

## THE TRINITY UPTOWN PLAN

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## THE TRINITY UPTOWN PLAN

Between 2001 and 2003, a comprehensive plan was developed for the entire 88 miles of river and major tributaries in the greater Fort Worth area. Known as the Trinity River Vision Plan, this planning process was sponsored by the Tarrant Regional Water District and the Streams and Valleys Committee, in association with south by Belknap Street. In addition, the adjoining districts and the City of Fort Worth, Tarrant County, and the US Army Corps of Engineers. The planning process involved extensive collaboration with numerous stakeholders throughout the city. In October 2003, the Trinity River Vision Plan was adopted by the City of Fort Worth and is now included in the City's Comprehensive Plan.

One important segment of the Trinity River Vision Plan is the "Central City Segment", now called Trinity Uptown. Due to its unique engineering and urban development implications, a more thorough study of this area has been carried out over the past year. This report is designed to summarize the findings and recommendations of this work.

Central to the Trinity Uptown Plan is a bypass channel to carry flood waters around an 800 acre area immediately north of downtown Fort Worth. The Trinity Uptown Plan proposes an urban lake, with a publicly accessible waterfront and a mix of urban land uses. These exciting components will focus attention back to the central city and encourage citizens to live, work, play and learn in this urban setting. The area has the potential to attract over 10,000 households and an additional 3,000,000 sq ft of commercial, educational, office, and civic spaces. In today's dollars, this would add well over \$2.1 billion dollars to the local property tax base over a 50 year build-out period. Parks, schools, transportation improvements, environmental restoration, water quality management and other civic amenities are also included in the plan.

The Trinity Uptown Plan includes over 12 miles of public waterfront and associated trail systems. To create this waterfront, the Trinity River will be impounded by a hydraulically controlled dam to be located just downstream from Marine Creek. The resulting constant water elevation will allow for boating between the Stockyards area (Marine Creek) and Downtown.

The scope of the Trinity Uptown Plan includes all elements of urban redevelopment, including environmental restoration, land-use plans, transportation planning, urban design guidelines, water quality initiatives, engineering requirements, and recommendations for parks, schools, and other community facilities.

Generally, the more detailed study area is bound on the north by Northside Drive and the Oakwood Cemetery property, to the west by the Fort Worth and Western Railroad and Henderson Street corridors, to the east by Samuels Avenue and to the neighborhoods were all evaluated as the context for Trinity Uptown. An important goal of Trinity Uptown is to complement and link all of the adjoining districts and neighborhoods, such as the Near Northside neighborhoods, the Stockyards District, Oakwood Cemetery, Samuels Avenue Neighborhood, Downtown, and the Cultural District.





## HISTORY

HISTORICAL ROLE OF THE RIVER DEVELOPMENT TIMELINE

## HISTORICAL ROLE OF THE RIVER



1880 map of Fort Worth

The role of the Trinity River in the history of Fort Worth has been profound. Indeed, Fort Worth would not have been located where it is if not for the river. Before settlement arrived, the Trinity Uptown area was a native North Texas landscape. The area was a major riparian greenbelt with water and dense vegetation along its banks. The forested bluffs and river provided a supply of vegetation, fisheries and wild game for Native Americans and incoming settlers. The Trinity River, along with its adjoining habitat, Like in most American cities between 1940 and 1970, residential was critical to sustain the wildlife, including the celebrated buffalo herds. In 1849, the military outpost of Fort Worth was established atop the bluffs, approximately where the Tarrant County Courthouse and Heritage Park are located today. In 1853, the abandoned fort buildings became the beginning of what is now Downtown. For many years the great cattle drives came up the Chisholm Trail (Eastern Trail) through Fort Worth to cross the Trinity River.

1891 bird's eye view of Fort Worth

The arrival of the railroads in 1876 helped assure that Fort Worth would become a major Texas city. Downtown began to flourish as a business and government center. Meat packing, oil and gas industries, and transportation fueled a growing economy. Beautiful homes were constructed along Samuels Avenue, overlooking the river.

and retail growth shifted to the suburban areas. Downtown and the central city remained a strong office and governmental center, but they began to lose much of their residential and retail focus. Fort Worth's Northside, with its stockyards and meat packing plants, flourished during this period. The Trinity Uptown area continued to be primarily industrial, but some of the major industries began to decline and sites became abandoned. During this time, the levee system was completed along the Trinity River. These levees were built to prevent flooding but resulted in

visual and physical barriers to the river. The Stockyards area also went into difficult economic times when the meat packing industries decentralized between about 1950 and 1970.

In recent decades, Downtown has reestablished itself as the office, Uptown area. commercial, and governmental center. Families and individuals wishing to move back to the central city where they can live, work, The potential of the Trinity Uptown concept has been recognized play, learn and shop in a vital urban area have created a substantial and augmented by recent actual and planned developments including Pier 1 Headquarters, RadioShack Headquarters, Trinity market demand for a residential downtown. The Stockyards have been redeveloped as an entertainment and restaurant attraction Bluffs, and the Tarrant County College Downtown Campus. centered around Western Heritage for both tourism and Tarrant County residents alike. The Streams and Valleys Committee, Throughout Fort Worth's history, the Trinity River has played a significant role in the progression of industry, commerce, and working with the City of Fort Worth, the Tarrant Regional Water District and others, has made great strides in improving the Trinity now central city reinvestment. All the while, the Trinity River has Greenbelt with trails, beautification, and other amenities. The remained one of the strongest features, linking Fort Worth together Trinity Uptown portion of the greenbelt remains generally barren and adding to its unique character and environmental quality. and cut off by the levee system. Much of the lands in the Trinity

Uptown area are now vacant or under-utilized. However, the Tarrant Regional Water District, along with the Streams and Valleys Committee, the City of Fort Worth and others, has worked to improve the recreational use of the river through this Trinity

## DEVELOPMENT TIMELINE

The following diagrams below illustrate in the same scale the growth of Fort Worth from its inception. In the 1960's, the city experienced explosive growth as suburban development became possible with the new highway systems. During this period,

Fort Worth was able to maintain an active business core that has recently started to attract new residential development. The Trinity Uptown site offers an attractive alternative to the sprawling suburban development that has shaped much of Fort Worth.



**1850** The bluff on the Trinity River provides a strategic lookout point for the US Army Outpost.



**1895** The cattle drive and railway expansion bring civilian pioneers to Fort Worth. The courthouse establishes order and marks the axis of the city.



