of total FIRE, STEM, and Professional Service employment.

Top Employment Cores and Corridors Corpus Christi MSA: 2015



MAP KEY	CORE NAME	2015 JOBS
1	Downtown/Uptown	~20,000
2	Joe Fulton Trade Corridor	18,100
3	La Palmera/Sunrise	15,600
4	Staples St.	5,600
5	Airline Medical	4,600
6	I-37/Hwy 358	3,700
7	Crosstown/S. Padre	3,000
8	Saratoga/Staples	2,700
9	Flour Bluff	2,500
10	Robstown	2,100
11	Portland	2,100
12	Ingleside	2,000
13	Port Aransas	1,500
14*	Rockport	1,400
15	Texas A&M Corpus Christi	1,180
16	Naval Air Station	4,500



NOTE: *Rockport not shown on map for scale and quality enhancements; The Flour Bluff employment core (#9) includes some sections that overlay over water given census geographical boundaries.

SOURCE: U.S. Census Bureau - Longitudinal Employer-Household Dynamics (2015); RCLCO

PRELIMINARY MARKET OVERVIEW

Potential Areas of Redevelopment

Given that most planned near-term* infrastructure projects, such as Kinney Power Street Pump Station Improvements, McGee Beach Nourishment, Morgan Avenue (Ocean Drive to Staples Street) improvements, and Chaparral Street Phase Two improvements are located in close proximity to or within the TIRZ #3, RCLCO recommends focusing redevelopment efforts in the TIRZ #3, especially in the Marina Arts District. Planned infrastructure projects in the immediate area increase access and mobility, and are likely to enhance the TIRZ #3's desirability as an area of investment and development.

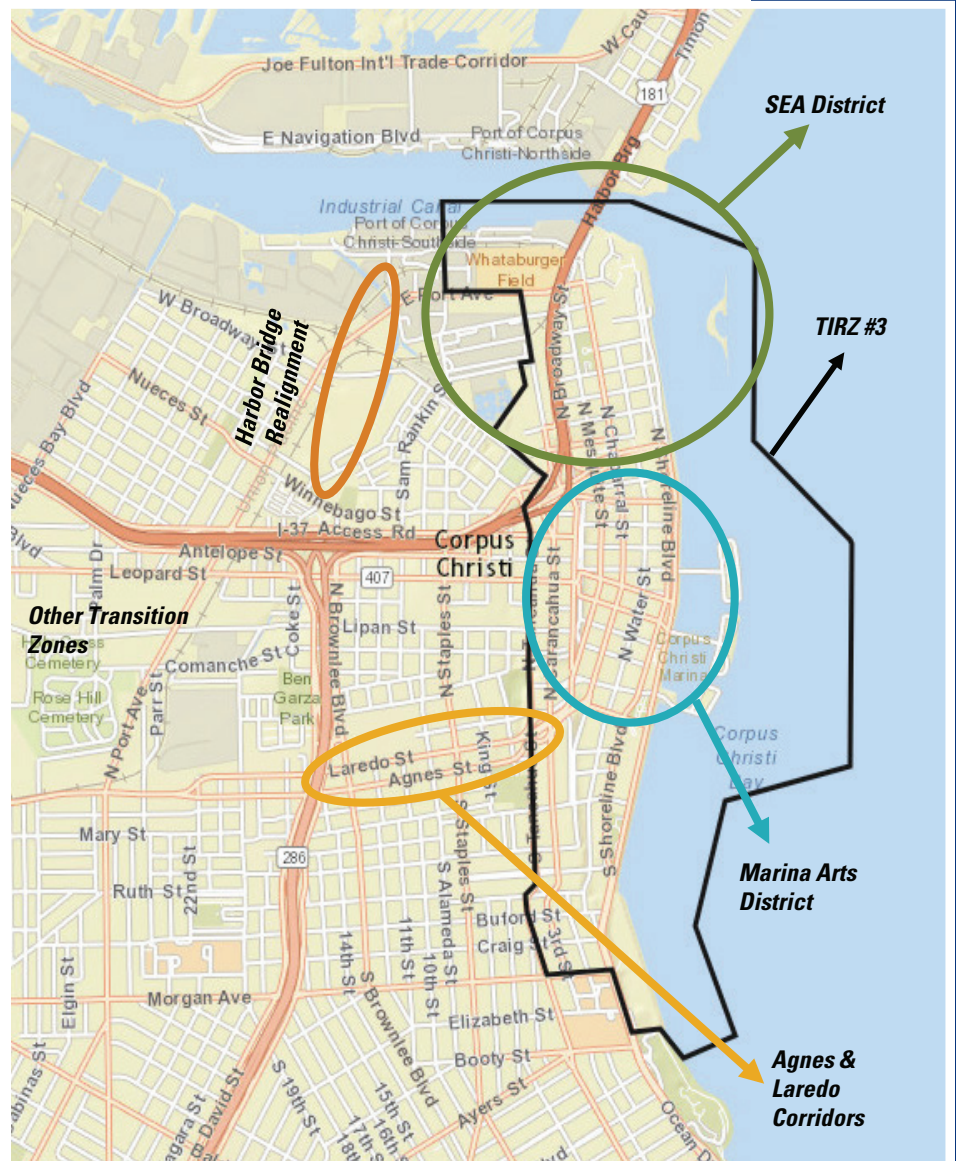
Beginning revitalization efforts with the Marina Arts District south of the I-37 Access Road can help build a residential base downtown, especially because there are a small number of planned multifamily and retail developments underway in this area.

After the Harbor Bridge is relocated, connectivity between the Marina Arts District and the SEA District will improve, encouraging development further north into the SEA District.

Another area of potential redevelopment to the south, the Agnes and Laredo corridors, serve as main thoroughfares to and from downtown. Investment in this area can also help increase the desirability of downtown and bring development to the TIRZ #3.

* Near-term defined as 2018-2023

SOURCE: Department of Engineering Services at the City of Corpus Christi; RCLCO



Downtown Development Growth Patterns

In order to generate demand for a variety of land uses and weave together the existing attractions in downtown Corpus Christi, including the Whataburger Baseball Stadium, the Museum of Science and History, Art Museum and Water Park, it is first necessary to build a critical mass of full-time households in the downtown area. Unlike seasonal and temporary visitors, permanent residents located downtown represent the connective tissue that in turn supports additional retail and attracts employers, eventually transforming an area into a vibrant mixed-use district and lively 18-hour urban environment.

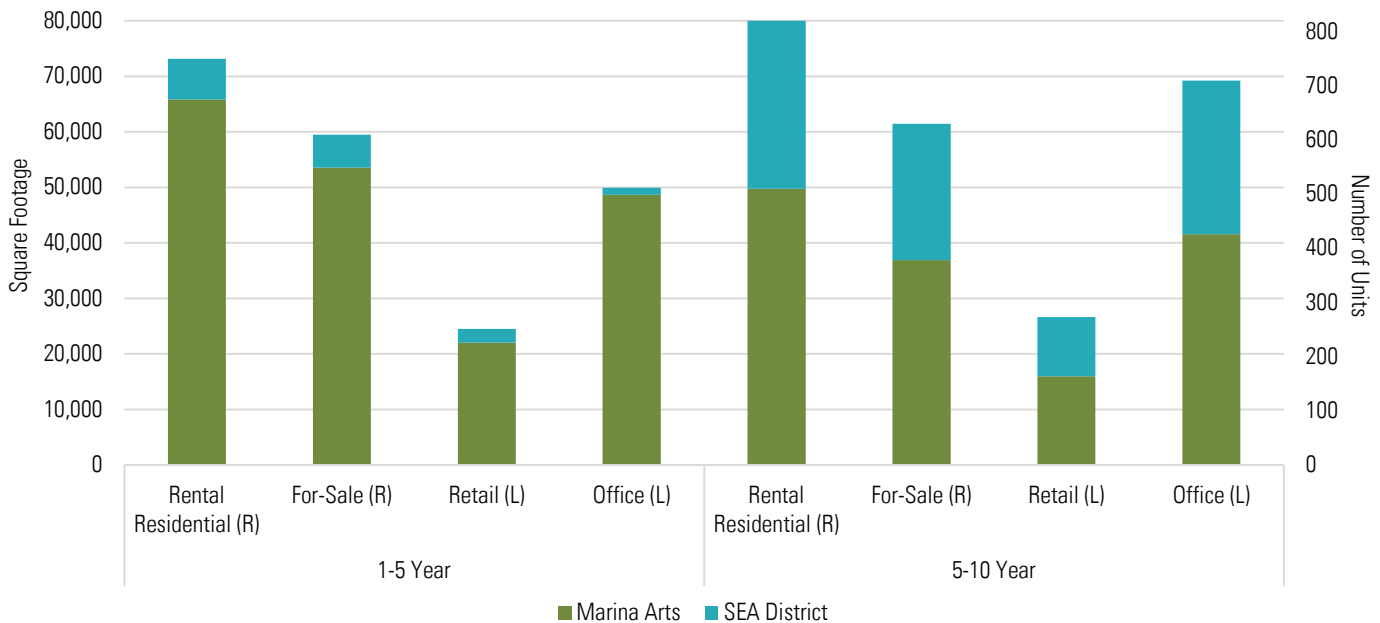


Downtown TIRZ #3: Redevelopment Opportunities

In the next five years, RCLCO recommends that the City of Corpus Christi focus redevelopment efforts primarily on the Marina Arts District, given that this area has the largest concentration of existing office and hotel towers, is slated to experience several infrastructure improvements, and has several planned and recently delivered apartment projects that represent a small and growing household base. In the longer-term, RCLCO recommends that the city continue to build out the Marina Arts District, and also begin investing more in the SEA District as the Marina Arts District stabilizes and major infrastructure projects, including the bridge demolition and associated improvements, are completed in the SEA District.¹ Land availability and the City’s ownership of parcels in the SEA District could create a more fluid environment for concentrated and coordinated development efforts. It is important to note that demand is dependent on the City actively engaging in downtown and illustrating renewed interest in the urban core.

LAND USE	1-5 YEARS	5-10 YEARS
Rental Residential	Develop new rental units in addition to currently planned units in the Marina Arts District to begin to increase household density in the TIRZ #3.	Potential for additional new units in the Marina Arts District and some units in the SEA District, especially near attractions, once the Nueces Bay Causeway bridge is relocated.
For-Sale Residential	Develop/renovate a modest amount of townhomes and SFD units, focusing on the Marina Arts District, with some neighborhood-scale townhomes and/or single-family dwellings in SEA District.	Continue to develop condos, townhomes, and small lot single-family units in the Marina Arts District. There is also increased opportunity for new for-sale product in the SEA District once the bridge is relocated as a more predictable environment emerges.
Retail	Establish basic neighborhood services e.g. a small grocer/market, pharmacy, and dining options in the Marina Arts District to support residential growth.	Create a small concentration of bars, restaurants, and shops to capture local demand from new households as well as serve visitors and tourists.
Office	Limited potential for new “class A” office in the short-term	Possible demand for new or renovated office space.

Demand by Land Use, Timeframe, and District within the TIRZ #3



SOURCE: CoStar (2017); ESRI (2017); RCLCO

¹ This analysis assumes 90% of development efforts focused in the Marina Arts District in the first five years, and 60% in the following five years. See demand slides for more detail on each land use. Demand for residential units in the chart above is using the upside scenarios.

