

City of Carrollton

1945 E. Jackson Rd.
Carrollton, Tx. 75006



REGULAR WORKSESSION & MEETING

Tuesday, April 21, 2015

5:45 PM

CITY HALL, 2nd Floor

City Council

Mayor Matthew Marchant
Mayor Pro Tem Bob Garza
Deputy Mayor Pro Tem Anthony Wilder
Councilmember Jeff Andonian
Councilmember Steve Babick
Councilmember Kevin Falconer
Councilmember Doug Hrbacek
Councilmember Lisa Sutter

*****PRE-MEETING / EXECUTIVE SESSION*******5:45 P.M. – COUNCIL BRIEFING ROOM**

1. Receive **information and discuss Consent Agenda.**
2. Council will convene in Executive Session pursuant to Texas Government Code:
 - **Section 551.071** for private consultation with the City Attorney to seek legal advice with respect to pending and contemplated litigation and all matters on the agenda to which the City Attorney has a duty under the Texas Rules of Discipline and Professional Conduct regarding confidential communication with the City Council.
 - Hamrla, et al, v. City
 - Camelot Landfill Application
 - **Section 551.072** to discuss certain matters regarding real property.
3. Council will **reconvene in open session** to consider action, if any, on matters discussed in the Executive Session.

*****WORKSESSION*****

4. Discuss **Dates For Strategic Planning Session.**
5. Discuss **The Solid Waste RFP Committee's Vendor Selection Recommendation.**
6. Discuss **Update Of Camelot Landfill Expansion Process.**
7. Discuss **A Municipal Marketing Program.**
8. Discuss **Proposed Revisions And Updates To The Stormwater And Flood Protection Ordinance.**
9. Discuss **A.W. Perry Homestead Museum Adjacent Property Use And Acquisition.**
10. Mayor and Council reports and information sharing.

*****REGULAR MEETING 7:00 PM*******INVOCATION****PLEDGE OF ALLEGIANCE****PRESENTATIONS**

11. Recognition Of Carrollton Community Chorus.

PUBLIC FORUM

12. **Hearing of any citizen/visitor on items not listed on the regular meeting agenda. Citizens wishing to address the Council regarding items on the posted agenda will be called to speak during the Council's consideration of such items.**

Citizens/visitors should complete an appearance card located on the table at the entrance to the City Council Chambers. Speakers must address their comments to the presiding officer rather than to individual Council members or staff; Stand at the podium, speak clearly into the microphone and state your name and address prior to beginning your remarks; Speakers will be allowed between 2 and 5 minutes for testimony; Speakers making personal, impertinent, profane or slanderous remarks may be removed from the room; Unauthorized remarks from the audience, stamping of feet, whistles, yells and similar demonstrations will not be permitted; No placards, banners or signs will be permitted in the Chambers or in any other room in which the Council is meeting. In accordance with the State Open Meetings Act, the City Council is restricted from discussing or taking action on items not listed on the agenda. Action can only be taken at a future meeting.

CONSENT AGENDA

*(*All items marked with a single asterisk are part of a Consent Agenda and require no deliberation by the Council. Each Council member has the prerogative of removing an item from this agenda so that it may be considered separately. Contracts and agreements are available in the City Secretary's Office.)*

MINUTES

- *13. Consider Approval Of The April 7, 2015 Regular Meeting Minutes.

BIDS & PURCHASES

- *14. Consider Approval Of The Purchase Of Court Resurfacing In An Amount Not To Exceed \$30,150.00.

CONTRACTS & AGREEMENTS

- *15. Consider Authorizing The City Manager To Approve A Project Specific Agreement (PSA) With Dallas County Road And Bridge District #4 For A Street Mill And Overlay Of The 1000 Through 1200 Blocks Of West Alan Avenue And The 1000 Through 1200 Blocks Of West Russell Avenue In An Amount Not To Exceed \$105,757.52.
- *16. Consider Authorizing The City Manager To Approve A Contract Amendment For Demolition And Environmental Remediation Services With Lindamood Demolition In An Amount Not To Exceed \$37,145.00 For A Total Amended Contract Amount Of \$1,311,492.00.
- *17. Consider Authorizing The City Manager To Approve A Professional Services Contract With Terracon Consultants, Inc. And Kleinfelder For Geotechnical And Material Testing Services In An Amount Not To Exceed \$500,000.00.

RESOLUTIONS

- *18. Consider A Resolution Authorizing The City Manager Or His Designee To Enter Into An Agreement To Sell A 40,893 Square Feet Tract Of Land In Fee Simple, Which Tract Is Part Of A Parcel Of Land Located At 1825 North IH-35E; And Providing An Effective Date.
- *19. Consider A Resolution Authorizing The City Manager To Approve A Contract With BBC Research And Consulting To Prepare The Analysis Of Impediments To Fair Housing In An Amount Not To Exceed \$37,560.00.

PUBLIC HEARING-CONSENT AGENDA

- *20. Hold A Public Hearing And Consider An Ordinance To Rezone To Establish A Special Use Permit For A Temporary Surface Parking Lot With Special Conditions Located Across Two Parcels On An Approximately 0.2-Acre Tract Located At 1101 Carroll Avenue And A Second Approximately 0.41-Acre Tract Located At 1104 East Belt Line Road; Amending Accordingly The Official Zoning Map. Case No. 04-15SUP2 Downtown Temporary Parking Lot 5/City of Carrollton. Case Coordinator: Christopher Barton.

OTHER BUSINESS

21. Consider Appeal Under Section 52.084 Of The Carrollton City Code Of The Applicability Of The Impact Fees To The Development At 2226 Arbor Crest Drive.

ADJOURNMENT

CERTIFICATE - I certify that the above agenda giving notice of meeting was posted on the bulletin board at the City Hall of Carrollton, Texas on the 17th day of April 2015 at 12:00pm.

Krystle F. Nelinson

Krystle F. Nelinson, City Secretary

This building is wheelchair accessible. For accommodations or sign interpretive services, please contact City Secretary's Office at least 72 hours in advance at 972-466-3005. Opportunities and services are offered by the City of Carrollton without regard to race, color, age, national origin, religion, sex or disability.

Pursuant to Section 551.071 of the Texas Government Code, the City Council reserves the right to consult in a closed meeting with its attorney and to receive legal advice regarding any item listed on this agenda. Further, the Texas Open Meetings Act, codified in Chapter 551 of the Texas Government Code, does not require an agenda posting where there is a gathering of a quorum of the City Council at a regional, state or national convention or workshop, social function, convention, workshop, ceremonial event or press conference. The City Secretary's Office may occasionally post agendas for social functions, conventions, workshops, ceremonial events or press conference; however, there is no legal requirement to do so and in the event a social function, convention, workshop, ceremonial event or press conference is not posted by the City Secretary's Office, nothing shall preclude a quorum of the City Council from gathering as long as "deliberations" within the meaning of the Texas Open Meetings Act do not occur.



City of Carrollton

Agenda Memo

File Number: 1975

Agenda Date: 4/21/2015

Version: 1

Status: Work Session

In Control: City Council

File Type: Work Session Item

Agenda Number: 4.

CC MEETING: April 21, 2015

DATE: April 15, 2015

TO: Leonard Martin, City Manager

FROM: Ashley D. Mitchell, Administrative Services Director

Discuss **Dates For Strategic Planning Session.**

BACKGROUND:

Each year the city council holds a strategic planning session to set goals for the coming year and uses Randy Pennington as the facilitator. The following dates are available for 2015:

- July 10-11
- July 24-25



City of Carrollton

Agenda Memo

File Number: 1979

Agenda Date: 4/21/2015

Version: 1

Status: Work Session

In Control: City Council

File Type: Work Session Item

Agenda Number: 5.

CC MEETING: April 21, 2015

DATE: April 15, 2015

TO: Leonard Martin, City Manager

FROM: Lon Fairless, Information Technology Director

Discuss **The Solid Waste RFP Committee's Vendor Selection Recommendation.**

BACKGROUND:

The purpose of this item is for staff to present the Solid Waste RFP Committee's vendor selection recommendation, and for the Council to provide direction on the final vendor selection.



City of Carrollton

Agenda Memo

File Number: 1976

Agenda Date: 4/21/2015

Version: 1

Status: Work Session

In Control: City Council

File Type: Work Session Item

Agenda Number: 6.

CC MEETING: April 21, 2015

DATE: April 15, 2015

TO: Leonard Martin, City Manager

FROM: Scott Hudson, Environmental Services Director

Discuss **Update Of Camelot Landfill Expansion Process.**

BACKGROUND:

An application to expand the Camelot Landfill was filed with the Texas Commission on Environmental Quality (TCEQ) in March 2012. A major permit modification, the proposed changes would significantly extend the size and operating life of the landfill. This agenda item will provide a review of the current landfill status and an update on the pending expansion process.



City of Carrollton

Agenda Memo

File Number: 1973

Agenda Date: 4/21/2015

Version: 2

Status: Work Session

In Control: City Council

File Type: Work Session Item

Agenda Number: 7.

CC MEETING: April 21, 2015

DATE: April 15, 2015

TO: Leonard Martin, City Manager

FROM: Ashley D. Mitchell, Administrative Services Director

Discuss **A Municipal Marketing Program.**

BACKGROUND:

Councilmember Steve Babick requested that this item be placed on the agenda.

MUNICIPAL MARKETING STRATEGIC PLAN

AUGUST 14, 2013





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Section I

PROJECT OVERVIEW



INTRODUCTION

Background

In October 2012, the City of Carrollton issued an RFP soliciting qualifications from firms/individuals to assist the City in pursuing opportunities to work with the City's assets with the objective of obtaining incremental revenue through appropriate sponsorship and partnership programs.

Through the identification of and generation of alternate revenue sources, the City of Carrollton sought to develop mutually beneficial partnerships with private-sector companies.

In January 2013, LSM made a formal presentation to the City, and then in February 2013, the Carrollton City Council officially selected LSM and formally approved the contract between the two parties.

Scope of Services

The City requested that the selected firm complete the following scope of services:

1. review and identify tangible and intangible assets and events for sponsorship/partnership opportunities;
2. identify and prioritize revenue generating opportunities;
3. assist the City in developing a marketing partnership policy;
4. assist the City in developing a strategic plan to fulfill the goal of achieving alternate sources of revenue generation that is sensitive to community values; and
5. review of existing City contracts to identify revenue opportunities.



City of Carrollton Fast Facts

- Approximately 122,100 residents
- Located in the heart of Dallas-Fort Worth Metroplex
- Located in Dallas, Denton and Collin counties
- Corporate boundaries encompass 37 sq. mi.
- CNN *Money* ranked Carrollton 15th among "Best Places to Live" in 2008
- *Forbes* recently ranked Carrollton 12th among "America's 25 Best Places to Move"
- More than 1,200 acres of park land — one of the highest park-land-per-capita figures in the Metroplex
- Just minutes from DFW, Love Field and Addison airports
- Home of three DART rail stations and connects with Denton's A-Train

Section II

EXECUTIVE SUMMARY



KEY FINDINGS

- Honored numerous times by various publications as one of the best places to live in the country, the City of Carrollton is a thriving part of the Dallas-Fort Worth Metroplex.
- With a population of nearly 125,000, a median household income of almost \$70,000, more than 500 City employees, and a solid corporate base, Carrollton is a strong candidate to launch a meaningful marketing program that produces positive results for the City, residents and businesses.
- LSM has identified five (5) types of partnerships that are common in municipal marketing — Naming Rights Partnerships, Marketing Partnerships, Community Partnerships, Vending Partnerships and Advertising Partnerships — and estimated the City of Carrollton's likelihood of generating incremental revenue with respect to each.
- LSM believes the City's top opportunities are Marketing Partnerships and Community Partnerships. Meanwhile, LSM believes the City's opportunities for Naming Rights Partnerships and Advertising Partnerships are far more limited. And due to the City's current deal with Coca-Cola, opportunities with Vending Partnerships also appear to be limited (although adding vending machines that sell salty snacks may be worth looking into).
- Naming Rights Partnerships are very common in the sports and entertainment industry but are fairly rare in municipal marketing for a variety of reasons. In order to generate significant revenue from the sale of naming rights, a facility typically must meet one of the following criteria: be a brand-new, state-of-the-art venue; have a sports team as a tenant; or consistently attract high-profile concerts and performances. As such, LSM does not believe that the City of Carrollton has any facilities, including McInnis Park, that will attract interest as it relates to Naming Rights Partnerships. It is important to note that this is in no way a negative reflection on the City's assets or marketing staff but rather a simple reality of the sponsorship world. There are thousands upon thousands of municipal parks and recreation centers throughout the United States and only a select few have naming rights agreements. As such, Naming Rights Partnerships at the municipal level typically do not provide companies with enough ROI to justify the financial commitment.

Evaluating Carrollton's Opportunities

Type	Potential for Success				
	Low				High
Naming Rights Partnerships	★				
Marketing Partnerships				★	
Community Partnerships					★
Vending Partnerships			★		
Advertising Partnerships		★			

Although Marketing Partnerships have the most revenue potential, they are also the most difficult to implement. Community Partnerships, which are something the City already has a track record with, are relatively easy to execute but typically offer less revenue potential.

KEY FINDINGS (cont'd)

- LSM believes that Marketing Partnerships provide the best opportunity for the City of Carrollton to realize incremental revenue going forward. LSM reached this conclusion for the following key reasons: (1) Marketing Partnerships are the type of municipal marketing agreement that other cities around the country are seeing the most results with, and (2) although the City's other assets and marketing opportunities are likely to generate some degree of interest from the corporate marketplace, LSM does not anticipate that these opportunities are likely to represent *significant* sources of incremental revenue. In order to realize the potential from this type of partnership, the City must be willing to have its marketing staff collaborate with its procurement and must be willing to grant a company access to its residents, employees and retirees. Marketing Partnerships are attractive to companies because they provide something that advertising and impressions do not: access to employees, retirees and residents to market products and services. Marketing Partnerships represent an opportunity to utilize the aforementioned parks and recreation centers in a partner agreement. For instance, companies may see little to no value in naming rights at a park or recreation center on a one-off basis, but a local health system may want access to recreation centers to offer flu shots or launch wellness initiatives. These municipal assets can be valuable in that they can serve as a means of access to employees, retirees and residents.
- Although Marketing Partnerships are the partnership type that municipalities around have had the most success with, many cities never realize the full potential municipal marketing offers. This is typically due to factors such as public and internal resistance, as well as challenges with coordinating and implementing these deals. LSM can assist the City in approaching companies about these types of opportunities.
- LSM believes that Community Partnerships represent a modest opportunity for the City to add several agreements on a one-off basis. The most attractive asset for this type of partnership is the Festival at the Switchyard, and if the City is able to "beef up" the benefits a partner would receive, LSM believes this is a very marketable event. Other candidates for Community Partnerships include capital improvements for Mary Heads Carter Park and a presenting sponsorship for the Carrollton Trails 5K, among others. Community Partnerships represent the bucket into which most past and present City of Carrollton partnership agreements fall, and it is important to note that LSM believes the City and its marketing staff currently do an adequate job of securing Community Partnerships given the available resources and assets. Community Partnerships are driven almost exclusively by relationships developed between City employees and the private sector. It is not likely that a third-party sales agency would have any more success in securing this type of partnership than City employees themselves, as no one has a better feel for the pulse of the local business community than the City itself. These deals are secured by establishing a relationship with a local business, outlining a vision for specific use of the funds — such as refurbishing a small park — and then asking for a financial commitment.
- LSM does not believe that Vending Partnerships presently have the potential to generate incremental revenue for the following reasons: (1) the City is locked into an agreement with the Coca-Cola Bottling Company of North Texas until 2016, and (2) the City's agreement with the Coca-Cola Bottling Company of North Texas is, in the opinion of LSM, already a favorable deal for the City when compared to deals struck by other cities around the country.

KEY FINDINGS (cont'd)

- To the best of LSM's knowledge, the City of Carrollton does not own or operate any outdoor boards present within City limits. Nor does it control any advertising inventory that may be present at the Downtown Carrollton Station, which is served by the DART Rail Green Line trains. Therefore, LSM does not believe that Advertising Partnerships are a viable source for generating incremental revenue. Advertising typically offers municipalities a very low ROI unless the municipality controls a substantial number of high-visibility assets (for example, the City of Chicago has an extensive network of outdoor boards). In LSM's opinion, Advertising Partnerships are not presently worth the City of Carrollton's time.
- LSM conservatively estimates that the City could generate between \$30,000 and \$60,000 from Marketing Partnerships in Year 1 and between \$15,000 and \$30,000 from Community Partnerships in Year 1.
- If the City decides to move forward with its municipal marketing strategy, industries that should be targeted include telecommunications/wireless, healthcare, energy, and banking/financial. These are industries that are most likely to have marketing dollars to spend and would be most interested in the opportunity to market products and services to City employees, retirees and residents.
- The City must also understand the importance of remaining flexible with its marketing program. For instance, the City could pitch a healthcare company on a Marketing Partnership that would provide the company with access to numerous parks, rec centers and perhaps even libraries and schools. Then, in more advanced conversations with the company, the City may come to find out that the company is only interested in marketing its services at rec centers and libraries, but not parks or schools. The ability to stay flexible and open-minded and having the willingness to help companies build customized marketing platforms are traits that will translate well to successfully executing a municipal marketing program. Professional sports teams excel at figuring out the needs and goals of a particular company and then bundling in the necessary assets or building a marketing platform to push a deal across the finish line. An example of this is the City of Plano's deal with Plano Health Presbyterian, which was brokered by LSM.
- Another item the City may be wise to invest some resources in is professional photography. Part of what professional sports teams and major college programs do well is put together sharp, eye-popping presentations to solicit sponsors. And what often makes this very easy is that these teams and college programs have photo servers with thousands and thousands of colorful, exciting photos of players, games, fans and special events. The City of Carrollton could have a wonderful set of assets, but when it comes time to put together a pitch deck that will be a critical element in securing a key long-term partnership, if there is a lack of photos or architect's renderings, it will be incredibly difficult to sell the company on the City's vision. At the present time, there is a lack of professional photos that highlight the City's key assets and events, and if the City is serious about launching and executing a successful marketing campaign, hiring professional photography, even on a part-time basis, would be a relatively cheap but immensely important place to start.

Section III

DEMOGRAPHICS

MARKET SNAPSHOT

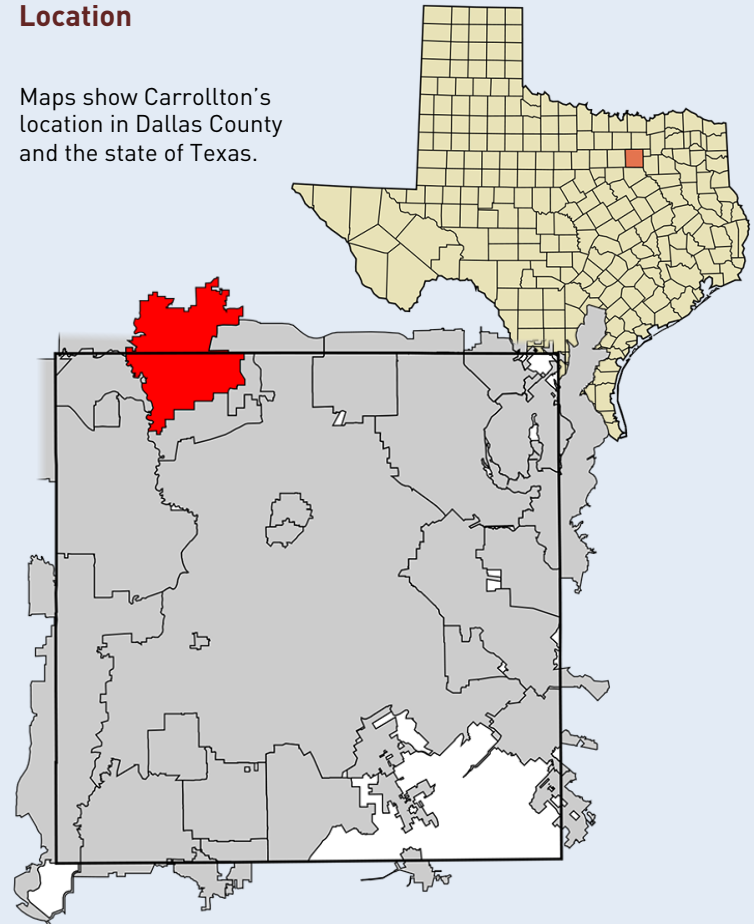
Market Demographic Summary

Demographic Variable	City of Carrollton
POPULATION	
2000 Population	107,024
2013 Population	124,096
2018 Population	133,866
AGE	
Median Age	36.6
Age Distribution:	
Under 18	25.3%
18 to 34	22.3%
35 to 54	30.9%
55 & Over	21.5%
HOUSEHOLD INCOME	
Median Household Income	\$68,139
Income Distribution:	
\$0 to \$24,999	13.3%
\$25,000 to \$49,999	22.1%
\$50,000 to \$74,999	20.0%
\$75,000 to \$99,999	13.3%
\$100,000 to \$149,999	18.6%
\$150,000 & Over	12.6%

Source: Claritas.

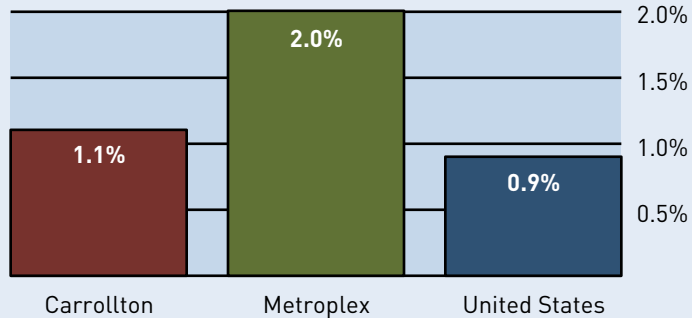
Location

Maps show Carrollton's location in Dallas County and the state of Texas.

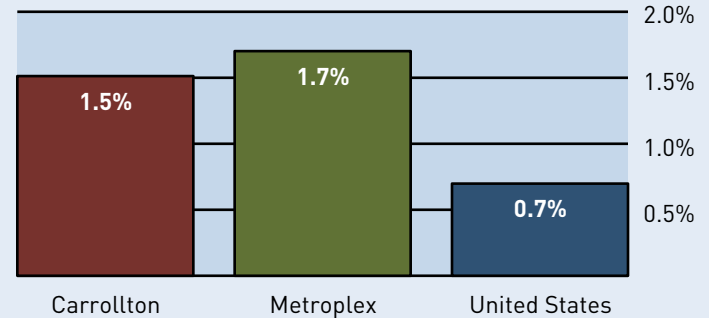


MARKET COMPARISON

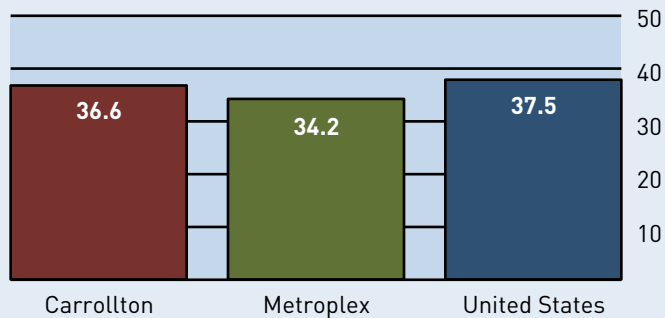
Historical Annual Pop. Growth Rate (2000–13)



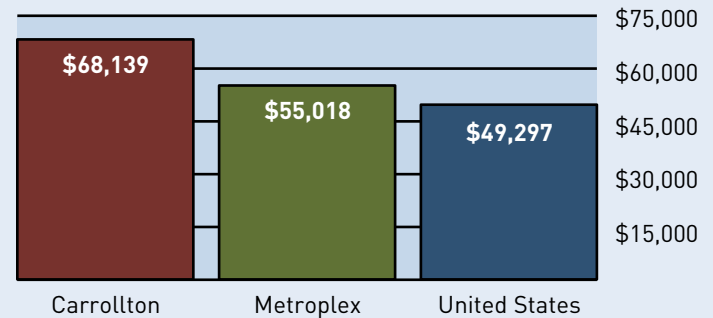
Projected Annual Population Growth (2013–18)



Median Age



Median Household Income



Source: Claritas.



CORPORATE BASE

Corporate Inventory

Annual Sales	No. of Companies
\$1.0 million to \$2.4 million	268
\$2.5 million to \$4.9 million	141
\$5.0 million to \$9.9 million	94
\$10 million to \$24.9 million	75
\$25 million to \$49.9 million	24
Over \$50 million	20
Total Corporate Inventory ¹	622

1. Includes all corporations with at least 10 employees and \$1 million in annual sales within the City of Carrollton. Excludes certain industries such as government entities, membership organizations, religious organizations, non-profits and private households.

Top Companies by Annual Sales

Company	Annual Sales (\$M)
Woot, Inc.	\$2,115.8
Carlson Restaurants Worldwide, Inc.	772.4
IBL Limited, LLC	691.0
Accor North America	586.9
TGI Friday's Inc.	417.9
Schneider Electric Buildings Americas, Inc.	323.1
RealPage, Inc.	322.2
McLane Foodservice, Inc.	258.5
The Brandt Companies LLC	143.4
Hilton Reservations Worldwide, LLC	127.9
Thomson Reuters (Tax & Accounting) Inc.	122.5
Motel 6 Operating Partnership L.P.	99.9

Source: Hoovers.



Section IV

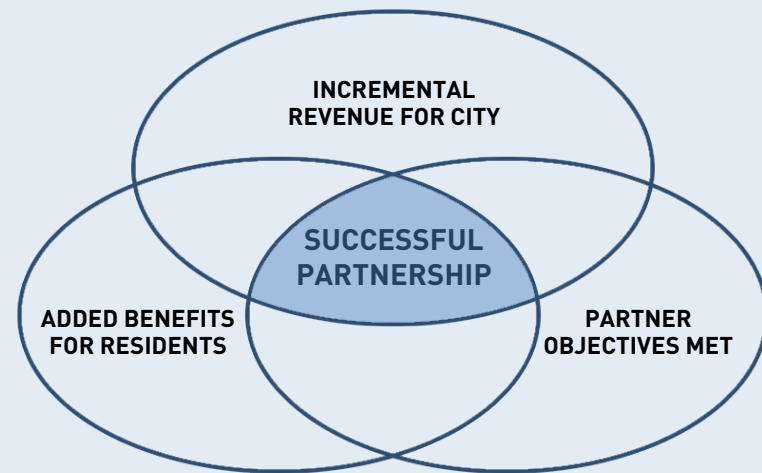
MUNICIPAL MARKETING



OVERVIEW

- Municipal marketing refers to any mutually beneficial public-private relationship whereby the external organization contributes cash, goods or services to a project or program in return for recognition, acknowledgment or promotional consideration.
- Over the past 15 years, municipal marketing has become an increasingly popular vehicle by which cities have attempted to generate incremental revenues to fund programs and services without raising taxes and fees.
- Although cities have long dabbled in various forms of municipal marketing, the launch of San Diego's successful program in 1999 is widely credited with being the trigger for the current municipal marketing movement.
- Locally, municipalities such as Dallas, Arlington, Lewisville and Plano have all experienced at least some degree of success as it relates to municipal marketing.
- However, municipal marketing is not without its challenges. Many cities have struggled to successfully execute programs due to a variety of reasons ranging from public resistance to internal politics to issues with implementation.
- LSM believes municipal marketing can often be broken down into five (5) partnership types: Naming Rights Partnerships, Marketing Partnerships, Community Partnerships, Vending Partnerships and Advertising Partnerships.
- In this strategic marketing study, LSM takes an in-depth look at each of the partnership types outlined above and provides recommendations on how the City of Carrollton can exploit them in a productive and sustainable manner.

Successful Municipal Marketing Partnership



LSM defines a successful public-private partnership as one in which the City generates incremental revenue or budget-relieving goods, residents receive added benefits, and the partner achieves its marketing objectives.

NAMING RIGHTS PARTNERSHIPS

WHAT THEY ARE: Naming Rights Partnerships are agreements in which a company places its name on a specific venue. Local examples of Naming Rights Partnerships include the American Airlines Center, Dr Pepper Ballpark and Verizon Theatre at Grand Prairie.

HOW THEY WORK: Negotiated in a manner similar to Community Partnerships, the City seeks agreements on a one-off basis. However, these types of deals are typically done on a more intermediate or long-term basis. Most naming rights agreements are at least 5 to 10 years, while some at the professional level may even be 20- or 25-year deals.

WHAT THE COMPANY GETS: The company typically receives a plethora of benefits, including on-site signage, highway directional signage, digital marquee signage, opportunities for activation and product sampling, inclusion in the venue's media buy, and in most cases broadcast exposure.

WHAT THE CITY GETS: The City receives cash to offset operating expenses, pay down debt service or fund capital improvements. An example of a Naming Rights Partnership brokered by LSM at the municipal level is the City of Lewisville's Toyota of Lewisville at Railroad Park. In that 2010 deal, Toyota of Lewisville paid \$1.5 million over 10 years for naming rights to the new 225-acre outdoor athletic complex. The revenue has been set aside to fund ongoing maintenance of the facility. Occasionally, the benefits received by the City may include products and/or services as well. For instance, the telecommunications company Cox Communications agreed to pay \$1.7 million in goods, services and monies over 7 years to put its name on Oklahoma City's convention center in 2002. At the time, Cox sought to promote its IT capabilities and it just so happened that the convention center was in tremendous need of a modernized IT infrastructure.

OUTLOOK FOR CARROLLTON: LSM does not believe any City properties have enough presence in the marketplace to warrant interest as it relates to Naming Rights Partnerships.



Cox Communications' \$1.7-million deal for naming rights at Oklahoma City's convention center revolved around a massive IT infrastructure upgrade.



LSM negotiated a \$1.5-million, 10-year deal with Toyota of Lewisville for naming rights to the City's Railroad Park athletic complex.

MARKETING PARTNERSHIPS

WHAT THEY ARE: Marketing Partnerships are citywide deals between the City and a specific company in which the company is entitled to the designation of “Official Partner” in a particular business category.

HOW THEY WORK: The City develops Marketing Partnerships in conjunction with the procurement of products and/or services, and as the name suggests, only one company can be a partner in each business category. For example, Snapper could be the “Official Lawn Care Equipment Partner” of the City of Carrollton. Popular categories for pursuing these partnerships include automobiles, banks, healthcare, office supplies and utilities.

WHAT THE COMPANY GETS: The main benefit received by the company is the right to market its products and/or services directly to City employees through the City’s various internal communications channels, often times at a special discount. Companies typically engage in Marketing Partnerships in order to utilize special access to these marketing channels to generate a return on their investment. However, other motivating factors may exist. For instance, in the early 1970s, Ford Motor Company provided the City of Dearborn (Mich.) with a number of Lincoln Town Cars equipped with early airbag systems in order to accumulate engineering data in real-world conditions.

WHAT THE CITY GETS: The main benefit received by the City is typically cash but can also include products and/or services. In the Ford Motor Company example above, the City of Dearborn received free police cruisers. Another example: According to the IEG Sponsorship Report, the City of Huntington Beach (Calif.) has saved more than \$500,000 over the past four years as a result of its partnership with Toyota Motor Sales U.S.A., Inc., which provides 17 vehicles for the City’s marine safety and beach operations divisions.

OUTLOOK FOR CARROLLTON: LSM estimates that the City could generate \$30,000 to \$60,000 from Marketing Partnerships in Year 1 and \$60,000 to \$90,000 each ensuing year.



For years, Ford Motor Company has supplied the City of Dearborn (Mich.) with police cruisers. Ford’s world headquarters are located in the Detroit suburb.