**1910** Fort Worth is promoted as a major business hub. The Paddock Viaduct (North Main Street bridge) connects the city across industries thrive, bringing continued the river to the Northside area. The city grows to 17 sq miles.



**1930** Established as an aviation center for training during the war. Oil and other business and urban expansion. The city grows to 62 sq miles.



**1960** After the 1949 flood, the Trinity leads to a decline of the downtown area, particularly in the retail, residential, and entertainment sectors.







som







**1970** Major infrastructure projects River is channelized. Post-war urban sprawl initiated during economic boom, including continued support for cultural projects, highway expansion, DFW airport, museums urban entertainment and downtown and convention center. The city grows to 272 sq miles as retail and new residential development continue the transition to suburban areas.



**1980** Growth of high-tech industry, office development begin the revitalization entire city. A vital urban center attracts of downtown. City leaders like Tandy (now RadioShack), Pier 1, the Bass Family, various banks and others substantially invest in the downtown. Corporate and business growth continue to reinforce the developed. Pier 1, RadioShack, and downtown as a commercial center. The City of Fort Worth and Tarrant County continues to invest in the downtown as a center of government.



2000 Increased road networks, economic growth, cultural diversity and a high index-of-living continue the growth of the people who want to live, work, play, and learn downtown. With the realization of the importance of the downtown, Trinity River Vision and Trinity Uptown are Tarrant County College announce major downtown plans linking to the river. The city reaches an area of 343 sq miles.









## SETTING THE STAGE

OBJECTIVES FOR TRINITY UPTOWN SITE ANALYSIS SITE PHOTOGRAPHS URBAN DESIGN CONCEPTS

## **OBJECTIVES FOR TRINITY UPTOWN**

After years of losing retail and residential development to the suburbs, downtown Fort Worth has been experiencing a growing resurgence of people wanting to move back to the central city. These people are seeking the opportunity to work, play, learn and shop in a vital urban area. The Trinity Uptown Plan envisions providing such areas. Water features, waterfront promenades and related open spaces are used as a way to provide attractive amenities for urban family living.

Fort Worth is joining a North American city movement that is finding strategies to reconnect their citizens and downtowns with their riverfronts. In the past, rivers were treated as dump sites for waste and as dangerous places where floods occurred. This attitude created physical and psychological barriers between urban development and rivers. As a result, rivers have been channelized into sterile, controlled water bodies with limited public access and poor water quality.

Reconnecting to rivers is not only an important sustainability strategy, but also an important urban development strategy to promote compact, mixed-use urban development. With the Trinity Uptown Plan, Fort Worth can continue to be a leader in rediscovering the importance of the central city.

The Trinity Uptown Plan has been guided by the key planning objectives outlined in the following columns.

Reconnect urban Fort Worth to the Trinity River by eliminating the barrier created by the levees. Encourage activity on the water and along waterfront areas.

The new levee configuration can be accomplished with the introduction of a bypass channel. This will allow for the redevelopment of the substantially obsolete and vacant industrial area north of Downtown into a major mixed-use waterfront area centered around the confluence of the West Fork and Clear Fork of the Trinity River. The new Trinity Uptown development will assure that all waterfront and greenbelt areas have continuous public access so that all citizens can benefit from this public and private investment.

Cities that have successfully reconnected with their waterfronts have become the premier places to live and work. In San Antonio, Texas, for example, the River Walk has become very successful in attracting people to the river edge, which in turn has helped to support the many businesses that have located along side it. The River Walk creates an intimate and cool place to be in the hot climate of San Antonio. The shortcomings of River Walk are that it is a destination waterfront lacking any residential development along its edges, as well as being relatively small in size.

Providence, Rhode Island, is another example of how a waterfront can be integrated into the City's life. Here the Providence River provides beautiful walkways, opportunities for water-based activities, and a place for celebrations such as the WaterFire festival. Although some commercial and institutional uses front onto the river edge, residential uses would bring even more activity to the waterfront.

One of the most intensively developed waterfronts in North America is found in Vancouver, British Columbia. In this case, there are a variety of neighborhoods and uses over its many miles of continuous, publicly-accessible waterfront. The waterfront has become not only a powerful amenity for the people who live close to it, but also a regional draw that helps to support the businesses that locate on and near the waterfront. The attraction of living, working, playing and learning near the water's edge has promoted a diversity of water-based activities such as boat houses, and a variety of recreational uses, making water part of people's daily lives.











The Trinity Uptown site is strategically located in the center between Downtown, the Cultural District and Northside/ The Trinity Uptown site is a part of the larger Trinity River Stockyards. This is a unique opportunity to integrate housing into watershed. The Plan incorporates watershed management and the central city. Although mixed-use developments should be environmental restoration strategies that will create a sustainable encouraged throughout the central core, having a concentration urban environment. These water quality and environmental of family-oriented neighborhoods close to these districts will initiatives for Trinity Uptown will complement and reinforce the promote a greater diversity of users for the institutions, businesses planning for water quality now underway at the regional level. and public infrastructure. Focusing on residential development in the Trinity Uptown area will compliment and reinforce the already successful adjoining districts without diluting their respective strengths. Extending the existing street grid and trail system through the Trinity Uptown site will help to seamlessly integrate the site to the city.



1. River Walk, San Antonio 2. Providence River, Rhode Island 3. False Creek North, Vancouver

4. Coal Harbour, Vancouver

Create a vital and sustainable Trinity Uptown that links Downtown, the Cultural District Area, and the Near Northside/Stockyards Districts.

Provide flood protection for redevelopment areas. Ensure ecosystem restoration and water quality management are integrated into a sustainable urban environment for the enjoyment of all citizens.



conceptual diagram of valley storage and environmental restoration areas

other three nodes

Attract over 10,000 new households to the Trinity Uptown site. Create compact mixed-use neighborhoods populated by the diverse demographic make-up reflective of Tarrant County.

Consistent with the City of Fort Worth Comprehensive Plan, the Trinity Uptown Plan will promote mixed-use family-oriented development in this area. In addition to residential developments, it is important that other community needs such as schools, community centers, neighborhood shopping and parks be provided. recent City Capital Improvement Program included \$11 million

It is interesting to compare the development patterns of Vancouver, acquired about 40 acres on both sides of the river near the British Columbia, and Fort Worth, Texas, where two very different growth patterns have taken place. Both cities have populations of approximately 550,000. In Vancouver, urban development is constrained by its proximity to the mountains, the ocean and the border. These constraints and related regional planning efforts have resulted in a denser, more compact form of development. Fort Worth, with its prairie context and lack of physical constraints, has developed in a significantly more spread-out pattern. In the diagram below, plans at the same scale show that the population of Vancouver lives in an area about a tenth the area of Fort Worth.