RESIDENTIAL MARKET OVERVIEW

Rental Apartment Market Overview

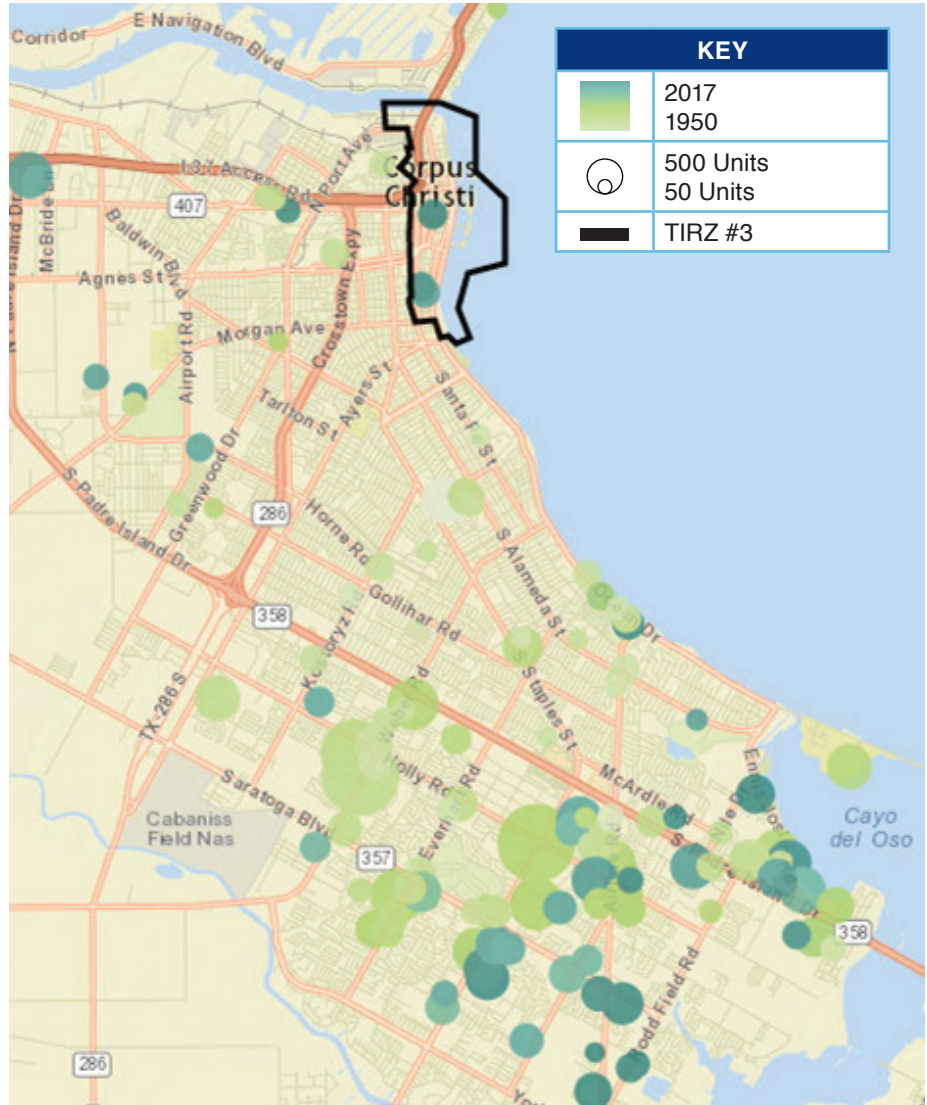
Historically, apartments have clustered south of downtown, adjacent to La Palmera Mall and Texas A&M University Corpus Christi.

Since 2012, multifamily rental occupancy has been relatively healthy, with an average occupancy of 93% (over 94% excluding 2016 and 2017) and net absorption of approximately 500 units, annually. However, after the delivery of more than 2,400 new units in 2016 and 2017 in conjunction to job losses due to the decline of oil prices, occupancy has dropped across the MSA to 90.8% in 2017.

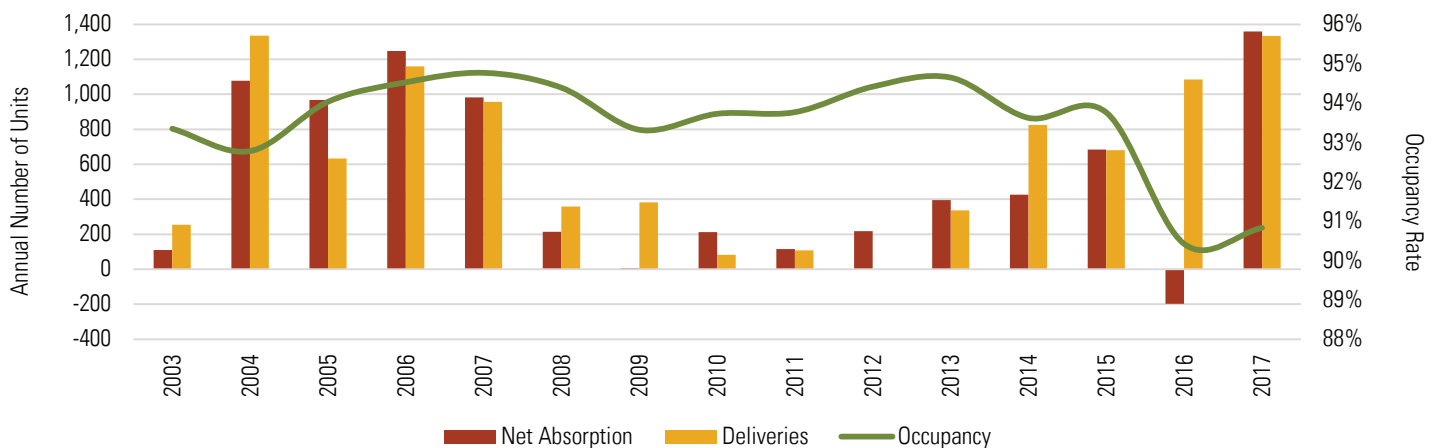
Recent deliveries have higher rents per square foot on average, with deliveries since 2010 demonstrating a 24% premium over the MSA average, which was \$1.06 in 2017.

SOURCE: Axiometrics; CoStar; ESRI; RCLCO

Map of Existing Multifamily Apartment Rentals Corpus Christi



Multifamily Net Absorption, Deliveries, and Occupancy Corpus Christi, TX MSA; 2003-2017



DOWNTOWN RENTAL APARTMENT MARKET

Recent Rental Apartment Trends

Although historically apartment development has concentrated south of downtown, the TIRZ #3 has seen significant multifamily development activity since 2010. Out of 22 total multifamily deliveries in the MSA since 2010, three of them are located in the TIRZ #3 District. However, all of these recent deliveries are located south of I-37 downtown, with no multifamily rentals in the SEA District to-date.

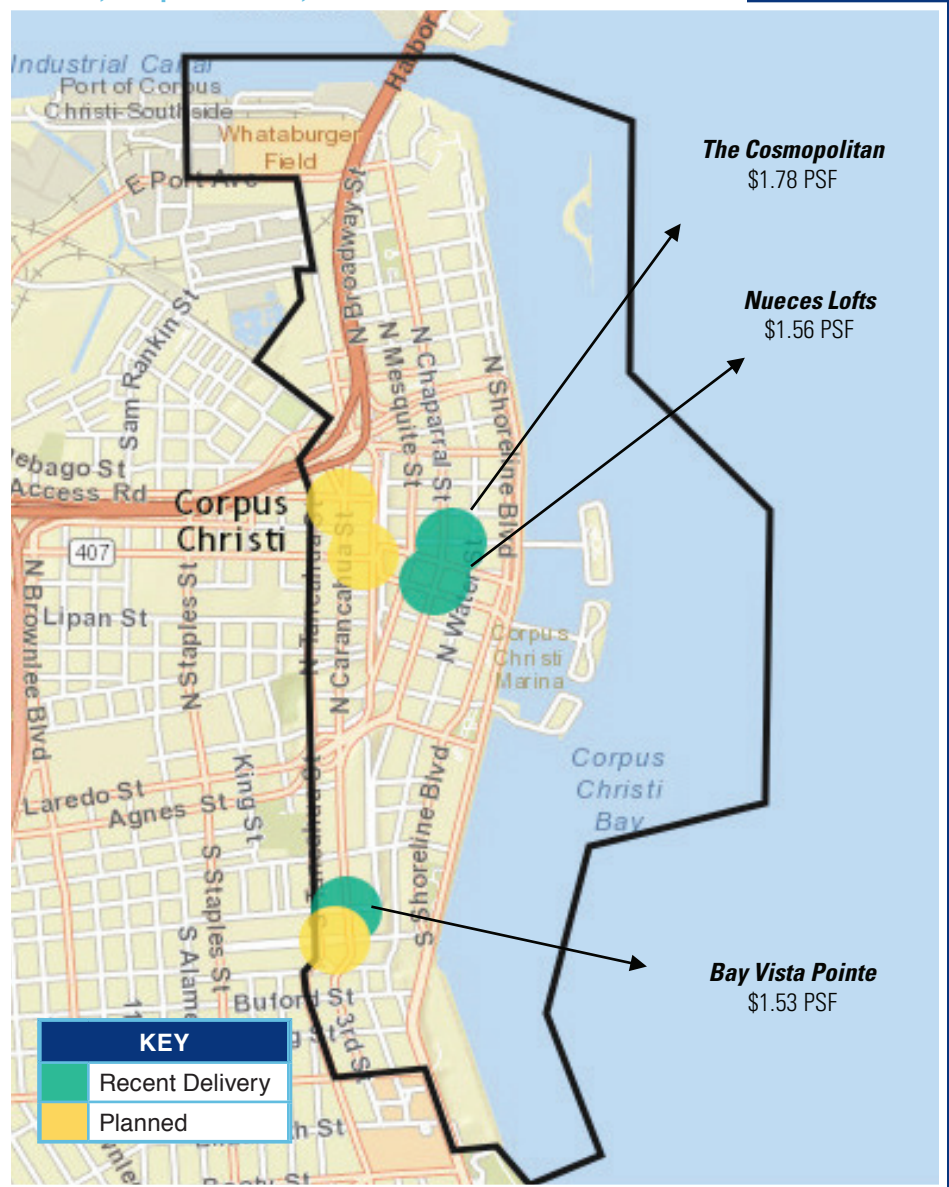
Most recently, Phase I of The Cosmopolitan was delivered in the TIRZ #3 in 2017; as of November 2017 the property was in lease up with a total of 89 units in Phase I and 76 units in Phase II. This new development is targeting much higher rents than the historical average in the MSA; at an average effective rent of \$1.78 per square foot, it is positioned at the top of the market.

Downtown Apartment Pipeline

In addition to the existing apartment supply downtown, there are several planned and incentivized TIRZ #3 multifamily projects worth noting. The Clock Tower Apartments and 600 Building plan for 149 and 126 units respectively, and are scheduled to deliver in the next two to three years.

There are also a couple of adaptive reuse projects, such as the Studio 21 Apartments and Broadway Lofts that fall within the TIRZ #3 boundaries; these planned renovation projects will deliver fewer than 50 units apiece.

Map of Recent and Planned Multifamily Developments TIRZ #3, Corpus Christi; 2010-2019



SOURCE: Axiometrics; Caller-Times; CoStar; ESRI; RCLCO

Key “First-Mover” Renter Segments

Student & Young Professional Residential Opportunity

There is an opportunity to capture demand for downtown apartments in Corpus Christi with the large pool of post graduates and students from two tertiary educational institutions in Corpus Christi.

Although Texas A&M University Corpus Christi is approximately eight miles from Interstate-37 and Shoreline Boulevard, there is an opportunity to capture some demand for downtown apartments from the enrollment pool of just over 12,000 students. Increasing the supply of multifamily rental housing downtown is especially pertinent given that 82% of all Texas A&M Corpus Christi students chose to live off-campus in 2016.

Downtown likely has greater appeal for particular groups of students, such as graduate students. Of the students enrolled in 2016, 2,242 were graduate students.

Graduate students have a high propensity to live off-campus, given their age and different family or household structures.

Additionally, Del Mar College represents another large pool of students that generate demand for downtown rentals, with approximately 12,000 students enrolled in community college courses in 2016. Del Mar College’s East Campus is only three miles from Interstate-37 and Shoreline Boulevard, and does not provide student housing; it is likely that a small share of these students might choose to live downtown with more available options in the market.

Furthermore, in national surveys, young professionals and post-graduates have indicated strong preferences for downtown urban living compared to other age groups; if given the choice, about 18% of people under age 35 would choose to live downtown.

Annual Residential Demand Methodology

RCLCO projected future housing demand in the Corpus Christi MSA based on household projections, income and age distributions, and demonstrated propensities of ownership, turnover, and choosing new housing options.

In order to estimate downtown’s potential capture of future housing demand, RCLCO utilized two different capture methodologies: demonstrated preferences and stated preferences.

The first approach uses the TIRZ #3’s historical capture of rental and for-sale housing, though this approach is overly conservative given the existing supply-constrained downtown market.

The second approach utilizes national survey data with stated locational preferences to determine the percentage of households that would choose to live in an urban, mixed use downtown. RCLCO accounted for varying preferences of households to choose urban living by age and income level. Though this data provides a defensible upper bound for housing demand, Downtown Corpus Christi will need to enhance its offering of walkable, neighborhood services often associated with urban living before it can expect to capture levels illustrated by the consumer preference surveys.

The difference between the demonstrated demand and survey results from the National Association of Realtors provides a range of demand for residential units that should be taken into consideration when determining feasible development in downtown in the next five to ten years.