COMMUNITY PARTNERSHIPS



GPS technology company Trimble Navigation partnered with Santa Rosa (Calif.) City Schools for a \$50,000, three-year deal sponsorship at the new Science and Technology Center.

WHAT THEY ARE: Community Partnerships are marketing agreements between the City and a company that are tied to a specific program, project, facility or event. The company receives the designation of “Community Partner.”

HOW THEY WORK: The City seeks partnerships on a one-off basis. For example, the City could choose to pursue an agreement with a company to serve as presenting partner for the Festival at the Switchyard or it could seek funds for capital improvements at Mary Heads Carter Park. Unlike the previously outlined Marketing Partnerships, more than one company may be a Community Partner within a given business category, and no RFP is required.

WHAT THE COMPANY GETS: The benefits can vary widely. For instance, the presenting partner for Festival at the Switchyard may receive backlit signage above the main stage and the opportunity to activate on-site. In Santa Rosa, Calif., Trimble Navigation Limited recently agreed to a \$50,000, three-year deal with the school district for a sponsorship at the new \$3.6-million Science and Technology Center at Piner High School. Trimble is a leading provider of GPS technology and pursued the deal to promote its connection to education. Trimble receives the right to use the science and technology center one week each year to hold one of its corporate conferences. Trimble did not ask for or receive naming rights or signage as part of the deal.

WHAT THE CITY GETS: The benefits received can include cash, products, services or a combination of all of the above. The City of Arlington last year secured a \$100,000 partnership with Chevy to refurbish Randol Mill Park, a park with a play area designed for children with special needs. The city is using the funds to upgrade the park with sustainable plants, an energy-efficient field house and other environment-friendly improvements.

OUTLOOK FOR CARROLLTON: LSM estimates that the City could generate \$15,000 to \$30,000 from Community Partnerships in Year 1 and \$30,000 to \$45,000 each ensuing year.

VENDING PARTNERSHIPS



The City of Carrollton presently has a vending deal with the Coca-Cola Bottling Company of North Texas through May 2016.

WHAT THEY ARE: Vending Partnerships are agreements in which a company has the exclusive right to sell its non-alcoholic beverage and/or snack brands from vending machines at mutually agreed upon City parks, recreation centers, libraries and other facilities.

HOW THEY WORK: The company typically agrees to pay an annual rights fee as well as a commission based on the quantity of product sold, thereby earning the exclusive right to sell its products at City vending machines. The overall value of the agreement is usually determined, at least to an extent, by the sales volume estimated by the company. The company is responsible for installation, operation and servicing of all vending machines.

WHAT THE COMPANY GETS: The company gets the exclusive right to sell its products from City vending machines and may also get additional recognition such as signage at mutually agreed upon locations (e.g., City parks and recreation centers).

WHAT THE CITY GETS: The City receives annual rights fees as well as commissions based on sales volume. The value of these deals is often determined by the percentage of sales the City can negotiate for itself. In May 2011, the City of Carrollton entered a five-year agreement with the Coca-Cola Bottling Company of North Texas to provide non-alcoholic beverages, including energy drinks, on City property. The City negotiated an upfront payment of \$25,000 in Year 1 as well as \$15,000 annual rights fees in Years 2 – 5 plus commissions ranging from 15% to 25% depending on the product. For the sake of comparison, national vending machine operating company Canteen agreed to pay the City of Huntington Beach (Calif.) a \$50,000 advance against first-year commission plus up to a 20% commission rate on snack items and up to a 40% commission rate on beverages.

OUTLOOK FOR CARROLLTON: Since the City is locked into an existing agreement with the Coca-Cola Bottling Company of North Texas until 2016, LSM does not see this category being a source of any incremental revenue in the immediate future. Unless the City is willing to pursue a deal to put salty snack vending machines in City facilities.

ADVERTISING PARTNERSHIPS



JCDecaux and the City of Chicago have teamed up for a first-of-its kind public-private partnership to create a large-scale digital billboard network on public land.

WHAT THEY ARE: Advertising Partnerships are agreements in which the City or a third-party firm sells advertising to companies on billboards, LED boards, City buses and maintenance vehicles, or even at train and bus stations.

HOW THEY WORK: The City or a third-party firm manages the inventory and sells contracts, typically on a month-to-month basis, to companies that seek to expose their brand messages to traffic and pedestrians.

WHAT THE COMPANY GETS: The company gets space to deliver its advertising message. There are no other benefits associated with this type of agreement.

WHAT THE CITY GETS: The City either collects payment from companies on a month-to-month basis or negotiates a deal with a third-party firm to manage the inventory and collect payment. For example, in 2013, outdoor advertising company JCDecaux agreed to a deal with the City of Chicago to operate 34 large (up to 1,200 sq. ft.) digital billboards with 60 LED display panels along Chicago's expressways. The Chicago City Digital Network is the first public-private partnership to create a large-scale digital billboard network on public land in the United States. The network will serve as a communications broadcast system for emergencies, weather and traffic alerts, safety issues, and cultural events while at the same time generating revenue for the City and providing advertisers the best locations along expressways to display messages on a real-time basis.

OUTLOOK FOR CARROLLTON: LSM does not believe there is presently an opportunity for the City to generate incremental revenue from Advertising Partnerships.

MARKETING DASHBOARD



Section V

STRATEGY / NEXT STEPS





STRATEGY

1. Despite recommending the pursuit of Marketing Partnerships, LSM recognizes there are several challenges associated with this approach, and it is necessary for the City to address the following issues before deciding whether or not this is the proper strategy to pursue: (1) Even though many cities around the country are implementing this form of municipal marketing with success, does pursuing this strategy violate any ordinances or provisions in the City's charter or any local or state laws? (2) Even if the City is not prohibited from seeking these types of partnerships, does pursuing this strategy fit the City from a philosophical and organizational standpoint?
2. Marketing Partnerships require a fairly sophisticated amount of planning and coordination to properly execute. For instance, when the City issues an RFP for procurement, the person responding to the RFP at any given company is highly unlikely to be the decision maker as it relates to the company's marketing budget. Therefore, in order to successfully negotiate a partnership in this manner, it is often times necessary for the City's procurement department (or a consultant) to have an existing relationship with (or to have at least engaged in conversations with) the company's key marketing budget decision maker.
3. After the opportunities that exist with Marketing Partnerships, LSM believes that the Festival at the Switchyard and the planned improvements at Mary Heads Carter Park are the City's most marketable assets. Although the Festival at the Switchyard has only been around for three years, it has brought in solid musical acts and quickly established credibility in the City. LSM believes it would be worthwhile to outline a more comprehensive benefits package — such as fixed backlit signage above the stage — and approach local companies about making a 5-year commitment to serve as title sponsor. In addition, when considering other Community Partnerships around the Metroplex, such as Arlington's deal with Chevy to refurbish Randol Mill Park, LSM believes there is a strong enough narrative present to generate sponsor revenue for capital improvements at Mary Heads Carter Park.
4. Prospects targeted for Community Partnerships should exclusively be companies with a presence in Carrollton. Marketing Partnerships can include companies from outside the City if, for instance, they are a large vendor to the City.
5. If the City does decide to pursue a municipal marketing program, the City could call it the "Carrollton Champion Partners" program and use the tagline, "Where Corporate Connections Happen."

Prospects targeted
for Community
Partnerships should
exclusively be
companies with a
presence in the
City of Carrollton.

NEXT STEPS

1. Decide which types of partnerships, if any, the City of Carrollton would like to pursue.
2. Designate one person from the City to be responsible for all initiatives and matters relating to the partnership program. The key functions of this person will be to recognize and pursue new partnership opportunities, oversee the sales execution of a third-party firm, and coordinate the fulfillment of the partner's rights and benefits.
3. Designate one person from Purchasing to work with the marketing department on drafting RFPs to pursue Marketing Partnerships and other opportunities as needed.
4. Adopt a formal citywide marketing policy that governs all partnership agreements.
5. Identify immediate opportunities, based on this report, that the City may be willing to explore.
6. Provide guidance to LSM on which strategy it plans to pursue so that LSM can develop and finalize marketing collateral accordingly.
7. Consider engaging LSM to work with the City's marketing staff to exploit the opportunities outlined in this report.
8. Finalize prospect database.



The Festival at the Switchyard is one of the City of Carrollton's most marketable assets and falls under the category of Community Partnerships. LSM believes a title sponsor can be secured for this event.



March 12, 2015

Steve Babick
City of Carrollton, Texas

Dear Steve,

Thank you for making the time to talk yesterday concerning our services. Abby and I are excited about our entry in to the municipality marketing / local government space. The scope of our firm is to assist cities and counties in their pursuit of organizing and marketing their sponsorable assets for corporate partnership.

This shift in our business, from sports marketing into localized marketing has been a result of listening to brands and their desire to be engaged with customers in settings and activities that are important to them, even more so than their pro or college team. After eighteen months of research we are now operating in this space that gives us the ability to practice strategic sponsorship procurement programming that connects brands with communities. Our focus is to work with municipalities in recognizing, organizing, pricing and ultimately taking assets to market and procure much needed dollars from brands. Our approach to this market is to help these types of entities focus on sustainability and not just logos on scoreboards.

The Water Tower Process is divided in to two phases. This helps us truly understand city assets in discovery and best practice platforms in packaging and presenting. Most of our projects take three to four months to fully develop the go-to market plan.

Steve, please let me know what else you might need at this time. We look forward to next steps.

Have a great day,

Kevin
Water Tower Partners

12 Norcross Street, Suite 101-A
Roswell, Georgia 30075





WATER TOWER PARTNERS

Our mission is to be the experts in creating effective corporate partnership programs for municipalities looking to generate revenue and enhance their citizen's experiences.

Water Tower Partners

We believe in the power of “true” leverage that is created through understanding brand essence and trends that are important to the particular brand category and client objectives.



Water Tower Partners develops tailored strategies for our clients in the areas of:

- **Asset Development and Packaging**
- **Corporate Partner Program Strategy**
- **Attainment of Strategic Corporate Partnerships**

Our Experience

Developed successful partnership strategies for the following properties, including, but not limited to:

- NCAA
- Southeastern Conference (SEC)
- Big 12 Conference
- Southern Conference
- Metro Atlantic Athletic Conference (MAAC)
- University of Tennessee
- Florida State University
- Notre Dame
- University of Kentucky
- University of South Carolina
- University of Michigan
- Oklahoma State University
- University of Texas
- University of Arizona
- Association of Historically Black Colleges
- Hoop It Up 3 on 3 Tournaments
- FLW
- Professional BASS anglers
- Shriners
- Nantahala Outdoor Center

Participated in negotiations securing close to a billion dollars in major sponsorship agreements with some of the biggest brands in the world:

- Coca-Cola
- Regions Bank
- Chick-fil-A
- Cooper Tire
- Dr. Pepper
- Brown Forman
- Golden Flake
- AT&T
- FedEx
- UPS
- Western Union

Under the Water Tower

Brands are looking for ways to get involved with the community where their employees and customers work and live.

“On Main Street”
“Under the Water Tower”



- Corporations increasingly see the value of **“doing well by doing good”**
- According to *The Power of Partnership*, 73% of companies say that partnerships with nonprofits and other **socially responsible organizations** will be **important** in the next three years
- Nearly 90% of Americans said it is important that business, government and non-profits collaborate to **solve pressing social issues.**
- 79% of Americans said they would likely switch from one brand to another if the other brand is **associated with a good cause.**

WHY CORPORATE PARTNERS...



Amid a challenging economic time and historical budget cuts in all sectors of society, it is more important than ever to have corporations as part of the solution to improve our communities while positively impacting the brand itself and its bottom line.

Foundational Partners

FEWER
and
BLUER



- A Foundational Partner supports and participates in different programs that promote the community's **social well-being** and **economic growth**.
- Geared towards **long term partnerships** rather than sponsoring one time special events and fundraisers.

Corporate Partnership Program Expectations...

Brands

Exposure

Parks, festivals, concerts,
community involvement,
environmental initiatives,
etc...

Municipalities

Revenue

Capital projects, improved
parks, enhanced
experiences, etc...

**Brands are looking for increased exposure;
while cities need incremental revenue.**

Municipalities provide exposure and brands provide revenue...it's a win-win.

Strategic Plan

Develop an integrated corporate marketing program that serves the municipality and its corporate partners.

- Strategically aggregate assets of the municipality and package them to take to market in a manner appealing to brands
- Manage and advise municipality on pricing of all sponsorship marketing and advertising assets and creative ideation of new elements
- Target potential partners and create a category management matrix
- Develop and maintain criteria for ROI
- Recommendations on the “go-to-market” plan



We are not this



We are this...

Shade Structures

Outdoor Furniture

Concerts/Festivals

Recycling

Charging Stations

Improved Trails

Hydration Stations

Playgrounds

Etc...



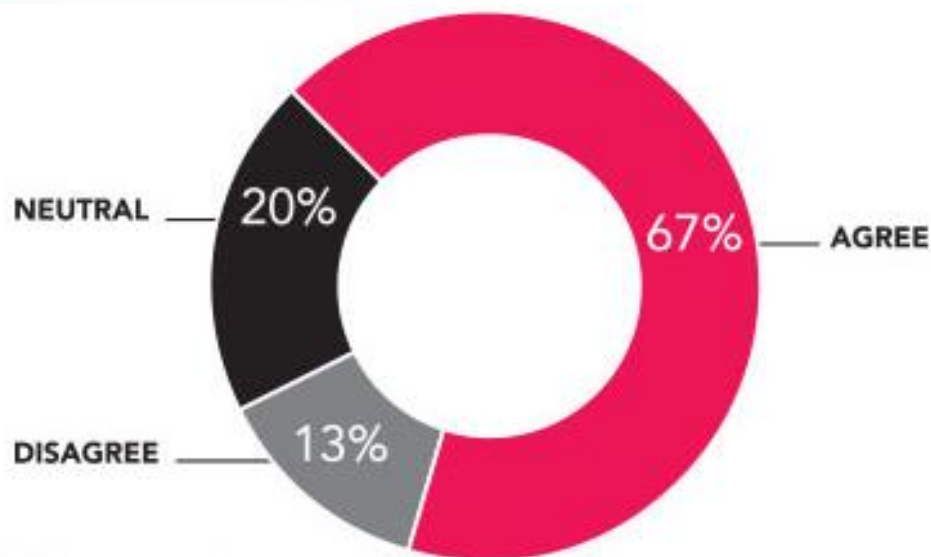
THE RESEARCH



Virginia's Fairfax County Park Authority in 2012 teamed with researchers at The Pennsylvania State University (Andrew Mowen) and the University of New Hampshire (Nate Trauntvein) to measure public sentiment regarding sponsorship of FCPA programs and facilities.

Support for Sponsorship is High

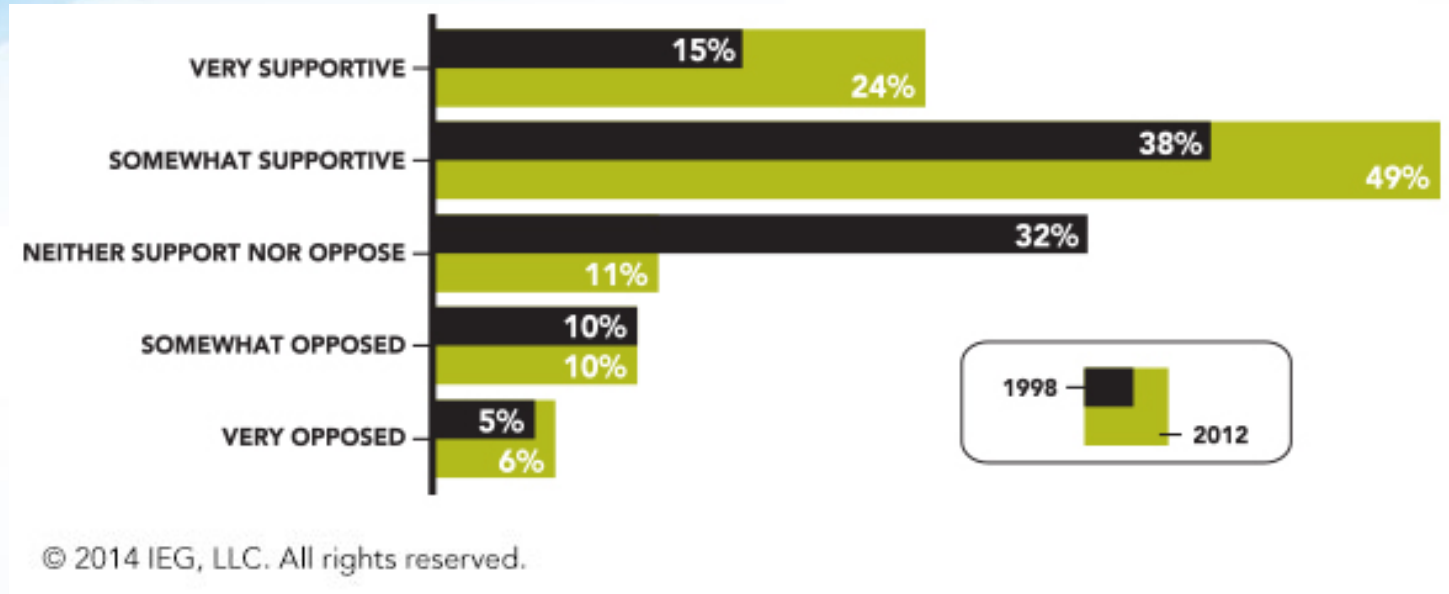
Overall, I approve of sponsorship of park facilities/programs



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Support for Sponsorship has Increased

Level of Support/Opposition for Sponsorship



SAN DIEGO CASE STUDY

Corporate Partner Program

San Diego Corporate Partner Program

Beginning in 1999, the municipality generated revenue from Marketing Partnerships with corporations through its Corporate Partnership Program (CPP).

- The goal of the program is to work with organizations to develop business strategies to drive revenue and deliver a positive impact on the San Diego community.
- The CPP has generated over \$20 million for the municipality through past and current partnerships with companies and organizations including but not limited to the following:

Toyota Motor Sales USA • Sprint Solutions Inc.
Rainbow Vending • The PEPSI Bottling Group •
EA Sports • Ford Motor Company • Cardiac
Science • Sunroad Enterprises • Evolution Film
Inc. • Qualcomm • San Diego Metropolitan
Credit Union • Verizon Wireless

San Diego - Toyota Motor Sales, U.S.A.

"Official Vehicle of
the San Diego
Lifeguards"

- Toyota Motor Sales, U.S.A., as the official vehicle partner of the City Lifeguards, is granted a variety of benefits including, but not limited to promotional events at City facilities, media exposure and working with the City Lifeguards for Special Events.
- Toyota has the right to market directly to the City's 10,000 employees
- Toyota is the presenting sponsor of the Lifeguard Water Safety Days (PDF) program at municipality beaches which includes outreach to beachgoers along with vehicle displays
- As part of the Marketing Agreement Toyota is providing the municipality with 34 reliable and quality vehicles with an option to replace the entire lifeguard fleet upon renewal
- The vehicles have a projected lease value of up to \$1,110,000 depending on the length of the Marketing Agreement

San Diego - Sprint Solutions, Inc.

"Official Wireless
Partner of the City
of San Diego"

- Sprint Solutions, Inc. as the official wireless partner to the City is granted the exclusive right to market discounts directly to the 10,000 City employees, along with additional benefits.
- Sprint will also be allowed placement of recycling donation kits for their cellular phone recycling program in designated municipality employee areas
- The City will receive additional funds dependent on the total number of phones recycled by municipality employees
- The City will receive up to \$500,000 in Marketing Rights fees depending on the length of the Marketing Agreement, which is up to 5 years

San Diego - Canteen San Diego

"Official Beverage
and Snack Vending
Partner of the City
of San Diego"

- Canteen San Diego is the exclusive beverage vending and snack vending partner of the city. In part, as the exclusive vending partner, Canteen is granted the placement of vending machines on city property along with additional marketing benefits and opportunities.
- Canteen provides the city with a unique opportunity to sell advertising on vend fronts and on vending machine enclosures within the sign ordinance parameters
- The city receives revenue from advertising in addition to revenue from the sale of vending products
- The city is projected to receive a combined revenue from beverage and snack of \$1,255,000 over a 5 year term



Kevin Bryant

kb@watertower-partners.com

Abby Port

ap@watertower-partners.com

www.WaterTower-Partners.com



sign in

Wednesday, April 15, 2015

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Roswell mulls corporate partnership possibilities

 articles

by James Swift
 js swift@neighbornewspapers.com

October 16, 2014 04:24 PM | 1947 views | 0 | 6 | |

Exclusive concession agreements, building naming rights and presenting sponsorship deals for events like Youth Day were all considered at Monday's council work session at Roswell City Hall.

"We wanted to understand the philosophical view of the city on corporate marketing," said Roswell-based marketing matchmaker Water Tower Partners representative Kevin Bryant.

"Why are you going after corporate partners now, why are you looking at your different events and your approaching brands ... who's driving that strategy?"

Bryant said the city, in particular the recreation and parks and cultural arts departments, could be banking big on corporate partnerships.

He projects Roswell could earn \$150,000 for "presenting sponsorship" agreements for the city's marquee events, including the annual Fourth of July and End of Summer celebrations.

Additionally, he said naming rights for city buildings such as the Roswell Cultural Arts Center could be worth \$250,000.

"We have a lot of resources," Mayor Jere Wood joked. "I'd open that up for just about every city property, except perhaps for the jail or city hall."

Some of the targeted corporate partners for Roswell, Bryant said, include banks, insurance firms and wireless providers.

Although Bryant said the city had a large number of "mature 'sponsorable' assets," he also said Roswell without an "organized strategic corporate sponsorship acquisition plan."

"I think there are some great brands you are involved in and there are some great brands that are within the city or within earshot of the city that you're not involved in," he said, "that I think would love to be a part of the things you are doing as a city."

One such opportunity, Bryant said, would be city property exclusivity agreements.

He said a hypothetical "official beverage of Roswell" package, complete with Splash 'n Play Sprayground title sponsorship, was likely to garner bids in the half-million dollar range.

"We're very sensitive how we go to market and who we go to market with," Bryant said.

"But also, if you're going to do it, you've got to be aggressive — you've got to say let's give it a shot, let's see if we can get somebody to give us 'x' amount of dollars for our parks."

Wood said the city wasn't looking to "sell out" to the highest bidder, but rather, to strike a deal with partners who would provide the best "image" for Roswell.

While Bryant advised placing a municipal marketing program under Roswell, Inc., Wood said he preferred keeping corporate partnering packages "in-house" with the city government.

"We need to coordinate with Roswell, Inc.," Wood said, "but it still needs to be Roswell."

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City of Atlanta puts itself up for sale



The City of Atlanta is putting itself up for sale. It's asking advertisers to submit proposals to place corporate logos in parks, on some city buildings and maybe even sidewalks. 11Alive News

Jeremy Campbell, WXIA 11:51 a.m. EST December 5, 2014

The City of Atlanta is putting itself up for sale. It's asking advertisers to submit proposals to place corporate logos in parks, on some city buildings and maybe even sidewalks.



(Photo: Sam Adams)

ATLANTA (WXIA) -- The City of Atlanta is asking advertisers to submit proposals to place their corporate logos in parks, on some city buildings, kiosks and maybe even sidewalks.

There's a one billion dollar infrastructure backlog in Atlanta, and this influx of money from ads would go entirely toward clearing that.

"We think the city could be generating up to \$5 million in annual revenue," explained Emily Lieb, a project manager with the city's Innovation Delivery Team.

Some places are off limits for advertisers such as Centennial Park, police cars, fire trucks, Falcons stadium, schools, the Beltline and certain government buildings.

"We're soliciting ideas right now from both local and national firms, and we're trying to run the gamut of possibilities. Everything from LED signage to more traditional media," explained Innovation Delivery Team member Sam Adams.

That doesn't mean we should expect full sized billboards in Piedmont Park. Instead, the vision is to add ads that are disguised as high-tech benches along walkways. They would be built with charging stations and wifi hotspots, offering a free connection in exchange for viewing an ad on the splash page.

"The city is looking to roll out a bike share program," Adams said.

Imagine free helmets with a corporate logo ,of course. It's another way to bring in money for the city.

The kiosks at Woodruff Park are prime candidates for a sponsored digital make over to look more like Wifi hotspots coming from a similar plan in New York City. Covered bus stops, courtesy of an advertiser sponsored video screen, are going up in San Francisco and could be sponsored in Atlanta.

"The idea is to offer a new service for citizens while also gaining corporate sponsorship," Adams said.

But is it selling out?

"There's always going to be a balance when talking about things like marketing and advertising. We just want folks to know that we are hearing the feedback and are really going to take a holistic approach," Adams said.

Corporations have until February 4 to submit their proposals, and the city will then start considering ideas.

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IN DEPTH | SEP 24, 2012

Found Money: The Growing Popularity Of Municipal Marketing

Cities, schools and other public entities explore public-private partnerships as a way to offset soaring budget deficits.

Swelling budget deficits and shrinking tax revenue are driving renewed interest in municipal marketing programs among cities, counties, school districts, airports and nearly every other type of government entity.

While municipal marketing has been around since the 1990's, interest in public-private partnerships has gained increased momentum following the 2008-2009 economic collapse and subsequent decline in tax revenue.

That was a situation faced by David Cavazos, city manager of the City of Phoenix. Cavazos took his position in November 2009, a time when the city was facing its most difficult financial crisis in its 131-year-old history.

"We had a \$277 million deficit on a \$1.1 billion budget. We had to be creative and think of new ways to generate revenue," he said.

The city has signed two partners since rolling out a marketing partnership program in 2010: Coast2Coast Rx Card and Service Line Warrantees of America, a marketer of water and sewer line insurance for residents.

Phoenix receives a commission based on the number of products sold. For example, the city receives \$1.25 for each Coast2Coast Rx Card sold and a 12 percent ongoing revenue share from the service line protection program.

Phoenix designed the program to create mutually beneficial relationships for the city, its residents and corporate partners, said Cavazos, noting that the Coast2Coast Rx Card has helped save residents \$5.6 million on prescription drugs.

The program also has benefited the city: Phoenix has generated \$124,114 over the past two years and will receive another \$216,000 this month as part of the kickoff of its new partnership with SLWA. The program is expected to generate \$500,000 in revenue for the 2012-13 fiscal year.

"That's revenue we can use to enhance our services and provide better experiences for our residents," said Cavazos, who is exploring other sponsorship inventory ranging from beverage vending rights to naming rights deals.

"Everything is on the table. We want to raise revenue, but only when it aligns with our objectives of benefiting the city and our residents."

Other Government Entities Get Into The Act

A growing number of cities, counties and other government entities are following Phoenix's lead in the municipal marketing space.

Those efforts range from comprehensive programs that span city-wide assets to sponsorship of specific programs or departments.

For example, The City of Milwaukee this month endorsed a plan to sell sponsorship rights to everything from parking garages to naming rights deals.

Others have already gone down the sponsorship road. Those include Indianapolis, Huntington Beach, Calif. and the City of Arlington, Texas.

And many of those cities are finding success using sponsorship to generate new revenue streams and underwrite capital improvements. Case in point: The City of Arlington last year secured a \$100,000 partnership with General Motors Co.'s Chevy brand to refurbish Randol Mill Park, a park with a play area designed for children with special needs.

The city is using the funds to upgrade the park with sustainable plants, an energy-efficient field house and other environment-friendly improvements.

Arlington secured the partnership through a relationship with EcoMedia. The media buying agency offers advertisers the opportunity to support Arlington's environmental initiatives as part of a media buy in the Dallas-Fort Worth DMA.

"Ten percent of their ad buy comes back to the city to green buildings, plant trees or create recycling programs," said Trudy Lewis, a City of Arlington project director who managed the program prior to taking a new position with the city last month.

The program helps support GM's community presence, said Lewis, noting that the automaker operates a factory in Arlington and has an existing partnership with the MLB Texas Rangers. The environmental tie-in also gave the automaker a platform to promote the Chevy Volt hybrid vehicle.



A multifaceted relationship: Toyota's partnership with the City of San Diego includes experiential marketing programs and dealer tie-ins.

In addition to accessing new revenue streams, some cities have found success offsetting expenses through public-private partnerships. For example, Huntington Beach has saved more than \$500,000 over the past four years as a result of its partnership with Toyota Motor Sales U.S.A., Inc., which provides 17 vehicles for the city's Marine Safety and Beach Operations Divisions.

Toyota receives designation as the official vehicle of Huntington Beach and other benefits in exchange for the vehicle donation.

Surf City also has expanded its corporate partner roster. Huntington Beach in July rolled out a new tie with Compass Group USA, Inc.'s Canteen Vending division, which is installing beverage and snack vending machines throughout the city. The five-year partnership is expected to generate roughly \$90,000 annually for the city.

And other government entities are getting into the act. California's Santa Rosa City Schools this month inked a 10-year, \$50,000 sponsorship with Trimble Navigation LTD, a manufacturer of GPS software, while American Express Co. in June announced a partnership with Toronto Pearson International Airport.

Other transportation agencies are rolling out or exploring sponsorship programs to offset fare hikes and improve service. Those include the Chicago Transit Authority and Massachusetts Bay Transportation Authority, both of which are selling title to subway stops.

The Key To Success: Enhancing The Consumer Experience

As demonstrated by the City of Phoenix, government organizations need to build business partnerships around one central tenant: enhancing the consumer experience.

That can range from improving the quality of life in the local community to providing discounts on specific products and services.

"It is important to demonstrate to the public a benefit of more than just dollars generated, but how the program or service enhances the quality of life in the community overall, and perhaps even to them on an individual basis," said Simone Slifman, economic development project manager with the City of Huntington Beach.

And the partnerships don't have to be complex. Deals that provide a modicum of relief from life's daily stress can go a long way in making a consumer happy, said Brad Jersey, founder and executive vice president of Airport Marketing Income, an agency that specializes in developing nontraditional revenue for airports.

Jersey points to two examples: PepsiCo, Inc.'s title of a children's play area at the Dallas-Fort Worth International Airport, and Yahoo! Inc.'s 2011 partnership with Chicago's O'Hare International Airport, around which the technology company underwrote fees associated with curbside check-ins during the Thanksgiving Day travel weekend.

In another example, BMO Bankcorp several years ago underwrote the cost of installing hand sanitizers at O'Hare International Airport during the swine flu scare.

"We look at every partnership through the lens of how it will enhance the traveler's experience. Traveling can be an unnerving and stressful experience, and something small can go a very long way," said Jersey.

Some properties look to pro sports venues for inspiration. Case in point: Boston Logan International Airport last year secured Toyota Motor Sales U.S.A. Inc.'s Lexus brand as title of the airport's Parking Passport Gold program. The program offers members guaranteed parking with easy access to airport terminals.

"The theme of the day is passenger enhancement," said Josh Kritzer, a founding partner with Property Consulting Group, a sponsorship sales agency that sold the deal on behalf of AMI.

AMI is working similar deals with three other airports, added Jersey.

Where possible, rightsholders should survey residents to gain feedback prior to developing sponsorship programs. The Chicago Transit Authority used intercept surveys to gain feedback prior to developing its program.

"We wanted to minimize the risks associated with the commercialization of public assets in the marketplace," said Jay Kenney, senior vice president of IMG Consulting, which developed and is selling the CTA program.

The results were positive. "People realize the CTA is in a serious budget crisis. They don't want to see service cuts, and they realize the only way for transit authorities to continue is to develop additional sources of revenue."

The CTA has taken a less is more approach by selling title to 11 of its 144 train stations. "Our recommendation was to open up no more than 10 percent of the system for commercialization. We want to maintain some exclusivity and value to companies that step up to naming rights," said Kenney.

In addition to title status, each eight-year package includes media exposure in the station, mention in train schedules and other benefits. The CTA hopes to generate seven figures from each package, said Kenney.