Studies have shown that vibrant urban life is achieved by promoting putting any extraordinary burdens on local government budgets higher density, mixed-use neighborhoods. Infrastructure expenditures for cultural and environmental amenities can then be cost-effectively provided in the inner-city neighborhoods, thereby enlivening the central core at all times of the day and night.

Create a regional inter-governmental financing strategy that includes the Tarrant Regional Water District, the City of Fort Worth and Tarrant County. This financing would be matched by federal and state funds.

In 2003, a Tax Increment Financing (TIF) arrangement for the Trinity Uptown area was established with the agreement of the Tarrant Regional Water District, the City of Fort Worth, Tarrant County, and the Tarrant County College District. The most for parks and streets in the area. Tarrant County College has just courthouse for a downtown campus. The campus acquisition price includes funds for environmental clean-up.

Congress has authorized \$110 million of US Army Corps of Engineer funds for the project. Additional federal funds will come from the Department of Transportation (DOT), the Department of Housing and Urban Development (HUD), the Economic Development Administration (EDA), and the Environmental Protection Agency (EPA).

These financing strategies are designed to accomplish the Plan without and local taxpayers.

Conserve, respect, and interpret the rich history of the confluence of the Trinity River, the birthplace of Fort Worth and Tarrant County.





comparative urban areas for the City of Fort Worth and the City of Vancouver, 2004

These are tangible elements that link the site back to its natural and cultural history. It is important to create a place that continues a sense of Fort Worth as a city connected to its past.

## SITE ANALYSIS

#### LOCATION

The Fort Worth Trinity Uptown planning area is located roughly between Downtown and the Trinity Bluffs to the south, the Fort Worth and Western Railroad to the north and west, and the Trinity Bluffs and Samuels Avenue neighborhood to the east.

#### CLIMATE

Fort Worth is in a subtropical climate, which can result in hot and humid summer days. Shade, water, and breezes therefore become important elements in the design of waterfronts and other outdoor public spaces. Summer nights are generally pleasant, but can sometimes remain very warm and humid, so again a light breeze is important outside. The spring and fall times of the year have moderate to warm temperatures, with mostly beautiful days and nights for outdoor activity. The exception is the strong rain and wind storms that occasionally move through, but these are usually short-lived, lasting only a day or two. The winters are generally mild, but "northers" occur about twice a month, accompanied by drops in temperature, and usually last a couple of days. About two to three times during the winter, periods of snow and ice will occur, lasting about one to three days and followed by rapid melting and pleasant sunny days.

#### GEOLOGY

The site exists on the alluvial flood plain of the Trinity River, with underlying limestone bedrock. The general elevation of the site ranges from 530 to 535 ft above sea level, with the bedrock located 5 to 15 ft below the surface. The 8 ft to 33 ft deep flood plain deposits are made up of clays, silts, sands and gravels. The soils and underlying geology are generally suitable for the construction of mid to high-rise buildings and can support underground parking, with tanking required in some locations.

#### TOPOGRAPHY AND NATURAL FEATURES

The site is a flat flood plain with an average elevation at 533 ft above sea level. The bluff creates the south/southeast edge of the site and rises about 100 ft above the site at the Courthouse. To the north, the land rises more gently up from the Fort Worth and Western Railroad. Oakwood Cemetery sits on this gentle slope up to the Belmont Terrace neighborhood. North Main Street also traverses up this slope, beginning at the railroad and going up to Northside Drive. One of the iconic images of Fort Worth is the view from the Trinity Uptown site towards Downtown, with the courthouse sitting on the forested bluff and the high-rise skyline in the background. This juxtaposition of nature and buildings is a fundamental view that must be preserved and enhanced. The current river surface elevation drops from an average of 520 ft above sea level in front of Pier 1 to 505 ft in front of the Tarrant Regional Water District (TRWD) offices. These elevations have a fluctuation of +\-30 ft from low water to flood water. Controlling these variations and establishing a constant surface elevation allow development to occur both at and adjacent to the water.



#### SIGNIFICANT STRUCTURES

There are several historic buildings/structures on the site which are shown on the adjacent diagram. To the extent feasible, these buildings/ structures need to be retained and integrated into the new plan as they are tangible links to the history of the site. In addition to the historic buildings, there are structures and spaces that are critical to the identity of Fort Worth. These structures are noted on the diagram below and will be integrated into the plan.



#### LINKAGES AND VIEW CORRIDORS

There are good north-south street linkages on the site. North Main Street creates the strong ceremonial/commercial axis that connects the Trinity Uptown site both to central Downtown and to the Northside/Stockyards. Henderson Street creates another strong north-south connection, linking Northside Drive to the west side of Downtown. Both streets are major regional streets, providing connections for the site beyond its immediate context.

White Settlement Road is the only east-west street that comes into the site and connects only as far as Henderson Street. This leaves an east-west gap in the area between Henderson and North Main Street and to the freeways further east. The bluff creates a difficult barrier for road access to the east because of the significant grade change. White Settlement Road must extend through this site to provide a complete east-west connection.

need to be reinforced.



secondary city streets



major buildings significant structures/buildings plaza 📥 bridges

The extensive Trinity River trail system connects through the site, but connections to Downtown

🚥 major city streets 🛛 💻 major view corridors 📼 overhead powerlines 🔵 levees → vehicular access points

🛑 substation

📥 railway

sewer

#### BARRIERS AND MAJOR INFRASTRUCTURE

The major barriers to waterfront access and development are the 5 miles of levees which restrict visual and physical access to the river. The natural bluffs create barriers for vehicular traffic to the east and south.

The Fort Worth and Western Railroad traverses southwest to north-northeast and is generally the western edge of the site. The proposed bypass channel is adjacent and parallel to this railroad because moving or closing the railroad would not be financially or environmentally cost-effective.

It is assumed that the existing overhead power lines will be relocated under the future roadways and the substations will be retained. Where the street grid is modified, it is assumed that the underground utilities will be realigned to suit. Two main sewer lines, shown on the diagram below, will remain in place due to their size and importance. The plan accommodates their alignment.