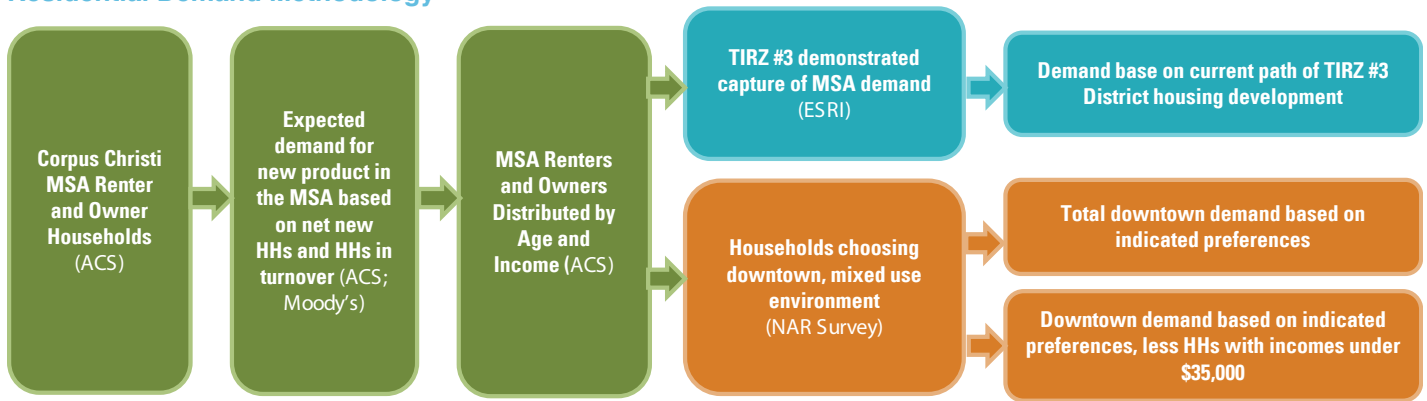
National Renter Propensity to Choose Urban Downtown Living, by Age and Income*

INCOME	UNDER 35	35-54	55+
Less than \$35,000	15%	15%	9%
\$35,000-\$50,000	16%	12%	3%
\$50,000-\$75,000	25%	17%	11%
\$75,000+	18%	8%	9%
TOTAL	18%	13%	8%



SOURCE: Del Mar College; *National Association of Realtors – 2011 Preference Survey n=2,000+; Texas A&M Corpus Christi; RCLCO

Residential Demand Methodology



SOURCE: US Census American Community Survey 2012-2015; ESRI Business Analyst; Moody's Economy.com; National Association of Realtors – 2011 Preference Survey; RCLCO

Downtown Rental Demand

Currently, with both the limited rental housing stock and limited neighborhood retail services offered downtown, there are only about 1,000 renter households living in the TIRZ #3 out of about 68,000 estimated renters in the MSA, meaning only about 1.5% of renters are living downtown.

However, national survey data indicates that without supply constraints, 13% of renters would likely choose to live in an urban, mixed use, downtown environment.

There is some variation in renters' indicated preferences to live downtown depending on age and income. Therefore, RCLCO filtered estimated annual demand for downtown rentals into segments. It should be noted that renters with children, or families, demonstrate similar proclivities to live downtown as other renters.

Despite the current lack of households, downtown is also a major employment core with between 19,000 and 21,000 employees. With additional neighborhood services, the TIRZ #3 has the potential to be a vibrant, walkable downtown with an "18-hour" live-work-play environment.

Overall, once more services and amenities are in place, the Corpus Christi TIRZ #3 should aspire to capture demand for about 160 rental units annually, the estimated demand for rentals based on national preferences and households with incomes over \$35,000.

10-Year Demand for Multifamily Units, by Age and Income; Corpus Christi TIRZ #3

INCOME	UNDER 35 YOUNG PROF.	35-54 MATURE PROF. & FAMILIES	55+ EMPTY NESTERS	TOTAL
\$35,000-\$50,000	100	47	20	167
\$50,000-\$75,000	492	175	73	740
\$75,000+	396	226	71	693
Total \$35,000+ Demand	988	448	164	1,600

Aggregated Long-Term Demand for Multifamily Units; Corpus Christi TIRZ #3

	10-YEAR AVERAGE ANNUAL	5-YEAR DEMAND*	TOTAL 10-YEAR DEMAND
Demonstrated Demand	30	150	300
\$35,000+ National Preferences Demand	160	750	1,600

NOTE: The projected 5-year demand is less than the 10-year on an annual basis, since demand is projected to increase over the long-term.

SOURCE: US Census American Community Survey 2012-2015; ESRI Business Analyst; National Association of Realtors – 2011 Preference Survey; RCLCO

New For-Sale Market Overview

For-sale housing in the Corpus Christi MSA is relatively affordable compared to other Texas MSAs, with the median single-family home price just under \$200,000 as of November 2017. According to data from Redfin, newly constructed for-sale homes are typically priced closer to \$270,000.

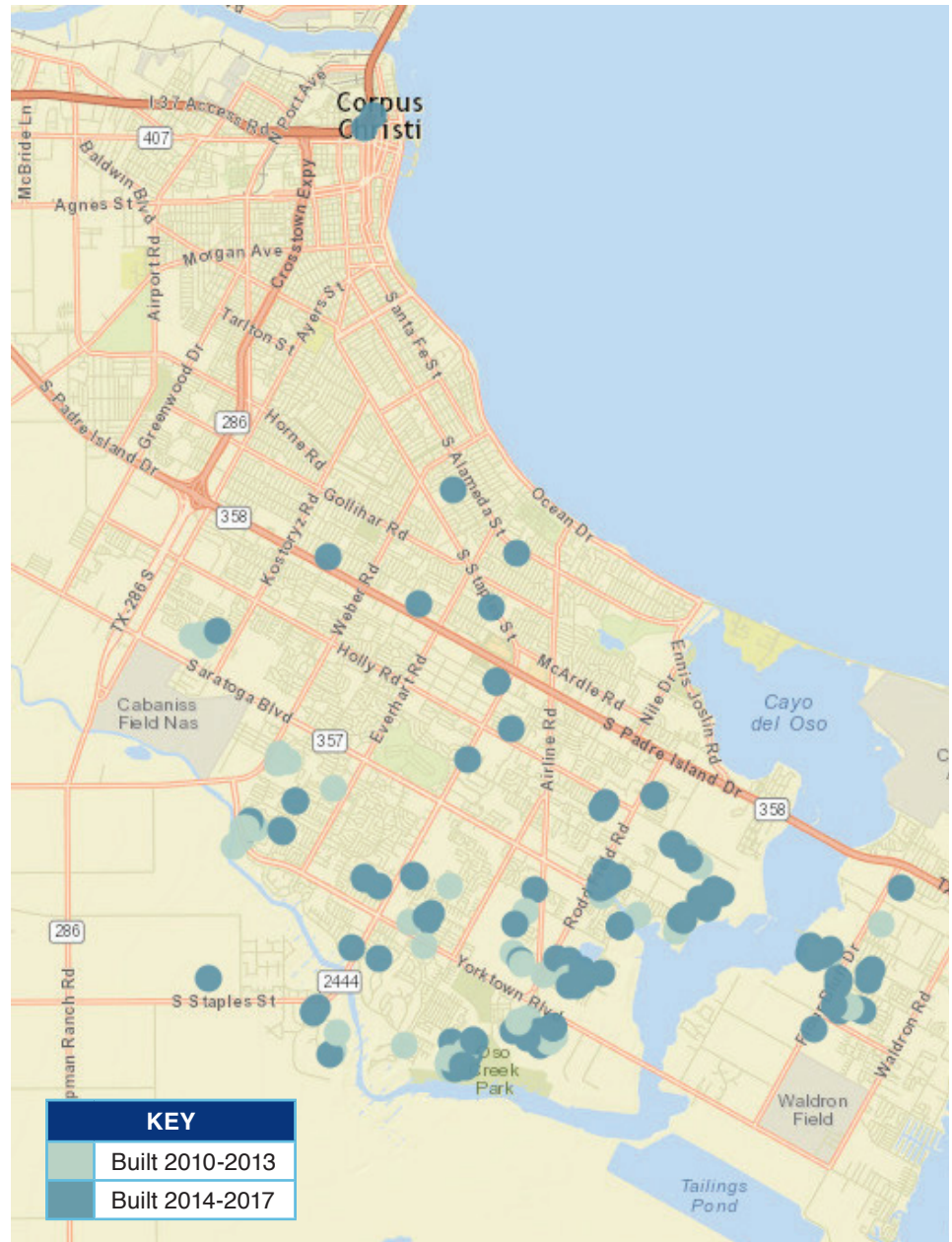
New for-sale housing tends to cluster south of downtown, in the neighborhoods along Oso Creek and Oso Bay, as well as in Flour Bluff.

Given the significant number of beaches and small barrier islands, the Corpus Christi MSA is a seasonal tourist destination, which is evident by the fact that in 2010, 4.7% of the housing stock in the MSA was designated for seasonal use or second homes, compared to the state overall at 2.1%.

The large concentration of seasonal homes likely results in slightly inflated for-sale housing prices in the MSA, and a continually rising affordability ratio, i.e. home prices are rising faster than incomes. However, in the aftermath of Hurricane Harvey, it is unclear how home prices and seasonal ownership will change going forward.

The Downtown TIRZ #3 has the potential to have both a large full-time population as well as have additional support from seasonal owners or renters. Historically, only about 1.2% of the housing stock in the TIRZ #3 has been for seasonal use, though this could increase if additional amenities and services are delivered in the area. With more supply of for-sale housing as well as rental units, downtown is well-positioned to be a vibrant, emerging urban core.

Sample of For-Sale Home Listings Built Since 2010
Corpus Christi, TX; 2010-2017



SOURCE: Redfin (November 2017); Texas A&M Real Estate Center; Moody's Economy.com; ESRI Business Analyst; RCLCO

Resale Housing Market Overview

There is a healthy stock of resale housing in the Corpus Christi MSA, with resale transactions in line with the last real estate cycle (2001-2007), averaging about 4,750 transactions annually between 2010 and 2016.

In the past few years, months of inventory has been in line with the typical equilibrium level of 5-6 months. The long-term average of nine months is above typical equilibrium levels, which suggests that historically there has been an excess of resale product in the Corpus Christi market, possibly due to seasonal home listings along the coast.

Although resale home prices stagnated during the recession, there has been significant growth in home prices in the past five years, which was aided by the large influx of employment growth caused by the oil boom. Despite the decline of oil prices, home values have continued to rise. Between 2012 and 2017, the MSA median resale price increased by approximately 30% while MSA median household income only increased by 16%, significantly impacting affordability in the local market.

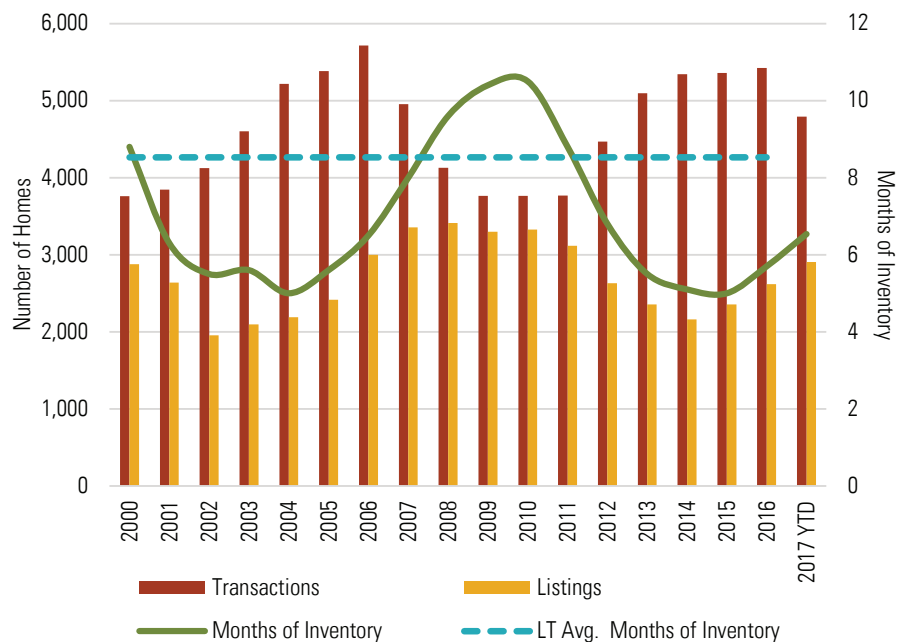
The median resale price in the MSA was \$185,000 in 2016. Assuming the average national down payment of 11%, RCLCO estimates that a household with an annual income of approximately \$65,000 could afford the median home price.¹

Downtown For-Sale Residential Demand

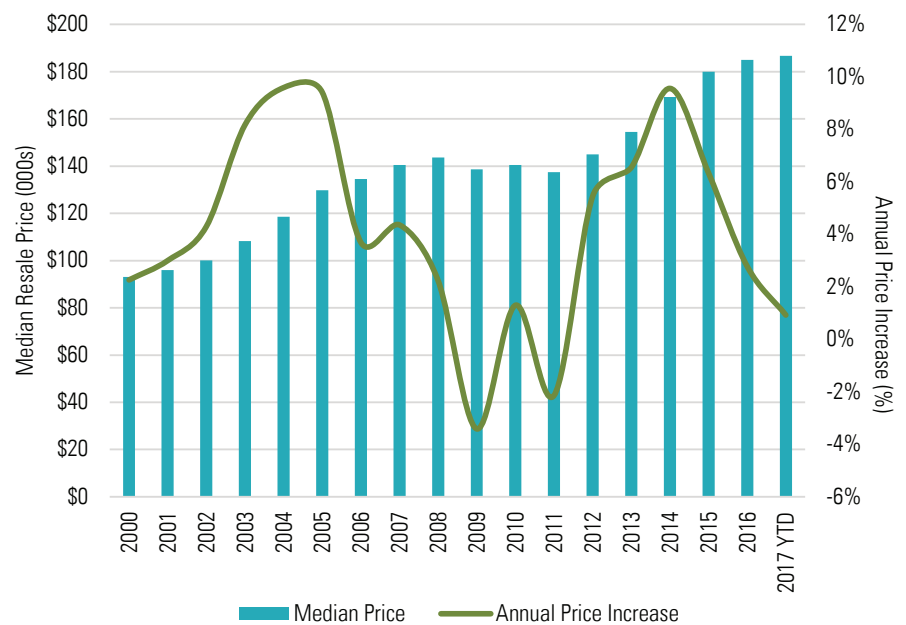
Currently, there are only about 200 owner households living within the TIRZ #3 in downtown Corpus Christi. This represents a 0.15% capture of homeowners across the MSA; if this share of owners were to stay consistent with historic trends, downtown would expect very little demand for for-sale residential product (see demonstrated demand).