San Diego's Evolving Sponsorship Program

As one of the first municipalities to roll out a comprehensive sponsorship program, the City of San Diego offers a template for other cities to follow.

San Diego—which launched its program in 1999—has moved away from packages centered on the city's purchasing department in favor of marketing-driven deals that may or may include procurement.

"Procurement was intended to be decided separately from partnerships, and partnerships were not supposed to influence a procurement decision. That had created confusion which has led to a revamping of our program," said Natasha Collura, the City of San Diego's director of strategic partnerships, who has spearheaded the program since joining the city in March 2011.

Going forward, San Diego is placing more focus on packages that include consumer-facing marketing components. For example, the city added a public service component to its partnership with Toyota Motor Sales U.S.A., Inc., which was primarily interested in placing vehicles on the city beaches.

The package included an on-site display that featured lifeguards, a Toyota lifeguard vehicle and a water safety message.

"The water safety aspect, lifeguard and lifeguard truck actually drew more people to the display than if it were just Toyota vehicles," said Collura.

San Diego lifeguards go out of their way to ensure the automaker is featured in news interviews and used as a backdrop for TV productions, added Collura.

San Diego also has secured deals with three other new partners: Canteen Vending, Service Line Warrantees of America and Sprint Corp. Sprint replaces a ten-year-old partnership with Verizon Communications, Inc., while Canteen replaces a 12-year-old sponsorship with a Pepsi distributor.

The distributor did not meet its minimum guarantee to the city after over-projecting the number of machine installations, said Collura. "The amount of machines was much lower than projected and thus the minimums were not met."

Rather than imposing a minimum guarantee with Canteen, the two organizations are working together to increase the number of machines and implement an advertising sales component that will generate incremental revenue, she said.

The vending machines also will sell Coke, Pepsi and other products "which is sure to increase sales," Collura added.

San Diego plans to share its sponsorship knowledge with other cities. Collura has approached other cities about establishing an informal network to share best practices and brainstorm ideas in the muni marketing space.

"We want to create a network to share contacts, best practices and other information," she said, noting that San Diego receives frequent calls from other cities looking for advice on starting municipal marketing programs.

Sources

City of Arlington, Tel: 817/459-6100

City of Huntington Beach, Tel: 714/536-5233

City of Phoenix, Tel: 602/262-7176

City of San Diego, Tel: 619/236-5900

Airport Marketing Income, Tel: 866/389-9036

IMG, New York City office, Tel: 212/489-8300

Property Consulting Group, Tel: 312/ 948-0260

SIDEBAR

Muni Marketing: Two Obstacles To Widespread Adoption

September 24, 2012:

While consumers and politicians have come a long way in accepting public-private partnerships, the programs face two significant hurdles: an antiquated bidding process and a lack of funds to hire dedicated staff to manage the programs.

Below, *IEG SR* breaks down the two challenges.

Request for Proposals. RFPs, Request for Qualifications and other requests in the government bidding process can present a significant challenge to marketers who may not be familiar with the lengthy, paperwork-intensive process.

"The private sector is not used to submitting RFPs for sponsorship opportunities. They want to know how much it is and what they get. Unfortunately that's not the way it works in the public sector," said Jay Kenney, senior vice president of consulting with IMG Consulting, which developed and is selling a sponsorship program for the Chicago Transit Authority.

For its part, IMG educates and guides prospective partners through the bidding process. That includes educating prospects about the CTA's open bidding process.

IMG won the CTA business after responding to the transit agency's RFP seeking an exclusive marketing agency, he said.

Commission-only deals. The growing popularity of municipal marketing programs has created a Catch-22: cities need revenue to offset budget deficits, but most do not have the necessary funds to hire dedicated staff or a sponsorship sales agency.

Instead, many cities have opted for commission-only deals. Those kinds of relationships often lead to one-off ties that can leave money on the table.

"Cities aren't willing to pay for services to get the right consulting expertise. They want everything done on a commission basis," said Ed Augustine, managing partner with The Pathfinder Group, which has helped develop city-wide sponsorship programs for the City of San Diego and other municipalities.

Agencies also face the risk of having a program unexpectedly shot down by a politician or other stakeholders, he added.

But some agencies are willing to take on that risk. Case in point: IMG has a commission-only partnership with the CTA. But the agency did have an out: IMG would have received a fee if the CTA decided not to pursue the program.

Sources

IMG, New York City office, Tel: 212/489-8300

The Pathfinder Group, Tel: 800/477-2559

Breaking It Down: Two Canteen Vending Deals

City of Huntington Beach

- Five year deal
- Installation, operation and servicing of snack and beverage vending machines at city facilities and public locations
- Canteen pays a quarterly commission based on gross sales proceeds
 - 10 percent snack items/15 percent beverages (select locations)
 - 20 percent snack items/40 percent beverages (select locations)
- Canteen pays \$50,000 advance against first year commission
- Huntington Beach pays 15 percent commission of all revenue to Active Network, the city's municipal marketing consultant

City of San Diego

- Five year deal
- Installation, operation and servicing of snack vending machines at city facilities and public locations
- Canteen receives status as "official snack vending partner of the City of San Diego"
- Canteen pays a commission of 20 percent of gross receipts from the sale of snacks and a commission of 30 percent of advertising net revenue
- Canteen pays \$30,000 advance against first year commission

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SPONSORSHIP BLOG

Time For Municipal Marketing To Realize Its Potential

BY LESA UKMAN NOV 16, 2011

"Make no little plans. They have no magic to stir men's blood and probably themselves will not be realized."

Unfortunately, that sage advice from the great architect Daniel Burnham regarding his "Plan of Chicago" is not being followed by the current leader of that city, nor by other civic leaders when it comes to building meaningful public/private partnerships between municipalities and corporations.

Mayor Rahm Emanuel is rethinking everything from the routing of garbage pick-ups to the redevelopment of the Chicago River. Too bad he is not applying that same strategic creativity to corporate partnerships.

From Philadelphia to Atlanta and New York to Colorado Springs, scores of municipalities, school districts and government bodies have tried, and failed, at optimizing revenue potential from corporate partnerships. Rather than learning from these experiences, the City of Chicago is repeating the mistakes of government officials—and inexperienced rightsholders—coast to coast. These include:

Selling advertising, not building partnerships. Mayor Emmanuel projects \$25 million in annual revenue from selling signage on city property. If the Bank of America banners on a Chicago River bridge house that appeared last weekend are any indication, the program will end up costing the city money while squandering the much bigger opportunity from integrated partnerships.

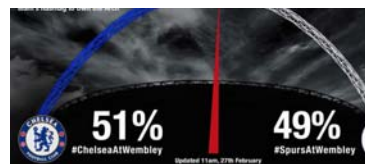


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Beyond currying favor with the city, why would any company want to clutter Chicago's storied architecture with cheap, ugly banners? It will hurt, not enhance, the brands of the advertisers.

In a [blog post](#), the bridge docent for the Chicago River Museum called the signage a "tasteless display of corporate graffiti on historic landmarks."

In addition, if signage is not integrated into a larger partnership strategy, the city will be ambushing its own efforts.

Seeking sponsorship for what needs funding rather than what's most marketable. Sponsorship is being sought to offset costs of hosting the NATO/G8 Summit in Chicago next May. With police being trained for "mass arrests" and more than 30,000 angry protesters expected, the risks of sponsoring the summit far outweigh the benefits.

Yet the City of Chicago is sitting on a surfeit of untapped assets, from iconic festivals to robust year-round opportunities that can be built with city high schools and colleges.

Sponsorship fees are unrestricted. Sell what's most marketable and use the funds to offset G8 costs.

Outsourcing sales to amateurs, political cronies or agencies. [Crain's Chicago Business reports](#) that Mayor Emanuel has "enlisted a troika of A-list fundraisers" to solicit corporate partners for the NATO/G8 Summit.

The troika, A-list or otherwise, may know how to solicit campaign and philanthropic contributions, but have zero experience creating and marketing business solutions. Working with fundraisers will either leave money on the table or alienate businesses.

The upside potential is too high to hire an agency to sell on commission or risk leaving money on the table with the wrong hires.

Chicago should take control of its commercial destiny, not outsource it.

So, how should the City of Chicago and other municipalities approach corporate partnerships? Top-line strategies include:

Set the policy, be transparent. Adopt a marketing partnership policy that governs the process. In 2003, New York City's CMO unilaterally signed a deal with Snapple giving it exclusive vending in public schools. The Bloomberg administration was accused of making a "backroom deal" without public review and was sued for not putting the opportunity out for competitive bidding. While the court allowed the contract to stand, it said future contracts could not be handled this way.

Centralize assets, design strategic solutions. IEG client experience reveals the way for cities to maximize revenue generation from the corporate

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Lesa

Ukman@LesaNkman_IEG

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Show Summary



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Managing Director, Client Leadership, IEG Consulting



Kristen Pelachyk

Senior Director, Research and Analytics, IEG Consulting Group

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sector is to centralize marketing assets and intellectual properties and create multi-year, integrated offers.

Rather than the current approach, where companies are asked to buy signage one day and a G8 Summit or city festival the next, targeted prospects should be approached with a strategic solution. It should be made clear that this is the city's sole opportunity for the category and that there will not be 20 other ways in.

Base fees on value, not instinct or budget. Without knowing the fair market value of the Snapple deal, New York City undersold it and most of the revenue was contingent on sales in vending machines that never materialized.

Know the drivers of value. Just because you can put a sign on a bridge does not mean you should. In 2011, eyeballs are a commodity. Partners need engagement opportunities, not signage.

Less is more. Selling 30 partners at \$500,000 each generates \$15 million, with net revenue after deducting the cost of selling, negotiating and servicing closer to \$12 million.

Alternatively, three strategic partners at \$15 million each will generate \$45 million, with an estimated net of \$43 million.

Build in benefits for citizens. Corporate partners require buy in from the public. This will only occur if residents benefit from the partnerships—expanded bike lanes, additional science tutoring for school children, green initiatives, etc. Each partnership should be designed accordingly.

Don't just think cash. When assessing offers, the entire package should be considered. In addition to cash, corporate partners bring vast promotional budgets which can be harnessed to build the city's brand, growing jobs and tourism.

With a strategic approach, cities and other government entities can lead the way in partnerships that enhance the quality of life for their citizens, provide much-needed unrestricted dollars to municipal coffers, and deliver high-value sales and marketing solutions for corporate partners. Everyone wins.

Listen to IEG Senior Vice President Jim Andrews offer alternatives to the City of Chicago's current advertising program in an [appearance on WGN-AM](#) on November 15.

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ABOUT THE AUTHOR

[Lesa Ukman](#) is the founder and chief insights officer of IEG. With the launch of *IEG Sponsorship Report* in 1982, she created a publication that defined an industry now worth more than \$53 billion. She continues to define new and better ways for companies to get closer to their customers through sponsorship, including her current pioneering work developing the new industry standard for measuring the results of sponsorship, offered through IEG's ROI Services. [Follow Lesa on Twitter!](#)

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Municipalities and Corporate Sponsorship

Jun 11, 2013 | Municipalities, Tuesday Morning Commentary | 2 comments

Earlier this month, I had the pleasure of speaking at the [Federation of Canadian Municipalities](#) (FCM) conference in Vancouver. This is the annual gathering of mayors, councillors, aldermen, and other city officials and staff. FCM does an amazing job of organizing this event and running its own sponsorship program. Vancouver was a terrific host to the over 2,200 delegates. I presented a session on corporate sponsorship and municipalities. The room was packed-not because of the speaker, but rather the topic!

Municipalities were represented- at least the ones that are smart enough to understand that corporate sponsorship revenue is essential to the long term financial success of their fiefdoms! It is no longer about whether a municipality wants to engage in sponsorship, but when it will "get into the game." Municipal corporate sponsorship is one of the fastest growing sectors in our industry-and it will affect all the other sectors, from arts to sports, charities to schools. As municipalities enter this game further, the question will be whether they take the money from existing sponsorship programs elsewhere in the community or grow the pot! I truly believe they will grow the pot. They will create new opportunities that fit brands that have never invested in sponsorship. They will work alongside schools, charities, and sport organizations to grow the sector and deliver better results for sponsors, and put much needed dollars on the bottom line for all these organizations.

But it has to be done right. When it is not, we see citizens and communities revolt. Or worse yet, hundreds of thousands of dollars are spent on "sponsorship development" by marketing agencies and brand integration companies, when what the municipality really needs is to know what it has to sell, what it is worth, and how to sell it through training and capacity building.

Recently, we have seen two municipalities sell naming rights, parks, or buildings, and also sponsorship programs where they truly undersold the value of the assets. This, in turn, hurts the rest of the community such as the sport organization or college that now cannot sell their properties at fair market value, because the unprepared and uneducated municipality has lowered the bar and undersold its naming rights. In April, The Ottawa Citizen reported the dismal failure of The City of Ottawa's sponsorship program after the first year, where it used an outside sponsorship brokerage to sell its programs and raised under \$750,000, versus a \$2.3 million expectation for year one. The City of Winnipeg still struggles with its sponsorship program because its assets have neither been fully identified nor valued by an outside third party to allow them to be sold at real market value and generate the money they should.

Then we see examples such as the City of Chicago where the "Blue Bin" recycling program was sold to Coca-Cola for over \$2.5 million. We watch in British Columbia, where the City of Nanaimo is undertaking training and development not only for its staff, but also offering four full days of sponsorship workshop training at a subsidized price to local and area non-profits, charities, and sport and recreation organizations. Now that is capacity building for success all around! At the same time, the community of Fort St John is reviewing such an opportunity. Both these municipalities are being supported by credit unions in the delivery of these programs.

For municipalities to be successful, they need to know how to "get into and play the game." When they do it wrong, they are in big trouble. From my experience, and we work with more municipalities across Canada than anyone, municipalities are open to sharing. I see how our client the Town of Canmore worked on its policy development with support from the City of Edmonton. The City of Spruce Grove has done the same. The City of Toronto also makes its policy available. And there are others. My advice to municipalities is to reach out to one another.

On October 21 in Calgary, the day before the [SMCC Western Sponsorship Congress™](#), the Partnership Group – Sponsorship Specialists™ will host a [half day corporate sponsorship workshop for municipalities](#). The session will review everything from asset identification to valuation, procurement issues and concerns, and policy development and prospecting. This is "must attend" workshop for municipalities.

These are just one person's thoughts. Yours are welcomed as well. Please add your thoughts or comments below. Thank you for reading and your feedback.

Brent Barootes


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2 Comments



Bernie Colterman on June 12, 2013 at 5:26 am

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 As a firm that has been involved in municipal sponsorship for over a decade, I agree that

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However, as the firm also brokering sponsorship and advertising opportunities on behalf of the City of Ottawa, I feel it necessary to point out the inaccuracy of your statement. While the Ottawa Citizen may have reported a dismal failure to achieve sponsorship revenue objectives, the figures they stated were very much out of context (how surprising for a newspaper) and covered areas not even considered under the sponsorship program such as transit advertising and station sponsorship. Here are the real stats on the sponsorship program:

The City of Ottawa's sponsorship program was officially launched until June 2012, a year later than originally planned. This late start was to ensure that the City had its "act together" prior to entering the marketplace. Of the \$981,000 actually projected for the first year of the program, \$773,000 was raised by the end of 2012, a very solid result for 6 months of full operation.

Since the official launch of the program, less than one year ago:

- 3 naming rights deals have been secured for a total value of \$2.4 million,
- \$1,242,000 has been secured for 5-year pouring rights in City facilities,
- A billboard advertising program has been put in place which will generate estimated revenue of \$1,850,000 over 5 years.

The City of Ottawa is well on its way to achieving \$12.7 million over 5 years. Moreover, they continue to push the boundaries of municipal sponsorship by taking an innovative approach towards revenue generation. The City's "Community Champions" model is one that should be adopted by municipalities that want to take a strategic approach towards sponsorship.

[Reply](#)

Brent Barootes on June 12, 2013 at 5:50 am

Bernie,

Thanks for your post and your clarification. It is always important to garner feedback from those on the front line. Congratulations on the success of the City of Ottawa project and your work in Burlington and Kitchener. Brent

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The Partnership Group shared their expertise to help introduce us to the complex world of Corporate Engagement, providing critical recommendations that we are taking action on today and key insights that will be invaluable going forward. With excellent commitment to service, they over delivered in providing industry standard valuations on more assets than we expected so that we are best positioned for success in the future. Partnership Group is an excellent choice for organizations at any stage in Corporate Engagement seeking assistance in this arena. Thank you Brent, Chris and the rest of the team at Partnership Group – Sponsorship Specialists.

Richard Warring

Head, Marketing & Public Information - **Alberta Parks**



<http://albertaparks.ca>
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City of Carrollton

Agenda Memo

File Number: 1969

Agenda Date: 4/21/2015

Version: 1

Status: Work Session

In Control: City Council

File Type: Work Session Item

Agenda Number: 8.

CC MEETING: April 21, 2015

DATE: April 14, 2015

TO: Leonard Martin, City Manager

FROM: Cesar J. Molina, Jr., P.E., Director of Engineering

Discuss **Proposed Revisions And Updates To The Stormwater And Flood Protection Ordinance.**

BACKGROUND:

The Stormwater and Flood Protection Ordinance serves as the basis for drainage design in the City. The current ordinance was adopted in 2000 and has served the community well in both legal and general practice settings. Revisions are needed to address some inconsistencies in the document, to correct or update language related to federal issues, and to set forth new requirements for re-development and storm water quality initiatives.

Attached is a memorandum which details all of the changes between the original and revised versions, and a draft copy of the revised ordinance. The development of the revised ordinance included input from a variety of sources, both internal and external. This has also been reviewed by the Texas Water Development Board (FEMA review agency) and the City Attorney.

FINANCIAL IMPLICATIONS:

There are no direct financial implications associated with the update and revision of this ordinance.

IMPACT ON COMMUNITY SUSTAINABILITY:

This project will contribute to community sustainability by:

- Further reducing the potential for flooding associated with new development;
- Improve stormwater quality through the use of long-term best management practices;
- Provide for consistency with federal regulations associated with stormwater quality and floodplain management.

STAFF RECOMMENDATION/ACTION DESIRED:

Staff seeks to advise City Council and seek input regarding proposed revisions and updates to

the City's Stormwater and Flood Protection Ordinance.

For the last two years, we have been working to revise the City's Stormwater and Flood Protection Ordinance. The previous document had been approved by Council in December 2000. Over the 15 years since the approval of the current ordinance, there have been some changes in laws and policies that relate to drainage. These issues needed to be addressed as well as clarifications and improvements to the document that reflect our current policies and procedures.

Early in this project, we formed a committee of end users to provide feedback and guidance to the development of this ordinance. Members included –

Bill Walker – Billingsley Company – Development Community

Curtis Beitel, P.E. – HDR – Consultant Community

David Humphrey – Humphrey and Morton - Contractor

Brian O'Neill, P.E. – Pacheco Koch – Consultant – Private Land Development

Rob Guarnieri, P.E. – City Building Inspection

Krista Pender – Code Enforcement - Stormwater Quality

Regina Edwards – Assistant City Attorney

The project was led by William (Bill) Wallace, P.E. and Jenny LaFoy, P.E. with Nathan D. Maier Consulting Engineers. Bill has been involved with the City's drainage infrastructure for over 20 years and has authored many of the City's drainage related documents, including the previous Stormwater and Flood Protection Ordinance. He has also developed similar ordinances for other cities in the metroplex.

The final document has been reviewed and approved by both the City Attorney's office and the Texas Water Development Board (TWDB). The TWDB is the state coordinator for FEMA floodplain management.

Summary of Changes

The December 2000 ordinance served as the starting point for the new ordinance. To simplify the evaluation of the new ordinance, the following lists the significant changes that are in the proposed new ordinance.

Miscellaneous Items

- Clarified that the ordinance is enforced by the City Manager or his authorized representative.
- Clarified lowest finished floor in several areas to correspond to FEMA
- Establishes the Floodplain Administrator as the key enforcement / interpreter of the ordinance. The Floodplain Administrator is the de facto City Manager authorized representative.
- Article 9 – Special Provisions – removed several of the specific Corridor Development Certificate (CDC) requirements since they are addressed in the CDC Manual prepared by the North Central Texas Council of Governments.

- Specifically addressed the current FEMA floodplain maps (as opposed to the 'latest) per request from TWDB.
- Changed ordinance structure as requested by the City Attorney. This document will be an attachment to the ordinance, therefore some of the ordinance wording such as severability will be included in the ordinance and not in this technical document.

Article 1 – Title, Findings of Fact, Statement of Purpose, and Scope of Authority

- This section includes references to protecting storm water quality which is added in Article 10

Article 2 – Definitions

- Clarified the definition of Owners Association (Definition 55, page 9)
- Defined Transit Oriented Development Areas (Definition 75, page 12). This also notes that the TOD areas may have a Master Drainage Plan.
- Cleaned up several definitions to provide direct correspondence with FEMA definitions. These include 'Manufactured (Mobile) Home Park (Definitions 42, 43 and 44, page 8), Substantial Damage (Definition 72, page 11).

Article 3 – General Provisions

- Section A removes exemptions from the city. This was a point that we tried to negotiate with TWDB since our channel improvements, by design, do not impact private property. This will require the City to prepare a LOMR for channel improvement projects even though it has little, if any, impact to real property. This will cause a small increase in cost for these projects.
- Section C was adjusted to reflect the fact that this is an attachment to the ordinance and the Penalty Clauses for violations is covered elsewhere.

Article 4 – Administration

- The Floodplain Administrator is appointed to administer and implement the floodplain management portions of this ordinance and associated sections. This was the City Manager.
- IMPORTANT – Page 17, paragraphs 1 and 2 discuss proportionality. This is an issue that is based in recent State Law. Essentially a developer should not be responsible for infrastructure that is not required by his development. These paragraphs state the developer is required to bring this issue to the city and show that the required facilities are serving areas outside of his development. The City then has the right to participate or defer until funds are available. The methodology for determining the percentages between the City and the developer are presented in a guidance document that is not part of the ordinance. This document is attached.
- Typical Permit Process on page 20 details the general steps required to consider as part of a drainage design. Several items were added to address proportionality considerations. Item (m.) and (n.) address maintenance responsibilities, which are addressed later in the document.
- Section E, Item 2 adds a requirement for a maintenance bond of 150% of the contract price for a three year period to cover bioengineered improvement projects. These are usually difficult to establish and require extensive maintenance during the establishment period. This will aid in requiring the contractor to add additional vegetation as needed during the maintenance bond period.

- Section F, Item 2. Variances (page 26). The City Manager shall hear and decide variance requests (was the Planning and Zoning Commission).

Article 5 - Runoff Calculations

- IMPORTANT – The second paragraph on page 28 establishes a new detention / retention standard that will increase the area of ponds and the cost associated with them. Currently, detention is required to reduce flows leaving the site to the design flow from a typical residential development. This was an arbitrary standard. The new standard reduces flows to pre-development flows which is potentially a significant increase. This would mean that new residential subdivisions will be required to have detention. This is in conformance with Low Impact Development (LID) measures that are part of the Community Rating System (CRS) associated with flood insurance.
 - Caveat 1 – Redevelopment of a tract will be required to detain to the existing flows from the site unless the downstream storm drain capacity is exceeded.
 - Caveat 2 – There are very few significant residential tracts remaining in the city for development. This section should have minimal impact on a new development.
- Page 31 – Regional detention / retention is mentioned at the end of the second paragraph. While it is hoped that we can encourage regional facilities, the lack of available land may be a problem.

Article 6 - Design of Local Drainage Systems

- Page 32 - All design will be 100 year frequency storm event based designs. There was a provision for 10-year design on streets in the previous document, but it was rarely used.
- Section C, Item 3 (Page 33) – This is clarified to eliminate references to top of curb or alley elevation. Proper lot drainage can be provided for lots below the top of curb of the street without an alley at the back. The criteria provided address the basic design parameters.
- Pages 35 and 36 include tables that were moved from the Appendix for ease of reading.
- Page 37, Item 5 – This section addresses redevelopment concerns, especially in older parts of the City. Like proportionality, the City has a responsibility to improve the downstream system if the system is currently undersized but has the right to defer the construction until funds become available.
- Tables 6 and 7 (pages 39 and 41) were moved from the Appendix.
- Item 6, Page 55 – Simplified and clarified responsibilities for maintenance of drainage systems. Essentially everything within a dedicated easement or right of way that is accepted by the city shall be maintained by the city. For other drainage facilities, the city reserves the right to access the facility if it is not properly maintained by the appropriate party (HOA, owner, etc.). The previous ordinance had a number of requirements to address city maintained versus privately maintained drainage facilities. This was not practical for the major drainageways such as Dudley Branch, where poor maintenance could impact upstream homes.
- Section D, Item 9, page 60 – Adds a requirement for landscaping for detention pond areas.

- Section E, page 60 – New section that discusses Master Drainage Plans and notes that there may be additional requirements put forth in the Master Drainage Plans beyond the requirements in this ordinance.

Article 8 – Floodplain Guidelines

- Page 62, Item 2.c. and 3.b. – These two sections were revised to address FEMA requirements relating to lowest floor of buildings. Since basements are uncommon in the area, these are very minor changes.

Article 9 – Special Provisions

- Page 68 – minor adjustments to address CDC permitting noted above.

Article 10 – Stormwater Quality

- Page 71 through 75 – New section to address stormwater quality issues that are being promulgated by the EPA. In short, a number of Permanent Best Management Practices (PBMPs) are described and a point system is put forth to allow evaluation of the measures used for a site. The system is fairly simple and it is a first attempt at quantifying PBMP effectiveness at a specific site. There is flexibility in the last table item on page 24 providing for City approved methods beyond the items listed.

There is a section of exhibits at the back of the ordinance. These are pretty much the same as the previous document with the exception of correction of clerical issues on a couple of the exhibits.

INTERNAL PROPORTIONALITY GUIDELINE DOCUMENT

Purpose

The purpose of this document is to set forth general guidelines for the City Manager or other City official to determine proportional funding shares for the City and developer/owner, builder, and/or other parties as related to current Stormwater and Flood Protection Ordinance. This document is intended for internal use to assist the City Manager in determining proportional share of costs related to improvements proposed by a developer/owner, builder, and /or other parties, whether intended for this proposed development or part of a regional improvement.

These guidelines are established to address three (3) separate situations.

Condition 1 – The developer/owner, builder and /or other parties are proposing to make drainage improvements where upstream discharges are flowing through the property to be developed and the proposed improvements are required to convey this upstream flow (with ultimate watershed development) and the additional flow resulting from the development of the property. The City may participate in its proportional share of the improvement costs.

Condition 2 – The developer/owner, builder and /or other parties are proposing to make regional drainage improvements where the downstream receiving drainage system is inadequate to convey existing and ultimate design discharges. The City may share in its proportional share of the improvement costs to bring the design conditions to be point to where the downstream system is sufficient to convey existing design discharges.

Condition 3 – The developer/owner, builder and /or other parties are proposing to make regional drainage improvements where the downstream receiving drainage system is adequate to convey existing and ultimate design discharges. The City does not share in the improvements costs for this conditions.

Proportional Share Guidelines

The following calculation method may be used by the City Manager for determining proportional share of costs between the City and the developer/owner. The City's financial participation in their proportional share of costs shall be dependent upon the availability of funds and timing of the project. The following method is provided as a guideline that may be used to determine proportionate costs of developer/owner and the City for channel improvement projects and major storm sewer improvements that convey runoff from both the upstream watershed and on-site improvements. Other methods, beyond those found in this document, may be recommended and selected by the City Manager.

Condition 1 - Calculation Method for Proportional Cost Share of Developer/owner Drainage Improvements

This calculation method is based on the determination of runoff without upstream development (within the City of Carrollton). This method also considers the incremental flows that the project will cause due to the proposed development.

1. Compute QDEV, the discharge from an undeveloped watershed within the City, ultimate development outside City limits, and with development of the proposed site (without consideration of detention).

2. Compute QULT, the total watershed discharge (including the site), based on ultimate development in the watershed.
3. Determine CREQ, the cost of channel or conveyance improvements required to meet all Federal, State and City regulations for the developed site using QDEV.
4. Determine CTOT, the overall improvement cost to meet all requirements with ultimate development using QULT.
5. Determine CDEV, the Developer's share of costs, using Equation 1.
6. Determine CCITY, the City's share of costs, using Equation 2.
7. Determine RDEV, the Developer's ratio share of easement and future maintenance costs, using Equation 3.
8. Determine RCITY, the City's ratio share of easement and future maintenance costs, using Equation 4.
9. Determine EASE, the total cost of conveyance easements based on a fair market analysis of the value of the easement prior to site rezoning, platting and/or development, required for conveying QULT, including any maintenance access easement required.
10. Determine EDEV, the developer's cost of conveyance easements based on a fair market analysis of the value of the easement prior to site rezoning, platting and/or development, required for conveying QULT, including any maintenance access easement required, using Equation 5.
11. Determine ECITY, the City's cost of conveyance easements based on a fair market analysis of the value of the easement prior to site rezoning, platting and/or development, required for conveying QULT, including any maintenance access easement required, using Equation 6.
12. Determine MAIN, the present value of conveyance maintenance costs, projected for a 50-year period based on expected maintenance activities, frequency, repair costs, equipment, fuel, personnel costs, etc. using an interest rate based on the prime interest rate at the time of calculation plus one percent.
13. Determine MDEV, the developer's portion of the present value of conveyance maintenance costs using Equation 7.

$$CDEV = CREQ \quad \text{(Equation 1)}$$

$$CCITY = CTOT - CDEV \quad \text{(Equation 2)}$$

$$RDEV = CDEV/CTOT \quad \text{(Equation 3)}$$

$$RCITY = CCITY/CTOT \quad \text{(Equation 4)}$$

$$EDEV = EASE \times RDEV \quad \text{(Equation 5)}$$

$$ECITY = EASE - EDEV \quad \text{(Equation 6)}$$

$$MDEV = MAIN \times RDEV \quad \text{(Equation 7)}$$

Example Calculations

QDEV = 2,200 cfs
 QULT = 3,000 cfs
 CREQ = \$2,500,000
 CTOT = \$2,700,000
 CDEV = CREQ = \$2,500,000
 CCITY = \$2,700,000 - \$2,500,000 = \$200,000
 RDEV = \$2,500,000/\$2,700,000 = .93
 RCITY = \$200,000/\$2,700,000 = .07
 EASE = \$500,000
 EDEV = \$500,000 x 0.93= \$465,000
 ECITY = \$500,000 - \$465,000 = \$35,000
 MAIN = \$120,000
 MDEV = \$120,000 x 0.93= \$111,600

Related Requirements

The developer/owner is responsible for the construction of the project. Any mutually accepted change orders, occurring during construction, may be shared on the same proportional cost share basis, unless a different approach is agreed upon prior to the change order approval. The entire cost of any change orders, occurring during construction, that do not receive prior written approval from the City shall be the responsibility of the developer/owner.

A different calculation method may be determined by City Manager, at his discretion. In the event that the developer/owner does not provide all the data required for the analysis of proportionality shares, then the developer/owner will be responsible for all improvement, easement, and future maintenance costs. In this case, the developer/owner shall establish an association, with proper funding, to cover all future maintenance and repair costs.

If the City does not have the funds available for their portion of the improvement costs, then:

1. The developer/owner can proceed with the development project, covering all costs of the improvements. The City will reimburse the developer/owner for the City's proportional cost share within an agreed upon time frame after the final completion of the conveyance improvements and easement acquisition, or
2. The developer/owner must delay the development project until City funding is available to cover the City's portion of the conveyance improvements and related easement cost.

The developer/owner shall provide the City with the developer's share of the computed cost of maintenance (MDEV). The City shall place the funds in an escrow account for future maintenance of the project. The City shall be responsible for all future maintenance and repair activities.