#### EXISTING LAND USES AND OWNERSHIP

The majority of the privately owned lands are vacant or under-utilized industrial lands. Through the years, many industries have closed or transitioned to marginally productive economic use. However, there remains some viable industries, most of which are adjacent to or close to the North Main Street corridor. The reconstruction of LaGrave Field and its vast surface parking area has a significant influence on the eastern portion of the site.

Approximately 50% of the site area is owned by the Tarrant Regional Water District and the City. This will certainly aid in the financial feasibility of the project. There are approximately 115 private property owners in the Trinity Uptown site.

There are no residential developments within the site area. The Samuels Avenue neighborhood adjoins the site atop the bluffs and there are some apartments under construction west of Henderson Street on Peach Street. The residential quality of life on Samuels Avenue and all adjoining areas will be substantially improved by the Trinity Uptown project.



TRWD

Tarrant County College

park



l∙ railway bridge over the West Fork

2. view looking northwest at the confluence of the Clear Fork and West Fork

3. the Trinity River east of the North Main Street bridge showing the levee as a barrier to the Trinity Uptown site



4. view over the bluff to the TXU Power Plant

5. view over Heritage Park to TXU Power Plant

b. the intersection at North Main Street₁ 2nd to 4th Street looking south

## URBAN DESIGN CONCEPTS

#### Create a controlled water surface

In order to remove the levees adjacent to Downtown and to divert flood waters from the site, it is necessary to build a bypass channel with flood gates. When the flood gates close, the flood waters are diverted from the existing watercourses into the new bypass channel. Constructing a new hydraulically controlled dam east of Samuels Avenue will function to create an impounded water body with a constant elevation of 525 ft above sea level.

Together, these measures create a controlled water body that allows flood-protected walkways and buildings to be established at the water's edge at approximate elevations of 530 ft and 532 ft above sea level respectively.



configuration of the bypass channel and Samuels Avenue dam

Create a variety of water edges similar to a river delta The configuration of the impounded water has been one of the main challenges of the design process. The designs were inspired by Texan delta formations where water channels meander through the land, creating organically shaped land parcels. These organic forms express the forces of slow-moving water. The Trinity Uptown Plan adopted these forms to organize the water and land parcels.

and Downtown.



#### Preserve views of bluff

The massing of the buildings in the area between the Urban Lake and the river will be kept to a maximum height of six stories to preserve views of the bluff from the north and from within the site. High-rise (+/- 20 stories) buildings will be concentrated at the edges of the site at the confluence points of the river. Restricting building heights to 20 stories is important to protect the iconic views of Downtown and the Courthouse on Trinity Bluff.



section showing the view corridor protecting the bluff

#### Integrate the new levees into the urban form

Buildings that front the bypass channel will be built into the side of the levees. Street ends that connect with the top of the levees will gently slope down at 5% to the existing grade. Implementing these two measures will create a bypass channel that is fully integrated into the City and create an amenity space with desirable development lands along its edges.

Create an Urban Lake as a new focal point for the City The new lake is created by the widening of the West Fork. This new focal area will provide the primary identity of the Trinity Uptown site. It will draw together the energy of the confluence, the refurbished TXU Power Plant site, the RadioShack site



options for the river delta configuration



section showing the integration of the levee into the building edge

#### Create distinct mixed-use neighborhoods

The waterways are used as natural edges to define four distinct neighborhoods. Each neighborhood will have its own character and compliment of uses to accommodate daily living. Organizing the site into smaller neighborhoods will reinforce a community spirit.

design evolution of the Urban Lake location and integration of the urban structure



## THE TRINITY UPTOWN PLAN

ELEMENTS OF THE PLAN WATER QUALITY MANAGEMENT STRATEGIES

## ELEMENTS OF THE PLAN

The Trinity Uptown Plan is organized by waterways (bypass channel, Urban Lake, river and canals) overlaid with an extension of the existing street grid. These elements are further articulated by the integration of the open public spaces, the development of a mixed-use land policy and the protection of the bluff as a park and visual feature. Together, these elements create the conditions for the development of diverse neighborhoods, shaped by the uniqueness of the locale and its history. The Trinity Uptown Plan is thus born of its time, place and cultural conditions.

The Trinity Uptown site is divided into four main areas: the North, the Southwest, the Southeast and the Urban Lake. Although seamlessly linked, each area has its own unique character nodes that help to give each area its own identity.

This section describes the basic elements of the plan which include:

- Waterways
- Street network
- Public open space
- Neighborhood design guidelines
- Land-use, density and building heights

#### WATERWAYS

Water is the main theme for the site and is used to create a variety of unique places within the plan. The water and associated landscape will create Trinity Uptown as a unique urban oasis. Existing levees will be eliminated and 12 miles of accessible waterfront trails and promenades will be created.

The course of the Trinity River along the bluff edge will be maintained. The section of the West Fork between the steel truss historic railway bridge and the bluff edge will also be maintained in its general course but reconfigured into the main water feature called the Urban Lake. Flowing from west to east are two new canal courses that create unique environments for the residential areas. All of the water bodies are navigable by kayaks, canoes and rowboats. In addition, small ferries, with a maximum 8 ft clearance, will operate on the main water bodies to link various points. This is similar to the boat clearance provided on the San Antonio River Walk.

1. Trinity River

- 2. West Fork
- 3. Clear Fork
- 4∙ Urban Lake

- 5. TXU Power Plant
- 6∙ LaGrave Field
- 7. TR⊎D Building
- 8. North Main Street
- 9. Henderson Street 10. White Settlement Road 11.Heritage Park 12. Bypass Channel
- 13. Tarrant County Courthouse 14. TCC Downtown Campus 15. RadioShack Headquarters 16. Pier 1 Imports Headquarters



#### The bypass channel

The bypass channel is the central element of the river flood control strategy. It is designed to be an important part of the water character of Trinity Uptown. In addition to its flood control duties, it will be a place to walk, run, rollerblade, ride bicycles, ride horses, and enjoy water activities.

The southwest edge of the bypass channel is formed by three terraced retaining walls. At the top of the levee is a 15 ft wide continuous public walkway. This walkway slopes from a high point elevation of 555 ft above sea level at the confluence of the Clear Fork, to an elevation of 540 ft at the confluence of the Trinity River. The lower walkway is a 30 ft wide terrace with an undulating planted edge allowing for varying walkway widths of between 12 ft and 18 ft. This walkway has a constant elevation of 530 ft. Sections of the walkway will be at an elevation of 526 ft to provide an opportunity to be close to the water and for boat launching and landing. The middle terrace has an average elevation of 542 ft and provides a transition between the top and lower walkways. The terraced walls will be landscaped with shrubbery and trees. Walkways will have pedestrian-level lighting and benches.