¹Mortgage Assumptions Assumes a 30-year, 4.25% fixed rate mortgage and an 11% down payment with a 0.75% PMI rate. Additionally, calculations factor in a property tax rate of 2.55%, homeowners insurance of more than \$2,000 annually, and \$450 in other monthly household debts.

Existing Home Transactions, Listings, and Months of Inventory; Corpus Christi MSA; 2000-November 2017



Median Resale Home Values; Corpus Christi MSA; 2000-November 2017



NOTE: There is limited data available for the Corpus Christi Local Market Area (LMA). With a difference of only 1%-3% in median home prices between the MSA and LMA, and the fact that only two complete years of inventory data are available for the LMA, RCLCO believes the MSA provides more insight than the local market area.

SOURCE: Texas A&M Real Estate Center; RCLCO

However, without constraints on for-sale housing supply, national survey data indicates that about 6% of owner households would likely choose to live in an urban, downtown environment.

There is some variation in owners' indicated preferences to live downtown depending on age and income. Therefore, RCLCO segmented estimated annual demand for downtown for-sale product into categories. It should be noted that buyers with children, or families, demonstrate similar proclivities to live downtown as other home buyers.

RCLCO recommends that the Corpus Christi TIRZ #3 should aspire to capture demand for up to 121 for-sale units annually, the estimated demand for for-sale product is based on national preference data, restricted to households with household incomes over \$35,000. Demand in the first five-years is likely below the long-term 10-year demand, as the area needs to establish itself as an appealing residential neighborhood through the introduction of rental housing and services.

RETAIL + OFFICE MARKET OVERVIEW

Retail Market Overview

Retail in the Corpus Christi MSA overwhelmingly consists of highway or major corridor-oriented retail, especially along Highway 358.

With a lack of recent deliveries, overall retail vacancies have been shrinking since the Great Recession.

According to data from CoStar, overall Corpus Christi MSA rents have stayed relatively consistent, hovering near \$12 per square foot (NNN¹) since 2012, with annual averages fluctuating slightly between \$11.50 and \$12.85 over this same time period.

¹A triple net lease (NNN) is a lease agreement where the tenant is responsible for the ongoing expenses of the property, including real estate taxes, building insurance, and maintenance, in addition to paying the rent and utilities.

SOURCE: ESRI Business Analyst; CoStar; RCLCO

10-Year Demand for For-Sale Units, by Age and Income Corpus Christi TIRZ #3

INCOME	UNDER 35 YOUNG PROF.	35-54 MATURE PROF. / FAMILIES	55+ EMPTY NESTERS	TOTAL
\$35,000-\$50,000	50	48	26	124
\$50,000-\$75,000	78	101	35	214
\$75,000+	406	401	95	902
Total \$35,000+ Demand	534	550	156	1,240

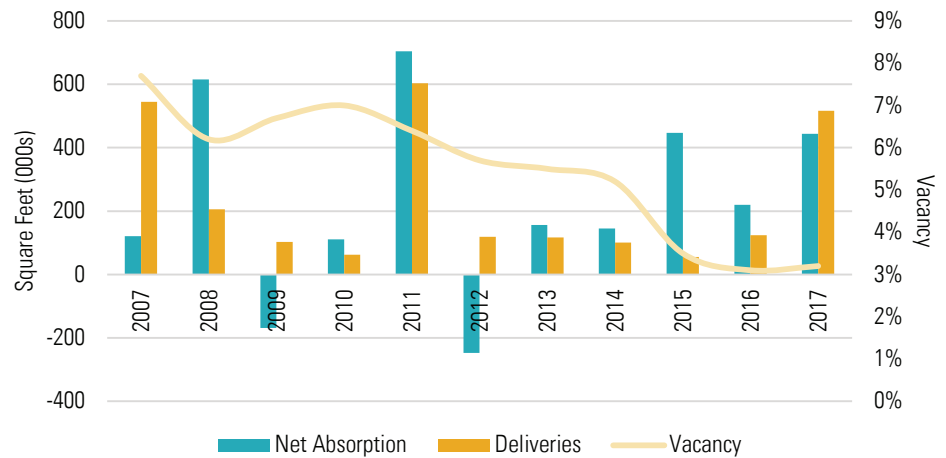
Demand for For-Sale Housing Units Corpus Christi TIRZ #3

	10-YEAR AVERAGE ANNUAL	5-YEAR DEMAND*	TOTAL 10-YEAR DEMAND
Demonstrated Demand	2	10	20
\$35,000+ National Preferences Demand	124	610	1,240

NOTE: The projected 5-year demand is less than the 10-year on an annual basis, since demand is projected to increase over the long-term.

SOURCE: US Census American Community Survey 2012-2015; ESRI Business Analyst; National Association of Realtors – 2011 Preference Survey; RCLCO

Retail Net Absorption, Deliveries, and Vacancy Corpus Christi, TX MSA; 2007-2017



The largest retail cluster is La Palmera Mall, located along Highway 358, which offers over 100 restaurants and shops with over one million square feet of retail space. The adjacent Sunrise Mall offers an additional 700,000 square feet of retail; however, after a period of high vacancies and eventual foreclosure in 2008, the Sunrise Mall is likely in need of redevelopment.

Downtown Retail Opportunity

Given the lack of recent retail deliveries in the MSA and limited existing neighborhood-serving retail in the TIRZ #3, there is an opportunity for a limited amount of neighborhood retail development downtown, contingent on the addition of new investment and household growth.

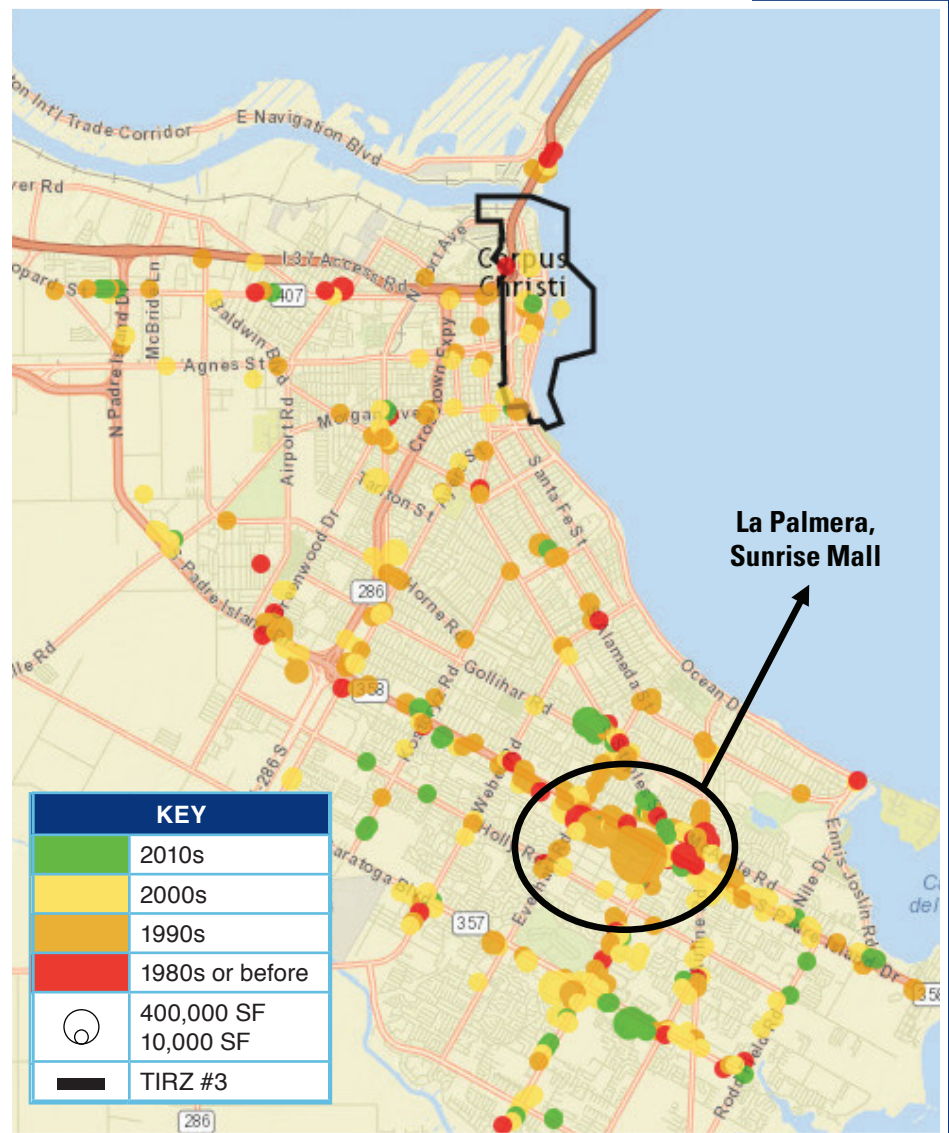
Most of the existing retail in the TIRZ #3 is supported by seasonal visitors, convention attendees, and shoppers who do not reside downtown, illustrated by the surplus of retail spending in the chart below. Although there is a small cluster of retail in the TIRZ #3 south of Interstate-37 in the Marina Arts District, there are only two restaurants in the SEA District to the north, where many key attractions and hotels are located.

Currently, there is a deficit of key neighborhood retail services downtown, with no pharmacy or grocery located in the TIRZ #3 to serve local residents. Therefore, if the TIRZ #3 realizes the forecasted demand for new households, the TIRZ #3 area can expect to capture a modest amount of neighborhood retail, up to approximately 23,000 to 25,000 square feet in the next five years, with support for an additional 25,000 to 27,000 square feet in the five to ten-year timeframe.

This addition of retail would help limit the retail leakage over the next five years with a small market/grocery, and result in demand for a few additional restaurants, cafes, or other small retail establishments. This demand is based on household spending patterns and the ratio of new retail space demanded per new household in the MSA.¹ Most of the potential market demand is concentrated in the Marina Arts District area of the TIRZ #3, where there is more demand for households and a higher concentration of employees, with more limited retail opportunities in the SEA District over the next five years until infrastructure improvements are complete.