Condition 2 - Calculation Method for a Regional System Where Downstream Capacity Limitations Control

This calculation method is based on the determination of runoff within the contributing watershed for existing conditions and ultimate conditions with the proposed development. The method is also based on the capacity of the downstream receiving system at the point which the system limitation occurs. This method only applies when the existing discharge (QEXIST) is greater than the allowed discharge (QALLOW) based on downstream system limitations. In the event that the existing discharge is less than the allowed discharge, then the developer/owner shall be responsible for all improvement costs.

1. QALLOW, the discharge allowed for the downstream system based on capacity requirements or other limitations.
2. QEXIST, the existing discharge contributing to the downstream system prior to additional development or redevelopment.
3. Compute QULT, the total watershed discharge contributing to the downstream system, based on ultimate development in the watershed.
4. Determine CTOT, the overall system improvement cost (channel, storm sewer, regional retention/detention, land acquisition) to meet identified system limitations and to satisfy all regulatory requirements with ultimate development using QULT.
5. Determine RDEV, the Developer's ratio share of improvement, easement and future maintenance costs, using Equation 1.
6. Determine RCITY, the City's ratio share of improvement, easement and future maintenance costs, using Equation 2.
7. Determine CDEV, the Developer's share of costs, using Equation 3.
8. Determine CCITY, the City's share of costs, using Equation 4.
9. Determine EASE, the total cost of conveyance easements based on a fair market analysis of the value of the easement prior to site rezoning, platting and/or development, required for conveying QULT, including any maintenance access easement required.
10. Determine EDEV, the developer's cost of conveyance easements based on a fair market analysis of the value of the easement prior to site rezoning, platting and/or development, required for conveying QULT, including any maintenance access easement required, using Equation 5.
11. Determine ECITY, the City's cost of conveyance easements based on a fair market analysis of the value of the easement prior to site rezoning, platting and/or development, required for conveying QULT, including any maintenance access easement required, using Equation 6.
12. Determine MAIN, the present value of conveyance maintenance costs, projected for a 50-year period based on expected maintenance activities, frequency, repair costs, equipment, fuel, personnel costs, etc. using an interest rate based on the prime interest rate at the time of calculation plus one percent.
13. Determine MDEV, the developer's portion of the present value of conveyance maintenance costs using Equation 7.

$$RDEV = (QULT - QEXIST)/(QULT - QALLOW) \quad (\text{Equation 1})$$

$$RCITY = (QEXIST - QALLOW)/(QULT - QALLOW) \quad (\text{Equation 2})$$

$$CDEV = CTOT * RDEV \quad (\text{Equation 3})$$

$$CCITY = CTOT - CDEV \quad (\text{Equation 4})$$

$$EDEV = EASE * RDEV \quad (\text{Equation 5})$$

$$ECITY = EASE - EDEV \quad \text{(Equation 6)}$$

$$MDEV = MAIN \times RDEV \quad \text{(Equation 7)}$$

Example Calculations

QALLOW = 1,700 cfs
 QEXIST = 2,200 cfs
 QULT = 3,000 cfs
 CTOT = \$1,000,000
 $RDEV = (3,000 - 2,200) / (3,000 - 1,700) = .62$
 $RCITY = (2,200 - 1,700) / (3,000 - 1,700) = .38$
 $CDEV = CTOT \times RDEV = \$2,700,000 \times .62 = \$620,000$
 $CCITY = \$1,000,000 - \$620,000 = \$380,000$
 EASE = \$100,000
 $EDEV = \$100,000 \times 0.62 = \$62,000$
 $ECITY = \$100,000 - \$62,000 = \$38,000$
 MAIN = \$120,000
 $MDEV = \$120,000 \times 0.62 = \$74,400$

Related Requirements

The developer/owner portion of the funds shall be provided to the City. The City shall be responsible for the bidding and acquisition for the project. Any mutually accepted change orders, occurring during construction, shall be shared on the same proportional share basis, unless a different approach is agreed upon prior to the change order approval.

A different calculation method may be determined by City Manager, at his discretion. In the event that the developer/owner does not provide all the data required for the analysis of proportionality shares, then the developer/owner will be responsible for all improvement, easement, and future maintenance costs. In this case, the developer/owner shall establish an association, with proper funding, to cover all future maintenance and repair costs.

If the City does not have the funds available for their portion of the improvement costs, then:

1. The developer/owner can proceed with the development project, covering all costs of the improvements. The City will reimburse the developer/owner for the City's proportional cost share within an agreed upon time frame after the final completion of the conveyance improvements and easement acquisition, or
2. The developer/owner must delay the development project until City funding is available to cover the City's portion of the conveyance improvements and related easement cost.

The developer/owner shall provide the City with the developer's share of the computed cost of maintenance (MDEV). The City shall place the funds in an escrow account for future maintenance of the project. The City shall be responsible for all future maintenance and repair activities.

Condition 3 - Regional System Where Multiple Owners Participate In the Cost of Improvements

In the event that multiple property owners elect to construct regional system improvements (storm sewers, channels, retention/detention facilities), to satisfy City requirements that are unrelated to limited downstream capacity of the receiving system, than the property owners shall share in the entire cost of the improvements. The developers shall provide the City with the computed cost for all maintenance (MAIN as defined previously). The City shall place the funds in an escrow account for future maintenance of the project. The City shall be responsible for all future maintenance and repair activities.

ORDINANCE NO. _____
CODIFIED AS CHAPTER — OF THE CARROLLTON CITY CODE OF ORDINANCES
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ORDINANCE NO. ____

ARTICLE 1

SECTION 1

**TITLE, FINDINGS OF FACT, STATEMENT OF PURPOSE,
AND SCOPE OF AUTHORITY**

ORGANIZATION OF THIS ORDINANCE

SECTION A. Title

This Ordinance shall be known as the "Stormwater and Flood Protection Ordinance" of the City of Carrollton, and shall include Exhibit "A", attached hereto and incorporated by reference for all purposes.

SECTION B. Findings of Fact

1. The drainage ways and flood hazard areas of the City of Carrollton, Texas, are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety, and general welfare.
2. These flood losses are created by the cumulative effect of obstructions in floodplains that increase flood heights and velocities and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed, or otherwise protected from flood damage.

SECTION C. Statement of Purpose

This Ordinance sets forth the minimum requirements necessary to provide and maintain a safe, efficient, and effective drainage system within the City and to establish the various public and private responsibilities for the provision thereof. Further, it is the purpose of this Ordinance to:

1. Protect human life, health, and property;
2. Minimize expenditure of public money for drainage related projects;
3. Minimize damage due to drainage to public and private facilities and utilities such as water and gas mains, electric service, telephone and sewer lines, streets and bridges;
4. Help maintain a stable tax base and preserve land values;
5. Ensure that potential buyers are notified that property is in an area of special flood hazard;
6. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions;
7. Preserve the natural beauty and aesthetics of the community;
8. Control and manage all stormwater runoff and drainage from points and surfaces within subdivisions;
9. Provide for control measures for protecting stormwater quality;

10. Establish a reasonable standard of design for development that prevents potential flood and stormwater damage.

SECTION D. Scope of Authority

Except as exempted by Article 3, Section A; Article 7, Section A; and Article 9, Section C, any person, firm, corporation, or business proposing to develop land or improve property within the City is subject to the provisions of this Ordinance. The provisions of this Ordinance also apply to individual building structures, subdivisions, excavations and fill operations, and similar activities. The scope of authority extends to additional improvements on projects, developments, subdivisions, etc., which were previously permitted and/or constructed under the authority of prior ordinances or guidelines. The implementation of the requirements of this ordinance are intended to result in improvements that meet or exceed applicable State and Federal requirements.

SECTION E. Organization of This Chapter

This Ordinance revises the provisions of the former "Stormwater and Flood Protection Ordinance" (Ordinance No. 2581). Further, it expands and clarifies various aspects of the former ordinance. The following list is a synopsis of the contents of each article.

- Article 1 - Title, Findings of Fact, Statement of Purpose, and Scope of Authority - Discusses the purposes, scope, and authority of this ordinance, and provides a penalty for noncompliance with this chapter.
- Article 2 - Definitions - Lists and defines various terms used in this ordinance.
- Article 3 - General Provisions - States general provisions related to implementation and enforcement of this ordinance.
- Article 4 - Administration - Overviews the administrative procedures to be followed for obtaining the necessary City drainage approvals related to building on or improving property.
- Article 5 - Runoff Calculations - Explains the methodologies to calculate runoff quantities.
- Article 6 - Design of Local Drainage Systems - Gives the design standards for building local drainage systems (i.e., enclosed storm sewers).
- Article 7 - Special Drainage Facilities - States additional design standards for specialty drainage system items.
- Article 8 - Floodplain Guidelines - Presents the floodplain regulations, including the requirements to be met when reclaiming floodplain land.
- Article 9 - Special Provisions: Trinity River Corridor Development Certificate Process - Presents additional regulations for activities within the Regulatory Zone of the Elm Fork Trinity River and tributaries.
- Article 10 - Stormwater Discharge Quality - Provides requirements for controlling stormwater runoff quality for post-construction conditions using Permanent Best Management Practices.

SECTION F. Related Ordinances

In addition to this ordinance, the City of Carrollton has other ordinances, regulations, and specifications pertaining to drainage and storm sewer facilities. These other documents include, but are not limited to, the City's Comprehensive Zoning Ordinance ("CZO"), City's subdivision ordinance, the Standard Specifications for Public Works Construction by the North Central Texas Council of Governments, as amended by the City, and the General Design Standards for the City of Carrollton, which shall remain in full force and effect. Provided, however, if there is any conflict between such prior ordinances, regulations, or specifications and this Ordinance, this Ordinance shall prevail.

ARTICLE 2

DEFINITIONS

For purposes of this Ordinance, certain terms, phrases, words and their derivatives shall be construed as specified in this Ordinance, unless the context clearly indicates or requires a different meaning. Where terms are not defined, they shall have their ordinary, accepted meanings within the context with which they are used. Webster's Third New International Dictionary of The English Language, Unabridged, copyright 1986, shall be considered as providing ordinary, accepted meanings. Words in the singular shall include the plural and the plural the singular. Words used in the masculine gender shall include the feminine and the feminine the masculine

1. Appeal

A request for review or interpretation of any provisions of this Ordinance or a request for a variance.

2. Area of Special Flood Hazard

The land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

3. Base Flood

The flood having a one percent chance of being equaled or exceeded in any given year, determined based upon FEMA guidelines and as shown in the current effective Flood Insurance Study.

4. Base Flood Elevation

The water surface elevation resulting from the base flood.

5. Bioengineering

Bioengineering is the practice of including elements that involve the use of vegetation for the protection and stabilization of drainage improvements. Bioengineering improvements may include the combination of both structural and vegetation elements in an overall improvement plan.

6. Biologist/Botanist

Biologist or Botanist shall mean a person with a minimum of a Bachelor of Science Degree in Biology, Botany, Ecology or Environmental Science from an accredited college or university.

7. City

The City of Carrollton, Texas.

8. City Council

The City Council of the City of Carrollton.

9. City Manager

The person appointed to the position of City Manager by the City Council of the City of Carrollton, or his/her duly authorized representative.

10. Conduit
- Any closed device for conveying flowing water.
11. Construction
- Any human activity that involves clearing, grading, excavation, landfilling, or other placement, movement, removal, or disposal of soil, rock, or other earth materials.
12. Corridor Development Certificate ("CDC")
- A required permit process managed by the City's Floodplain Administrator for activities within the Regulatory Zone of the Trinity River and its tributaries.
13. Design Flood
- The flood having a one percent chance of being equaled or exceeded in any given year based upon fully developed watershed conditions.
14. Detention Basin
- A dry basin or depression constructed for the purpose of temporarily storing stormwater runoff and discharging all of that water over time at a reduced rate than would have otherwise occurred. (See Retention Basin for wet basin, depression, or pond).
15. Developer
- A person, partnership, or corporation engaged in the development of land and/or building of structures and not excluded by exemption sections of this Ordinance. For purposes of this Ordinance, the term developer shall include the owner.
16. Development
- Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, grading, or clearing.
17. Discharge
- Rate of stormwater runoff for flood waters flowing in a river, creek, channel, storm sewer system or other stormwater conveyance system.
18. Elevated Building
- In the case of Zones A1-30, A, A99, AO, B, C, D, V1-V30, and any other designated FEMA Zone, an elevated building includes a building elevated by means of fill so that the finished floor of the building is at least two feet (2') above the water surface elevation of the design flood.
19. Entrance Head
- The head required to cause flow into a conduit or other structure; it includes both entrance loss and velocity head.

20. Entrance Loss

Head lost in eddies or friction at the inlet to a conduit, headwall, or structure.

21. Environmental Protection Agency (EPA)

The United States Environmental Protection Agency, the regional office thereof, any federal department, agency, or commission that may succeed to the authority of the EPA, any duly authorized official of EPA or such successor agency.

22. Equal Conveyance

Principle of reducing stream conveyance for a proposed alteration with a corresponding reduction in conveyance to the opposite bank of the stream. The right of equal conveyance applies to all owners and uses and may be relinquished only by written agreements.

23. Erosion

The wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep. In this Ordinance, erosion due to stormwater runoff is the primary design issue.

24. Existing Construction

For the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of Ordinance 905. "Existing construction" may also be referred to as "existing structures".

25. Facility

Any building, structure, installation, process, or activity from which there is, or may be, a discharge of pollutant.

26. Federal Emergency Management Agency (FEMA)

Federal agency which administers the National Flood Insurance Program.

27. Flood or Flooding

A general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland waters and/or
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

28. Flood Insurance Rate Map (FIRM)

The official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

29. Flood Insurance Study

The official report in which the Federal Emergency Management Agency has provided flood profiles, the water surface elevation of the base flood, as well as the Flood Boundary-Floodway Map.

30. Flood Protection System

Those physical structural works which have been constructed specifically to modify flooding in order to reduce the extent of the areas within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

31. Floodplain or Flood-prone Area

Any land area susceptible to being inundated by water from any source (see definition of flooding).

32. Floodplain Administrator

The City Manager or his designee appointed to administer and implement this Ordinance and other appropriate sections of 44 CFR (Emergency Management and Assistance National Flood Insurance Program Regulations) pertaining to floodplain management.

33. Flume

Any open conduit on a prepared grade, trestle, or bridge.

34. Freeboard

The vertical distance between the design flood elevation and the top of an open channel, dam, levee, or detention basin to allow for wave action, floating debris, or any other condition or emergency without overflowing the structure.

35. Hard Mast Producing Trees

Hard mast producing trees are trees that produce a hard fruit for wildlife consumption. These trees would include Pecans, Oaks, Elms, etc.

36. Hydraulic Gradeline

A line representing the pressure head available at any given point within the drainage system.

37. Levee

A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

38. Levee System

A flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

39. Licensed Professional Engineer (LPE) or Professional Engineer (PE)

A person who has been duly licensed and registered by the Texas Board of Professional Engineers for Professional Engineers to engage in the practice of engineering in the State of Texas.

40. Lowest Floor

The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of FEMA under 44 CFR, 60.3.

41. Manning Equation

The uniform flow equation used to relate velocity, hydraulic radius, and energy gradeline slope.

42. Manufactured (Mobile) Home Park or Subdivision, Existing

A manufactured (mobile) home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured (mobile) homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed on or before December 31, 1974 or before the effective date of the community's initial Flood Insurance Rate Map (FIRM), whichever is later.

For floodplain management purposes, the term "manufactured home" includes manufactured homes, as defined by Texas Occupations Code, § 1201.003, park trailers, travel trailers, and other similar vehicles placed on a site for greater than 180 consecutive days. The term "manufactured home" does not include a "recreational vehicle".

43. Manufactured (Mobile) Home Park or Subdivision, Expansion to Existing Site

The preparation of additional sites by the construction of facilities for servicing the lots on which manufactured (mobile) homes are to be affixed (including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads).

44. Manufactured (Mobile) Home Park or Subdivision, New

A manufactured (mobile) home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured (mobile) homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed after December 31, 1974, or on or after the effective date of the community's initial Flood Insurance Rate Map (FIRM), whichever is later.

45. Master Drainage Plans

Master Drainage Plans are specific plans, developed by the City, to identify drainage improvements required for future development and redevelopment in these areas. These include Master Drainage Plans for the Transit Oriented Development areas.

46. Maximum Extent Practicable (MEP)

The goal of reducing adverse impacts through the appropriate design and management of improvements.

47. Mean Sea Level

For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1988, as amended, or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

48. Natural Drainage

The dispersal of surface waters through ground absorption and by drainage channels formed by the existing surface topography which exists at the time of adoption of this ordinance.

49. Natural Floodway

The effective area of a channel of a river or other water course and the adjacent land areas that must be reserved in order to discharge the "design flood" without cumulatively increasing the water surface elevation.

50. New Construction

Structures for which the "start of construction" commenced on or after the effective date of Ordinance 905.

51. Notice of Intent (NOI)

The NOI that is required by either the Industrial General Permit or the Construction General Permit. Documentation of construction activity which is submitted to the EPA and the City prior to construction. It serves as notification of construction activity as well as a commitment by the owner that he/she understands the requirements of the NPDES General Permit for Storm Water Discharges From Construction Activities and that measures will be taken to implement and maintain a SWPPP at the site.

52. Notice of Termination (NOT)

The NOT that is required by either the Industrial General Permit or the Construction General Permit. A completed form sent to the EPA and City upon stabilization of the site that serves as notice that the site is no longer subject to the requirements of the NPDES General Permit for Storm Water Discharges From Construction Activities.

53. Open Channel

A channel in which water flows with a free surface.

54. Owner

The person who owns all or part of a facility or property. The terms Owner or Property Owner are used interchangeably and also applies to future owners, heirs, and assigns.

55. Owners Association

Owners Association, Homeowners Association, Property Owners Association, or any other entity or group established by the Developer/Owner, and approved by the City Council, to be the responsible party for performing maintenance of and repairs to approved drainage improvements.

56. Permanent Best Management Practices (PBMP)

Schedules of permanent practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. This also includes treatment requirements, operating procedures, and practices to reduce runoff and limit pollutants in runoff.

57. Person

Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity, or any other legal entity, or their legal representatives, agents, or assigns. This definition includes all federal, state, and local governmental entities.

58. Probable Maximum Flood (PMF)

The flood magnitude that may be expected from the most critical combination of meteorological and hydrologic conditions that are reasonably possible for a given watershed.

59. Rational Formula

The means of relating runoff with the area being drained and the intensity of the storm rainfall.

60. Recreational Vehicle

Means a vehicle which is (i) built on a single chassis; (ii) 400 square feet or less when measured at the largest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light duty truck; and (iv) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

61. Regulatory Floodway

The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the "base flood," as calculated by FEMA, without cumulatively increasing the water surface elevation more than a designated height.

62. Regulatory Zone

The area within the 100-year floodplain of the specified reach of the Trinity River as defined by the latest approved version of the digital Trinity River Corridor Map - CDC Regulatory and Review Zones maintained by NCTCOG.

63. Retention Basin

A pond or other water body which has been designed to have both a conservation pool for holding some water indefinitely and a flood storage pool for storing stormwater runoff on a temporary basis for the purpose of reducing the peak discharge from the basin. (See Detention Basin for a dry basin or depression)

64. Riparian Area

The area along the banks of a river or other natural watercourse.

65. Sanitary Sewer (or Sewer)

The system of pipes, conduits, and other conveyance which carry industrial waste and domestic sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated, to the sewage treatment plant serving the City (and to which stormwater, surface water, and groundwater are not intentionally admitted).

66. Sediment

The soil particles uplifted by erosion and deposited through the process of sedimentation. These soil particles settle out of runoff at variable rates based on the size of the particle and soil type.

67. Site

The land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

68. Standard Project Flood

The flood that is developed on a case-by-case basis using the U. S. Army Corps of Engineers' current criteria.

69. Start of Construction

For other than new construction or substantial improvements, under the Coastal Barrier Resources Act (CBRA), this is the date the building permit was issued, provided that the actual start of construction, repair, rehabilitation, addition, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a building on site, such as the pouring of a slab or footing, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured (mobile) home on a foundation. For a substantial improvement, actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

70. Stormwater

Stormwater runoff, snow melt runoff, and surface runoff and drainage.

71. Structure

A walled and roofed building, a manufactured home, a gas or liquid storage tank, or a substation that is principally above ground.

72. Substantial Damage

Damage of any origin sustained by a building whereby the cost of restoring the building to its before-damaged condition would equal or exceed 50% of the market value of the building before the damage occurred.

73. Substantial Improvement

Any combination of repairs, reconstructions, or improvements of a structure, the cumulative cost of which equals or exceeds fifty percent (50%) of the initial market value of the structure either:

- (1) before the first improvement or repair is started, or

- (2) if the structure has been damaged and is being restored, before the damage occurred.

For the purpose of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. Incremental improvements over a period of time, the cumulative cost of which equals or exceeds fifty percent (50%) of the market value at the time of the first improvement, shall be considered as a "substantial improvement."

The term does not, however, include either:

- (1) any project for improvement of a structure to comply with existing State or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions or,
- (2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

74. Time of Concentration

The estimated time in minutes or hours required for a drop of water to flow from the most remote point in the drainage area to the point at which the flow is to be determined.

75. Transit Oriented Development Areas

Transit Oriented Development (TOD) Areas are those areas defined by the City around the Dallas Area Rapid Transit corridor. The TOD areas may have specific Master Drainage Plans that have been developed for the areas.

76. Use

Any purpose for which a building or other structure or a tract of land may be designed, arranged, intended, maintained, or occupied; or any activity, occupation, business, or operation carried on, or intended to be carried on, in a building or other structure or on a tract of land.

77. Use Permit

The permit required before any use may be commenced.

78. Variance

A grant of relief to a person from the requirements of this ordinance when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this ordinance.

79. Violation

A structure or other development that is not fully compliant with this Ordinance. A structure or other development without the FEMA elevation certificate prior to a certificate of occupancy, other certifications, or other evidence as required by the Floodplain Administrator, is presumed to be in violation until such time as that documentation is provided.

80. Watershed

The area drained by a stream or drainage system.

81. Waters of the United States

All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; all interstate waters, including interstate wetlands; all other waters the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce; all impoundments of waters otherwise defined as waters of the United States under this definition; all tributaries of waters identified in this definition; all wetlands adjacent to waters identified in this definition; and any waters within the federal definition of "waters of the United States" at 40 CFR 122.2; but not including any waste treatment systems, treatment ponds, or lagoons designed to meet the requirements of the Federal Clean Water Act.

82. Water Surface Elevation

The height, in relation to the NGVD or 1929 datum (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of riverine areas.

ARTICLE 3

GENERAL PROVISIONS

SECTION A. Lands to Which This Ordinance Applies

This Ordinance shall apply to all areas of land within the city limits of the City of Carrollton, Texas, as may be amended or expanded. Certain provisions of this Ordinance apply only to special flood hazard areas within the City, while other provisions exempt certain other tracts. These limited areas of application are explained in the relevant provisions (See Article 8, Section A). This Ordinance also extends the scope of authority to additional improvements on projects, developments, subdivisions, etc., which were previously permitted and/or constructed under the authority of prior ordinances or guidelines.

Some areas and projects shall be free from meeting selected requirements of this Ordinance. These include, and are limited to the following:

Existing Flood Control Districts, Levee Improvement Districts ("Districts"), and other related districts that have been established for the express purpose of flood control are exempt from meeting some requirements of this Ordinance. These districts are exempt from specific requirements as specified within this Ordinance. The following list sets forth the modified requirements for the Districts for design and maintenance projects:

1. Exempt from the following requirement:

Alterations of the floodplain, excluding ineffective flow areas, shall not increase the water surface elevation of the design flood of the creek beyond the limits established by the City for the "regulatory floodway". For the "regulatory floodway" the impacts cannot impact any upstream, downstream or adjacent property owner. Increases to the water surface elevations may be permitted if all increases are limited to the requirements of the "regulatory floodway" and are contained on the applicant's property and there are no adverse impacts to any property under other ownership. Any increase that exceeds the City's requirements for the "regulatory floodway" must meet the requirements of CFR 44 Section 65.12.

Districts shall meet the following requirement: Alterations of the floodplain, excluding ineffective flow areas, shall not increase the water surface elevation of the design flood of the creek beyond the limits established by the City for the "regulatory floodway". Modifications within the floodway cannot impact any upstream, downstream or adjacent property owner. Increases to the water surface elevations may be permitted if all increases are due to improvements beyond the limits of the FEMA "Regulatory Floodway" and are contained on the District's property or within District's easements and there are no adverse impacts to any property under other ownership. Any increase that exceeds the City's requirements for the "regulatory floodway" must meet the requirements of CFR 44 Section 65.12. Other State and Federal regulations must also be met.

2. Exempt from meeting the permissible velocity requirements.

Districts shall meet the following requirement: The District shall attempt to meet the permissible velocity requirements of this Ordinance for improvements proposed by the District on District property. The District shall be free from these requirements unless the impact extends to private property or areas not maintained by the District. The District shall provide for on-site erosion and sedimentation control for all projects.

SECTION B. Basis for Establishing the Areas of Special Flood Hazard

The areas of special flood hazard identified by FEMA in the Flood Insurance Studies for the City, with accompanying FIRM and Flood Hazard Boundary-Floodway Maps including Dallas County, Texas effective July 7, 2014; Denton County, Texas effective April 18, 2011; Collin County, Texas effective June 2, 2009; or the most recent versions of these studies and maps are hereby adopted by reference and declared to be a part of this Ordinance, as if written word for word herein. The Flood Insurance Studies are on file in the office of the Floodplain Administrator.

SECTION C. Penalty Clause

1. Criminal Penalty - any person, firm or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and, upon conviction, shall be punished by a penalty or fine as defined by City code.
2. Civil Penalty - In addition, the violator shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the City of Carrollton from taking such other lawful action as is necessary to prevent or remedy any violation. Article 4, Section C.6 states an additional penalty against persons proceeding with construction without obtaining the necessary permits from the City.

SECTION D. Abrogation and Greater Restrictions

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and other ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

SECTION E. Interpretation

In the interpretation and application of this ordinance, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally construed in favor of the governing body; and,
3. Deemed neither to limit nor repeal any other powers granted under State statutes.

SECTION F. Warning and Disclaimer of Liability

The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This Ordinance does not imply that land outside the area of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This Ordinance shall not create liability on the part of the City, any officer or employee thereof or the FEMA for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

ARTICLE 4

ADMINISTRATION

SECTION A. Duties of City Officials

1. Duties of the Floodplain Administrator

The Floodplain Administrator is hereby appointed to administer and implement the floodplain management portions of this ordinance, including Articles 8 and 9 and other appropriate sections of 44 CFR (National Flood Insurance Program Regulations) pertaining to floodplain management. The duties of the Floodplain Administrator shall include, but not be limited to:

- Review and approval of all development permits to determine that the permit requirements of this ordinance have been met and that necessary State and Federal permits have been obtained;
- Obtain and record the actual elevation in relation to mean sea level of the lowest habitable floor (of structures adjacent to regulatory floodplain areas), including basement of all new or substantially improved structures, and whether or not the structure contains a basement;
- Maintain for public inspection all records pertaining to the provisions of this ordinance, including floodproofing certifications;
- Notify adjacent communities and the Texas Water Development Board ("TWDB"), or other State designated or successor agency, prior to any alteration or relocation of a watercourse that negatively impacts an adjacent community, and submit evidence of such notification to the FEMA;
- Notify adjacent communities prior to any alteration or relocation of a watercourse that requires approval through the CDC process;
- Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished;
- Make interpretations, where needed, as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions); and
- Obtain, review, and reasonably utilize any base flood elevation data available from a Federal, State or other source, in order to administer this ordinance when base flood elevation data has not been provided; and
- Administer and implement the storm drainage system portion of this Ordinance, and to assist the City Manager with the technical aspects of the floodplain management portions of this ordinance.

SECTION B. Responsibilities of Developers

The developer of property to be developed shall be responsible for all storm drainage flowing through or abutting such property. This responsibility also includes drainage directed to the developer's property by ultimate development as well as the drainage naturally flowing through the property by reason of topography. It is the intent of this Ordinance that provisions be made for storm drainage at such time as any property affected is proposed for development, use, or

modification. This includes the necessary improvements and easements extended to the property line to allow for future upstream development.

A developer shall be responsible for all improvements required for the development, including any necessary offsite facilities and construction staking. The City may participate in construction costs of offsite, perimeter and oversized drainage, water or sanitary sewer improvements, in accordance with state law. In addition, should the required improvements exceed the expected impact from the development or are not for the primary benefit of the development and which are required to be oversized to serve developments other than the development submitted for approval, in the City's sole determination, only to the extent and according to the standards set forth in this Ordinance, the developer may apply for funding from the City, based upon the cost of oversize or non-required improvements. All requests for funding are subject to City Council approval and subject to available funding.

In the event that City funding is unavailable at the time of the improvements, then the developer may proceed with the improvements, but shall bear the entire costs of the improvements; provided, however, that the City Council may approve such improvements, subject to future funding, which may become a debt of the City due and payable fifty (50) years from and after the developer makes final payment to contractor for construction of the development. Such debt shall be noninterest bearing and City, at its discretion, may retire said debt prior to the expiration of the fiftieth year.

Where the improvement or construction of a storm drainage facility is required along a property line common to two or more owners, the owner hereafter proposing development of the property shall be responsible for the required improvements at the time of development, including the dedication of all necessary rights-of-way or easements, to accommodate the improvements.

Where a property owner proposes development or use of only a portion of the property, provision for storm drainage shall only be required in that portion of the property proposed for immediate development, except if construction or improvements of a drainage facility outside that designated portion of the property is deemed essential to the development of that designated portion.

Developers shall provide for stormwater runoff and shall design drainage related facilities in accordance with and/or in a compatible manner with any City master drainage study, regional drainage study and plan in effect at the time or any proposed capital improvement project when plans for drainage facilities are submitted to the City for approval.

In addition, developers may be required to provide at their expense a preliminary drainage study for the total area to be ultimately developed. This study shall be submitted to the Floodplain Administrator as a part of the submitted data for consideration of preliminary plat or site plan approval for the portion of the property proposed for immediate development.

The requirements of this ordinance shall meet or exceed the requirements of State and Federal Laws. In cases where the developer believes that requirements of this Ordinance may result in non-conformance, it is the developer's responsibility to clearly demonstrate, to the satisfaction of the Floodplain Administrator, that a specific requirement of the ordinance would result in a non-conforming situation.

The owner shall schedule and participate in a kick-off meeting with the City at the beginning of the design process. The purpose of the kick-off meeting is to define the scope and nature of the proposed project and to identify specific requirements that may impact the project design. The requirements of this ordinance shall be met, regardless of the specific issues identified in this meeting.

SECTION C. Permits

The City requires several different permits related to storm drainage. Some of these permits are listed below and explained in detail in the following paragraphs. A developer may be required to obtain other permits under the City's Code of Ordinances.

- Development Permit
- Floodplain Alteration Permit, formerly called the Fill Permit
- Tree Removal Permit
- Corridor Development Certificate (See Article 9)
- Building Permit

1. Development Permit

All developers within a Flood Hazard or Flood-Prone Area, shall obtain and submit for approval a development permit application for new construction, placement of fill, new manufactured home sites, alteration of a waterway, substantial improvement to existing structures or manufactured homes, or improvements to existing structures, or manufactured homes in the floodplain of the design flood that will result in increasing the overall outside dimensions of the structure or manufactured home. The application form can be obtained from the Floodplain Administrator's office. This form, along with duplicate copies of the accompanying engineering or architectural plans, shall identify those construction or renovation projects that would occur in a flood hazard area. As a minimum, the engineering or architectural plans will show, to scale:

- a. The nature, location, dimensions, and elevations in relation to mean sea level of the area in question.
- b. The elevation in relation to mean sea level and the location of existing or proposed structures, fill, storage of materials, and/or drainage facilities.
- c. The elevation in relation to mean sea level to which an existing non-residential structure shall be flood-proofed, the location of the foregoing.
- d. Any off-site facilities or conditions that may either affect on-site conditions or be affected by on-site conditions.