The upper walkway is adjacent to a continuous line of residential development. The buildings vary from 6 to 25 stories in height, with the lower units having raised patios fronting onto the walkway. The strategy of having housing overlooking the public walkways is a deliberate strategy to improve public safety by providing informal community surveillance of these areas. Parking is under the buildings in the 20 ft high space between the top of the levees and the existing grade. Through careful integration of housing and streets into the levees, the levees become a seamless part of the city.

Throughout the southwest side, the lower trail will be accessed by stairs at a number of street ends and by ramps at the three flood control gates, the White Settlement bridge, and the North Main bridge. In three locations, pedestrian bridges connect across the bypass channel on the lower level to facilitate a continuous trail system.

The northwest side of the bypass channel is a landscaped sloping levee. This side of the Channel is designed to restore a more natural greenbelt condition in the urban area. A continuous 15 ft wide trail is provided at the water's edge and at the top of the levee. These trails provide a continuity for equestrian and high-speed bicycle traffic. d. Northwest side channel - levee/railway



a. Southwest side channel - access ramp



b. Southwest side channel - courtyard linkage



c. Southwest side channel - street linkage











view along the northwest side of the bypass channel

view along the southwest side of the bypass channel

view of north confluence of the bypass channel and the Trinity River





#### The Urban Lake

The Urban Lake is the focal point for Trinity Uptown. It is here that the greatest variety of uses, both on water and on land, are to be found. It is also the location around which civic festivals and events will be staged.

The shaping of the Urban Lake is governed by a number of forces. The east edge is more urban, radiating from the Courthouse to the historic trellis bridge. This urban edge is interrupted behind the TXU Power Plant in order to bring water views to people travelling along North Main Street. The west edge is curved to pick up the natural meander of the older river. Both edges pinch down at the north end just before the flood gate and again at the south end where the edges meet the old course of the West Fork. This opening and closing of the water space will make for a series of interesting vistas on the water.

A continuous public walkway surrounds the Urban Lake at an elevation of 530 ft above sea level. This walkway has a variety of conditions. At the north end, residential units front onto the water. Here six-story buildings with ground-oriented townhouses front the walkway with raised patios. The walkway is 20 ft wide, with steps leading down into the water at a few locations. Shade trees line the walkway to help mitigate the heat from the summer sun.

The TXU Power Plant site will anchor this area both physically and programmatically with a diverse mix of uses that attract people to the river. Many of the existing structures will be adapted to accommodate these uses. Ideally, the Power Plant stacks will be retained as landmark structures within the mid-rise development. Docks are located here to facilitate the launching and landing of small watercraft.

A large expanse of green space is located between the river and RadioShack's corporate headquarters. A portion of this green space is elevated 16 ft to create a green terrace on the roof of a commercial building at the water's edge. This commercial building will be fronting the new Waterfront Drive with restaurants, shops, and marine facilities to help animate the area.

Piled pavilions hovering above the waterline are proposed. These pavilions allow attractive opportunities for visitors to experience the water in an intimate setting. Expressive and inviting pedestrian bridges will link the downtown side across the Urban Lake to the Trinity Uptown site.



a. Urban Lake - retail edge





b. Urban Lake - mixed-use edge



c. Urban Lake - civic plaza







view of the TXU Power Plant site and the Urban Lake

#### Trinity River and the bluff

At this location, Trinity River has the opportunity to provide a strong contrast between the two banks. On the bluff side, the natural beauty will be preserved and restored. On the opposite bank, a vibrant and diverse urban development will be created.

The course of the existing Trinity River is maintained along the base of the bluff. However, in order to create the opportunity for connections across the river and increase the variety of uses, the width of the river will vary. The south and east banks of the river will be maintained to their current configuration while the north and west banks will be modified significantly to create a variety of spaces. Restoration of the urban forest on the bluff will be an important part of enhancing the natural history and environment of Fort Worth. Parallel to the bluff edge are the proposed new Waterfront Drive and trails. This road will link to the downtown and provide access to recreational opportunities along the bluff. Low-intensity, mixed-use development can be located off of the drive and situated on the river itself.

A node of intense activity will be created where the North Main Street bridge and newly proposed Tarrant County College Campus cross the river. Here, in the condensed space of the college buildings, the bridge and the bluff, a variety of mixed-uses (education, cultural, commercial, residential, etc.) can be integrated with the TXU power plant site. This will be a place of interaction between students, residents, and visitors in an area of small-scale buildings, courtyards and plazas.

Northeast of the new Tarrant County College Campus, the river will be widened to create a neighborhood centered around houseboats and other floating structures. Continuing northeast, the Trinity Uptown Plan envisions mid-rise developments in courtyard forms opening to a natural river edge. The natural bluff edge continues until the river intersects the new Northeast 7th Street bridge. At this point, residential development would be located on both sides of the river.



a. the bluff - Trinity Place



b. housing on the water



c. housing adjacent to wetlands edge



ew of the



view of the Trinity River along the bluff

#### The Canals

Two canals run across the site in an east-west direction. The canals are bisected by the Urban Lake, thereby creating four different canal sections. Each of these sections has distinct characteristics. These smaller-scale water bodies are approximately 50 ft wide.

There are continuous public walkways along the majority of the canal edges, approximately 5 ft above the waterline. The surrounding grades and bisecting streets are adjusted to allow for these continuous walkways. Access to the canal walkways from the street ends or sidewalks is either at grade, down stairs or ramps. Mid-rise buildings with ground-oriented townhouses and raised patios generally front the canals. As well, public parks and schools are located adjacent to the canals.

In the Southwest neighborhood, the canals create a small island. A large neighborhood park, school, and community center built into the existing incinerator plant as well as buildings for other public uses will be located on this island.

In the North neighborhood, the north canal has two main nodes. The first node is where the canal crosses under North Main Street. Here, a plaza is created, opening up views of the canal and providing an opportunity for commercial uses to connect from North Main Street to the canal. The second node is at the LaGrave Stadium. Here, a park is proposed to buffer the canal from larger crowds during game time.