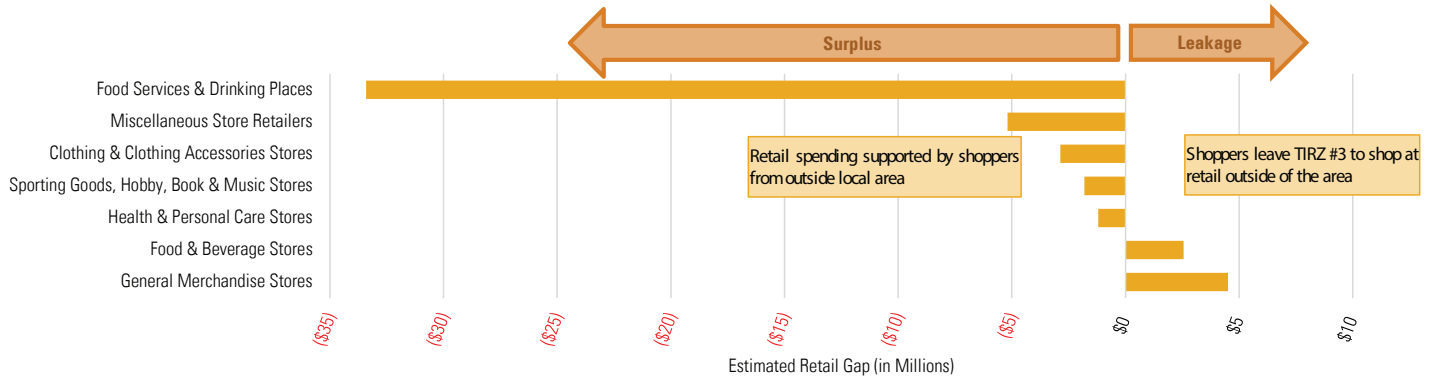
¹ Households typically spend about a third of total retail spending on neighborhood retail, which includes good purchased in brick and mortar stores outside of major malls, lifestyle centers, and power centers. On average, there has been 53 square feet of new retail space per new household in the Corpus Christi MSA between 2012-2016.

Map of Existing Retail Properties by Year Built Corpus Christi MSA



SOURCE: ESRI Business Analyst; CoStar; RCLCO

Retail Surplus and Leakage; TIRZ #3, Corpus Christi; 2017



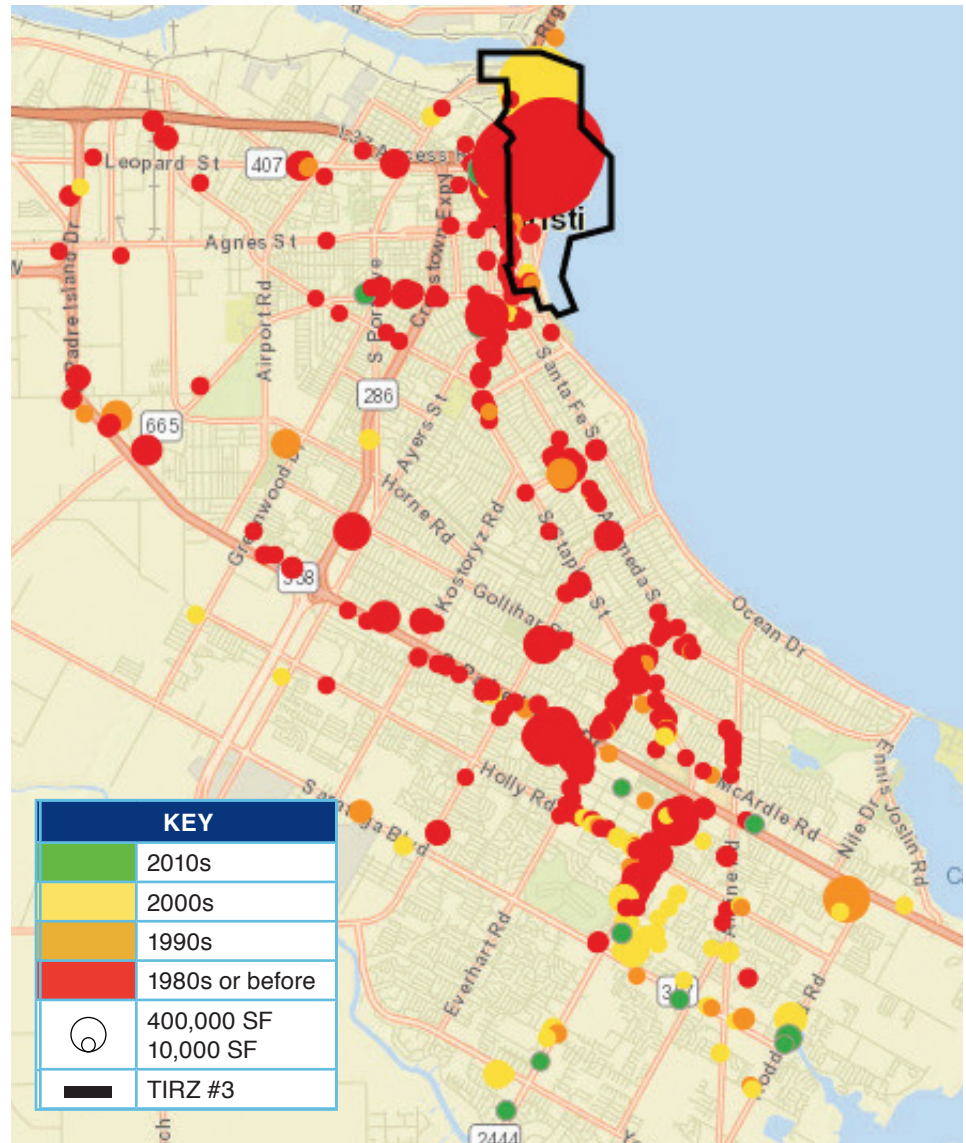
SOURCE: ESRI Business Analyst (2017) – Retail Expenditures; CoStar (2017); RCLCO

Office Market Overview & Opportunity

As the most significant employment core in the Corpus Christi MSA, the downtown TIRZ #3 accounts for about four million square feet of the ten million total office square feet in the Corpus Christi MSA. Despite this large concentration of office space, the majority of existing downtown office space was constructed before 1990. Additionally, The Corpus Christi MSA has added limited new office space in recent decades given the clustering of employment in industries requiring limited traditional office space, such as the education and healthcare, construction, manufacturing, transportation, and leisure and hospitality sectors. Furthermore, Corpus Christi Regional Economic Development Corporation lists four target industries going forward, including specialty steel production, oil and natural gas, aerospace, and entrepreneurship and small businesses, none of which are significant users of new, “Class A” office space.

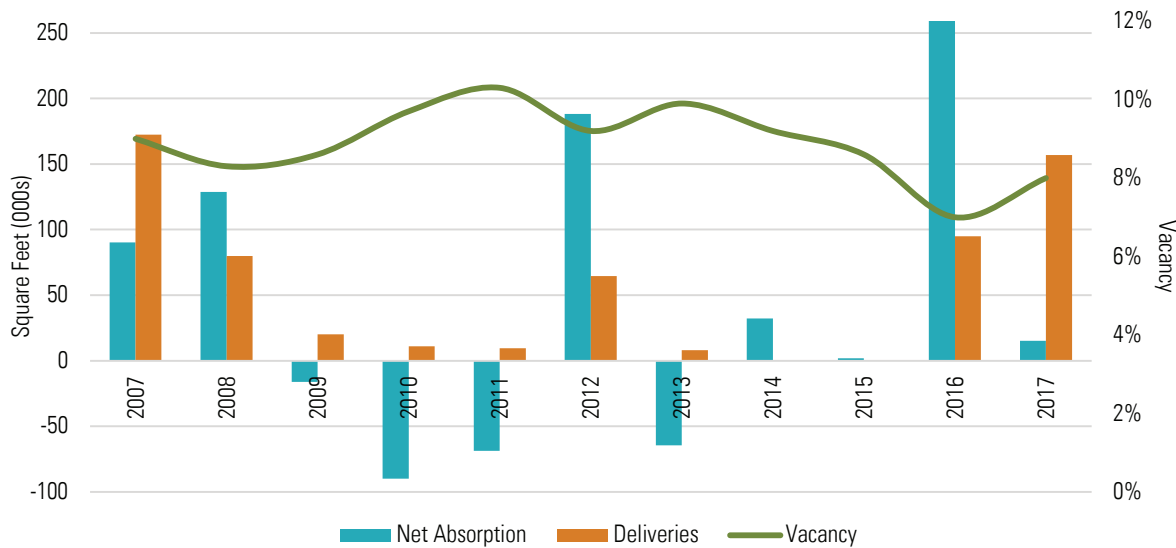
Therefore, the opportunity for new, office space in TIRZ #3 is likely limited going forward, especially given the significantly higher office rents that would need to be achieved to support new construction.

Map of Existing Office Properties by Year Built Corpus Christi, TX MSA; October 2017



SOURCE: CoStar (2017); RCLCO

Office Net Absorption, Deliveries, and Vacancy Corpus Christi, TX MSA; 2007-2017



SOURCE: CoStar (2017); RCLCO

Based on the historical capture of absorption in TIRZ #3, the area could support up to 50,000 square feet over the next five years, with support for approximately 70,000 square feet over the next five to ten years;¹ though this is contingent on more households moving to the area and the delivery of neighborhood services. Most of the modest demand for this office would be concentrated in the Marina Arts District of the TIRZ #3, especially in early years.

EMPLOYMENT CONCENTRATIONS IN DOWNTOWN CORPUS CHRISTI

Downtown Employment: Geographic Information Systems Analysis

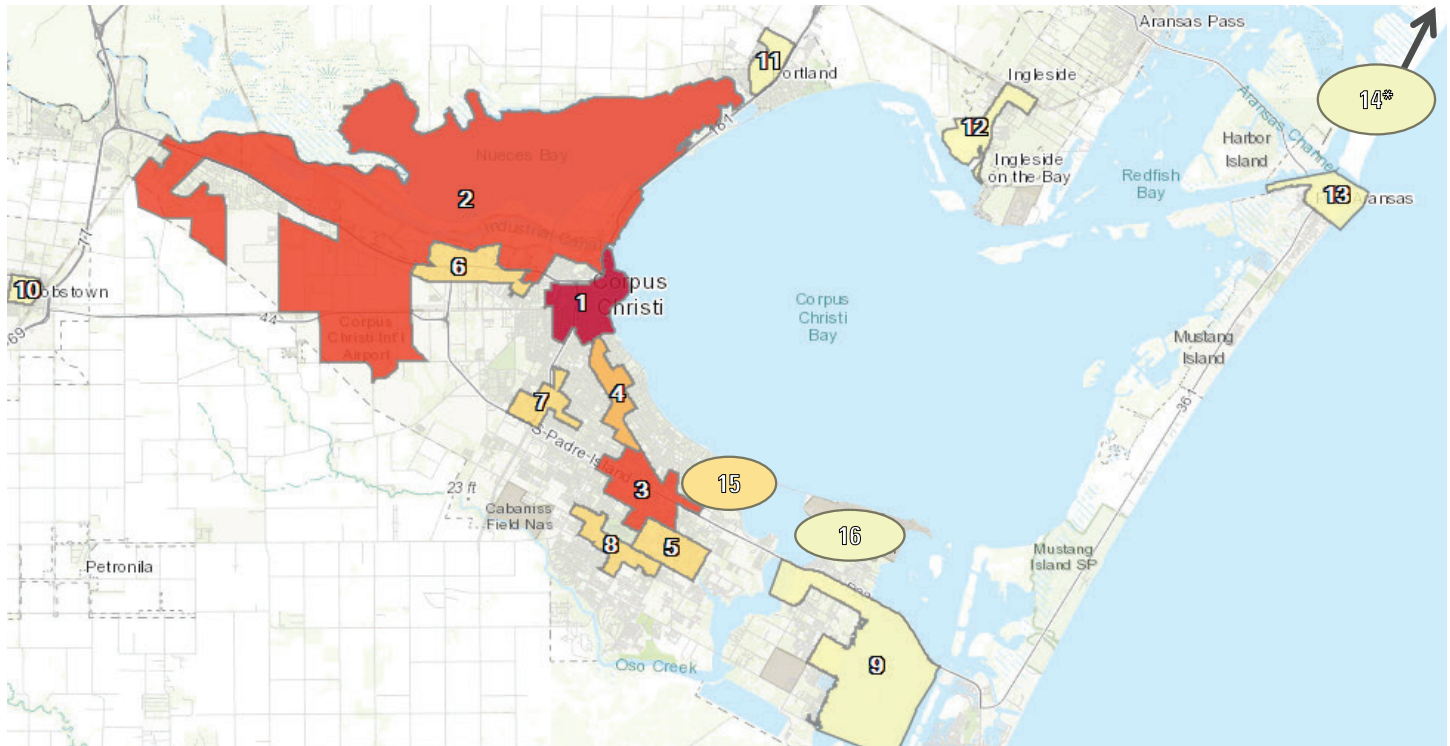
After the discussion with City Council, staff, and key stakeholders, RCLCO believed it would be helpful to provide some clarification on several questions and concerns raised about the concentration of employment in Downtown Corpus Christi as well as the takeaways from one active apartment project.

RCLCO's employment cores map for the Corpus Christi Region represents the most recent 2015 US Census Bureau Longitudinal Employer-Household Dynamics data on local employment by block group. RCLCO's employment cores are based on a GIS analysis of employment densities of US Census block groups;² therefore, geographic definitions may be untraditional and slightly different from definitions used by other organizations in the past. The US Census' data is aggregated from administrative records and therefore employees may be counted at the location of the corporate or public headquarters instead of satellite offices or campuses and vice versa, depending on data collection methods. Without a comprehensive local survey of all employers in Downtown Corpus Christi, the US Census provides one of the most accurate estimates for employment on a local level.