If an existing non-residential structure is proposed for flood-proofing, then a certification sealed by a licensed professional engineer in the State of Texas shall be submitted stating that all of the flood-proofing criteria listed in Article 8, Section B will be met. Construction or renovation projects cannot begin until the City issues a development permit.

2. Floodplain Alteration Permit

Developers shall obtain a floodplain alteration permit prior to filling in a floodplain; channelizing, impounding, realigning, deepening, or otherwise modifying a natural drainage way; making improvements, substantial or otherwise, to existing structures or manufactured homes in a floodplain if the improvements result in the increase of the overall outside dimensions of the structures or manufactured homes; or otherwise reclaiming floodplain land. A floodplain alteration permit application form can be obtained from the Floodplain Administrator's office. Article 4, Section D.2 identifies the information that must be submitted to the Floodplain Administrator. No floodplain alterations may begin until a permit is issued by the Floodplain Administrator.

3. Corridor Development Certificate

Developers shall apply for and obtain a CDC prior to commencement of work in a Regulatory Zone of the Trinity River Corridor (the floodplain). Work requiring a CDC within the floodplain includes, but is not limited to: (1) filling, channelizing, impounding, realigning, deepening, or otherwise modifying a natural drainageway; (2) making improvements, substantial or otherwise, to existing structures or manufactured homes in a floodplain if the improvements result in the increase of the overall outside dimensions of the structures or manufactured homes; or (3) otherwise reclaiming floodplain land. A CDC application form can be obtained from the Floodplain Administrator's office. Article 9 identifies the information that must be submitted to the Floodplain Administrator. No floodplain alternations shall begin until a CDC permit is issued by the Floodplain Administrator.

4. Elevation Certificate

Developers shall complete an elevation certificate prior to issuance of a certificate of occupancy by the City if constructing improvements in or adjacent to a Flood Hazard, Flood-Prone or Floodplain Area. Elevation certificate forms can be obtained at the Floodplain Administrator office.

5. Other State and Federal Permits

A development permit will not be issued until the developer acquires all necessary State and Federal permits. A copy of the necessary permits will be provided to the City prior to the issuance of any permits. The requirements of this ordinance shall not result in improvements that conflict with any State or Federal Laws. The necessary State and Federal permits may include:

- a. Conditional Letter of Map Revision (CLOMR) from the Federal Emergency Management Agency (FEMA). A CLOMR is required for all activities that result in a modification of any FEMA regulatory floodplain or floodway of the City of Carrollton.
- b. Permit related to Section 404 of the Clean Water Act (from U.S. Army Corps of Engineers).
- c. 401 Water Quality Certification from the Texas Commission on Environmental Quality (TCEQ).
- d. Any necessary antiquities or historical permits.
- e. Notification of the TWDB of any proposed alteration to a watercourse.

For projects involving floodplain reclamation or a modification to the FEMA "Regulatory Floodway", a Letter of Map Revision (LOMR) must be secured from FEMA after completion of the project. For reclamation projects where a CLOMR was acquired, a LOMR must be received before a certificate of occupancy will be issued by the City. For reclamation projects that did not apply for a CLOMR, a LOMR must be received before the construction of any buildings will be allowed.

6. Proceeding without the Applicable Permits

Any developer who fails to obtain the applicable development, floodplain alteration and/or CDC permit before beginning the subject project is in violation of this ordinance. In addition to the penalties outlined in Article 3, Section C, no building permit, plat, site plan, or certificate of occupancy shall be issued for any construction, reconstruction, or development upon any land where such construction, reconstruction, or development is not in conformity with the requirements and intent of this ordinance. Anyone person who violates any of the terms and provisions of this Ordinance shall be denied a building permit, or any other development-related permit, until the violation is corrected.

7. Deviations from Permit Terms

Permits may be revoked by the Floodplain Administrator if, upon periodic inspection, he determines that the work is not progressing in accordance with the requirements and specifications of the approved plan and permit.

Field changes to storm sewer plans can be made only upon approval by the Floodplain Administrator. Record drawings shall be submitted to the Floodplain Administrator at the completion of the project.

8. Typical Permit Process

The typical permitting process for activities within floodplain and flood-prone areas may include the following steps. Each project may vary from the typical process shown below and it is the developer's responsibility to determine the permitting activities that are required for their project. The Floodplain Administrator may waive certain steps in the process or may require certain steps to be completed, depending on the nature of the proposed project.

- a. Determine if the project is located within, or adjacent to, a floodplain or flood-prone area.
- b. Setup and attend a kick-off meeting with the City to identify requirements related to the proposed improvements.
- c. Complete the necessary technical studies to define the impacts of the project. Technical studies include the FEMA and City requirements.
- d. Develop concept plans for proposed improvements.
- e. Submit proposed plan as a part of the platting process.
- f. Determine if improvements will result in any proportional division of costs. In the case where a proportional division of cost is anticipated, develop a conceptual cost and evaluate proportional division of costs. Coordinate with the City to determine availability of funding and impacts to project schedule.
- g. Submit a CLOMR to the City for review and comment. A CLOMR submittal is required for any activity that will modify the FEMA Regulatory Floodway. CLOMR submittals may be required for other floodplain activities. The City will submit the CLOMR, with any necessary revisions, to FEMA.
- h. Submit necessary hydrologic and hydraulic studies to the City based on ultimate watershed development.
- i. Determine if any other State and/or Federal submittals, permits, or approvals are required and make appropriate submittals.
- j. Receive approvals for State and Federal submittals, including CLOMR.
- k. Submit application and receive CDC permit, if required for the project.
- l. Prepare construction plans and update any submittals to the City.
- m. Prepare easement documents and secure approval as a part of the final platting.
- n. Set up an Owners Association (as required for future maintenance) and provide required funds for the maintenance agreement.

- o. Update opinions of probable construction cost. Enter into a development agreement with the City in the event that proportional division of costs is expected. Determine updated schedule for City participation and funding.
- p. Receive approval based on the City requirements, as provided in the Stormwater and Flood Protection Ordinances and other pertinent ordinances.
- q. Secure a floodplain alteration permit, development permit and CDC permit from the City, as applicable.
- r. Submit NOI to the City and TCEQ and begin project construction.
- s. Complete project construction and file NOT with the City and TCEQ.
- t. Complete necessary elevation certificates and secure any necessary building permits.
- u. File a LOMR submittal with the City for all projects that alter the FEMA floodplain or "Regulatory Floodway". Make any necessary revisions and the City will submit the LOMR application to FEMA.
- v. Receive LOMR acceptance from FEMA.
- w. Secure certificate of occupancy from the City if the project is located in the FEMA floodplain.
- x. Complete any actions related to the proportional division of project costs.

SECTION D. Plan Requirements

Plan requirements for stormwater drainage systems and floodplain alterations are listed below. All engineering plans shall be sealed by a professional engineer who is licensed in the State of Texas and experienced in civil engineering work. The total cost for such engineering plans and specifications shall be borne by the developer and shall be furnished to the Floodplain Administrator for review and approval. A kick-off meeting will be held with the Floodplain Administrator prior to the preparation and submission of project plans.

1. Drainage Plans

As part of the platting process, drainage plans shall be prepared. These plans shall include drainage facilities for both off-site and on-site drainage so that the proper transition between the two can be maintained. Criteria for on-site development shall also apply to off-site improvements.

The construction of all improvements shall be in accordance with the current General Design Standards (GDS) of the City of Carrollton and Standard Specifications for Public Works Construction by the North Central Texas Council of Governments (NCTCOG) as amended by the City.

The drainage plans shall include:

- a. Drainage Area Map
 - 1) Use up to 1"=200' scale for the development and up to 1"=1000' for creeks and off-site areas, provided that the scale is adequate for review, and show match lines between any two or more maps.
 - 2) Show existing and proposed storm sewers and inlets.

- 3) Indicate sub-areas for each alley, street, off-site, etc.
- 4) Indicate contours on map for on- and off-site.
- 5) Indicate zoning on drainage area.
- 6) Show points of concentration.
- 7) Indicate runoff at all inlets, including any by-pass flows.
- 8) Provide runoff calculations for all areas showing acreage, runoff coefficient, inlet time, and storm frequency.
- 9) Provide detention calculations based on the criteria established herein.
- 10) Indicate all crests, sags, and street and alley intersections with flow arrows.
- 11) Show limits of each plan-profile sheet.

b. Plan-Profile Sheets

- 1) Show plan and profile of all storm sewers on separate sheets from paving plans.
- 2) Indicate concrete cushions or embedment where applicable.
- 3) Specify reinforced concrete Class III pipe unless otherwise noted. Use heavier pipe where crossing railroads, deep fill or heavy loads.
- 4) Indicate property lines along storm sewer and show easements with dimensions.
- 5) Show all existing utilities in plan and profile of storm sewers.
- 6) Indicate existing and proposed ground line and improvements on all street, alley, and storm sewer profiles.
- 7) Show hydraulic gradeline with computations.
- 8) Show laterals on trunk profile with stations.
- 9) Number inlets according to the number designation given for the area or sub-area contributing runoff to the inlet.
- 10) Indicate size and type of inlet on plan view, lateral size and flow line, paving station and top of curb elevation.
- 11) Indicate quantity and direction of flows at all inlets, stubouts, pipes and intakes.
- 12) Show future streets and grades where applicable.
- 13) Show design water surface at outfall of storm sewer, velocity, and typical section of receiving water body.
- 14) Where fill is proposed or trench cut in creeks or outfall ditches is proposed, specify compacted fill and compaction criteria.
- 15) Show size of pipe, length of each pipe size, and stationing at 100-foot intervals in the plan view.
- 16) Begin and end each sheet with even 100-foot or 50-foot stationing.
- 17) Show diameter of pipes, physical grade, discharge, capacity of pipe, slope of hydraulic gradeline, and velocity in the pipe in the profile view.
- 18) Show elevations of flow lines at 100-foot intervals on the profile.
- 19) Give bench mark information.

- 20) Show capacities, flows, velocities, etc., of the existing system into which the proposed system is being connected.
- 21) Show details of all connection boxes, headwalls on storm sewers, flumes or any other item that is not a standard detail.
- 22) Provide lateral profiles and where utilities are crossed, show all utilities in profile.
- 23) Show headwalls and specify type for all storm sewers at outfall.
- 24) Provide flat grade at alleys and streets to discharge into streets.
- 25) Show curve data for all storm sewers.
- 26) Tie storm sewer stationing with paving stations.
- 27) On all dead-end streets and alleys, show grades for drainage overflow path on the plan and profile sheets, and show erosion controls.
- 28) Specify concrete strength for all structures.
- 29) Provide sections for road, railroad and other ditches with profiles and hydraulic computations. Show design water surface on profile.

c. Bridge Plans

- 1) Show the elevation of the lowest member of the bridge and 100-year water surface elevation.
- 2) Indicate soil borings on plans.
- 3) Provide soils report.
- 4) Show bridge sections upstream and downstream.
- 5) Provide hydraulic calculations on all sections.
- 6) Provide structural details and calculations.
- 7) Provide vertical and horizontal alignment.

d. Creek Alteration and Channel Plans

- 1) Show stationing in plan and profile.
- 2) Indicate flow line, banks, design water surface, and freeboard. Show hydraulic computations.
- 3) Indicate nature of banks such as rock, earth, etc.
- 4) Provide cross-sections with ties to property lines and easements.
- 5) Show side slopes of creek, channels, etc.
- 6) Specify compacted fill where fill is proposed.
- 7) Indicate any adjacent alley or street elevations on creek profile.
- 8) Show any temporary or permanent erosion controls.
- 9) Indicate existing and proposed velocities.
- 10) Show access and/or maintenance easements.
- 11) As necessary, show ground elevations parallel to the top of bank to show how runoff is prevented from overland flow into the creek or channel.

e. Detention and Retention Facilities

- 1) Show plan view of detention/retention area and outlet structure.
- 2) Delineate limits of conservation pool, sediment storage area, flood storage pool, and/or freeboard.
- 3) Indicate size, dimension, total capacity, design discharge and velocity of the outlet structure.
- 4) Show any erosion control features at the discharge point of the outlet structure.
- 5) Specify side slopes of basin and outlet structure.
- 6) Show existing or proposed structures or other facilities downstream of the outlet structure and emergency spillway, and provide information sufficient to show that the downstream facilities will not be inundated or otherwise affected by the discharge from the basin.
- 7) Indicate locations and quantities of all inflows to the basin.
- 8) Provide design calculations for basins including inflow discharge, basin release rate, required storage volume, storage volume provided, time to empty the basin, basin by-pass flows, and other pertinent design data.

f. Levees

- 1) Show location, extent, nature, dimensions, etc., of levee embankments and associated interior and exterior drainage facilities.
- 2) Provide engineering analysis addressing potential erosion of the levee embankments during flood events.
- 3) Provide geotechnical engineering analysis of levee embankment stability and seepage through the levee during flood events.
- 4) Demonstrate that future settlement of the levee embankments will not result in freeboard dropping below the minimum requirements. Provide geotechnical reports showing anticipated levee consolidation.
- 5) Analyze interior drainage concerns. Identify sources of interior flooding, and extent and depth of such flooding, assuming a joint probability of interior and exterior flooding. Consider capacity of pumps and other drainage devices for evacuating interior waters.
- 6) Write an operations manual which discusses the flood warning system to trigger closures; closure operations, procedures, and personnel; operation plans for interior drainage facilities; at least an annual inspection program; and maintenance plans, procedures, and frequency.
- 7) Provide all other information required in Article 7, Section C, and any other information requested or required by the Floodplain Administrator and/or the FEMA.

2. Floodplain Alteration Plans

The materials listed below shall be submitted as part of the application for a floodplain alteration permit. It is recommended that applicants coordinate the application materials listed below with those needed for other City permits and with the data requirements of the FEMA. Such coordination will facilitate staff review, and drawings could be combined so as to save the applicant from multiple drawings.

- a. An engineering report consisting of at least:

- 1) Project description.
 - 2) Description of the hydrologic and/or hydraulic analyses used, including method used to determine historic rainfall and stream data, soils reports used to determine erosive velocity values, and discharges and water surface elevations for both the design and base floods.
 - 3) Vicinity map.
 - 4) Evaluation of the "natural floodway" and floodplain limits for the design flood. The "natural floodway" is the "regulatory floodway" for the City. The "natural floodway" is established to allow the City to effectively manage flood plain areas and allows no cumulative increase in flood elevations (0.00 feet), beyond the designated height.
 - 5) If hydraulic analyses are being submitted, then a table of values for existing and proposed water surface elevations and velocities must be included.
 - 6) Copies of computer input and output data, in electronic format, for existing and proposed conditions for both the base flood and design flood discharges.
- b. Engineering drawings consisting of at least:
- 1) Water surface profile, including channel flow line, existing and proposed water surface elevations, recorded high water marks, and location and number designation of cross-sections.
 - 2) Plan view on 24" x 36" paper, including:
 - a) Scale and north arrow.
 - b) Title block.
 - c) Boundary lines and nearest street intersections.
 - d) Existing and proposed contours.
 - e) Existing and proposed floodplain limits, and limits of the "natural floodway" /"regulatory floodway."
 - f) Area to be removed from the floodplain or area to be altered.
 - g) Top and toe of fill and/or side slopes and the numerical slope of the fill and/or side slopes labeled.
 - h) Location of all other associated improvements or alterations to the creek and/or floodplain, such as check dams, swales, channel modifications, etc.
 - i) Location of cross-sections.
 - j) Location of all existing and proposed easements and dedications.
 - k) Site vicinity map.
 - 3) Plots of cross-sections, including:
 - a) Scale.
 - b) Title block.
 - c) Existing and proposed ground elevations.
 - d) Cut and/or fill areas labeled.
 - e) Limits of and numerical values for existing and proposed "n" values.
 - f) Equal conveyance removed from both sides.
 - g) Numeric slopes.

SECTION E. Maintenance Bonds

The developer shall guarantee through the issuance of a maintenance bond as provided below, that the work is free of defective workmanship and materials for a period that is dependent on the type of materials used. These periods shall be as follows.

1. For projects involving typical construction materials, the maintenance bond shall be in the amount of 100% of the contract price, for a period of two (2) years after the date of acceptance of the work to cover his guarantee as set forth. The bond shall be on a form supplied by the City.
2. For channel and drainage improvements and erosion control projects involving bioengineering improvements, the maintenance bond shall be in the amount of 150% of the contract price, for a period of three (3) years after the date of acceptance of the work to cover his guarantee as set forth.

Where defective workmanship, materials and/or bioengineering elements are discovered requiring repairs or replacements to be made under this guarantee, all such work shall be done by the developer at his own expense within ten (10) calendar days after written notice of such defect has been given to him by the City. Should the developer fail to make repair or correct such defective workmanship and/or materials within ten (10) calendar days after being notified, the City may make the necessary repairs and charge the developer with the actual cost of all labor and materials required.

SECTION F. Appeals and Variance Procedure

1. Appeal

Any person aggrieved by a decision of the Floodplain Administrator may appeal to the City Manager for a variance. The decision of the City Manager shall be final.

2. Variances

The City Manager shall hear and decide requests for variances from the requirements of this Ordinance.

Variances concerning development permits may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.

Variances shall not be issued within any designated natural/ regulatory floodway if any increase in flood elevations during the design flood discharge would result unless the increase will result in no negative impacts on adjacent properties.

Variances may be issued only upon a determination that the variance is the minimum necessary to afford relief considering the flood hazard, drainage problems, and soil loss.

Variances shall be issued only upon meeting all three of the following criteria:

- a. A showing of good and sufficient cause;
- b. A determination that failure to grant the variance would result in exceptional hardship to the applicant; economic or financial hardships are not classed as a hardship for this purpose; and,
- c. A determination that the granting of a variance will not result in increased flood heights (except as allowed by this Ordinance), additional threats to public safety, extraordinary public expense, create

nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

Any applicant to whom a variance for building or renovating in a floodplain is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the design flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

In order to grant a variance, the City Manager shall make the following findings:

- That there is no danger that materials may be swept onto other lands to the injury of others;
- That there is no danger to life and property due to drainage, flooding, or erosion damage;
- That there is no susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual developer;
- That there is importance of the services provided by the proposed facility to the community;
- That there is necessity to the facility of a waterfront location, where applicable;
- That there is no availability of alternative locations for the proposed use which are not subject to flooding damage;
- That there is compatibility of the proposed use with existing and anticipated development;
- That there is a relationship of the proposed use to the comprehensive plan and flood plain management program of that area;
- That there is safety of access to the property in times of flood for ordinary and emergency vehicles;
- That there is no increase in expected heights, velocity, duration, rate of rise, and the effects of wave action, if applicable, expected at the site; and,
- That there is no cost of providing governmental services during and after storm events, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

Upon making the findings above, the City Manager may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Ordinance.

The Floodplain Administrator shall maintain the records of all appeal actions, including technical information, and report any variances of the floodplain management portions of this Ordinance to the FEMA upon request.

ARTICLE 5

RUNOFF CALCULATIONS

The selection of which method to use for calculating runoff depends upon the size of drainage area contributing runoff at the most downstream point of a project. The "Rational Method" is acceptable for situations in which the drainage area is less than 160 acres. A unit hydrograph method is required for situations with larger drainage areas.

No matter which method is used to calculate runoff, a developer of property greater than one acre in size, or any property that was platted as a part of an overall tract which was greater than two acres in size (including churches and schools), shall design new development of property so that the rate of runoff created by the proposed development as it leaves the property does not exceed the rate of runoff that would occur from the property in an undeveloped condition. In cases of property redevelopment, the rate of runoff created by the proposed development as it leaves the property does not exceed the rate of runoff that would occur from the property in its previously developed condition. However, additional detention/retention is required if it is necessary to reduce the runoff rate from the redeveloped site to the runoff rate less than the site prior to redevelopment due to downstream system limitations (see Article 6, section F.5). Article 7, Section D discusses design criteria for detention/retention facilities.

Runoff computations for the design of all drainage improvements shall be based upon fully developed watershed conditions in accordance with the land use projections in the latest comprehensive land use plan for the City. The design engineer shall size drainage facilities by disregarding the detention/retention effects of upstream property and calculating the runoff as if the off-site property was developed without any detention. If an approved regional detention/retention facility is in operation or designed as a part of the project, then the design engineer may size downstream receiving drainage facilities based on consideration of the detention/retention effects of the regional facility.

SECTION A. Procedure for Drainage Areas Less Than 160 Acres

1. Rational Method

Computation of Stormwater Runoff for drainage areas less than 160 acres shall be by the "Rational Method," which is based on the principle that the maximum rate of runoff from a given drainage area for an assumed rainfall intensity occurs when all parts of the area are contributing to the flow at the point of discharge. The formula for calculation of runoff by the "Rational Method" is:

(Equation 1)

$$Q = C_f C I A$$

Where: Q = the maximum rate of discharge, expressed in cubic feet per second.

C_f = frequency factor coefficient for adjustment of the rational method C value. This factor varies from 1.00 to 1.25 for the 10-year and 100-year storms respectively. (Note: The product of $C_f * C$ shall have a maximum value of 1.0).

C = a runoff coefficient which varies with the topography, soil, land use and moisture content of the soil at the time the runoff producing rainfall occurs. This runoff coefficient shall be based on the ultimate use of the land as recommended by the comprehensive land use plan for the City and shall be selected from Table 1 herein on the basis of the use shown on land use and zoning map of the Comprehensive Zoning Ordinance (CZO) for the City. If an area has been granted a zoning change that gives the area a land use classification for which the "C" in Table 1 is higher than the use shown on the existing land use and zoning maps, the higher "C" factor shall be used.

TABLE 1**VALUES OF "C" FOR USE IN "RATIONAL METHOD" FORMULA $Q = CIA$**

<u>Land Use From Master Plan</u>	Value of "C" (Runoff Coefficient)	Value of "C" (Runoff Coefficient)	Value of "C" (Runoff Coefficient)
	Slope - Flat 0% to 1%	Slope - Moderate 1% to 3.5%	Slope - Steep 3.5% and Over
Park Areas - No Developed Land	0.2	0.3	0.35
Developed Park Sites	0.3	0.4	0.45
Single Family Residential	0.45	0.55	0.65
Townhouse, Duplex and Zero Lot Line SF	0.5	0.6	0.7
Multiple Family	0.55	0.7	0.8
Schools *	0.6	0.7	0.8
Churches *	0.7	0.75	0.85
Commercial	0.8	0.85	0.9
Industrial	0.75	0.8	0.9

- Schools and Churches may support alternate "C" values based on specific site plans.

A = The drainage area, expressed in acres, contributing to the runoff at the point in question. Calculation of the drainage area shall be made from an accurate topographic map, a copy of which shall be submitted with the engineering plans for approval.

I = Rainfall intensity in inches per hour for the time period that it takes for flow from the farthest point of the drainage area to reach the point of design. The rainfall intensity is found by referring to the applicable curves of Figure 1. Time of Concentration or Duration of Rainfall for use in Figure 1 shall be calculated by velocity data shown in Table 2.

Time of concentration is the longest time, without interruption of flow by detention devices, that a drop of water takes to flow from the farthest point of the drainage area to the point of concentration (i.e., the point of design). The time of concentration is composed of the "inlet time" and the flow time in a conduit or channel to the point of design. Equation 2 shows how to calculate the time of concentration.

TABLE 2**AVERAGE VELOCITY FOR USE IN DETERMINING TIME OF CONCENTRATION**

Description of Water Course	0% to 3%	4% to 7%	8% to 11%	Over 12%
	V. in f.p.s.	V. in f.p.s.	V. in f.p.s.	V. in f.p.s.
Surface Drainage	5	9	13	15
Channels	Determine V. by Manning's Equation			
Storm Sewers	Determine V. by Manning's Equation			

(Equation 2)

$$T_c = \text{Inlet Time} + \frac{L}{V \times 60 \text{ sec/min}}$$

Where: T_c = Time of concentration in minutes.

Inlet time = 10 minutes for property zoned multiple family, churches, schools, local business, central business, commercial, or industrial

or

Inlet time is calculated based on the percentage ratio of the specific types of development within a mixed-use development

or

15 minutes for property zoned for parks, cemeteries, agricultural, and single family residential.

and

$$\frac{L}{V \times 60 \text{ sec/min}}$$

L = Length of conduit or channel, in feet.

V = Velocity of flow in conduit or channel, in feet per second.

When designing inlets and laterals, the time of concentration is simply equal to the inlet time. The design engineer will compare the above specified inlet times to the actual calculated inlet time by computing the flow time overland and along the gutter to the first inlet. The Manning equation, along with the velocity information in Table 2 (or other acceptable procedures such as the NRCS method), shall be used to determine flow time to the inlet. The design engineer may use the actual calculated or specified inlet time. In no case shall an inlet time longer than 10 minutes be used for multiple family, commercial, churches, schools, industrial and business areas, the calculated inlet time for mixed-use developments, and 15 minutes for parks, cemeteries, agricultural, and single-family areas.

When sizing storm sewers and channels, the time of concentration shall be calculated by adding the actual calculated inlet time (but not greater than the specified inlet times) to the flow time in the conduit and/or channel. The design engineer may use the combined times, as described, or the specified inlet times (without travel times) for storm sewer sizing. When using a time of concentration greater than the set inlet times, the calculation of the actual inlet and travel times must be provided in the plans.

SECTION B. Procedure for Drainage Areas Greater than 160 Acres and Detention/Retention Basins.

For drainage areas in excess of 160 acres where the use of the "Rational Method" does not provide reliable results, the unit hydrograph method shall be used. The unit hydrograph calculation used will be based upon standard and accepted

engineering principles normally used in the profession subject to the approval of the City Engineer. Acceptable methods include the Natural Resources Conservation Service (NRCS) Technical Release Number 55 for drainage areas from 160 acres to 2,000 acres, and NRCS's TR20 or the U. S. Army Corps of Engineers (USACE) HEC-HMS and HEC-1 models for drainage areas 160 acres or more.

The unit hydrograph method shall be based upon fully developed watershed conditions assuming no effects from the small on-site detention/retention facilities for maintaining the rate of runoff as if the property was in an undeveloped state. The detention/retention effects of large regional detention/retention facilities can be taken into account by using the unit hydrograph method. The impacts of regional detention/retention facilities must be evaluated using the unit hydrograph method of analysis.

Circumstances that may require the use of a unit hydrograph method include sizing open channels, reclaiming floodplains, creating lakes, or building other types of drainage-related facilities on major drainage courses. Design engineers of these types of facilities should be aware that the requirement of designing for fully developed watershed conditions will mean that they will have to calculate these fully developed flows instead of using the flows calculated in FEMA's flood insurance studies for the City. FEMA's flows cannot be used because the flows are based upon existing watershed conditions (For more information, see Article 7 on the sizing of channels and other major drainage facilities and Article 8 for floodplain alteration procedures). Use of the Rational Method is allowed for design of storm sewers within the project area, provided that the contributing area is less than 160 acres.

ARTICLE 6

DESIGN OF LOCAL DRAINAGE SYSTEMS

SECTION A. Drainage Systems

The design requirements of drainage systems vary with the size and type of system. Improvement standards vary based on the type of improvements proposed. The following describes the requirements for these systems.

Storm Sewer Systems – Drainage shall be placed in closed conduits when the design flows can be conveyed in a 72" RCP or smaller, unless this requirement would result in improvements that cannot meet State and Federal laws. The developer must clearly demonstrate that this requirement cannot be met, while conforming to State and Federal laws, before other types of drainage improvements will be approved by the Floodplain Administrator. For projects where it is demonstrated to the City's satisfaction that the design of a storm sewer system will result in non-conformance with State and Federal laws, then drainage improvements shall be designed under the requirements established for local drainage channels.

Local Drainage Channels – Open drainage systems for contributing flows that can be conveyed in a 72" RCP or smaller and the City agrees that an open system is necessary to conform with State and Federal laws.

Major Drainage Systems – Open channel drainage systems, box culverts, or multiple pipes with design flows that cannot be conveyed in a 72" RCP or smaller.

The specific requirements of each drainage system are outlined in this Article 6 and Article 7.

SECTION B. Design Storm Frequencies

The calculations of runoff quantities that must be accommodated in drainage facilities require the selection of the design storm frequency. The design storm frequencies for various drainage structures are given below.

DRAINAGE FACILITY

DESIGN RECURRENCE INTERVAL

Closed Storm Sewer Systems in streets and Inlets at Street Low Point or Sag, Closed Storm Sewer Systems not in street right-of-way

100-year with positive overflow at low points (addresses possible inlet blockage)

Culverts and Bridges

100-year

Channel Improvements

100-year within channel right-of-way or easement

Levees

Standard Project Flood (See Article 7, Section C)

Dams Above Natural Ground/Spillways

Spillway design flood varies with the class of structure (see Article 7, Section B).

The approved drainage system shall provide for positive overflow at all low points. The term "positive overflow" means that when the inlets do not function properly or when the design capacity of the conduit is exceeded, the excess flow can be conveyed overland along a grassed or paved course. This could be along a street or alley, or otherwise, and shall require the dedication and acceptance of all necessary, applicable property interests from the developer.

Local drainage and overland flow shall be directed away from onsite waster disposals systems and related improvements.

SECTION C. Street and Alley Capacities

1. Streets

Assuming parkway slopes to be 1/4 inch per foot behind the curbs, the depth of flow in the streets shall not exceed the top of curb. For standard street widths, Figure 2 shows the capacity of streets with a straight cross slope that varies from 1/8 inch per foot to 1/2 inch per foot, which are the minimum and maximum allowable street cross slopes. Figures 3 and 4 show the capacity of streets with parabolic crowns.

2. Alleys

The flows created by the 100-year storm shall be contained within the capacity of all paved alleys. Figure 5 shows the capacity of various alley sections.

Alley capacities shall be checked at all alley turns and "T" intersections to determine if curbing is needed or grades should be flattened. Alley sections shall be super-elevated as required at corners and curves to ensure that flow remains in the alley through these changes in alignment.

Curbing shall be required for at least 10 feet on either side of an inlet in an alley and on the other side of the alley so that the top of the inlet is even with the high edge of the alley pavement.

3. Finished Floor Elevations in Relation to Positive Overflows

The first floor elevations of all residential and other structures shall be set at an elevation to allow positive flow away from the structure at all locations. Positive overflow sections, flowing adjacent to a structure, shall provide a minimum vertical distance of 1.5 feet from the maximum overflow invert elevation adjacent to the structure as compared to the corresponding finished floor elevation of all residential and other structures.

SECTION D. Placement of Inlets

Storm sewer inlets shall be located and built along paved streets at such intervals that the depth of flow, based upon the 100-year storm, does not exceed the top of curb. If, in the opinion of the Floodplain Administrator, the flow in the gutters would be excessive using the above design criteria, the storm sewers or inlet locations could be altered to relieve adverse conditions.

Inlets shall be placed upstream of an intersection whenever possible. At any intersection, only one street shall be crossed with surface drainage and this street shall be the lower classified street. When an alley intersects a street, inlets shall be placed in the alley whenever flow down that alley would cause the capacity of the intersecting street to be exceeded.

SECTION E. Inlet Capacities and Sizes

Figure 6 shows the various types of inlets allowed for use along various kinds of streets. Other types of inlets may be used upon the approval of those inlets by the Floodplain Administrator. The minimum inlet size shall be eight feet. Figures 7 through 21 show how to determine the capacity of inlets. No more than 20 feet of inlets shall be placed along one gutter at any given location.