In the Southeast neighborhood, the south canal widens at the point where it crosses under North Main Street. This provides a dramatic view of the Urban Lake. At this location, commercial activity is provided tight to the canal edges. Again further east, the park and school for this neighborhood are located adjacent to the canal.



a. canal near Henderson Street

RETAIL COURTYARD

b. canal plaza near North Main Street

1532



RETAIL COURTYARD

WALKWAY







c. canal through neighborhood



d. canal with adjacent roadway



view from middle flood control gate towards the courthouse



view along the north canal

#### STREET NETWORK

The new street network proposed under the Trinity Uptown Plan builds on the existing Fort Worth network. North Main Street and Henderson Street are maintained as the north-south arterials linking Downtown to Northside Drive and beyond. Northside Drive, in turn, is the east-west arterial providing regional access to the site.

White Settlement Road is the only east-west collector connecting directly onto the site. The current alignment of White Settlement Road is modified into a T-intersection where it crosses Henderson Street. The road then continues until it intersects with North Main Street. To discourage through-traffic to the residential areas east of North Main Street, White Settlement Road then becomes a local street.

To create a link between the proposed Tarrant County College (TCC) campus and North Main Street, North 4th Street is proposed to shift north and a new street (North 3rd Street) is proposed at the base of the North Main Street bridge. This reconfiguration allows for an easterly exit from the proposed campus and direct access to the west side of the campus site. In later phases, as warranted by development patterns and traffic demand, Northeast 7th Street could be extended across the river and connect with Samuels Avenue to create an alternative connection to the northeast.

A new Waterfront Drive is proposed along the south/southeast bluff edge as a scenic pleasure route along the Trinity River. Access to the road would be off of the west end of Pursey Street and from the east end of the new Northeast 7th Street. Subject to further study, this new drive could also be connected to Taylor Street.

#### Street Character

The four main street characters are illustrated on the adjacent page. To enhance the urban character of Trinity Uptown, buildings will be required to build up to their property line in order to establish a strong street wall. Commercial development is continuous at grade with a continuous weather protection canopy. Residential developments will have street-oriented townhouses with raised patios fronting the sidewalks. This form of development encourages "eyes" on the streets and increases security and public safety.

A single row of trees will line all streets. Along North Main Street, a double row of trees is proposed. Where residential patios exist, a second row of smaller trees will be encouraged.



Bridges





- 100 ft right-of-way

Trinity Uptown is essentially an island and it requires bridges to connect it to the mainland. The existing Henderson and North Main bridges are maintained and a number of new bridges are introduced. A major new bridge will be on North Main Street crossing over the bypass channel. This will be an iconic structure marking the entry to the Trinity Uptown site from the north, in the same way that the existing North Main bridge marks the entry from Downtown. Two other major new bridges include the Henderson Street and White Settlement Road bridges over the bypass channel and the railway.

#### Parking

Parking is provided along the street curbs to promote traffic calming and to support mixed-use development. Structured parking is provided for 4,000 cars at LaGrave Field on three city blocks. This parking is concealed with screening around the street edges and mixed-use development on top. At the TXU Power Plant site, on-grade public parking is provided at the base of the North Main bridge and adjacent to the transformer site. Parking for residential and commercial development will generally be on site and underground. Some parking is proposed in the courtyards behind two-level townhouses. This parking will be topped with rooftop terraces. The parking ratios for new developments will be determined in future studies.

- four moving lanes with dedicated curb parking

- 88 ft right-of-way - four moving lanes with curb
- parking at non-peak times
- 78 ft right-of-way
- two moving lanes with
- dedicated curb parking

- 70 ft right-of-way
- Two moving lanes with dedicated curb parking on one side



#### PUBLIC OPEN SPACE Nodes and Linkages

The public open space network is defined by park and plaza nodes connected by various linking spaces such as waterways, streets, trails, and greenways. Approximately 35% of Trinity Uptown is dedicated to public open space. The public open-space nodes include the following:

#### Nodes

Neighborhood Parks There are four major public parks, each associated with a neighborhood. Each park is adjacent to a waterway and has either a school or major recreation/cultural/ institutional facility associated with it. Each park will have its own unique identity. In addition, there are a number of pocket parks that connect people to the water and create relief and recreational spaces for the residential areas.

Plazas There are seven main public plazas. Each plaza connects directly to the water and has a cultural, institutional or commercial use associated with it. Four of these plazas are located around the Urban Lake as follows: a larger ceremonial plaza at the TXU Power Plant site, the RadioShack site plaza, a plaza at the west end of 4th Street and a plaza on the west side of the lake. The three other plazas are located at: the flood gate at the northwest end of the Urban Lake, at the intersection of the north canal with North Main Street, and to the east of the future Tarrant County College Campus. In addition, there are smaller plazas in each neighborhood.

#### Linkages

Connecting these nodes are the following linkages:

**Streets** The streets are the main links between the nodes. All street types are designed to be pedestrian friendly. The description of the different street characters is provided in the preceding Street Network subsection.

Waterways The waterways are the main open space. These waterways have been introduced in the previous Waterways subsection. With enhanced access to the water, a great variety of water-based activities can be supported. All waterways in the Trinity Uptown Plan can accommodate canoe, kayak and low-clearance public excursion boats. Easy-access launching points for these boats are located throughout the site. Public boathouses and marinas are proposed in areas like the TXU Power Plant site and in front of the RadioShack site.



The Urban Lake provides additional opportunities for activities like windsurfing and sailing small-scale boats. With a straight run of approximately 3,000 ft from the RadioShack frontage to the middle flood control gate, some forms of rowing could also be accommodated.

The trail/walkway system Continuous public trails and walkways are provided along the majority of the water edges. A total of 12 miles of new trails and walkways are proposed for the Trinity It is envisioned that small passenger ferries would operate along Uptown Plan. This distance is equivalent to the distance between the Courthouse and Benbrook Lake. The majority of these the main waterways, providing transport to points within the Trinity Uptown site and to destinations such the Stockyards. This trails and walkways will be 5 ft above the waterline. Additional would be a practical and interesting form of transit within the City. walkways are located at the top of the new levees. The trails and walkways vary in character from park-like trails along the bluff The water will become a place for public celebrations. For example, edge and the northwest side of the bypass channel to intensely the July 4th fireworks can be launched from the Urban Lake near urban walkways along the Urban Lake and canals. Numerous the TXU Power Plant. pedestrian bridges connect across the waterways.





view of Urban Lake

Mid-block greenways Throughout the Trinity Uptown are a series of courtyards and pathways linked directly to the residential blocks.