¹ This is based on the TIRZ #3's share of MSA office absorption from 2012-2016, excluding years where office absorption in the TIRZ #3 was negative.

² The US Census Bureau defines "Block Groups" as "statistical divisions of census tracts, [that] are generally defined to contain between 600 and 3,000 people, and are used to present data and control block numbering." The employment cores map is comprised of aggregated block groups. Downtown/Uptown is defined by block groups 483550010001 through 483550013002 and 483550064002.

GIS Employment Cores Map, Corpus Christi, TX



* Rockport not shown on map for scale and quality enhancements; The Flour Bluff employment core (#9) includes some sections that overlay over water given census geographical boundaries.

SOURCE: U.S. Census Bureau - Longitudinal Employer-Household Dynamics (2015); RCLCO

MAP KEY	CORE NAME	2015 JOBS	
1	Downtown/Uptown	~20,000	20,000+
2	Joe Fulton Trade Corridor	18,100	15,000 - 20,000
3	La Palmera/Sunrise	15,600	10,000 - 15,000
4	Staples St.	5,600	5,000 - 10,000
5	Airline Medical	4,600	2,500 - 5,000
6	I-37/Hwy 358	3,700	< 2,500
7	Crosstown/S. Padre	3,000	
8	Saratoga/Staples	2,700	
9	Flour Bluff	2,500	
10	Robstown	2,100	
11	Portland	2,100	
12	Ingleside	2,000	
13	Port Aransas	1,500	
14*	Rockport	1,400	
15	Texas A&M Corpus Christi	1,180	
16	Naval Air Station	4,500	

Downtown Employment: Zip Code Approach

In order to provide a second data point that supports these original employment estimates, RCLCO utilized a different methodology to estimate the number of employees working in Downtown Corpus Christi. Instead of using the cores identified in the employment core map on the previous page, which were identified based on a GIS analysis of employment density, RCLCO performed this second analysis specifically on the 78401 zip code to provide a more standardized geography.

As of November 2017, the 78401 zip code contains over four million square feet of occupied office space according to CoStar. Assuming a range of occupied office space per office-using employee of 379 square feet (the Corpus Christi MSA-wide ratio which is likely overly conservative) and a more normalized ratio of 300 square feet, RCLCO estimates a range of 10,700 to 13,500 office-using employees in the 78401 zip code alone.

However, given the large concentration of tourism, service, and healthcare professionals, RCLCO assumes that only 50% of employment in Downtown Corpus Christi is office-using employment, which equates to 21,000 to 27,000 total employees in the 78401 zip code (for reference the MSA ratio of office-using employment is 14%). Running several sensitives on this analysis, even if office space in the 78401 zip code had a vacancy rate closer to 30%, a hypothetical anomaly for traditional central business districts across the US, total employment would still range between 16,000 to 20,500 in the 78401 zip code alone.

Estimated Employment Using Occupied Office Space (Vacancy Rate as of November 2017)

ESTIMATED EMPLOYMENT IN 78401			
Total Office Square Feet (2017)	4,405,125		
Vacancy Rate (Nov. 2017)	7.7%		
Occupied Office Square Feet (2017)	4,063,837		
Office Square Feet per Employee	300	350	379
Total Office-Using Employees	13,546	11,611	10,712
Share of Office-Using Employment	50%		
TOTAL ESTIMATED EMPLOYEES	27,092	23,222	21,424

Estimated Employment Using Occupied Office Space (Extreme Vacancy Scenario)

ESTIMATED EMPLOYMENT IN 78401			
Total Office Square Feet (2017)	4,451,660		
Vacancy Rate (Assumption*)	30.0%		
Occupied Office Square Feet (Assumption)	3,116,162		
Office Square Feet per Employee	300	350	379
Total Office-Using Employees	10,387	8,903	8,214
Share of Office-Using Employment	50%		
TOTAL ESTIMATED EMPLOYEES	20,774	17,807	16,428

NOTE: *See the last sentence in the last bullet for additional details.

SOURCE: CoStar (2017); Moody's Economy.com; ESRI Business Analyst; RCLCO

Downtown Employment: Economic Framework Market Analysis

The Economic Framework Market Analysis, provided by the City of Corpus Christi, uses the same source for office data as RCLCO, which is CoStar. Though it is unclear how exactly the W-ZHA report defines the CBD, the 78401 zip code is likely relatively similar. With that said, the W-ZHA report shows approximately 4.5M square feet of available office space* in the CBD, similar to the 4.4M of total (occupied and vacant) office space identified by CoStar in RCLCO's analysis .

Though the W-ZHA report points out several buildings with a high percentage of office space available downtown, which is typically higher than vacant space (see the definition for Available Space below), the overall office availability rate of the nine properties surveyed on Page 12 of the W-ZHA report equates to only 16%. These properties are all included in RCLCO's analysis as well.

**NOTE: CoStar defines available office space as the total amount of space that is currently being marketed as available for lease or sale in a given time period. It includes any space that is available, regardless of whether the space is vacant, occupied, available for sublease, or available at a future date.*

SOURCE: City of Corpus Christi; RCLCO

W-ZHA Report Exhibit, Page 12

Office Sub-Market Statistics Corpus Christi Office Market 4th Quarter 2013		
Sub-Market	Sq. Ft.	
Central Business District	4,497,000	46%
South Side	2,213,000	23%
Mid-City	1,486,000	15%
West Side	658,000	7%
Other*	873,000	9%
Total	9,727,000	100%

* The data from the "2013 Texas Metro Market Overview" is not consistent. The "Other" category was created to compensate for total supply discrepancies.

Source: CoStar Group and Burbach Associates; Texas Real Estate Center at Texas A & M University, "2013 Texas Metro Market Overview Data"; W-ZHA

DOWNTOWN EMPLOYMENT: CONCLUSION

Results

In conclusion, after using multiple methodologies to estimate total employment in Downtown Corpus Christi, RCLCO stands by estimates of a strong employment base in the downtown area that makes it the largest employment core in the Corpus Christi MSA. While the exact number of employees is difficult to estimate without a detailed survey of all employers, RCLCO collaborated with the City of Corpus Christi and the Corpus Christi Regional Economic Development Corporation to arrive at an employment figure that is both supported by data and defensible from a local market perspective. To date, this estimate stands at roughly 19,000-21,000 employees in the downtown core. RCLCO recognizes the inherent flaws with national data sets used in the original estimates of employment, but after collaborating with local officials and referencing multiple data sources, RCLCO believes the 19,000-21,000 estimate is conservative and defensible.

Additional Factors & Concerns

RCLCO's analysis for residential demand in Downtown Corpus Christi is based on US Census household characteristics, projected regional household growth, and renter household preferences. While employment concentration is of course an important factor in sizing the opportunity for residential development, RCLCO's residential demand models are based on household projections instead of employment projections.

The success or failures of a single property with a single orientation, product program, and pricing schedule should not be used to address potential demand across the entire market. First entrants into an emerging neighborhood often have mixed results. Additionally, the development of residential properties in a place like Downtown Corpus Christi could help spur additional demand for both office and retail development – employers, particularly office-using employers, are increasingly seeking walkable mixed-use environments to help both attract and retain talent. Furthermore, these types of places are also draws for employers that may not be considering Corpus Christi currently.

CRITICAL ASSUMPTIONS

Our conclusions are based on our analysis of the information available from our own sources and from the client as of the date of this report. We assume that the information is correct, complete, and reliable.

We made certain assumptions about the future performance of the global, national, and local economy and real estate market, and on other factors similarly outside either our control or that of the client. We analyzed trends and the information available to us in drawing these conclusions. However, given the fluid and dynamic nature of the economy and real estate markets, as well as the uncertainty surrounding particularly the near-term future, it is critical to monitor the economy and markets continuously and to revisit the aforementioned conclusions periodically to ensure that they are reflective of changing market conditions.

We assume that the economy and real estate markets will grow at a stable and moderate rate to 2020 and beyond. However, stable and moderate growth patterns are historically not sustainable over extended periods of time, the economy is cyclical, and real estate markets are typically highly sensitive to business cycles. Further, it is very difficult to predict when an economic and real estate upturn will end.

With the above in mind, we assume that the long-term average absorption rates and price changes will be as projected, realizing that most of the time performance will be either above or below said average rates.

Our analysis does not consider the potential impact of future economic shocks on the national and/or local economy, and does not consider the potential benefits from major “booms” that may occur. Similarly, the analysis does not reflect the residual impact on the real estate market and the competitive environment of such a shock or boom. Also, it is important to note that it is difficult to predict changing consumer and market psychology.

As such, we recommend the close monitoring of the economy and the marketplace, and updating this analysis as appropriate.

Further, the project and investment economics should be “stress tested” to ensure that potential fluctuations in revenue and cost assumptions resulting from alternative scenarios regarding the economy and real estate market conditions will not cause failure.

In addition, we assume that the following will occur in accordance with current expectations:

- » Economic, employment, and household growth.
- » Other forecasts of trends and demographic and economic patterns, including consumer confidence levels.
- » The cost of development and construction.
- » Tax laws (i.e., property and income tax rates, deductibility of mortgage interest, and so forth).
- » Availability and cost of capital and mortgage financing for real estate developers, owners and buyers.
- » Competitive projects will be developed as planned (active and future) and that a reasonable stream of supply offerings will satisfy real estate demand.
- » Major public works projects occur and are completed as planned.

Should any of the above change, this analysis should be updated, with the conclusions reviewed accordingly (and possibly revised).

GENERAL LIMITING CONDITIONS

Reasonable efforts have been made to ensure that the data contained in this study reflect accurate and timely information and are believed to be reliable. This study is based on estimates, assumptions, and other information developed by RCLCO from its independent research effort, general knowledge of the industry, and consultations with the client and its representatives. No responsibility is assumed for inaccuracies in reporting by the client, its agent, and representatives or in any other data source used in preparing or presenting this study. This report is based on information that to our knowledge was current as of the date of this report, and RCLCO has not undertaken any update of its research effort since such date.

Our report may contain prospective financial information, estimates, or opinions that represent our view of reasonable expectations at a particular time, but such information, estimates, or opinions are not offered as predictions or assurances that a particular level of income or profit will be achieved, that particular events will occur, or that a particular price will be offered or accepted. Actual results achieved during the period covered by our prospective financial analysis may vary from those described in our report, and the variations may be material. Therefore, no warranty or representation is made by RCLCO that any of the projected values or results contained in this study will be achieved.

Possession of this study does not carry with it the right of publication thereof or to use the name of "Robert Charles Lesser & Co." or "RCLCO" in any manner without first obtaining the prior written consent of RCLCO. No abstracting, excerpting, or summarization of this study may be made without first obtaining the prior written consent of RCLCO. This report is not to be used in conjunction with any public or private offering of securities or other similar purpose where it may be relied upon to any degree by any person other than the client without first obtaining the prior written consent of RCLCO. This study may not be used for any purpose other than that for which it is prepared or for which prior written consent has first been obtained from RCLCO.

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APPENDIX: STAKEHOLDER SUMMARY

BROADENING STAKEHOLDER CONSENSUS

Throughout the stakeholder interviews, open houses, discussions and presentations, key themes and topics have arisen. While the viewpoints and beliefs on level of investment in Downtown and the greater TIRZ #3 district vary, stakeholders overall felt that Downtown needs to be an area of significant reinvestment, especially in regard to the significant investment surrounding the Harbor Bridge replacement.

During the open house on November 28, 2017, the community was asked “What is the most important project to you?” and then invited to respond in one to three words for the results to be shown on a live stream feed. At the same time, stakeholder participants were invited to visit large-scale project maps located throughout the room to identify projects or areas they liked/supported and those that they did not. This gave the project team the opportunity to talk in more detail about specific project improvements, recommendations and to test the potential for significant infrastructure investments.

The feedback received during this open house reflected many of the same sentiments heard over the past nine months about the need for better connectivity, walkability and safety throughout downtown roadways and neighborhoods. That disconnection was most predominantly felt between the SEA District and the Marina Arts District where the current entertainment destinations require heavy auto-dependency and where the Harbor Bridge project stands to have the greatest impact in terms of street reconnection.

The following is a summary of public comments received during this open house:

Two-Way Conversion

1. Some members of the public expressed opposition to converting any one-way downtown streets to two-way streets. Concerns included the lack of space for large vehicles and delivery trucks to pass each other, the challenge parallel parking creates for people trying to park and trying to pull out of a parking space, and the confusion created when some streets are two-way, and others remain one-way.
2. Other members of the community suggested that the proposal to convert some downtown streets to two-ways should be extended to all downtown streets.
3. A third contingent of residents supported the one to two-way conversion as proposed by the consultant team.