Minimum sizes of laterals shall be 18-inches for use with 8-foot inlets, and 21-inch laterals with 10-foot, 14-foot, and drop inlets, and 24-inch laterals for 20-foot inlets. Where laterals tie into trunk lines, place the laterals on a 60-degree angle with the trunk line and connect them so that the longitudinal centers intersect.

SECTION F. Pipe Design Standards

1. The Manning Equation

Storm sewer conduit shall be sized to flow full, when possible. Manning's Equation shall be used to determine the conduit size. Manning's equation is expressed as:

(Equation 3)

$$Q = \frac{1.486}{n} (A) (R)^{2/3} (S)^{1/2} \quad \text{or} \quad V = \frac{1.486}{n} (R)^{2/3} (S)^{1/2}$$

Where: Q = Flow in cubic feet per second.

V = Velocity of flow in conduit in feet per second.

A = Cross-sectional area of the conduit in square feet.

R = Hydraulic radius of the conduit, which is the area of flow divided by the wetted perimeter ($R = A/P$).

S = Slope of the hydraulic gradeline.

n = Roughness coefficient of the conduit.

P = Wetted perimeter.

Figure 22 is a graphical solution of Manning's Equation, which allows sizing of concrete pipe, assuming an "n" value of 0.013.

2. Minimum and Maximum Velocities in Pipes

The minimum velocities in conduit shall be 2.5 feet per second. The minimum slopes for various pipe sizes that will maintain this minimum velocity are given in Table 3. The maximum velocities of flow in the conduit and channels are given in Table 4.

The maximum discharge velocities in the pipe shall also not exceed the permitted velocity of the receiving channel or conduit at the outfall to prevent erosive conditions, as shown in Table 4. The maximum outfall velocity of a conduit in partial flow shall be computed for partial depth and shall not exceed the maximum permissible velocity of the receiving channel unless controlled by an appropriate energy dissipater (e.g. stilling basins, impact basins, riprap protection).

TABLE 3**MINIMUM SLOPES FOR CONCRETE PIPES**

(to produce a velocity of 2.5 f.p.s. or greater)

(n = .013)

Pipe Diameter (inches)	Slope (Feet/100 Feet)	Pipe Diameter (inches)	Slope (Feet/100 Feet)
18	.180	51	.045
21	.150	54	.041
24	.120	60	.036
27	.110	66	.032
30	.090	72	.028
33	.080	78	.025
36	.070	84	.023
39	.062	90	.021
42	.056	96	.019
45	.052	102	.018
48	.048	108	.016

3. Roughness Coefficients for Conduits

In general, stormwater shall be carried in concrete pipe conduit, but other types of conduit can be used to carry stormwater. However, prior permission to use other pipe materials must be obtained from the Floodplain Administrator. Table 5 shows recommended roughness coefficients for various types of conduits. If, in the opinion of the design engineer, other values for the roughness coefficient should be used, the different value can be used with the permission of the Floodplain Administrator. Appropriate notes of the approved roughness coefficient shall then be shown on the engineering plans.

4. Hydraulic Gradeline of Conduits

Conduits must be sized and slopes must be set such that runoff flows smoothly down the drainage system. To ensure this smooth passage, the hydraulic gradeline must be at the proper elevations.

The proper starting elevation of the hydraulic gradeline shall be set according to the applicable criteria listed as follows:

TABLE 4
MAXIMUM VELOCITIES IN CONDUITS FLOWING FULL AND CHANNELS

Flow Through:	Maximum Velocity (fps)
Culverts	12.5
Inlet Laterals	10
Storm Sewers	12.5
Earthen Channels	See Table 9
Concrete Channels	12
Shale	6
Rock	6 - 10*

* Depends upon exact type of vegetative cover, soil, or rock for the location in question.

TABLE 5
ROUGHNESS COEFFICIENTS FOR CLOSED CONDUITS

Materials of Construction	Recommended Roughness Coefficient "n"
Concrete Pipe Storm Sewer	
Good Alignment, Smooth Joints	.013
Fair Alignment, Ordinary Joints	.015
Poor Alignment, Poor Joints	.017
Concrete Pipe Culverts	.012
Monolithic Concrete Culverts & Conduit	.012
Corrugated Metal Pipe	.024
Corrugated Metal Pipe (Smooth Lined)	.013

- a. When a proposed conduit is to connect to an existing storm sewer, the hydraulic gradeline of the proposed storm sewer shall start at the elevation of the hydraulic gradeline of the existing storm sewer based on an evaluation of the existing storm sewer with respect to the requirements found in this Ordinance. This criterion will be used for existing systems when the existing receiving systems has adequate capacity based on the requirements of this Ordinance.
- b. When a proposed conduit is to connect to an existing storm sewer, and the hydraulic gradeline and capacity of the existing system is inadequate to handle the existing and/or proposed flow, based on current criteria, then additional improvements are required to prevent flooding. See Article 6, Section F.5.
- c. When a proposed conduit enters an open channel, creek, or flood control sumps, the hydraulic gradeline of the proposed conduit shall start at the 10-year water surface elevation of the channel or creek when the ratio of the drainage area of the receiving creek (at the development) to the development area is 15 or greater. For ratios of less than 15, the 100-year water surface will be used on the receiving creek.

Not only is it important to use the proper starting elevation for the hydraulic gradeline, but proper hydraulic gradeline elevations must be maintained for the length of the conduit. The inside top of the conduit should be at or near the hydraulic gradeline. Pressure flow is permitted within storm sewers, conduits, and culverts. An effort should be made to keep the top of the pipe as close to the hydraulic gradeline as possible so that deep excavations to lay pipe are not required.

When the conduit is flowing partially full, the hydraulic gradeline shall be shown at the inside crown of the conduit.

The hydraulic gradeline shall be kept two feet below the top of curb. If this cannot be obtained, the hydraulic gradeline shall be at least $1.5 V_1^2/2g$ feet below the gutter line, where V_1 is the velocity in the lateral.

5. Inadequate Receiving Drainage Systems

In some instances, the downstream receiving drainage system may be inadequate to handle the design flows based on the current ordinance requirements. The developer may not construct any improvements that would increase flooding in downstream receiving systems that are currently inadequate. Various options are available to the developer in this situation.

- a. In the case where the downstream receiving system is adequate to convey the existing conditions discharges (based on current criteria), but not adequate to receive additional flow then the developer must construct the necessary improvements to prevent flooding that would occur from the proposed improvements. These improvements may include providing increased detention/retention volume with resulting reduced release rates, increasing the size of the limiting downstream system, or other appropriate approach that is verified by technical analyses and approved by the City.
- a. In the case where the downstream receiving system is inadequate to convey the existing conditions discharges (based on current criteria), then the developer must delay the proposed improvements that would increase downstream flooding until the City has improved the downstream receiving system to increase the system capacity or has constructed regional retention/detention facilities to address the capacity issue.
- b. In the case where the downstream receiving system is inadequate to convey the existing conditions discharges (based on current criteria), then the developer may select to

participate with the City in constructing improvements that would increase the capacity of the downstream receiving system or constructing regional retention/detention facilities to address the capacity issue. In this instance the appropriate guidelines for cost sharing shall be used.

6. Minor Head Losses

When establishing the hydraulic gradeline of a storm sewer, minor head losses at points of turbulence shall be calculated and included in the computation of the hydraulic gradeline.

Entrance Losses

Entrance losses to a closed storm sewer system from an open channel or lake shall be calculated using Equation 4.

(Equation 4)

$$H_L = K_E \frac{(V_1)^2}{2g}$$

Where: H_L = Head loss in feet.

V_1 = Velocity in the downstream pipe in feet per second.

K_E = Head loss coefficient (see Table 6).

The resulting hydraulic gradeline shall be compared to inlet control conditions for the storm sewer as described in Section F. The higher of the two values will be used as the controlling upstream hydraulic gradeline.

Expansion Losses

For pipe size expansions, head loss shall be calculated using the following equations:

(Equation 5)

$$H_L = \left(1 - \left(\frac{D_1}{D_2} \right)^2 \right)^2 \frac{V_1^2}{2g}$$

Where: H_L = Head loss in feet.

V_1 = Upstream velocity in feet per second.

D_1 = Upstream pipe diameter.

D_2 = Downstream pipe diameter.

TABLE 6
ENTRANCE LOSS COEFFICIENTS

$$\text{Entrance head loss } H_L = K_e \frac{V_1^2}{2g}$$

<u>Type of Structure and Design of Entrance</u>	<u>Coefficient K_e</u>
<u>Pipe, Concrete</u>	
Projecting from fill, socket end (groove-end)	0.2
Projecting from fill, square cut end	0.5
Headwall or headwall and wingwalls	
Socket end of pipe (groove-end)	0.2
Square-edge	0.5
Rounded (radius = 1/12D)	0.2
Mitered to conform to fill slope	0.7
End-section conforming to fill slope	0.5
Beveled edges, 33.7- or 45-degree bevels	0.2
Side- or slope-tapered inlet	0.2
<u>Pipe, or Pipe-Arch, Corrugated Metal</u>	
Projecting from fill (no headwall)	0.9
Headwall or headwall and wingwalls square-edge	0.5
Mitered to conform to fill slope, paved or unpaved slope	0.7
End-section conforming to fill slope	0.5
Beveled edges, 33.7- or 45-degree bevels	0.2
Side- or slope-tapered inlet	0.2
<u>Box, Reinforced Concrete</u>	
Headwall parallel to embankment (no wingwalls)	
Square-edged on 3 edges	0.5
Rounded on 3 edges to radius of 1/12 barrel dimension or beveled edges on 3 sides	0.2
Wingwalls at 30- to 75-degrees to barrel	
Square-edged at crown	0.4
Crown edge rounded to radius of 1/12 barrel dimension, or beveled top edge	0.2
Wingwall at 10- to 25-degrees to barrel	
Square-edged at crown	0.5
Wingwall parallel (extension of sides)	
Square-edged at crown	0.7
Side- or slope-tapered inlet	0.2

Manhole and Bend Losses

Head losses associated with manholes for pipe direction changes and bends in pipes of equal diameter shall be calculated using:

(Equation 6)

$$H_L = K_b \frac{V_2^2}{2g}$$

Where: H_L = Head loss in feet.

V_2 = Velocity in the downstream pipe in feet per second.

K_b = Head loss coefficient from Table 7.

Junction Losses

Head losses associated with wye connections or manholes with branch laterals entering the main line shall be calculated by using Equation 7.

(Equation 7)

$$H_L = \frac{V_2^2}{2g} - K_j \left(\frac{V_1^2}{2g} \right)$$

Where: H_L = Head loss in feet.

V_1 = Velocity in the upstream pipe in feet per second.

V_2 = Velocity in the downstream pipe in feet per second.

K_j = Head loss coefficient from Table 7.

7. Storm Sewer Laterals

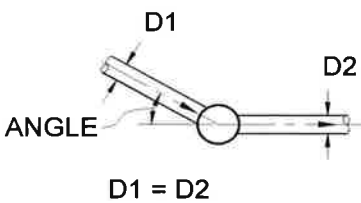
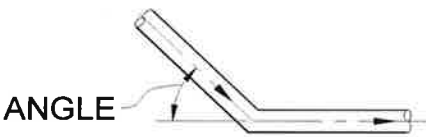
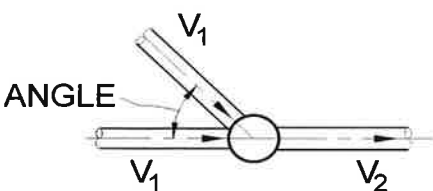
Laterals for storm sewer systems shall be sized to control the flooding depth at the inlets. The depth shall not exceed the limits previously established for storm sewer systems. Calculation of the flooding depth shall be determined based on the addition of the velocity head of the lateral to the computed HGL of the lateral at the inlet:

$$\text{ELEV} = \text{HGL} + \frac{V_L^2}{2g}$$

This calculated elevation shall be compared to the elevation determined based on inlet control nomographs as developed by the Department of Transportation. The higher of the two elevations shall be used to establish the capacity of laterals and the corresponding depth of flooding.

TABLE 7

VELOCITY HEAD LOSS COEFFICIENTS FOR CLOSED CONDUITS

MANHOLE AT CHANGE IN PIPE DIRECTION		
DESCRIPTION	ANGLE	HEAD LOSS COEFFICIENT K_j
 <p>D1 = D2</p>	90°	0.55
	60°	0.48
	45°	0.42
	30°	0.3
	0°	0.05
BENDS IN PIPES		
DESCRIPTION	ANGLE	HEAD LOSS COEFFICIENT K_j
	90°	0.5
	60°	0.43
	45°	0.37
	30°	0.25
JUNCTION		
DESCRIPTION	ANGLE	HEAD LOSS COEFFICIENT K_j
	0°	1
	22 1/2°	0.75
	45°	0.5
	60°	0.35
	90°	0.25

8. Outfalls to Open Channels and Lakes

The flow lines of storm sewer conduits that discharge into open channels shall match the flow line of the channel. One exception to this requirement of matching the flow line is when a storm sewer discharges into a concrete-lined channel, or when the outfall is submerged below the normal water surface of a lake. In the case of a pipe discharging to a lined channel, the top of the outlet must be below the top of the channel lining. The second exception pertains to storm sewer discharges that must cross wide floodplain areas. Under this condition, the storm sewer could discharge into a lined ditch which would convey runoff to the flow line of the channel without creating an erosive condition. Permissible velocities within the ditch will be based on the type of lining used and the velocities provided in Tables 4 and 9. Flumes to bring the discharge down to the flow line of earthen creeks shall not be permitted. Drop structures shall be allowed upon written approval of the Floodplain Administrator.

The velocity at the discharge end of the conduit shall be computed based on partial flow depth and shall be sufficiently low so as to not cause downstream erosion problems. Tables 4 and 9 show the maximum velocities allowed in various types of channels, which are also the maximum discharge velocities from storm sewer outfalls.

In some circumstances, the configuration of the storm sewer in relation to the flow line of the creek may cause excessive velocities to be reached unless provisions are made to slow the velocity. One recommended method of slowing the velocity is to have a sufficient length of pipe (a length of at least ten times the diameter) be on a slope that will reduce the partial flow outlet velocity to the values shown in Tables 4 and 9 for the receiving stream. Stilling basins shall also be allowed to reduce discharge velocities.

The discharge pipe shall also intersect minor creeks at an angle not to exceed sixty (60) degrees. Minor creeks are defined as those creeks, channels, or drainageways where the distance from the pipe outlet to the opposite creek bank at the bottom of the channel is twenty feet (20') or less. Pipes entering minor creeks shall provide erosion protection on both the banks adjacent to and opposite from the pipe outlet. Pipes may intersect major creeks (greater than twenty feet (20') to opposite bank) at a 90-degree angle. The Floodplain Administrator may require that pipes intersect major creeks at an angle not to exceed 60 degrees, when a 90-degree angle would result in an erosive condition.

Figure 23 shows how a storm sewer should be configured to discharge into a creek.

9. Easements for Enclosed Storm Sewers, Positive Overflow Areas and Lot Drainage

All storm sewer conduits required to be dedicated to the City shall be located in an easement or public right of way dedicated, subject to acceptance of such dedication, to the City at the time of final platting of the property. The easement shall be at least fifteen feet (15') wide for storm sewers or wider if the Floodplain Administrator requires it for maintenance or other purposes. Drainage easements for positive overflows on private property shall be a minimum of ten feet (10') wide or wider if the Floodplain Administrator requires it for maintenance or other purposes.

Lot to lot drainage is not permitted without specific approval from the Floodplain Administrator. If lot to lot drainage is permitted by the Floodplain Administrator, then requirements established by the Floodplain Administrator shall be met. No fences, buildings or other structures and improvements shall be placed within areas that may impede approved lot to lot drainage.

SECTION G. Culvert Design Standards

Culverts shall be designed in accordance with this ordinance and the Texas Department of Transportation (TxDOT), Hydraulic Design Manual, Chapter 48 - Culverts. In the event of any discrepancy between these documents, this Ordinance shall control. The calculation of hydraulic gradelines will consider both inlet and outlet control for the culvert. Starting water surface elevations for gradeline calculation will be the same as required for storm sewers; as described in Section F of this ordinance.

ARTICLE 7

SPECIAL DRAINAGE FACILITIES

SECTION A. Channels

1. Channel Design

Open channels may be used instead of enclosed storm sewer systems when the contributing flow from the drainage area cannot be conveyed in a 72" RCP. Open channel sections may also be used for Local Drainage Channels in accordance with Article 6, Section A. Tables 4 and 9 show the maximum velocities allowed for certain types of channels. Roughness coefficients for the design of open channels are provided in Table 8. The following criteria shall be used in determining the nature of open channel improvements.

a. Requirements for Channel Improvements

1. Drainage improvements shall be in compliance with all applicable State and Federal Laws. The developer shall be responsible for determining if improvements meet appropriate laws. The Floodplain Administrator may allow drainage improvements that do not meet all requirements of this Ordinance when strict adherence would result in improvements that do not conform with State or Federal Laws. The applicant must clearly demonstrate, to the satisfaction of the Floodplain Administrator, that an improvement would not be in conformance due to a specific ordinance requirement prior to the waiver from any drainage requirement.
2. Drainage improvements shall minimize the disturbance to natural channel sections, while meeting the requirements of this Ordinance.
3. Channels may be left in their natural state provided that the channel velocities meet the requirements of Tables 4 and 9 and are not experiencing signs of erosion. The Floodplain Administrator may require the inclusion of erosion control improvements when the channels exhibit signs of on-going erosion, regardless of the velocity requirements of this ordinance.
4. For natural channels and improved channels, the flow from the 100-year design flood must be contained within a public right-of-way or easement for the overall floodplain or improved channel section while providing for one foot of freeboard. An improved channel shall meet the floodplain alteration regulations presented in Article 8.
5. Excavated earthen channels shall not be permitted without protective measures to prevent erosion.
6. Bioengineering elements may be used to stabilize the sideslopes of drainage improvements, when the channel velocity range is from 6 to 8 fps. The engineer must demonstrate the adequacy of the bioengineering approach for the specific application. Bioengineering alternatives shall meet the requirements of Article 7, Section A.1.b.
7. Improved channels shall include a lined section if the design channel velocity is greater than the permissible velocities for vegetated channels as shown in Tables 4 and 9. Lining types such as concrete, rock walls and gabions, may be used upon approval of the Floodplain Administrator. Improved channels with design channel velocities of less than the permissible velocities shown in Tables 4 and 9 may be earthen if the channels are protected by bioengineering elements.
8. For improvements requiring lined sections, all of the channel bottom and at least the first three feet (3') (vertical height) of the side slopes up from the channel bottom shall be lined, unless approved by the Floodplain Administrator. The minimum allowable bottom width for a lined section is eight feet (8'), unless approved by the Floodplain Administrator.

TABLE 8
ROUGHNESS COEFFICIENTS FOR OPEN CHANNELS FLOW AREAS

<u>Channel Description</u>	<u>Roughness Coefficient “n”</u>		
	<u>Minimum</u>	<u>Normal</u>	<u>Maximum</u>
MINOR NATURAL STREAMS (Top Width at Flood Stage Less Than 100 Feet)			
Moderately Well-Defined Channel			
Grass and Weeds, Little Brush	0.025	0.030	0.033
Dense Weeds, Little Brush	0.030	0.035	0.040
Weeds, Light Brush on Banks	0.030	0.035	0.040
Weeds, Heavy Brush on Banks	0.035	0.050	0.060
Weeds, Dense Willows on Banks	0.040	0.060	0.080
Irregular Channel with Pools and Meanders			
Grass and Weeds, Little Brush	0.030	0.036	0.042
Dense Weeds, Little Brush	0.036	0.042	0.048
Weeds, Light Brush on Banks	0.036	0.042	0.048
Weeds, Heavy Brush on Banks	0.042	0.060	0.072
Weeds, Dense Willows on Banks	0.048	0.072	0.096
Floodplain, Pasture			
Short Grass, No Brush	0.020	0.030	0.035
Tall Grass, No Brush	0.025	0.035	0.050
Floodplain, Cultivated			
No Crops	0.025	0.030	0.035
Mature Crops	0.030	0.040	0.050
Floodplain, Uncleared			
Heavy Weeds, Light Brush	0.035	0.050	0.070
Medium to Dense Brush	0.070	0.100	0.160
Trees with Flood Stage Below Branches	0.080	0.100	0.120
MAJOR NATURAL STREAMS (Top Width at Flood Stage Greater Than 100 Feet)			
The roughness coefficient is less than that for minor streams of similar description because banks offer less effective resistance.			
Moderately Well Defined Channel	0.025	---	0.060
Irregular Channel	0.035	---	0.100

TABLE 8, continued

<u>Channel Description</u>	<u>Roughness Coefficient “n”</u>		
	<u>Minimum</u>	<u>Normal</u>	<u>Maximum</u>
MANMADE VEGETATED CHANNELS			
Mowed Grass, Clay Soil	0.025	0.030	0.035
Mowed Grass, Sandy Soil, or Easily Erodible Soils	0.025	0.030	0.035
MANMADE NON-VEGETATED CHANNELS			
Clean Gravel Section	0.022	0.025	0.030
Shale	0.025	0.030	0.035
Smooth Rock	0.025	0.030	0.035
LINED CHANNELS			
Smooth Finished Concrete	0.013	0.015	0.020
Riprap (Larger Pieces)	0.030	0.040	0.050

9. An alternative approach may be allowed by the Floodplain Administrator for improvements that have channel velocities of 8 to 9 fps, but do not incorporate lined sections due to considerations related to State and Federal laws. The alternative approach to lining the channel bottom, that may be acceptable, shall include the following:
 - a) Perform appropriate geomorphology analyses establishing the future stable channel slope without protection;
 - b) Design improvements to include grade control structures to limit the vertical difference between the existing channel slope and the calculated stable slope to a maximum of two feet (2’).
 - c) Design sidewalls to be constructed on footings that are placed such that the top of the footing of any adjacent structure is placed at a distance below the elevation of the future stable channel slope, such that the structure will remain stable should the anticipated erosion occur.
10. All disturbed areas must be grassed with a low-maintenance and drought tolerant species as listed in Table 9.
11. All improved channels sections shall have a side slope of four feet (4’) horizontal to one foot (1’) vertical for earthen grassed side slopes, or flatter.

TABLE 9**MAXIMUM PERMISSIBLE VELOCITIES FOR CHANNELS LINED WITH GRASS**

COVER	SLOPE RANGE *	PERMISSIBLE VELOCITY, FPS
	(%),* %	Easily Eroded Soils
		Clay Soils
Bermuda Grass	0-5	6
	5-10	5
	>10	4
Buffalo grass, Kentucky bluegrass, Smooth brome, Blue grama	0-5	5
	5-10	4
	>10	3
Grass Mixture	0-5	4
	5-10	3
	>10	Do not use
Lespedeza sericea, Weeping love grass, Ischaemum (yellow blue-stem), alfalfa, crabgrass	0-5	3
	5-10	Do not use
	>10	Do not use
Annuals, used on mild slopes or as temporary protection until permanent covers are established, Common lespedeza, Sudan grass	0-5	3
	5-10	Do not use
	>10	Do not use

* Longitudinal bed slope of the channel bottom.

Remarks: The values apply to average, uniform stands of each type of cover. Use velocities exceeding 5 fps only where good covers and proper maintenance can be obtained. Based on past experience, all soils within the City have been found to be easily eroded soils.

TABLE 9.A**TEMPORARY VEGETATION**

Temporary Vegetation - The following plants are commonly used for temporary cover in Texas. For optimum planting dates and adaptations for a specific soil or site, contact your local field office of the USDA, Soil Conservation Service.

<u>Species</u>	<u>Planting ¹ Rate/Acre</u>	<u>Planting ² Date</u>	<u>Source ³</u>
Cane, Redtop	30#/S	8/15-9/30	C
Millet, German	40#/s	4/1-5/15	C
Oats	3 bu/S	8/15-9/30	C
Panicum, Texas	25#/S	3/15-5/15	C
Prosomillet	40#/S	4/1-5/15	C
Rye, Elbon	1-1/2 bu/S	8/15-9/30	C
Ryegrass, Annual	30#/S	8/15-9/30	C
Sprangletop, Green	3.4#PLS/S	2/1-5/15	C
Sudangrass	40#/S	4/1-5/15	C
¹	Planting Rate/Acre: S - # Commercial Seed/AC, bu - bushels/AC, #PLS - Pure Live Seed/AC		
²	Planting Date: This represents a statewide spread in planting dates. Refer to local guides for specific dates.		
³	Source: C - Commercial		

TABLE 9.B

PERMANENT VEGETATION - LOW AREAS

Permanent Vegetation - Because of wide variations in growing conditions within a planned area, permanent vegetation has been selected for the following conditions. For optimum planting dates and adaptations for a specific soil or site, contact your local field office of the USDA, Soil Conservation Service.

Note: Low areas are subject to ephemeral and intermittent flows.

<u>Species</u>	<u>Moisture Tolerance</u> ¹	<u>Planting Rate/Materials</u> ²	<u>Planting Date</u> ³	<u>Source</u> ⁴
Bermudagrass,	Coastal or Selection C	3 A/2	50 cu.ft/Ac/Sp	12/1-5/30
	Common C	A/2	4.6#/Ac/S	3/1-5/30
Buffalograss	A/3	32#/Ac/S	1/1-4/30	C or PMC
Bushy Beard	Grass -	C/3	---	Spring
Cordgrass, Prairie	B/2	1/sq.ft/R	1/1-5/30	L
Eastern	Gamma grass -	C/3	---	Spring
Knotgrass	A/2	1/sq.ft/R&St	2/1-5/30	L
Marshmillet	B/1	1/sq.ft/R	4/1-5/30	L
Reedgrass, Common	A/2	1/sq.ft/R	2/1-5/30	L or PMC
Vine-mesquite	A/2	1/sq.ft/St	2/1-1/30	L

¹ Moisture Tolerance: Total Submergence

A - 20 days or more
B - 10 - 20 days
C - Less than 10 days

Soil Saturation

1 - Require a saturated soil
2 - Will tolerate prolonged saturation and frequent drought.
3 - Will not tolerate a constantly saturated soil.

² Planting: Rate - #PLS/AC, Plant Parts/sq.ft.
Materials - S - Seed, R - Rhizomes, Sp - Sprigs, St - Stolons

³ Planting Date: This represents a statewide spread in planting dates. Refer to local guides for specific dates.

⁴ Source: C - Commercial, L - Locally Collected, PMC - Plant Material Center (as available)

TABLE 9.C
PERMANENT VEGETATION - SIDE SLOPES

<u>Species</u>	<u>Soils</u> ²	<u>Planting Rate/Materials</u> ³	<u>Planting Date</u> ⁴	<u>Source</u> ⁵
<u>Grasses</u>				
Bermudagrass, Common Selection ³ or Coastal	All	4.6#/Ac/S	3/1-5/30	C
	All	50 cu.ft/Ac/Sp	12/1-5/30	C
Bluestem, K.R.*	M-F	4#/Ac/S	12/1-5/30	C
Old World*	M-F	2.4#/Ac/S	2/1-5/30	PMC
Buffalo grass*	M-F	32#/Ac/S	1/1-5/15	C or PMC
Dallis grass	M-F	7#/Ac/S	2/1-5/30	C
Knotgrass ¹	All	1/sq.ft/R&St	2/1-5/30	L
Vine-mesquite	All	1/sq.ft/St	2/1-4/30	L
Wildrye	All	25#/Ac/S	9/1-10/1	L
<u>Forbs:</u>				
Bushsunflower*	All	10#/Ac/S	4/1-5/20	L or PMC
Englemandaisy* ¹	All	30#/Ac/S	9/1-2/30	L or PMC
<u>Legumes:</u>				
Trailing wildbean*	C-M	25#/Ac/S	2/15-5/15	L or PMC
Vetch*	All	20#/Ac/S	9/1-10/1	C

*Mixtures only: Reduce rates according to percentage of mixture desired.

¹ Lower portion of slope only, frequently inundated.

² Soils: C - Coarse, M - Medium, F - Fine

³ Planting: Rate - #PLS/AC, Plant Parts/sq.ft.
Materials - S - Seed, R - Rhizomes, Sp - Sprigs, St - Stolons

⁴ Planting Date: This represents a statewide spread in planting dates. Refer to local guides for specific dates.

⁵ Source: C - Commercial, L - Locally Collected, PMC - Plant Material Center (as available)

TABLE 9.D

PERMANENT VEGETATION

BERMS, SPOIL BANKS, AND SIMILAR AREAS

<u>Species</u>	<u>Soils</u> ¹	<u>Planting Rate/Materials</u> ²	<u>Planting Date</u> ³	<u>Source</u> ⁴
<u>Grasses</u>				
Bermuda grass, Common Selection ³ or Coastal	All	4.6#/Ac/S	3/1-5/30	C
	All	50 cu.ft/Sp	12/1-5/30	C
Bluestem, Caucasian*	M-F	4#/Ac/S	12/1-5/30	C
K.R.*	M-F	4#/Ac/S	12/1-5/30	C
Little*	All	6.8#/Ac/S	2/1-5/15	C
Buffalo grass*	All	6#/Ac/S	2/1-5/15	C
Fescue	M-F	20#/Ac/S	9/1-10/30	C
Harding grass "Wintergreen"	M-F	6#/Ac/S	9/1-10/30	C
Indian grass*	All	9#/Ac/S	2/1-5/30	C
Klein grass, "Selection 75"*	M-F	4#/Ac/S	1/1-5/30	C
Wildrye*	All	30#/Ac/S	9/1-10/1	L
Winter grass, Texas*	M-F	30#/Ac/S	9/1-10/30	C
<u>Forbs:</u>				
Bushsunflower*	All	10#/Ac/S	4/1-5/30	L or PMC
Englemandaisy*	All	30#/Ac/S	9/1-2/30	L or PMC
Partridgepea*	C-M	10#/Ac/S	2/15-5/15	C or PMC
Sunflower, Maximilian*	All	16#/Ac/S	4/1-5/30	L or PMC

TABLE 9.D, continued

<u>Species</u>	<u>Soils</u> ¹	<u>Planting Rate/Materials</u> ²	<u>Planting Date</u> ³	<u>Source</u> ⁴
<u>Legumes:</u>				
Clover,				
Crimson*	M	20#/Ac/S	9/1-10/30	C
White*	M-F	3#/Ac/S		C
Trailing wildbean*	C-M	10#/Ac/S	2/15-5/15	PMC
Vetch*	All	20#/Ac/S	9/1-10/1	C

*Mixtures only: Reduce rates according to percentage of mixture desired.

¹ Soils: C - Coarse, M - Medium, F - Fine

² Planting: Rate - #PLS/AC, Plant Parts/sq.ft.
Materials - S - Seed, R - Rhizomes, Sp - Sprigs, St - Stolons

³ Planting Date: This represents a statewide spread in planting dates. Refer to local guides for specific dates.

⁴ Source: C - Commercial, L - Locally Collected, PMC - Plant Material Center (as available)

12. The developer shall provide permanent drainage and maintenance easements as are required under this Ordinance (see Article 7 Section A.4) which shall be dedicated to and are subject to acceptance by the City.
13. Any plan including modification of a natural channel section shall be in accordance with the City of Carrollton Tree Preservation Ordinance No. 3388, including any subsequent amendments or revisions, or a Section 404 permit, if required, when mitigation is required as a part of the permit.
14. Maintenance activities performed within drainage channels, including mowing, brush clearing, tree removal, sediment removal, etc., are not considered as drainage improvements, and are exempt from the requirements established in this ordinance.

b. Bioengineering Requirements for Channel Improvements

Drainage channel improvements that incorporate bioengineering elements in lieu of or in addition to structural channel elements shall meet the following requirements. The following requirements are in addition to the requirements provided in Article 6, Section A.1.a.