These are semi-public spaces that provide open space for the residents of the individual residential blocks at a pedestrian scale.

view along Henderson Street





junction of Trinity River and canal at bluff

view of north canal

#### NEIGHBORHOOD DESIGN GUIDELINES Character Areas

Four neighborhoods have been identified on the Trinity Uptown site: the North neighborhood, the Southwest neighborhood, the Southeast neighborhood and the Urban Lake. The adjacent diagram illustrates their locations. The diagram on the following page highlights the main elements in each neighborhood. These elements include: parks, plazas, schools/college, commercial/ retail streets and institutional buildings. The combination of these distinct elements will set the character for each neighborhood as follows:

The North neighborhood will be identified primarily with the mixed-use development on the North Main Street corridor. This neighborhood will have great views of the bluffs and Downtown. It will have unique frontages on the bypass channel, the river and the canals. In addition, the activities surrounding LaGrave baseball field will also add to the character of this site.

The Southwest neighborhood will predominantly be a residential neighborhood with a variety of different housing types. The central park in the heart of this neighborhood will be urban in character and will be surrounded by six-story buildings. The "point" created where the bypass channel diverts from the old river course, will have distinctive views of Downtown and the Cultural District.

The Southeast neighborhood will be closely associated with the new Tarrant County College Downtown Campus and its activities. The college building will be closely integrated into the geography of the bluff and will provide a physical link between downtown Fort Worth and the river.

The Urban Lake will be a principal focal point for the entire Trinity Uptown site and as a result it will be a regional attraction. The Lake will be surrounded by a mix of uses including institutional and cultural facilities. This neighborhood will have easy access and great views of Downtown. The historic TXU Power Plant buildings will be preserved to become distinctive landmarks. Also, given the ease of water access, this area will support a wide range of water-based activities.





#### **NEIGHBORHOOD DESIGN GUIDELINES Residential Blocks**

There are six basic city block types illustrated on the adjacent page. The following are general design guidelines shared by all of these types:

- The street grid continues as pedestrian connections to the water edge, even when vehicular traffic may stop before the water. These corridors preserve important views, and assure generous pedestrian access to the waterfront.
- The existing street grid of 220 x 620 ft is maintained and broken down in scale by mid-block semi-public pedestrian passages.
- Buildings form semi-private courtyards accessible primarily by the residents of the development parcel.
- City blocks that front onto the perimeter water edges are generally 200 ft deep x 300 ft wide.
- Setbacks are minimal to create a consistent urban edge definition. Except for some insets for plazas, all urban edges should be defined by building edges.
- Residential units at street level will have raised floor and patio elevations along the sidewalk, with front door entries from the street side.
- Parking will either be under the building footprint or on grade within a courtyard, screened from the street by townhouses and covered with a landscaped roof terrace.

Future studies will provide more detailed guidelines for materials, colors, landscaping, etc. for the different building areas.



#### LAND-USE, DENSITY AND BUILDING HEIGHTS

The Trinity Uptown site is conceived as a mixed-use site organized into four neighborhoods. The 50-year build-out is estimated to be approximately 12 million sq ft of mixed use development with the majority being residential.

As shown on the adjacent diagram and table, each neighborhood has a complete complement of uses including: park, school, cultural facilities, recreational facilities, and retail/commercial space. In the proposed 50-year build-out, it is envisioned that over 9,375 housing units would be built in Trinity Uptown. This housing would cater primarily to families, but would also attract singles, young couples, and empty-nesters. Achieving a residential population of this size in the area between Downtown, the North Side/Stockyards and the Cultural District would provide a strong support base for businesses and activities in those areas as well.

The general building form is the six-story courtyard block. This building form reinforces street-oriented mixed-use development and avoids obstructing views of the bluff from the northside and from vantage points within the Trinity Uptown site. The 20 to 25-story towers are concentrated at the river confluence points in areas A1, A2, and A3. This is done to frame the views of the bluff and to accentuate these points both from the land and from the water. In order to maintain the clarity of the urban design approach, it is important to create strong design guidelines to enforce the plan.



	AV. Gross FAR	Residential Units at 1100 sq ft	Residential Building sq ft	Retail / Commercial Building so	Community Centre / Elememer School / Civic Building sq ft	TCC Campus Building sq ft
HNEIGHBORHOOD						
use – 4 to 24 levels – Predominately residential, support retail	2.2	950	1,045,000	15,000		
use – 4 to 6 levels (higher in select areas, if view corridors shown to tected) – Primarily residential, limited support retail	1.6	1,000	1,100,000	5,000		
use – 4 to 6 levels (higher in select areas, if view corridors shown to tected) – Primarily residential, limited support retail	1.6	900	990,000	15,000		
Main Street Corridor – Predominately office, office warehouse, orhood retail land uses, some residential above – 2 to 6 levels	1.0	200	220,000	630,000		
ve Field – Minor League Baseball Field – 6000 seats, + 80,000 sq ft t Retail, (most games are off-peak hour)				80,000		
use – 4 to 6 levels – Predominately residential, limited support retail	1.6	1,050	1,155,000	30,000		
S		4,100	4,510,000	775,000		

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#### SOUTHWEST NEIGHBORHOOD

-use $-4$ to 24 levels $-$ Predominately residential, limited support retail	2.2	1,000	1,100,000	30,000	
-use – 4 to 24 levels – Predominately residential, limited support retail	2.2	800	880,000		
-use – 4 to 6 levels (higher in select areas, if view corridors shown to be ted) – Primarily residential, limited support retail	1.6	1,055	1,159,400		
-use – 3 to 6 levels – Predominately residential, limited support retail	1.4	800	880,000		
vith adjacent Community Center and possible Elementary School	0.3				80,000
LS		3,655	4,019,400	30,000	80,000

#### SOUTHEAST NEIGHBORHOOD

l-use – 3 to 6 levels – Predominately residential, limited support retail	1.6	800	880,000		
nt County College Downtown Campus – 250,000 sq ft on north-side of 2,500 students (full time equivalent – north of river)		100	110,000		250,000
vith adjacent Community Center and possible Elementary School	0.3			80,000	
LS		900	990,000	80,000	250,000

#### **URBAN LAKE**

n Lake Zone – Mixed-use including civic destinations and urban waterfront ty areas – 2 to 8 levels, about 40% residential and 60% civic/retail	1.5	400	440,000	180,000	150,000
n Lake Zone – Mixed-use including civic destinations and urban waterfront ty areas – 2 to 8 levels, about 40% residential and 60% civic/retail	1.6	320	352,000	160,000	
LS		720	792,000	340,000	150,000

DTALS	9,375	10,311,400	1,145,000	310,000	250,000
D TOTAL sq ft: 12,016,400					



## WATER QUALITY MANAGEMENT STRATEGIES

This section outlines the major water management issues and proposed resolution strategies.