Open House (November 2017)



TxDOT Projects

1. Two community members indicated concern regarding TxDOT's closure of the Lipan Street Crosstown overpass. City staff did have an opportunity to explain that this is not a project that can be changed or influenced as an outcome of this City traffic and planning analysis, and the residents were understanding.
2. Three separate red pins signaled concerns regarding extension of Belden, Power, and Tancahua Streets in the SEA District once the current Harbor Bridge is removed. Neither City staff nor consultants had an opportunity to discuss the concern or concerns to better understand the potential issue/s identified.

Chaparral Street

1. Community members indicated that the intersection of Kinney and Chaparral is confusing and needs to be a prioritized project.
2. Some expressed concern regarding the street width and ability to accommodate two-way traffic.
3. One comment suggested that the signals on Chaparral Street be set to flashing red instead of having the expense of taking out signals and replacing with stop signs.
4. A couple comments received suggested closing a couple blocks of Chaparral to vehicles and making it a pedestrian street only, possibly for special events.
5. One comment noted that special attention needs to be made to work in sections, incrementally in Phase 2 to avoid repeating problems from the first phase of this project.
6. Two red pins signaled general concern regarding the Chaparral Phase 2 project.
7. Two green pins signaled general support for the Chaparral Phase 2 project.

Proposed Infrastructure Projects and Policy Recommendations with Greatest Support

- Water Taxi (8 green pins)
- Pedestrian Improvements (5 green pins)
- Wayfinding (5 green pins)
- Sea Wall (5 green pins)
- Staples Street Extension (4 green pins)
- Agnes/Laredo Gateway (4 green pins)

General

There was some concern expressed by residents regarding the City's ability to efficiently execute infrastructure construction projects.

APPENDIX: ONE - TWO WAY

INTERSECTION CONVERSIONS

ONE TO TWO-WAY CONVERSIONS IN DOWNTOWN - INTERSECTIONS

Street Name	Intersection	Existing Conditions	Improvements*	All-Way Stop Considerations**
Mesquite Street	Belden St.	All-Way Stop	Stripe stop bar for all four approaches. Install stop sign and all way plaque on northbound approach (2). Remove one way signs northbound approach (2).	N/A
	WB IH-37	Signalized Intersection	Stripe stop bar on northbound approach. Stripe lane assignment arrows on all approaches. Install new mast arm, two signal heads, ILSN, VIVD camera for new northbound approach. Move southbound signal heads to line up with the new one lane approach. Remove one way signs on eastbound approach. Adjust the southbound VIVD detection zones. Retime signal.	N/A
	EB IH-37	Signalized Intersection	Stripe stop bar on northbound approach. Stripe lane assignment arrows on all approaches. Install new mast arm, two signal heads, ILSN, VIVD camera for new northbound approach. Move southbound signal heads to line up with the new one lane approach. Remove one way sign on pedestrian pole and remove do not enter sign. Adjust the southbound VIVD detection zones. Install striped or raised bulb out on southwest corner to guide eastbound right turn drivers away from parallel parking spaces. Retime signal.	N/A
	Mann Street	Two-way stop on parking lot exit and Mann St approaches	Stripe crosswalk on southbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove no left turn sign on northwest corner (1) and one way signs on northeast and southwest corners (2). Put pedestrian crossing signs on back of existing ped signs (2).	N/A
	Twigg Street	Stop sign on southbound Mesquite St approach and for westbound right turns on Twigg St, free flow through movement on Twigg St	<p>OPTION 1 - Stripe stop bar on northbound approach. Stripe stop bar and crosswalk on southbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way sign on northeast and southeast corners (2). Install stop sign on northbound approach. Adjust one flasher around to use for the northbound approach. Redesign eastbound approach so that Lower Broadway intersects with Twigg St. Redesign eastbound approach so that Lower Broadway ties into Twigg St and the right turn lane of the eastbound approach no longer needs to be a forced right turn.</p> <p>OPTION 2 - Due to Harbor bridge relocation, free flow movement on Twigg St might not be justified anymore. Consider changing this intersection to an all way stop if warranted. Recommendations listed are for an all way stop: Stripe stop bar on all four approaches. Stripe stop bar and crosswalk on southbound approach due to segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way sign on northeast and southeast corners (2). Install stop sign on east, west and northbound approach. Adjust flashers to all red for all approaches. Redesign eastbound approach so that Lower Broadway ties into Twigg St and the right turn lane of the eastbound approach no longer needs to be a forced right turn.</p>	N/A
	Taylor Street	Signalized Intersection	Stripe stop bar and crosswalk for both north and southbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way (4), no right turn (1), and no left turn (1) signs. Adjust right signal head for southbound approach. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.

Street Name	Intersection	Existing Conditions	Improvements*	All-Way Stop Considerations**
Mesquite Street	Starr St	Signalized Intersection	Stripe stop bar and crosswalk for both north and southbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way signs on northeast and southwest corners. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Peoples St	Signalized Intersection	Stripe stop bar on north and southbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way sign on northeast corner and no left turn sign on northwest corner. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Schatzell St	Signalized Intersection	Stripe stop bar and crosswalk on both the north and southbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Install two signal heads for northbound approach. Remove one way sign on southwest corner. Add one way sign to northwest corner for new northbound traffic to see that Schatzell is only westbound. Add one no right turn to southeast corner. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Lawrence St	Signalized intersection	Stripe stop bar and crosswalk for all approaches with segment and intersection surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove all one way signs (4). Install signal pole and two signal heads on the northwest corner, one signal head on the northeast corner, and one signal head on the southwest corner. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	William St	Signalized intersection	Stripe stop bar and crosswalk on north and southbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way signs on northeast and southwest corners (2). Install two one way signs for northbound traffic to see that William is only westbound. Install left signal head on the northwest corner and remove signal heads for the eastbound approach that is no longer there. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	John Sartain	Signalized intersection	Stripe stop bar and crosswalk on north, south and westbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Install do not enter signs (2) and lane use sign (1) on the eastbound approach for all westbound traffic. Install no left turn sign on northbound approach and no right turn sign on southbound approach. Remove all four one way signs. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Coopers Alley	Two-way stop controlled on Coopers Alley approaches	Four Options - Improvement Concept Exhibits	N/A

Street Name	Intersection	Existing Conditions	Improvements*	All-Way Stop Considerations**
Chaparral Street	Mann St	Two-way stop controlled on Mann St approaches	Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way (4) and no right turn (1) signs.	N/A
	Twigg St	Signalized Intersection	Stripe stop bar and crosswalk on all approaches with segment and intersection surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove DO NOT ENTER signs (2) and install pole and mast arm, two signal heads, radar detection for westbound approach. Adjust existing signal heads and radar detector for new southbound approach. Remove all one way signs (4) and no left turn sign (1). Remove lane assignment sign on eastbound approach mast arm. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Taylor St	Signalized intersection, bulb out on all corners	Stripe stop bar and crosswalk on north and southbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Uncover signal heads for southbound approach. Remove one way (2), no right turn (1) and no left turn (1) signs. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Starr St	Signalized intersection, bulb out on all corners	Stripe stop bar and crosswalk on north and southbound approaches and the crosswalks on the east and west legs with segment and intersection surface improvements. Stripe lane assignment arrows for all approaches. Uncover signal heads for southbound approach. Remove one way signs on northwest and southwest corner for westbound traffic (2). Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Peoples St	Signalized intersection, bulb out on all corners	Stripe stop bar and crosswalks on north and southbound approaches with segment surface improvements. Stripe lane assignment arrows for all approaches. Uncover signal heads for southbound approach. Remove one way sign on southeast corner for eastbound traffic (1). Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Schatzell St	Signalized intersection, bulb out on all corners	Stripe stop bar on all approaches with segment surface improvements. Stripe lane assignment arrows for all approaches. Uncover signal heads for southbound approach. Relocate one way signs on northwest and southwest corners for westbound traffic (2) for southbound traffic. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Lawrence St	Signalized intersection, bulb out on all corners	Modify bulb outs on all corners to allow for two-way traffic on Lawrence St. Stripe stop bar on all approaches with segment surface improvements. Stripe lane assignment arrows for all approaches. Uncover signal heads for southbound approach. Swap out the two 10' ped poles for taller signal poles and install two signal heads for westbound traffic. Remove all one way signs (4). Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.

Street Name	Intersection	Existing Conditions	Improvements*	All-Way Stop Considerations**
Chaparral Street	William St	Signalized intersection, bulb out on all corners	Stripe stop bar on westbound, northbound and southbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Uncover signal heads for southbound approach. Relocate one way signs on northwest and southwest corners for westbound traffic (2) to southbound traffic. Retime signal	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	John Sartain	Signalized intersection	Stripe stop bar and crosswalk on all approaches with segment and intersection surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Uncover signal heads for southbound approach. Install two signal heads for westbound traffic. Remove all one way signs (6). Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Coopers Alley	Signalized intersection, raised bulb out at southeast corner	Stripe stop bar and crosswalk on southbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Uncover signal heads for southbound approach. Stripe for southbound shared left-right turn only lane use. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
Twigg Street	Mesquite St.	Stop sign on southbound Mesquite Street approach for westbound right turns on Twigg St., free flow through movement on Twigg St.	<p>OPTION 1 - Stripe stop bar on northbound approach. Stripe stop bar and crosswalk on southbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way sign on northeast and southeast corners (2). Install stop sign on northbound approach. Adjust one flasher around to use for the northbound approach. Redesign eastbound approach so that Lower Broadway intersects with Twigg St. Redesign eastbound approach so that Lower Broadway ties into Twigg St and the right turn lane of the eastbound approach no longer needs to be a forced right turn.</p> <p>OPTION 2 - Due to Harbor bridge relocation, free flow movement on Twigg St might not be justified anymore. Consider changing this intersection to an all way stop if warranted. Recommendations listed are for an all way stop: Stripe stop bar on all four approaches. Stripe stop bar and crosswalk on southbound approach due to segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way sign on northeast and southeast corners (2). Install stop sign on east, west and northbound approach. Adjust flashers to all red for all approaches. Redesign eastbound approach so that Lower Broadway ties into Twigg St and the right turn lane of the eastbound approach no longer needs to be a forced right turn.</p>	N/A
	Chaparral St	Signalized intersection	Stripe stop bar and crosswalk for both north and southbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove one way (4), no right turn (1), and no left turn (1) signs. Adjust right signal head for southbound approach. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.

Street Name	Intersection	Existing Conditions	Improvements*	All-Way Stop Considerations**
Twigg Street	Water St	Signalized Intersection, bulb out on all corners	Stripe stop bar and crosswalk on east and westbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Use existing signal heads for westbound approach. Remove do not enter (2), one way (5) and no right turn signs (1). Retime signal.	N/A
	Shoreline Blvd	T intersection, stop controlled on the Twigg St approach	Stripe the stop bar and a shared through-right pavement marking arrow on the eastbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Restripe median area of Shoreline Blvd to allow northbound traffic on Shoreline to turn left onto Twigg St. Move yield/one-way signs to southern median instead of at the circle. Install yield/one-way signs at circle for westbound traffic. Remove one way signs on the northwest corner and median of Shoreline Blvd.	N/A
Starr Street	Water St	Signalized intersection, bulb out on all corners	Stripe stop bar and crosswalk on westbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Remove one-way sign (1) and no right turn sign (1) on northbound approach and no left turn signs (2) on southbound approach. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Shoreline Blvd	T intersection, but technically only northbound and southbound approaches, with northbound left turn onto Starr Street.	Stripe stop bar and crosswalk on eastbound approach with segment surface improvements. Install stop sign for eastbound approach. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Restripe median area of Shoreline Blvd to one lane for northbound traffic to u-turn or turn left onto Starr St, and one lane for eastbound traffic to turn left onto Shoreline Blvd. Relocate and rotate yield and one way traffic sign on southern median area of Shoreline Blvd to accommodate new eastbound traffic.	N/A
Peoples Street	Water St	Signalized intersection, bulb out on all corners	Stripe stop bar and crosswalk on new westbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Install two signal heads and VIVD camera for new westbound traffic. Install do not enter signs (2) on northwest and southwest corners facing new westbound traffic. Remove one-way signs (2) on southeast corner. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Shoreline Blvd	Signalized intersection, with bulb out on all corners	Stripe stop bar and crosswalk on eastbound approach with segment surface improvements. Install signal pole, mast arm, two signal heads and VIVD camera for new westbound traffic through the median area of Shoreline Blvd. Stripe lane assignment arrows on all approaches. Restripe median area of Shoreline Blvd to one lane for northbound left turning and westbound through traffic, and one lane for southbound left turning and eastbound through traffic. Remove one way sign (1) and no right turn sign (1) for southbound approach, do not enter sign (1) in striped median area, no left turn sign for northbound approach, and wrong way (1) and right turn only sign (1) for westbound approach. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
Schatzell Street	Water St	Signalized intersection, bulb out on all corners	Stripe stop bar and crosswalk, with shared through-left and right turn only pavement marking arrows for two lanes on westbound approach with segment surface improvements. Stripe shared through-left pavement marking arrow on southbound approach and shared through-right pavement marking arrow on northbound approach. Remove one way signs (4).	N/A
	Shoreline Blvd	T intersection, but technically only northbound and southbound approaches.	Stripe stop bar and crosswalk on eastbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Install stop sign on eastbound approach. Restripe median area on eastbound approach to mimic the existing lane assignment seen on Twigg St at Shoreline Blvd. Relocate stop/one-way signs in circle/median for eastbound approach. Install no right turn sign for southbound traffic. Relocate City Hall sign.	N/A