1. A detailed landscape plan shall be provided that shall show the proposed tree replacement, grass cover and other bioengineering elements.
2. Any required tree replacement shall be in accordance with local, State and Federal requirements and shall be from the approved list, provided in the Tree Preservation Ordinance. Willow trees, trees

that are not native to North Texas, and trees that are not suitable for riparian areas shall not be allowed as a part of a landscaping plan for drainage improvement projects. The replacement shall include a minimum of 75% hard mast producing trees.

3. Bioengineering improvements, in floodplain areas with velocities over 6 fps, shall include vegetated channel sections and the use of geo-fabrics as a minimum requirement. The geo-fabrics shall be designed to promote and protect the bioengineering elements during the establishment period.
4. Irrigation shall be required during the establishment period.
5. Temporary bioengineering elements may be allowed when the planting season is not appropriate for the installation of permanent bioengineering elements. Permanent bioengineering elements shall be installed at the beginning of the next growing season and shall obtain an 80% survival rate for a minimum period of the greater of six (6) months from the date of installation or one full growing season prior to final acceptance of the project.
6. Bioengineering elements used in channel sections shall include the use of grade control structures or other protective linings when required due to channel velocity considerations. The requirements for grade control structures established in Article 7 Section A.2 shall be met.
7. Maintenance schedules shall be submitted for improvement plans that incorporate bioengineering elements. The maintenance schedule shall project the type and frequency of maintenance activities and associated costs.
8. Bioengineering plans, for areas where the velocity exceeds 6 fps, shall be prepared by a biologist or botanist and sealed by a Professional Engineer.

2. Erosion Prevention

All channel sections must consider and account for channel stabilization in their design. This requirement pertains to all sections whether they are left in their natural condition or are modified in any manner. Three sets of requirements are provided depending upon the relationship of the existing channel to the limits of the developer's property boundaries. The Floodplain Administrator shall have the discretion to require the implementation of the portion of these requirements as deemed necessary, depending on the specifics of the property being developed or improved.

- a. In cases where the entire channel section is contained within the limits of the developer property boundaries, the developer shall:
 1. Provide an improved stabilized channel cross-section which reduces all velocities to 6.0 fps or below for vegetated channels. The channel improvements must meet all requirements of this Ordinance.
 2. Design vegetated channel sections with channel velocities ranging from 6 to 8 fps, using bioengineering elements and construct grade control structures within the channel and overbank areas to prevent erosion. Grade control structures shall have a minimum effective depth of 3.0 feet below existing or proposed grades with an adequate number of structures to limit future degradation to less than one foot (1').
- b. In cases where the property boundary follows the centerline of the channel or incorporates only a portion of the channel cross-section, the developer shall:
 1. Determine the design section required to provide for an improved stabilized channel cross-section which reduces all velocities for vegetated channels to 6.0 fps or below. The design channel section must meet all requirements of this ordinance.

2. Design sections that include vegetated channel sections with channel velocities ranging from 6 to 8 fps, using bioengineering elements and grade control structures are included within the channel and overbank areas to prevent erosion. Grade control structures shall have a minimum effective depth of 3.0 feet below existing or proposed grades with an adequate number of structures to limit future degradation to less than one foot (1').
 3. Construct the portion of the design improvements required on their property for the ultimate channel design. The Floodplain Administrator shall have the discretion to determine the portion of the design improvements to be constructed by the developer. In most instances, the developer shall construct one-half of the improvements on their property.
 4. Coordinate with adjacent developers when grade control structures are incorporated into the design and the construction impacts the adjacent property. These features are to be constructed in their entirety at the time of the initial portion of the channel improvements.
 5. Provide for a drainage easement and access/maintenance easement consistent with the portion of the improvements to be completed by the developer or as required for the proposed future construction which will be completed by the City with escrowed funds.
- c. In cases where the developer owns property adjacent to channel or floodplain areas but does not own a portion of the channel or floodplain area, the developer shall (at the discretion of the Floodplain Administrator):
1. Determine the channel improvement configuration necessary to meet the requirements of Item (2a) above; and,
 2. Provide a dedicated easement to the city for the portion of the future improvement configuration, including necessary maintenance and access easement, which will include the developer property.

A procedure for spacing grade control structures is provided in Figure 24. The developer must also meet all requirements related to erosion control for construction activities.

3. Starting Water Surface Condition

When performing hydraulic analyses for channel or drainageway design, the starting water surface shall be based on the following criteria.

- a. When the ratio of the drainage area of the receiving creek (at the confluence location) to the drainage area of the channel or drainageway being designed is fifteen (15) or greater, the 10-year water surface of the receiving creek shall be used as the starting water surface for hydraulic design calculations. For creeks where the 10-year water surface is not available, the slope-area method will be used for starting design calculations.
- b. When the ratio of the drainage area is less than fifteen (15), the 100-year elevation on the receiving creek shall be used as the starting water surface for design calculations.

4. Easements Required for Open Channels

Drainage and/or floodway easements for all channel improvements, including open channels, creeks and flumes shall be dedicated to, and are subject to acceptance by, the City. Easements shall encompass all areas having a ground elevation below the higher of one foot (1') above the water surface elevation associated with the design flood or the top of the high bank or channel edge. Residential lots shall not extend into easement and floodplain areas. Fences, buildings, or other structures shall not be placed within floodplain and dedicated drainage easement areas. In all cases, the easement shall also include at least a 15-foot wide

maintenance strip along both sides of the channel or, if the Floodplain Administrator so allows, at least a 20-foot wide maintenance strip along one side of the channel. Streets, alleys, bike paths, etc., alongside the channel can serve as all or part of the maintenance easement.

Drainage easements for flumes shall be located with sufficient width to permit future maintenance accessibility, and in no case shall be less than fifteen feet (15') wide.

5. Maintenance Access

Maintenance access areas will be provided along drainage channel improvements as defined in Article 7, Section A.4. The improvements will also include maintenance access ramps in the improvements when the sideslopes are steeper than 4 to 1. The location and number of the maintenance access ramps will be established by the Floodplain Administrator. Typically, each reach of improvement must have facilities to allow access for maintenance equipment.

6. Easements, Dedications, and Maintenance Responsibilities

- a. The City shall have the maintenance responsibility for all easements and/or rights-of-way that are dedicated and accepted by the City.
- b. The City shall not be responsible for the maintenance of improvements placed in lots, open spaces, common areas, etc. that are not within dedicated and accepted easements. Maintenance of improvements placed in these lots, open spaces, common areas, etc. shall be the responsibility of an Owners Association, or other approved association that is established by the developer. The Owners Association shall have the sole maintenance responsibility for these areas. The developer will enter into a maintenance agreement that will bind the Owner's Association to the maintenance of these areas. The City reserves the right to enter these areas should it be necessary due to the lack of maintenance by the responsible Owners Association.
 1. An approved maintenance agreement will be develop prior to acceptance of the project.
 2. The maintenance agreement shall be assured by either a private entity, trust fund, or other mechanism as approved by the City Council.
 3. In the event that the Owners Association does not provide proper maintenance, as determined by the Floodplain Administrator, then the Floodplain Administrator shall notify such Owners Association of the required corrections and or maintenance to bring the drainage improvements up to the standards as originally approved by the City and in accordance to the original improvement plan. If such maintenance is not accomplished within a reasonable time, then the City may contract for such work and levy an assessment to the Owners Association for costs incurred and impose any other appropriate penalties (Article 3, Section G) on the Owners Association.

SECTION B. Lakes and Dams

In the event that a developer desires to modify an existing pond or lake or desires to impound stormwater by filling or constructing an above-ground dam, thereby creating a lake, pond, lagoon or basin as part of the planned development of that property, the criteria listed below shall be met before City approval of the impoundment can be given. Ponds or lakes created by excavation of a channel area without erecting a dam above natural ground elevation or in-stream, low water checkdams are also subject to the criteria listed below, with the exception of spillway capacity requirements. The Floodplain Administrator has the final authority to determine the design criteria for a proposed dam, checkdam or excavated lake. The requirements of the State of Texas must also be met for the construction of dams, lakes, and other impoundments.

The design criteria for a dam is dependent on the size and hazard classification of the dam. The size and hazard classification will be based on Title 30, Texas Administrative Code, Chapter 299 and will be determined by the

Floodplain Administrator based on information furnished by the developer. The following criteria will be used to classify a dam:

1. Size

The classification for size is based on the height of the dam and storage capacity, whichever gives the larger size category. Height is defined as the distance between the top of the dam (minus the freeboard) and the existing streambed at the downstream toe. Storage is defined as the maximum water volume impounded at the top of the dam (minus the freeboard).

Impoundment Size Classification

<u>Category</u>	<u>Storage (acre-feet)</u>	<u>Height (feet)</u>
Minor	<100	<10
Small	≥100 and < 1,000	≥10 and < 40
Intermediate	≥1,000 and < 50,000	≥40 and < 100
Large	≥50,000	≥100

2. Hazard Potential

The hazard potential for a dam is based on the potential for loss of human life and property damage downstream from a dam in the event of failure. The following categories will be used:

Hazard Potential Classification

<u>Category</u>	<u>Loss of Life (Extent of Development)</u>	<u>Economic Loss (Extent of Development)</u>
Low	None expected (No permanent structures for human habitation)	Minimal (Undeveloped to occasional structures or agriculture)
Significant	Possible, but not expected (No urban developments and no more than a small number of inhabitable structure)	Appreciable (Notable agricultural, industry, or commercial development)
High	Expected (Urban development or large number of inhabitable structures)	Excessive (Extensive public, industrial, or agricultural development)

3. Spillway Design Flood

The classification of a dam based on the above criteria will be used to determine the Spillway Design Flood (SDF). The total capacity of a dam structure, including principal and emergency spillways,

shall be adequate to pass the SDF without exceeding the top of dam elevation at a minimum. The SDFs for various dam classifications are as follows:

Spillway Design Flood

<u>Hazard</u>	<u>Size</u>	<u>SDF</u>
Low	Minor	100-year
	Small	1/4 PMF
	Intermediate	1/4 PMF to 1/2 PMF
	Large	PMF
Significant	Small	1/4 PMF to 1/2 PMF
	Intermediate	1/2 PMF to PMF
	Large	PMF
High	Small	PMF
	Intermediate	PMF
	Large	PMF

In all cases, the minimum principal spillway design capacity is the 100-year design flood. In certain cases, a dam breach analysis may be required to determine the proper classification of the structure. For all structures requiring a spillway design flood equal to the Probable Maximum Flood (PMF), a dam breach analysis is required to determine the downstream consequences of a failure. All dams designed for a SDF of 1/2 PMF or less shall be constructed with a minimum freeboard of two feet above the SDF elevation.

4. Additional Design Requirements

- a. An engineering plan for such construction, accompanied by complete drainage design information and sealed by a licensed professional engineer, shall be approved by the City.
- b. The spillway and any emergency overflow areas shall be located so that flood waters will not inundate any buildings, roadways, or other structures.
- c. All Federal, State and City laws pertaining to impoundment of surface water shall be complied with, including the design construction and safety of the impounding structure. Copies of any Federal, State, and City permits issued for the proposed impoundments shall be submitted to the Floodplain Administrator.
- d. Any existing structure, which is included in the project area shall be improved to comply with the applicable Federal, State, and City safety requirements for structures.
- e. Before removing, enlarging, or altering any existing lake, the developer will furnish a study of the effects of the alteration upon flooding conditions both upstream and downstream. The study shall be prepared by a Professional Engineer and submitted to the City for approval prior to making the proposed alteration. Compensatory storage shall be provided in some manner such that equal or comparable flood retention capacity is maintained.
- f. Any improvements to existing dams or lakes or construction of new impoundments shall be made at the expense of the developer, prior to acceptance of the adjacent street, utilities

and drainage improvements as provided for under the Subdivision Ordinance No. 1849, and any amendments thereto.

5. Maintenance and Liability Criteria

- a. The developer shall agree to retain private ownership of the lake, pond, or lagoon or basin constructed and to assume full responsibility for the protection of the general public from any health or safety hazards related to the lake, pond, lagoon or basin constructed.
- b. The developer shall agree to assume full responsibility for the maintenance of the lake, pond, lagoon or basin constructed and shall enter into a maintenance agreement as required in Article 7, Section A.6. The developer shall keep the Floodplain Administrator advised of the current responsible agent for this maintenance.

SECTION C. Levees

The requirements established in this section for levee improvements apply to new levee systems. The requirements do not apply to existing levee systems or modifications to existing levee systems. In the event that developers wish to build new levees to protect an area from flooding, applicable FEMA and State of Texas guidelines and the following criteria apply:

1. Levees shall be designed to have four feet of freeboard above the Standard Project Flood (SPF) for the fully developed watershed flows.
2. Levees shall be designed according to the U. S. Army Corps of Engineers (USACE) design criteria whether or not they are federally authorized levees.
3. Levees systems shall be submitted to FEMA for a levee certification. A levee certification must be obtained prior to the construction of residential or non-residential structures inside the levee system.
4. Levee systems shall be designed with interior drainage systems to prevent flooding from local runoff contained within the system for the 100-year design flood.
5. Levee systems shall have written operation procedures that address gate closure conditions and an emergency warning plan. A copy of these procedures shall be furnished to the Floodplain Administrator.
6. Automated gate closure systems shall have power from two independent sources and shall be capable of being operated manually.
7. Ring levees protecting individual structures proposed for construction after the enactment date of this ordinance shall not be permitted.
8. All new levee systems shall have permanent positive closures to the required design elevation. Temporary closures involving sandbagging or other procedures requiring manual operations shall not be permitted.
9. Provisions shall be made for ensuring the permanent maintenance of levees either by a flood control district or similar governmental organization or by the existing property developer and all future developers, heirs, or assigns.
10. Additional plan requirements include water surface profiles for the design flood and SPF; top of levee profile, definition of interior drainage facilities, including pump station and ponding areas;

location of gravity outlets, gatewells and closure structures; and elevation-duration data on the receiving system.

New levee systems shall only be approved if they are established as a subdivision of the State of Texas with taxing authority to offset improvement, operation and maintenance costs. The City shall have no responsibility or liability for the levee system, other than review and approval authority.

SECTION D. Detention and Retention Facilities

As previously described in Article 5 of this Ordinance, runoff rates for all land uses shall be limited to the rates that would be produced from undeveloped property (prior to any development). This requirement applies to the development of all sites including churches, schools, and other institutional uses. In cases of property redevelopment, detention/retention is required only if it is necessary to reduce the runoff rate from the redeveloped site to the runoff rate of the site prior to redevelopment. Additional detention/retention may be required for any site if the downstream drainage system is inadequate to handle the design flows. The Floodplain Administrator may elect to waive the detention/retention requirement if the developer presents the necessary hydrograph analyses that demonstrate that the resulting downstream discharges with the proposed development, without detention, are no greater than would be experienced with the undeveloped site.

The City shall require additional detention when the existing downstream drainage system is inadequate to handle any increased flood discharges. The requirements for this condition are addressed in Article 6, Section F.5.

Detention/retention facilities are not required within existing flood control districts for the portion of the district that:

1. is located within an area that is protected by a levee system; and
2. drains to dedicated interior sumps and storage areas that provide adequate detention/retention storage to offset the impacts of development to runoff rates equal to a predeveloped condition.

The need for detention/retention facilities may be reduced or eliminated by the implementation of Permanent Best Management Practice (PBMP) approaches. The implementation of PBMP approaches can reduce the resulting runoff anticipated from proposed development. In the event that the use of PBMP approaches reduces the proposed runoff to that equivalent of an undeveloped condition, and there are no limitation related to downstream receiving systems, then detention/retention would not be required.

Detention/retention facilities shall be designed for the 100-year design flood according to the following criteria:

1. The minimum amount of effective storage volume of the detention/retention basin shall be that volume required to reduce runoff rate to an undeveloped rate.
2. Dedicated regional detention/retention basins shall also include an additional one foot of freeboard and two feet of sediment storage. Sediment storage volume is not used in determining the discharge attenuation that occurs from basins.
3. The volume of runoff storage for drainage areas greater than 160 acres shall be computed using unit hydrograph procedures. Unit hydrograph procedures shall be based on the Snyder's Unit Hydrograph method. Manual methods or the use of the computer program HEC-1 or HEC-HMS are allowed for runoff hydrograph computation and flood routings.

For drainage areas less than 160 acres, the above methods are recommended; however, an approximate routing method based on the rational formula is allowable, as outlined in Figure 25.

- 4 Detention areas in parking lots shall not be:

- In required parking spaces, but rather in extra spaces.
 - Behind speed bumps unless the speed bumps are made with reinforced concrete.
 - Deeper than six inches unless warning signs are posted.
5. Drainage easements shall be provided for all regional detention/retention facilities and for other detention/retention facilities where two or more developers are involved.
 6. Detention/retention facilities shall be designed to empty in less than 24 hours, unless it is also serving as an erosion control facility.
 7. Detention/retention facilities shall not be counted as an erosion control technique unless: (1) the basins are designed to empty a minimum of 24 hours from the storm event; and (2) adequate sediment storage areas in the basin have been set aside and are maintained.
 8. Detention/retention facilities shall be maintained by the developer unless the facilities are designed as regional detention facilities and dedicated to the City.
 9. Landscaping improvements are required for detention/retention basins. The minimum landscape requirement is to establish grass on all slopes, basin bottom and surrounding area. The City may require additional landscaping based on the location of the facility and any zoning/platting requirements. Landscaping involving trees, shrubs, etc. is permitted in the surrounding area. These type of landscaping improvements are not permitted in areas that would hinder future maintenance. This includes the bottom of the basin and within two feet (2') of the top of slope.

SECTION E. City Master Drainage Plans

The City may have developed Master Drainage Plans for specific portions of the City. This may include, but is not limited to, the defined Transit Oriented Development (TOD) areas. The Master Drainage Plans may provide specific guidelines for completing future drainage improvements in these areas. The plans may include additional or specific requirements for detention/retention, storm sewer improvements, culvert and bridge improvements, and/or channel improvements. Proposed development and redevelopment are required to meet the guidelines established for these areas, when a master plan has been developed. The performance of these improvements may require participation of the City.

SECTION F. Flumes

Flumes are not recommended for widespread use. Flumes shall not be permitted when the purpose of a permanent flume is to carry runoff down the sides of earthen channels. A flume may be used to direct overflow runoff along property lines until the runoff can be intercepted by streets or conduit flows. Flumes crossing sidewalks shall be covered or bridged in order to minimize danger to pedestrians.

SECTION G. Connections from Buildings to Storm Sewers

Drainage from residential areas, such as roof tops, should be allowed to flow overland before joining the storm sewer system.

Seepage into basements or sub-surface structures that is pumped to ground level, seepage from springs, and runoff from roof drains on non-residential buildings that would flow onto or across driveways, sidewalks, or other areas commonly crossed by pedestrians can create hazards or nuisances to pedestrians. Thus, if hazards or nuisances would be created, the basement and rooftop drains shall be tied directly to the nearest storm sewer, provided that pumped lines from basements have backflow preventers and the water is uncontaminated.

ARTICLE 8

FLOODPLAIN GUIDELINES

SECTION A. Lands to Which This Article Applies

A person shall comply with the requirements of this article for floodplain areas before making substantial improvements to or increasing the outside dimensions of an existing structure or developing land within the design flood line of a creek or stream, whether or not the land has been formally designated as a floodplain. Floodplain areas shall also include all areas inundated by the design flood and as shown as Areas of Special Flood Hazard on Flood Insurance Study maps.

SECTION B. General Floodplain Regulations

1. Permitted Uses of Floodplain Areas

To minimize possible losses of life and property, the following uses are permitted in a floodplain area provided they are also permitted in the underlying zoning district:

- Farm or ranch;
- Local utilities, electrical substation, water reservoir or pumping station, and water treatment plant;
- Public park or playground, private recreation club or area, private community center, and golf course;
- Outside commercial amusement approved by a specific use permit;
- Helistop approved by a specific use permit; and
- Radio, television, or microwave tower, and amateur communications tower with a special use permit.

Structures customarily associated with the above uses may be constructed within a floodplain area only if the proposed structure meets the same engineering requirements applicable to filling in a floodplain (See Article 8.C).

Open private recreation clubs or areas and private community centers, without exterior walls which would incur structural damage during flood conditions, are permitted in floodplain areas. Private facilities listed above, with enclosed walls that would incur damage, are not permitted in floodplain areas.

Uses and structures other than those mentioned above shall not be permitted in floodplain areas.

2. Residential Construction

All new construction, including areas adjacent to floodplains, in reclaimed floodplain areas and substantial improvements of any existing residential structure in floodplain areas shall have the lowest floor (that is at ground level) of any new or substantial improvement construction, elevated to at least two feet (2') above the design flood elevation.

All new construction, including areas adjacent to floodplains, in reclaimed floodplain areas and substantial improvements of any existing residential structure in floodplain areas shall have the lowest floor that consists of a basement or fully enclosed area below ground level of any new or substantial improvement construction:

- a. elevated to at least two feet (2') above the design flood elevation; or
- b. floodproofing of residential construction is not permitted.
- c. for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

Natural ground or fill elevations for the entire residential lot shall be at least one foot above the elevation of the design flood. Incremental improvements, either at one time or over a period of time, the cumulative cost of which equals or exceeds fifty percent (50%) of the market value at the time of the first improvement, shall be considered as a substantial improvement. New residential structures or substantial improvements on stilts or behind ring levees serving individual lots shall not be permitted.

Improvements to an existing structure that increase the outside dimensions, but do not result in a substantial improvement, must meet the requirements of Article 8.C.

Table 10 presents a synopsis of the requirements for residential construction in floodplain areas.

3. Non-residential Construction

All new construction, including areas adjacent to floodplains, in reclaimed floodplain areas and substantial improvements of any existing non-residential structure in floodplain areas shall have the lowest floor (that is at ground level) of any new or substantial improvement construction, elevated to at least two feet (2') above the design flood elevation.

All new construction, including areas adjacent to floodplains, in reclaimed floodplain areas and substantial improvement of any existing commercial, industrial, or other non-residential structure in floodplain areas shall have the lowest floor that consists of a basement or fully enclosed area below ground level, of any new or substantial improvement construction, together with attendant utility and sanitary facilities, shall be:

- a. elevated to at least two feet (2') above the design flood elevation; or
- b. floodproofed to an elevation that is at least two (2') feet above the design flood elevation so that the area is watertight, with walls substantially impermeable to the passage of water. Floodproofed areas shall have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. These areas shall also be certified by a licensed professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the official set forth in Article 4, Section A.1.

- c. for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

Incremental improvements, either at one time or over a period of time, the cumulative cost of which equals or exceeds 50 percent of the market value at the time of the first improvement, shall be considered as a "substantial improvement." Improvements to an existing commercial, industrial or other non-residential structure that increase the outside dimensions, but do not result in a "substantial improvement," must meet the requirements of Article 8.C.

4. Manufactured Homes

- a. All manufactured homes shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors. Special requirements shall be that:
 - Over-the-top ties be provided at each of the four corners of the manufactured home, with two additional ties per side at intermediate locations, with manufactured homes less than fifty feet (50') long requiring one additional tie per side;
 - Frame ties be provided at each corner of the home with five (5) additional ties per side at intermediate points, with manufactured homes less than fifty feet (50') long requiring four (4) additional ties per side;
 - All components of the anchoring system be capable of carrying a force of 4,800 pounds; and,
 - Any additions to the manufactured home be similarly anchored.
- b. For all manufactured homes that are placed or substantially improved within a floodplain and flood-prone area that are on sites for: new manufactured home parks and manufactured home subdivisions; for expansions to existing manufactured home parks and manufactured home subdivisions; for existing manufactured home parks and manufactured home subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads is planned; and for manufactured homes not placed in a manufactured home park or manufactured home subdivision; for manufactured homes moved onto a site in an existing manufactured home park in which a manufactured home has incurred substantial damage as a result of a flood, require that:
 - All manufactured homes meet the minimum FEMA, Housing of Urban Development, and Office of Rural Community Affairs requirements;

- Stands or lots are elevated on compacted fill such that the fill is at or above the FEMA base flood elevation and the lowest floor of the manufactured home is at least 1 foot above the design flood elevation; and,
- Adequate surface drainage and access for a hauler are provided.

Manufactured homes may be supported to the required height of one foot (1') above the design flood elevation by stands or foundation features as accepted by FEMA, and with a maximum height of thirty-six inches (36").

c. For all manufactured homes that are placed or substantially improved within a floodplain and flood-prone area that are moved onto sites for manufactured homes within an existing manufactured home park in which a manufactured home has not incurred substantial damage as a result of a flood, require that:

- All manufactured homes meet the minimum FEMA requirements;
- Stands or lots are created so that and the lowest floor of the manufactured home is at or above the design flood elevation;
- Adequate surface drainage and access for a hauler are provided; and,
- Manufactured homes shall be placed in a floodplain area on a pad site created by compacted fill or supported to the required design flood elevation by stands or foundation features as accepted by FEMA.

Table 10 overviews the requirements for placing manufactured homes in flood hazard areas.

5. Recreation Vehicles

Recreational vehicles located on a site within a designated floodplain area shall: (1) not be located on the site for more than 180 consecutive days; (ii) be fully licensed and ready for highway use, or (iii) meet the elevation and anchoring requirements for "manufactured homes" outlined in this section. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

6. Streets, Parking Lots, Culverts and Bridges

The top of curb of all new streets, including those built in reclaimed floodplain areas, shall be at least one foot (1') above the design flood elevation. The low beam of all new bridges to be constructed across floodplains shall be a minimum of one foot (1') above the design flood elevation. Box culvert improvements shall be designed to have the top of curb elevation, at the box culvert, two feet (2') above the design flood elevation. All new private bridges to individual homes shall have their low beams at one foot (1') above the design flood elevation. Parking lots associated with all residential, commercial and industrial uses, including within reclaimed floodplain areas, shall be at least at the design flood elevation. Parking lots for public parks or playgrounds, private recreation clubs or areas, private community centers and golf courses may be located below the design flood elevation.

7. Utilities

All new and replacement water supply systems, sanitary sewer facilities, and other public utilities shall be designed to minimize or eliminate flood damage and infiltration of flood waters into the system.

8. Fences

Fences (Private and Public Screening) shall be constructed such that blockage of surface water flow does not occur. Fences shall not be allowed in floodplain areas. Fences are not permitted within dedicated easements involving positive overflow from storm sewer systems. These requirements include the requirement that erosive conditions shall not be created around, under or near a fence structure.

9. Additional Construction Standards for Structures

All improvements and construction permitted in a floodplain area must comply with the following requirements:

- a. Structures must be securely anchored to the foundation to prevent flotation and collapse during inundation and designed to prevent damage to nonstructural elements during inundation.
- b. Thermal insulation used below the first floor elevation must be of a type that does not absorb water.
- c. Adhesives must have a bonding strength that is unaffected by inundation.
- d. Doors and all wood trim must be sealed with a waterproof paint or similar product.
- e. Mechanical, electrical, and utility equipment shall be located above the design flood elevation. Water heaters, furnaces, electrical distribution panels, and other critical mechanical or electrical installations must not be placed in basements. Electrical circuits for basements shall be separate from circuits serving floors above the basement, and circuits for basements shall be installed lowered from above.
- f. Basements are permitted for non-residential structures only if they are designed to preclude inundation by the design flood elevation, either by:
 - 1) The elimination of exterior openings below the design flood elevation; or
 - 2) The use of water-tight closures, such as bulkheads and flood shields. However, no basements are permitted in soils whose permeability meets or exceeds the minimum local standards of permeability established for the installation of individual sewage disposal systems.
- g. Plywood used at or below the lowest floor elevation must be of an "exterior" or "marine" grade and of a water-resistant or waterproof variety.
- h. Wood flooring used at or below the lowest floor elevation must be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain, without incurring structural damage to the building.
- i. Basement ceilings for non-residential structures must be of sufficient wet strength and be so installed as to survive inundation.

- j. Paints or other finishes used at or below the lowest floor elevation must be capable of surviving inundation.
- k. All air ducts, large pipes and storage tanks located at or below the lowest floor elevation must be firmly anchored to prevent flotation.
- l. Tanks must be vented at a location above the design flood elevation.

SECTION C. Floodplain Alterations

As stated previously in Article 8, Section B, no new construction is allowed in floodplain areas, but construction is allowed in those areas that can be reclaimed from the floodplain. The City has adopted a "natural floodway". The City's criteria allows a zero increase in cumulative impacts to flood elevation, beyond the designated height, due to modifications within the "natural floodway". The "natural floodway" consists of the natural channel and floodplain that is effective in conveying the design flood. Areas of ineffective flow around bridges, topographic constrictions, and other constrictions are excluded from the "natural floodway." The effective flow area and limits of the "natural floodway" are generally determined using 4:1 flow expansions downstream of constrictions and 1:1 flow expansions upstream of constrictions. Figure 26 displays an example of effective flow areas at a typical bridge location.

A Floodplain Alteration Permit for floodplain reclamation or other types of alterations shall be allowed only if all of the following criteria are met:

- 1. Alterations of the floodplain, excluding ineffective flow areas, shall not increase the water surface elevation of the design flood of the creek beyond the limits established by the City for the "regulatory floodway". For the "regulatory floodway" the impacts cannot impact any upstream, downstream or adjacent property owner.
- 2. Alterations shall be in compliance with FEMA guidelines and other State and Federal regulations.
- 3. Alterations of the floodplain shall not create an erosive water velocity on or off-site.
- 4. Alterations of the floodplain shall not significantly increase downstream discharges.
- 5. Alterations within the CDC regulatory zone shall be in compliance with Article 9 of this Ordinance.
- 6. The effects of existing improvements or public and private improvements for which a future commitment has been made by the City, State, or Federal agencies, shall be used in determining water surface elevations and velocities.
- 7. Any alteration of floodplain areas shall not cause any additional expense in any current or projected public improvements.
- 8. Maximum slopes of filled areas shall not be steeper than three (horizontal) to one (vertical). Slopes of any excavated areas, not in rock, shall not be steeper than four to one, except for transition areas to natural ground.

Fill slopes, vertical walls, terracing, and other slope treatments may be considered provided no unbalancing of stream flow results and only as a part of a grading permit application.
- 9. A grading permit shall be required so that proper provisions for protecting against erosion losses will be made.

These criteria shall be met before a Floodplain Alteration Permit can be issued for a proposed project. Typical projects requiring a Floodplain Alteration Permit include placing fill whether or not it actually raises the property out of the

floodplain, constructing a dam, straightening channel sections, making improvements, substantial or otherwise, to existing structures in a floodplain in which the existing outside dimensions of the structure are increased, and temporary storage of fill materials, supplies, and equipment.

The required submittals for a Floodplain Alteration Permit are listed in Article 4, Section D.2. In general, the information needed for the application can be obtained by running a backwater model, such as HEC-2 or HEC-RAS, and a HEC-1 or HEC-HMS flood routing model. Necessary models shall be run by permit applicants. The backwater information shall be used to determine that upstream water surface elevations and erosive velocities have not increased. Starting water surface conditions for backwater calculations are outlined in Article 7, Section A.3. Flood routing information shall be used to ensure that the cumulative effects of the reduction in floodplain storage of flood waters will not cause downstream increases in water surface elevations and erosive velocities.

Applicants can obtain copies of the existing conditions backwater models and flood routing where available from the Floodplain Administrator. The Floodplain Administrator shall keep the models current with modifications to the floodplain.

SECTION D. Verification of Floodplain Alterations

Prior to final acceptance by the City of utilities and street construction for projects involving floodplain alterations or adjacent to defined floodplains, creeks, channels and drainageways, a certified statement shall be prepared by a Registered Public Land Surveyor showing that all lot elevations, as developed within the subject project, meet or exceed the required minimum finished floor elevations shown on the final plat of the subdivision. This certification shall be filed with the Floodplain Administrator before issuance of a certificate of occupancy.