#### FLOOD AND WATER LEVEL CONTROL

The bypass channel is the flood control channel which will divert flood waters away from the developed site through the use of three flood control gates. During normal conditions, these flood control gates are open, allowing water to flow into the site through openings 24 ft wide by 12 ft high, with adjacent pedestrian openings 10 ft wide by 10 ft high. When floods occur, the gates drop, thereby sealing the inner area from the flood waters.

The water level will be controlled by the new Samuels Avenue Dam, working in conjunction with the other upstream dams. Together, these dams regulate the water flow to maintain a constant water elevation of 525 ft above sea level throughout the Trinity Uptown site. This controlled water elevation allows for flood protected walkways at 530 ft and building elevations at 532 ft above sea level.

#### WATER OUALITY MAINTENANCE

Critical to the success of the Trinity Uptown will be the maintenance of the water quality. A number of proven strategies are being investigated for implementation and are summarized as follows:

#### Control of water odors

Water odor occurs when "water turns": deeper, cooler water normally at the bottom reverses and rises to the top, bringing stagnant odors to the surface. In order to control water turning, the water depth will be limited to 8 to 10 ft, which will keep the water temperature nearly constant and minimize temperature stratification.

#### Flushing of the water bodies

A number of management strategies will be developed to flush water through the site during times of low water flow. For example, water could be retained in the upstream reservoirs and released during low flow times. As well, make-up water from recovered sources (see Reclaiming waste water section) could be released into the water channels.

#### Control of nutrients run-off

Nutrients from run-off will be one of the most difficult aspects of the water quality to control. The site is downstream from a large catchment area and nutrients will flow in from outside of the site. This issue will need to be dealt with in a city-wide strategy.

On the Trinity Uptown site itself, it will be possible to control nutrient run-off through instituting development standards for storm water management on a site-by-site-basis. Parts of this strategy will involve: building rooftop gardens, bio-retention ponds, controls on the amount of impervious surfaces, etc. (See the adjacent diagrams for an illustration of these systems).

To assist with nutrient removal from the river, it is proposed to introduce "periphyton gardens" in strategic locations. These gardens harvest the algae from the water through a series of terraced ponds. The river water enters one end of the pond and flows through the system, losing nutrients and thereby returning into the river virtually nutrient-free. These ponds will be integrated into the site landscaping. This is a proven technology that would benefit the entire city.

#### Reclaiming waste water

In order to harvest waste water, technologies such as the "purple pipe" will be considered. This entails taking effluent out of the main sewage pipe and putting it through a "scalping plant". This plant strains out the solids, and through the use of ultraviolet light and other procedures, purifies the water to the point that it can be used for irrigation. The solids are then put back into the sewage pipe and the "purple water" is piped back for irrigation of designated sites. In this case, part of the treated water could be released back into the river as a source of make-up water. The quality of this water could be higher than what would exist naturally in the river. This technology is not new and would benefit the entire community by reducing the load on the existing sewage treatment facilities and reducing demand on the water supply through the uses of recycled water.

#### Natural landscaping

As much as possible, attention will be given to the use of native landscape material for its ability to naturally survive the local climate.

#### IMPLEMENTATION

These water quality management strategies will hopefully be included in a region-wide set of standards over the next two years. However, if needed, such startegies can probably be incorporated into the design standards for the Trinity Uptown area.

outfalls



Bypass Channel



bypass channel

aeration waterfalls at storm drain

native shade trees

shallow benches along edge of canal support wetland vegetation that filters and purifies water

purified water from the purple pipe irrigates parksı landscaped areası and street trees

underground cisterns store rainwater from roofs and provides irrigation source

bio-retention ponds slow runoff and help remove nutrients

storm water wetland

periphyton garden purifies water pumped from canal receiving pool with stepped vegetated terraces





THE FUTURE

## IMPLEMENTATION

The implementation of the Trinity Uptown Plan is distinguished by inter-local cooperation that will provide local, state, and federal funds from a variety of sources. At the local level, the Tarrant Regional Water District, the City of Fort Worth, Tarrant County, and the Tarrant County College District have put in place strategies to provide local funding for this project. At the federal level, the US Corps of Engineers, along with several other federal agencies, will provide substantial financing for flood control, transportation, environmental restoration, and economic development.

The US Army Corps of Engineers is coordinating an environmental impact analysis process that is expected to result in the required federal approvals in October 2005. With these approvals, land acquisition for the project could begin in 2006. Final design, engineering, and construction of the entire project would take about six to eight years.

In the short term, many positive things are happening on the river. RadioShack and Pier 1 will open their corporate campuses in 2005, both linking Downtown to the Uptown area. Tarrant County College has announced a Downtown Campus that will link across the river, immediately northeast of the Courthouse. As well, the Trinity Bluffs residential development has announced plans to start a 1400+ neighborhood atop the bluffs overlooking the Uptown area.



TIF District boundaries

#### FINANCING

On the local government level, the Tarrant Regional Water District, the City of Fort Worth, Tarrant County, and the Tarrant County College District have all indicated strong financial support for the project. These entities have already put in place a Tax Increment Financing District (TIF) which could provide about 30% of the total project costs (60% of the local costs).

The City of Fort Worth will employ several funding sources that are normally used to improve infrastructure. These sources include the Capital Improvement Program (CIP) and the Water and Sewer Department capital funds. Tarrant County has also committed to look at capital sources such as the County Road and Bridge fund to help finance some of the transportation components. Tarrant County College has announced the development of a downtown campus that will substantially help with land acquisition and clean-up activities on the river near the Tarrant County Courthouse.

The US Army Corps of Engineers is the lead federal agency in the Trinity Uptown review and approval process. Congress has authorized \$110 million from the Corps budget. Additional federal funding will come from several sources including the US Department of Transportation, the Economic Development Administration, the Department of Housing and Urban Development, and the Environmental Protection Agency. These various federal funds will finance flood control, transportation, ecosystem restoration, environmental clean-up, economic development, open space, and recreational facilities.

#### Simplified Trinity River Uptown Schedule





view of bypass channel





Urban Lake









Courthouse and Tarrant County College



Southwest neighborhood



North neighborhood

Bypass Channel

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