Street Name	Intersection	Existing Conditions	Improvements*	All-Way Stop Considerations**
Lawrence Street	Lower Broadway	Stop controlled on the northbound Lower Broadway approach, free flow for Leopard/Lawrence eastbound approach	Stripe eastbound approach to transition from two lanes to one lane. Stripe crosswalk, with right turn only pavement marking arrow on westbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Install right turn only (1) and additional do not enter (2) signs for all westbound traffic. Remove one way sign on southeast corner.	N/A
	Mesquite St	Signalized intersection	Stripe stop bar and crosswalk for all approaches with segment and intersection surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Remove all one way signs (4). Install signal pole and two signal heads on the northwest corner, one signal head on the northeast corner, and one signal head on the southwest corner. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Chaparral St	Signalized intersection, raised bulb out at southeast corner	Modify bulb outs on all corners to allow for two-way traffic on Lawrence St. Stripe stop bar on all approaches with segment surface improvements. Stripe lane assignment arrows for all approaches. Uncover signal heads for southbound approach. Swap out the two 10' ped poles for taller signal poles and install two signal heads for westbound traffic. Remove all one way signs (4). Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Water St	Signalized intersection, bulb out on southeast corner	Stripe stop bar and crosswalk on east and westbound approaches with segment surface improvements. Stripe lane assignment arrows for all approaches. Install striped or raised bulb outs. Uncover signal heads for westbound approach. Remove all one way signs (3). Retime signal.	N/A
William Street	Water St	Signalized intersection, bulb out on all corners	Stripe stop bar and crosswalk on westbound approach with segment surface improvements. Remove no left turn (2), no right turn (2), and one way (3) signs. Stripe lane assignment arrows on all approaches. Retime signal.	N/A
	Shoreline Blvd	T intersection, but technically only southbound approach.	Stripe stop bar and crosswalk on eastbound approach with segment surface improvements. Stripe lane assignment arrows for all approaches. Install striped or raised bulb outs. Install stop sign and right turn only on eastbound approach. Remove one way (2) signs for the southbound approach.	N/A
John Sartain Street	Mesquite St	Signalized intersection	Stripe stop bar and crosswalk on north, south and westbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Install do not enter signs (2) and lane use sign (1) on the eastbound approach for all westbound traffic. Install no left turn sign on northbound approach and no right turn sign on southbound approach. Remove all four one way signs. Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.

Street Name	Intersection	Existing Conditions	Improvements*	All-Way Stop Considerations**
John Sartain Street	Chaparral St	Signalized intersection	Stripe stop bar and crosswalk on all approaches with segment and intersection surface improvements. Stripe lane assignment arrows on all approaches. Install striped or raised bulb outs. Uncover signal heads for southbound approach. Install two signal heads for westbound traffic. Remove all one way signs (6). Retime signal.	If all-way stop is warranted, operate as all-way flash with existing signals; City to confirm necessary equipment to function. Otherwise, signal poles can be taken down and replaced with stop signs.
	Water St	Signalized intersection, bulb out on all corners	Stripe stop bar and crosswalk on east and westbound approaches with segment surface improvements. Stripe lane assignment arrows on all approaches. Install two signal heads and VIVD Camera for westbound traffic. Remove all one way (3), no left turn (1), and do not enter (1) signs. Retime signal.	N/A
	Shoreline Blvd	T intersection, stop controlled on the John Sartain St approach	Stripe stop bar and crosswalk on eastbound approach with segment surface improvements. Stripe lane assignment arrows on all approaches. Remove no left turn (1), no right turn (1), one way (1), do not enter (2) signs and left stop sign (1) on the eastbound approach.	N/A

**In addition to the listed improvements, pedestrian facility improvements are needed to meet ADA standards. This study does not go into details of providing these specific pedestrian facility improvements, such as ADA compliant curb ramps, sidewalks, pedestrian signal heads and push buttons, for each intersection and segment.*

***City to perform an all-way stop study for each intersection*

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APPENDIX: ONE - TWO WAY ROADWAY SEGMENTS

ONE TO TWO-WAY CONVERSION - ROADWAY SEGMENTS

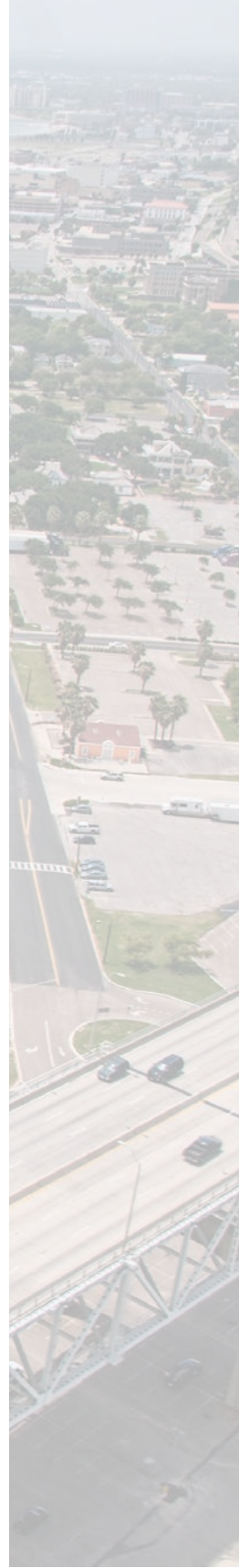
Street Name	Roadway Segment	Existing Conditions	Improvements*
Mesquite Street	Belden to WB IH-37	Two lanes southbound with small right turn bay	Surface improvements, stripe solid double yellow line (270') to have one northbound lane and one southbound through lane and one southbound right turn bay
	WB IH-37 to EB IH-37	Two lanes southbound	Surface improvements, stripe solid double yellow line (85')
	EB IH-37 to Mann Street	Two lanes southbound with two striped on-street parallel parking spots on west side	Surface improvements, stripe parallel parking spots and solid double yellow line (150')
	Mann Street to Twigg Street	Two lanes southbound with four striped on-street parallel parking spots on the west side	Surface improvements, stripe parallel parking spots and solid double yellow line (140')
	Twigg Street to Taylor Street	Two lanes southbound with striped on-street parallel parking spots on both side of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (275')
	Taylor Street to Starr Street	Two lanes southbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (260')
	Starr Street to Peoples Street	Two lanes southbound with striped on-street parallel parking on both sides of the street; loading zone close to intersection	Surface improvements, stripe parallel parking spots and solid double yellow line (280')
	Peoples Street to Schatzell Street	Two lanes southbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (75')
	Schatzell Street to Lawrence St.	Two lanes southbound with on-street parallel parking on east side	Surface improvements, stripe parallel parking spots and solid double yellow line (285')
	Lawrence Street to William Street	Two lanes southbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (265'), rotate parking sign (1) to face the correct direction of traffic
	William Street to John Sartain	Two lanes southbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (265')
	John Sartain to Coopers Alley	Two lanes southbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (495'), remove do not enter sign by Richline building, rotate no parking commercial loading zone sign (1) to face the correct direction of traffic
Chaparral Street	Mann Street to Twigg Street	Two lanes northbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (230'), remove wrong way signs (2)
	Twigg Street to Taylor Street	Two lanes northbound with striped on-street parallel parking on both sides of the street	Surface Improvements, modify angled parking to become parallel parking on both sides of the street, stripe solid double yellow line (290'), rotate parking signs (2) to face the correct direction of traffic
	Taylor Street to Starr Street	One lane northbound with striped on-street angled parking on both sides of the street	Surface improvements, modify angled parking to become parallel parking on both sides, stripe solid double yellow line (300'), rotate no parking commercial loading zone sign (1) to face the correct direction of traffic
	Starr Street to Peoples Street	One lane northbound with striped on-street angled parking on both sides of the street	Surface improvements, modify angled parking to become parallel parking on both sides, stripe solid double yellow line (300')
	Peoples Street to Schatzell Street	One lane northbound with striped on-street angled parking on both sides of the street	Surface improvements, modify angled parking to become parallel parking on both sides, stripe solid double yellow line (190')

Street Name	Roadway Segment	Existing Conditions	Improvements*
Chaparral Street	Schatzell Street to Lawrence St.	One lane northbound with both parallel and angled parking on both sides of the street	Surface improvements, stripe solid double yellow line (305')
	Lawrence Street to William Street	One lane northbound with both parallel and angled parking on both sides of the street	Surface improvements, stripe solid double yellow line (290')
	William Street to John Sartain	One lane northbound with on-street parallel parking on both sides of the street	Surface improvements, modify angled parking to become parallel parking on both sides, stripe solid double yellow line (290'), rotate parking signs (2) to face the correct direction of traffic
	John Sartain to Coopers Alley	One lane northbound with striped on-street angled parking on both sides of the street	Surface improvements, modify angled parking to become parallel parking on both sides, stripe solid double yellow line (440'), rotate 25 mph speed limit sign to face the correct direction of traffic
Twigg Street	Mesquite to Chaparral	Two lanes eastbound, no parking	Surface improvements, stripe solid double yellow line (275'), rotate speed limit (1), no parking (2). Remove traffic signal ahead sign (1) to face the correct direction of traffic. Relocate dual post sign to south side of the street.
	Chaparral to Water Street	Two lanes eastbound, no parking loading zone on south side	Surface improvements, stripe solid double yellow line (290'), rotate 5 min parking signs (2) and private property towing sign (1) to face the correct direction of traffic.
	Water Street to Shoreline Blvd	Two lanes eastbound with on-street parallel parking on both sides	Surface improvements, stripe solid double yellow line (315'), rotate do not enter sign (1) to face Twigg St and no parking sign (1) to face the correct direction of traffic, install do not enter sign (1) at Omni exit for new westbound traffic, remove one way sign (1)
Starr Street	Water Street to Shoreline Blvd	Two lanes westbound with on-street parallel parking on both sides	Surface improvements, stripe parallel parking spots and solid double yellow line (315'), remove one way signs (4)
Peoples Street	Water Street to Shoreline Blvd.	Two lanes eastbound with striped on-street parallel parking on north side, loading on south side	Surface improvements, stripe parallel parking spots and solid double yellow line (310'), remove one way signs (3)
Schatzell Street	Water Street to Shoreline Blvd	One lane westbound with striped on-street parallel parking on both sides on north leg, and two lanes westbound with striped on-street parallel parking on south side of south leg	Surface improvements, stripe parallel parking spots and solid double yellow line on both legs (590'), stripe for two eastbound lanes, one westbound lane that opens up to two and a striped median buffer, remove one way signs pointing left (2), install one way signs pointing right (2) on south leg
Lawrence Street	Mesquite St. to Chaparral Street	One lane eastbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (285'), rotate 2 hour parking sign (1) to face the correct direction of traffic
	Chaparral Street to Water Street	Two lanes eastbound with on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (295')
William Street	Water Street to Shoreline Blvd.	Two lanes westbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (310'), remove one way sign (1)

Street Name	Roadway Segment	Existing Conditions	Improvements*
John Sartain St	Mesquite Street to Chaparral St	Two lanes eastbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (280'), rotate no parking commercial loading zone sign (1) to face the correct direction of traffic
	Chaparral Street to Water Street	Two lanes eastbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (280')
	Water Street to Shoreline Blvd	Two lanes eastbound with striped on-street parallel parking on both sides of the street	Surface improvements, stripe parallel parking spots and solid double yellow line (320'), remove one way signs (3), remove lane assignment sign (1)

** In addition to the listed improvements, pedestrian facility improvements are needed to meet ADA standards. This study does not go into the details of providing these specific pedestrian facility improvements, such as ADA compliant curb ramps, sidewalks, pedestrian signal heads and push buttons, for each intersection and link.*

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GATEWAY
PLANNING