In addition, at any time in the future when a building permit is desired for existing platted property which is subject to flooding or carries a specified or recorded minimum finished floor elevation, a Registered Public Land Surveyor shall survey the property prior to obtaining a building permit. The survey data showing the property to be at or above the specified elevation shall be furnished to the Floodplain Administrator for approval. Compliance with the provisions of this ordinance pertaining to specified finished floor elevations shall be required.

The developer shall furnish, at his expense, to the Floodplain Administrator sufficient engineering information to confirm that the minimum floor elevations proposed are as required by this section. Construction permits will not be issued until (1) a conditional letter of map revision or amendment has been issued by FEMA, and (2) lots and/or sites are certified by a Registered Public Land Surveyor and are elevated from the floodplain according to the FEMA-approved revisions to the floodplain and the requirements of this Ordinance.

ARTICLE 9

SPECIAL PROVISIONS

TRINITY RIVER CORRIDOR DEVELOPMENT CERTIFICATE PROCESS

SECTION A. Trinity River Corridor Interlocal Agreement

This article recognizes the Trinity River Corridor Interlocal Agreement effective January 1, 1990 (and any subsequent revisions thereto), between cities and counties which acknowledge that the Trinity River Corridor ("Corridor"), is a unique regional resource. Local governments are responsible for the overall health, safety, and welfare of their citizens and must take the lead as stewards of the Corridor. Actions of upstream and downstream communities within the Corridor directly affect each other such that individual local goals for floodplain management, transportation, greenway, waste management, conservation, and development can only be achieved through cooperative management of the Corridor.

SECTION B. Trinity River Corridor Area

For the purpose of the Corridor Development Certificate (CDC) process, the Corridor is defined as the bed and banks of the river segments from the dams of Lewisville Lake, Grapevine Lake, Lake Worth, Benbrook Lake, Lake Arlington, and Mountain Creek Lake downstream to the point of the main stem of the Trinity River near Post Oak Road in southeast Dallas County, and all of the adjacent land area and all watercourses contained within the boundaries of the river floodplain as designated by the approved Trinity River Corridor digital map maintained on computer by NCTCOG.

SECTION C. Establishment of Development Permit

In order to ensure adequate management of the Corridor, a unique certification process has been developed and adopted. To distinguish it from other requirements, the development permit within the Corridor issued by the community will be referenced as a CDC. Any public or private development within the Regulatory Zone of the Corridor must obtain a CDC. The Regulatory Zone is the area within the ultimate development 100-year floodplain of the specified reach of the Trinity River as defined by the latest approved version of the digital **Trinity River Corridor Map - CDC Regulatory Zone**. This map is maintained by NCTCOG.

Any public or private development within the Regulatory Zone of the Corridor must obtain a CDC prior to start of any development activity, unless specifically exempted as discussed below. A development activity is defined "any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations." To assure consistency with TCEQ requirements, development activity also includes "any levee or other improvement".

It is the expressed purpose of this cooperative certification process to satisfy the requirements of FEMA and the TCEQ regarding City floodplain permit actions within the Corridor and to effect close coordination with the USACE and other state or federal agencies that have their own permit processes. The CDC process does not supersede other City, State and Federal programs.

VARIANCES:

A variance may be sought by any public or private development that cannot meet the established common criteria as detailed in the CDC Manual. A variance shall be any modification of the literal provisions of the CDC Manual when strict enforcement of the CDC process would cause undue hardship, owing to circumstances unique to the individual property on which variance from the process is requested. Variances may be issued for projects deemed to be in the overall regional

public interest, as determined by the City Manager and meet the variance requirements established in Article 4, Section F. The decision of the City Manager shall be final.

SECTION D. Approval Process

The standard CDC form will be used to record the actions taken and will be sent to NCTCOG for permanent recordkeeping. Approval will be based on compliance with the following steps.

- Step 1. Determination of Applicability by City
- Step 2. Jurisdictional Review by USACE
- Step 3. Notice of Intent to Process by City
- Step 4. Parallel USACE, FEMA, TCEQ, and Regional Review
- Step 5. Formal City Action

SECTION E. Appeals Process

The Applicant may seek relief from this process. Appellant relief of this permit process shall be sought from the City as an independent permitting authority.

SECTION F. Technical Updates

The latest technical hydrologic and hydraulic information concerning the Corridor may be obtained by the Floodplain Administrator of the respective communities from the NCTCOG and the USACE - Fort Worth District.

SECTION G. CDC Manual

The most recent CDC Manual (and any subsequent revisions) shall be adopted as a part of this Ordinance. The CDC Manual outlines the detailed requirements of this Article and is adopted in its entirety with the following exceptions:

1. Any provisions in direct contradiction to this ordinance.
2. The term of the CDC permit may be extended for multiple three-year periods as deemed appropriate by the Floodplain Administrator.
3. The applicant is not required to officially file the CDC permit in the county records.
4. The concept of equal conveyance shall not apply in areas where the opposing side of the channel has already been developed to the maximum extent practicable as determined by the Floodplain Administrator.
5. New levee systems shall have a minimum of four feet (4') of freeboard above the SPF elevation even if a relief system is provided. The levee requirements shall not apply to existing levee systems or improvements to existing systems.
6. All fill elevations shall have the minimum freeboard above the ultimate 100-year elevation as required by this ordinance.
7. Resource Data and Maintenance and Operation Data are not required unless specifically required by this ordinance.

8. Changes in State and Federal regulatory programs will not require a re-evaluation or reapplication unless:
- a) construction on the project has not begun or;
 - b) until the term of the current permit or extension expires.

ARTICLE 10

STORMWATER QUALITY

SECTION A. General Requirements for Construction Sites

All developers shall use best management practices to control and reduce the discharge, to the municipal separate storm sewer system (MS4) and to waters of the United States, of sediment, silt, earth, soil and other material associated during construction activities based on related City requirements.

SECTION B. General Requirements Post Construction

1. Permanent Best Management Practices (PBMP)

All developers of new development and redevelopment sites shall meet or exceed the minimum PBMPs requirements to control and reduce the discharge, to the MS4 and to waters of the United States, of sediment, silt, earth, soil, and other materials associated with developed sites by incorporating permanent stabilization and flow reduction measures into the site plan. The goals of incorporating PBMPs include the following:

1. To conserve natural resources that inherently control and filter stormwater.
2. To decrease impervious surface area, increase infiltration, and decrease overall runoff.
3. To instill natural processes, emulating pre-development hydrologic conditions, for stormwater to infiltrate and recharge groundwater.
4. To reduce pollution in stormwater runoff.
5. To treat the runoff resulting from the first flush of storms.
6. To potentially decrease the Developer's cost for necessary stormwater structural controls.

Such permanent PBMPs shall include, but are not limited to, the following measures as appropriate:

a. Buffers and Undisturbed Areas

- Use natural site topography for meanders and natural stormwater infiltration.
- Reduce amount of grading through excavating and filling.
- Use natural drainageways for stormwater retention instead of storm sewer pipe systems for stormwater detention and conveyance.

b. Bioretention Systems

- Design a landscaped area or shallow stormwater basin to collect and filter runoff.
- Ponding must not exceed forty-eight (48) hours.

c. Gravity Separator

- Remove or strain sediment, trash, oils and debris from collected stormwater.

d. Preservation of Natural Creeks (where applicable). See Article 7, Section A for requirements when preserving natural creeks.

- Use bioengineering erosion elements to preserve channels and natural creeks that are in a non-erosive state.
- e. Permeable and Semi-pervious Pavement
 - Decrease surface runoff by decreasing surface area of impermeable surfaces on site.
 - Incorporate porous paver systems or porous concrete for parking lots, pedestrian paths, and low-traffic applications.
- f. Low Impact Development Methods
 - Implement LID Methods such as rainwater harvesting, rain gardens, rain barrels, cisterns on individual lots, green roofs, planters, tree box filters, and/or bioretention or bioretention facilities which treat all post-construction areas.
 - The vegetated LID features shall consist of native plantings or plantings consistent with Texas Smart-Scape recommendations.
- g. Stream Restoration
 - Restore the natural functioning state of a stream through techniques such as channel modification, bank stabilization, and slope stabilization.
- h. Vegetative Filter Strips
 - Design an area of permanent vegetation next to a waterway or drainage path to help trap sediment and other pollutants from reaching the surface waters and slow down runoff.
- i. Vegetative Swales
 - Design a drainage pathway with permanent vegetation designed to convey water at a lower, non-erosive velocity and to trap sediment and pollutants.
- j. Native Landscaping
 - Plant live, native plants for immediate pollution uptake and erosion control.
- k. Stormwater Retention
 - Utilize stormwater retention basins instead of stormwater detention basins for flow detention.
- l. Aeration Features within Retention Basins
 - Providing fountains or other features in retention basins to aerate the stored water.
- m. Additional Approved Methods
 - Additional PBMP methods may be used if the effectiveness, performance, and maintenance procedures are approved by the City.

2. Permanent Best Management Practices Requirement

Not every site is the same. Thus, every development shall be evaluated to determine the most feasible approach to limit the development's impact. The design criteria to be used for development and redevelopment sites, such as site planning, LID, and PBMPs, will be discussed at the kick-off meeting. It is the responsibility of the design engineer to select and design PBMPs that address site specific conditions

using appropriate design criteria for the North Central Texas region. The source of the design criteria shall be referenced in the plans. Additional guidance for selecting PBMPs and devising operations and maintenance plans may be sought during the kick-off meeting.

The developer should prepare for the kick-off meeting with the following:

- Exhibits of the project area with topographic information; and,
- A list of proposed PBMPs.

To preserve the existing natural resources in Carrollton and promote sustainable development, demonstration of compliance with the following minimum number of PBMPs shall be provided:

PBMP Requirements

<u>Disturbed Area Size</u>	<u>Minimum Number of PBMP Points*</u>
12,000 sq. ft \leq Disturbed Area < 5 acres	2
5 acres < Disturbed Area < 10 acres	4
10 acres < Disturbed Area < 20 acres	6
\geq 20 acres	8

* Single family lots are excluded.

* Subdivisions with paved alleys shall provide one PBMP above minimum.

3. Permanent Best Management Practices Point System

The following Point System summarizes the contribution of each PBMP toward the minimum number of PBMP points required.

Permanent Best Management Practice Point System

<u>Permanent Best Management Practice</u>	<u>Size Criteria</u>	<u>Number of Points</u>
Buffers and Undisturbed Areas (varies by size)	1 Point for every 4 acres of buffer/undisturbed area. Minimum of 50 feet in width.	1 to 4
Bioretention Systems	Landscape areas and enhanced swales to filter runoff from a minimum of 10% of the developed site area.	2
Gravity Separator	Solids and oils removal device. A minimum of 2 devices per 10 acres of development.	3
Preservation of Natural Creeks (in a non-erosive state)	Preserve a minimum length of 70% of existing creeks	2
Permeable and Semi-pervious Pavement	A minimum of 50% of site pavement is pervious	2

Low Impact Development Methods	Green roof, rainwater harvesting, rain gardens, etc. as approved by the City.	2
Stream Restoration	Restoration performed on a minimum of 70% of existing creek length.	3
Vegetative Filter Strips	A minimum of 20-feet of strips along site boundaries and discharge to creeks	1
Vegetative Swales	A minimum of 50 feet of grass swale length to discharge locations	1
Native Landscaping	A minimum of 10% of site area stabilized using native plants.	1
Stormwater Retention	Use of stormwater retention basins	1
Aeration Features within Retention Basins	Aeration fountain in retention basins	1
Additional Approved Methods	To be determined by City	To be determined by City

4. Operations and Maintenance Form Requirement

Submittal of an Operations and Maintenance (O&M) Form is required to demonstrate the long-term preservation and performance of PBMPs. The O&M Form must be accepted by the City before the final plans are approved for construction. The Applicant shall agree to the operations and maintenance procedures and frequency of Maintenance for each PBMP specified in the O&M Form.

5. Operations and Maintenance Responsibility

A developer is responsible for the establishment and maintenance of PBMPs during the two-year warranty period. During this time developer, or established Owners Association, must perform necessary operations and maintenance activities. The developer representative must submit an annual inspection report identifying the success of the PBMPs.

The developer/ may request that the City accept maintenance responsibility of PBMPs after the completion of the two-year warranty period. This request must be made during the planning, design and platting phases. The developer must dedicate maintenance easements, subject to City acceptance, for all PBMPs that the City accepts as a maintenance responsibility. If approved, the developer will contribute to a general stormwater maintenance fund. The contribution shall be equal to the estimated present cost, including inflation, for twenty (20) years of operations and maintenance.

6. PBMP Easements

A developer shall place all PBMPs within the limits of private property and the maintenance shall remain the developer responsibility. PBMP's that include regional Stormwater Retention basins and any other PBMP that the City accepts long-term maintenance responsibility for shall be placed in an easement and be dedicated to the City.

7. Inspections and Monitoring

Inspections and monitoring of PBMPs is the responsibility of the developer representative, as identified on the O&M Form, during the established maintenance period. The frequency of inspections for the PBMPs is required annually, as a minimum. If PBMPs include structural controls, maintenance of the controls must be performed at the following minimum frequency:

- Quarterly for the first 3 years
- Twice a year thereafter
- Within 48 hours of major rainfall events (more than 3 inches of rain over a 24-hour period, approximately an annual rainfall event)

Maintenance activities shall include, but is not limited to:

- Maintaining PBMPs in a good working condition,
- Repairing damage to PBMPs,
- Removal and legal disposal of trash, debris, and accumulated sediment.

The developer representative must provide guidance to maintenance personnel to prevent system deterioration and failure. The developer representative must maintain inspection and maintenance logs. The developer must provide the City with copies of the inspection and maintenance logs, upon written request.

The City reserves the right to inspect the PBMPs at any time. If the PBMPs fails the inspection, then the developer representative is notified of the deficiencies and allowed a 30-day period to correct the noted issues. In the event that the deficiencies are not corrected within the 30-day period, then the City reserves the right to perform any work necessary to correct deficiencies. The developer representative shall be responsible for reimbursing the City for any costs incurred in resolving the deficiencies.

8. O&M Revisions

Any proposed revisions or modifications made to an approved O&M Form requires a new O&M Form to be completed. The revised O&M Form must be submitted to the City for review and approval.

9. Enforcement Actions

In addition to the reimbursement of costs incurred by the City, the developer may also be subject to fines under the City's Code of Ordinances for violations of this ordinance, on a per day basis.



City of Carrollton

Agenda Memo

File Number: 1980

Agenda Date: 4/21/2015

Version: 1

Status: Work Session

In Control: City Council

File Type: Work Session Item

Agenda Number: 9.

CC MEETING: April 21, 2015

DATE: April 15, 2015

TO: Leonard Martin, City Manager

FROM: Krystle F. Nelinson, Management Analyst/City Secretary

Discuss **A.W. Perry Homestead Museum Adjacent Property Use And Acquisition.**

BACKGROUND:

The purpose of this item is to allow the City Council an opportunity to discuss property use and acquisition related to property adjacent to the A.W. Perry Homestead Museum.



City of Carrollton

Agenda Memo

File Number: 1966

Agenda Date: 4/21/2015

Version: 1

Status: Presentations

In Control: City Council

File Type: Presentation

Agenda Number: 11.

CC MEETING: April 21, 2015

DATE: April 13, 2015

TO: Leonard Martin, City Manager

FROM: Krystle F. Nelinson, Management Analyst/City Secretary

Recognition Of Carrollton Community Chorus.



City of Carrollton

Agenda Memo

File Number: 1978

Agenda Date: 4/21/2015

Version: 1

Status: Consent Agenda

In Control: City Council

File Type: Minutes

Agenda Number: *13.

CC MEETING: April 21, 2015

DATE April 15, 2015

TO: Leonard Martin, City Manager

FROM: Krystle F. Nelinson, Management Analyst/City Secretary

Consider Approval Of The April 7, 2015 Regular Meeting Minutes.

**CARROLLTON CITY COUNCIL
REGULAR WORKSESSION AND MEETING
APRIL 7, 2015**

The City Council of the City of Carrollton, Texas convened in a Regular Worksession and Meeting on Tuesday, April 7, 2015 at 5:45 p.m. with the following members present; Mayor Matthew Marchant, Mayor Pro Tem Bob Garza, Deputy Mayor Pro Tem Anthony Wilder, Councilmembers Kevin Falconer, Doug Hrbacek, Lisa Sutter, Jeff Andonian and Steve Babick. Also present were City Manager Leonard Martin, Assistant City Managers Marc Guy, Bob Scott and Erin Rinehart, City Attorney Meredith A. Ladd and City Secretary Krystle Nelinson.

5:45 P.M. – COUNCIL BRIEFING ROOM

*****PRE-MEETING *****

Mayor Marchant called the meeting to order at 5:47 p.m.

- 1. Receive information and discuss Consent Agenda.**

*****REGULAR MEETING 7:00 PM*****

Mayor Marchant called the Regular Meeting to order at 7:10 p.m.

INVOCATION – Deputy Mayor Pro Tem Anthony Wilder

PLEDGE OF ALLEGIANCE – Mayor Pro Tem Bob Garza

PRESENTATIONS

- 9. Present Recognition Of The Texas Comptroller's *Platinum Leadership Circle Award For Financial Transparency*.**
- 10. Present A Proclamation Declaring April 6-11, 2015 As National Community Development Week.**
- 11. Present A Proclamation Declaring April 7, 2015 As *National Service Recognition Day*.**

PUBLIC FORUM

- 12. Hearing of any citizen/visitor on items not listed on the regular meeting agenda. Citizens wishing to address the Council regarding items on the posted agenda will be called to speak during the Council's consideration of such items.** Citizens/visitors should complete an appearance card located on the table at the entrance to the City Council Chambers. Speakers must address their comments to the presiding officer rather than to individual Council members or staff; Stand at the podium, speak clearly into the microphone and state your name and address prior to beginning your remarks; Speakers will be allowed between 2 and 5 minutes for testimony; Speakers making personal, impertinent, profane or slanderous remarks may be

removed from the room; Unauthorized remarks from the audience, stamping of feet, whistles, yells and similar demonstrations will not be permitted; No placards, banners or signs will be permitted in the Chambers or in any other room in which the council is meeting. In accordance with the State Open Meetings Act, the City Council is restricted from discussing or taking action on items not listed on the agenda. Action can only be taken at a future meeting.

Gerald Roehrig, 2306 Stonebrook Circle, recommended the Council adopt a resolution stating that the City would only respect United States laws, referred to HB 562 and explained his reasoning for the resolution.

Lee Roehrig, 2306 Stonebrook Circle, reiterated the request to protect the U. S. Constitution and laws.

David Yarbrough, 3202 Cutter Place, asked the Council to consider purchasing land next to the Perry Museum for the historical preservation of the whole area. He offered assistance.

Judy Scamardo, former Mayor Pro Tem, 1517 Northridge Drive, also encouraged the Council to consider the land referred to by Mr. Yarbrough.

Willie Rainwater, 2006 Southern Oaks, asked the Council to consider naming a street “Rainwater” to recognize the history of the Rainwater Family in the City. He suggested that Jamestown be renamed to Rainwater and felt it would have minimal impact.

Charles Rainwater, 2000 Knollwood Lane, also requested Jamestown Street be renamed to Rainwater and provided the history of the Rainwater Family.

Ray Rainwater, 1636 Old Hickory Trail, DeSoto, stated the Rainwater Family has been in Carrollton since 1855 and requested a street be named Rainwater Street.

Mayor Marchant thanked the Rainwater family for bring forward the request recognizing the history of their family and acknowledging the oversight.

CONSENT AGENDA

*(*All items marked with a single asterisk are part of a Consent Agenda and require no deliberation by the Council. Each Council member has the prerogative of removing an item from this agenda so that it may be considered separately. Contracts and agreements are available in the City Secretary's Office.)*

Mayor Marchant advised that Items 26 and 32 would be pulled from the Consent Agenda for separate vote.

Councilmember Falconer moved approval of Items 12-25 and 27-31; second by Councilmember Andonian. Deputy Mayor Pro Tem Wilder stated he is a big opponent of debt issuance; however since the voters approved the debt, it was the Council's duty to be good stewards of the debt. He thanked Bob Scott and his team because part of the issuance on the agenda for approval was a refunding of debt to a lower interest rate and he stated it was in the best fiscal interest of the taxpayers of the City. **The motion was approved with a unanimous 7-0 vote.**

MINUTES

- *13. Consider Approval Of The March 17, 2015 Regular Meeting Minutes.**

BIDS & PURCHASES

- *14. Consider Approval Of The Purchase And Construction Of A Pavilion At Jimmy Porter Park For The Parks Department From Play By Design In An Amount Not To Exceed \$69,650.00.**

- *15. Consider Approval Of Bid #15-022 For The Purchase Of Four Sand Spreaders To Warren Truck & Trailer In An Amount Not To Exceed \$63,920.00.**

- *16. Consider Approval For The Purchase Of Motor Fuel Through An Interlocal Agreement And A Tarrant County Bid Renewal In An Amount Not To Exceed \$1,253,615.00.**

- *17. Consider Approval Of The Purchase Of HVAC Replacement For Facility Services From Trane In An Amount Not To Exceed \$46,440.00.**

- *18. Consider Approval To Renew The Contract For Janitorial Services To CTJ Maintenance, Inc In An Annual Amount Not To Exceed \$367,140.00.**

- *19. Consider Approval Of The Replacement Of One (1) Service Truck From Southwest International Through An Inter-Local Agreement With BuyBoard In An Amount Not To Exceed \$69,181.20.**

- *20. Consider Approval Of The Purchase Of Fourteen (14) Trucks For Various City Departments From Caldwell Country Through An Inter-Local Agreement With BuyBoard In An Amount Not To Exceed \$355,297.43.**

- *21. Consider Approval Of Bid # 15-007 For Fertilizer For The Parks Maintenance Department From Various Vendors In An Amount Not To Exceed \$75,000.00.**

- *22. Consider Approval For The Purchase Of One Shade Structure For Rosemeade Dog Park Through An Inter-Local Agreement With BuyBoard In An Amount Not To Exceed \$19,838.00.**

- *23. Consider Approval Of The Purchase Of A Restroom/Concession Facility At Thomas Baseball Complex In An Amount Not To Exceed \$208,000.00.**

CONTRACTS & AGREEMENTS

- *24. Consider Authorizing The City Manager To Approve Change Order #1 With RKM Utility Services, Inc. To Connect Cheyenne Drive With Damsel Caitlyn Drive In Castle Hills As Part Of The Streets 2014 (Neighborhood Project #2) Reconstruction Project In An Amount Of \$86,347.00 For A Revised Contract Amount of \$3,614,682.00.**

***25.** Consider Authorizing The City Manager To Approve Change Order #2 With SYB Construction Company For Additional Pavement And Driveway Replacement Throughout The Carrollton Downs Alley And Sanitary Sewer Line Replacement Project In An Amount Of \$54,523.30 For A Revised Contract Amount Of \$2,177,159.30.

ORDINANCE

~~***26.** Consider An Ordinance Amending Title XI, Chapter 116, “Restaurants And Food Establishments”, To Allow Dogs On Food Establishment Patios, And Title III, Chapter 31, “Comprehensive Fee Ordinance”, Of The Carrollton Code Of Ordinances.~~

***27.** Consider An Ordinance Amending Title XIII, Chapter 133, “Parks And Recreation,” Of The Carrollton Code Of Ordinances Regarding General Policies And Guidelines.

***28.** Consider An Ordinance Adopting The North Central Texas Council Of Governments’ Regional Transportation Council’s Revised Clean Fleet Vehicle Policy.

***29.** Consider All Matters Incident And Related To The Issuance And Sale Of “City Of Carrollton, Texas, General Obligation Improvement And Refunding Bonds, Series 2015”, Including The Adoption Of An Ordinance Authorizing The Issuance Of Such Bonds, Establishing Parameters For The Sale And Issuance Of Such Bonds And Delegating Certain Matters To Authorized Representatives Of The City.

RESOLUTIONS

***30.** Consider A Resolution Authorizing The City Manager To Enter Into A Contract With Grant Thornton LLP For Independent Auditing Services In An Amount Not to Exceed \$107,197.00.

***31.** Consider A Resolution Authorizing The City Manager To Execute A Contract With KBA EnviroScience, Ltd. For The Installation And Sampling Of Permanent Groundwater Monitoring Wells At 1309 South Broadway In An Amount Not To Exceed \$13,750.00.

CONSENT AGENDA ITEMS PULLED FOR SEPARATE CONSIDERATION.

***26.** Consider An Ordinance Amending Title XI, Chapter 116, “Restaurants And Food Establishments”, To Allow Dogs On Food Establishment Patios, And Title III, Chapter 31, “Comprehensive Fee Ordinance”, Of The Carrollton Code Of Ordinances.

Mayor Marchant introduced the item that would allow dogs on exterior patios.

Councilmember Sutter moved that dogs be allowed in food establishments only in the TOD area. She voiced her opinion stating that it makes sense to try the new concept of allowing dogs on patios of food establishments in the TOD area because of the urban nature of the area. **The motion was seconded by Councilmember Andonian.** He supported trying the concept before making it a city-wide option. Councilmember Babick spoke in favor of allowing dogs on patios

on a city-wide basis as published on the agenda. Councilmember Babick made a substitute motion to approve it as stated across the City; second by Councilmember Falconer. A lengthy discussion was held regarding various issues surrounding the proposed motions and allowing dogs in food establishment patios.

Mayor Marchant called the vote on the substitute motion to allow it city-wide and the motion failed with Councilmembers Hrbacek, Falconer and Babick in favor and Councilmembers Sutter, Wilder, Andonian and Garza opposed.

Mayor Marchant called the vote on the original motion to allow it only in the TOD Districts. Councilmember Hrbacek stated he would vote against the motion stressing that it doesn't mean that he doesn't want dogs in restaurants in the Transit center. The motion was approved with a 6-1 vote, Councilmember Hrbacek opposed.

PUBLIC HEARING

***32. Hold A Public Hearing And Consider An Ordinance To Repeal And Re-Establish Special Use Permit 293 To Allow For An Increase In Height For An Existing Antenna Support Structure With Special Conditions; Amending Accordingly The Official Zoning Map. The Approximately 3.7-Acre Tract Is Located At 3065 North Josey Lane And Is Currently Zoned For The (LR-2) Local Retail District. Case No. 02-15SUP1 AT&T Cell Tower/Clinton Earnhart/SBA Communications. Case Coordinator: Christopher Barton.**

Christopher Barton, Chief Planner, stated the request was to replace an existing SUP for a cellular antenna monopole located at the southwest corner of Josey Lane and Frankford Road. The request would increase the height of the existing pole approximately 20 ft to allow the applicant to add additional carriers. Without the additional height, another antenna would be requested. He described enhanced landscaping that would occur. Staff received no comments from the public and he advised that the Planning Commission recommended unanimously in favor of the request.

Peter Kavanagh, 1620 Handley, Suite A, Dallas, representing Verizon Wireless advised that the antenna currently belongs to Sprint and explained that Verizon was requesting the 20 ft extension which would allow Verizon Wireless to be at the top of the pole and AT&T would be between Verizon and Sprint. He explained where the equipment would be placed and explained that there would be a total of three tiers of antenna like the one that was existing. He explained that allowing the T arms would allow for more carriers and more antennas in a lower profile. He guessed that flush mount antennas would require a 100 ft pole. Discussion was held about various types of antenna, locations and the need to get more data through to address customer need. Mayor Marchant felt the pole was detrimental to the view and the corridor and discussion was held with regard to aesthetics and alternative structures. Mr. Cavanaugh stated he does not see fewer or shorter poles in the future. He stated they would be agreeable to a six week continuation to allow them time to review options.

Councilmember Falconer moved to continue the case to May 19; second by Councilmember Babick.

Mayor Marchant announced that Councilmember Hrbacek removed himself from the meeting due to a conflict of interest as soon as it became apparent that Verizon was a party to the request.

The motion was approved with a 6-0 vote, Councilmember Hrbacek abstained.

Councilmember Hrbacek returned to the dais.

PUBLIC HEARING - INDIVIDUAL CONSIDERATION

33. Hold A Public Hearing And Consider An Ordinance To Rezone To Establish A Special Use Permit For A Child Daycare Center With Special Conditions On An Approximately 4.5-Acre Tract Located At 2760 East Trinity Mills Road; Amending Accordingly The Official Zoning Map. Case No. 01-15SUP1 University Kids/Tekisha Scott. Case Coordinator: Christopher Barton.

Mr. Barton began the presentation with photographs of the location. He stated that initially the staff recommended denial was based on the historic practice of the City showing a clear preference for a natural turf play area and in this case, the applicant was proposing to use artificial turf at the rear of the facility for the play area. He noted that there was no State requirement for natural turf. The Planning Commission continued the case to allow the applicant to provide more information about the proposed play area. He advised that the applicant returned with a well organized and detailed proposal including a drawing showing how the area could be fenced and protected with steel bollards. At the second public hearing on the case, the Planning Commission recommended in favor of the case. He also advised that staff had not received any public opposition to the request. He stated that although staff recommended denial in the beginning, they probably would not have made that recommendation had they had the information now available.

Tekisha Scott, applicant, stated that with her background in education she proposed to provide quality daycare and prep the children to be on or above grade level. She requested that the hours of operation be 6:00 am to 12:00 midnight.

Mr. Barton explained that the hours of operation in the case report were in accordance with the applicant's initial request and stated staff had no opposition to the requested change.

With regard to the distance between the bollards, Ms. Scott stated she would be happy to adjust the distance as Council desired.

Mayor Marchant opened the public hearing. He noted that Elsie Thurman, 9406 Biscayne Blvd., Dallas, and Donal Thompson, 1419 US Hwy 67 North, Cedar Hill, submitted a card in favor but did not wish to speak. He invited speakers to the podium and being none, he closed the public hearing.

Councilmember Sutter moved approval of Item 33 with the stipulation of having guard rails rather than bollards and that the hours of operation be from 6:00 a.m. to 12:00 midnight; second by Mayor Pro Tem Garza and the motion was approved with a unanimous 7-0 vote.

34. Hold A Public Hearing And Consider An Ordinance To Establish A Special Use Permit To Allow A Used Car Dealer With Special Conditions On An Approximately 1.3-Acre Tract Located At 2399 Midway Road; Amending Accordingly The Official Zoning Map. Case No. 03-155UP2 Texas Carz/Salah Nimer. Case Coordinator: Christopher Barton.

Mr. Barton presented the case noting it was initially denied by the City Council in September 2014; however the City Council granted a waiver to the “one-year rule,” allowing the applicant to resubmit an application for reconsideration. On March 5, 2015 the Planning & Zoning Commission recommended approval with staff stipulations with a 7-2 vote. He reported there was no public opposition to the request. Staff added a stipulation that the driveway at Midway Road be removed based on the driveway spacing requirements.

Salah Nimer, applicant, began the presentation with a history of the business stating that it went from a one man operation in 2008 to a team of nine employees in 2015. He talked about the measures they took to address traffic flow concerns. Further, they would be willing to remove the driveway as stipulated by staff although they feel it may impact the business. He provided before and after photographs of the site. He stated there would not be any wrecked cars in the parking lot and requested approval.

Mayor Marchant opened the public hearing and invited speakers to the podium. There being no speakers, he closed the public hearing.

Deputy Mayor Pro Tem Wilder asked if he intended to use the parking lot for overnight storage. Mr. Nimer replied that it was the idea because there was not enough space on the inside. He added that he intends to park about half of the number of vehicles as he formerly parked. Mr. Barton clarified that the proposal would allow overnight storage. Mr. Nimer advised that they added lighting when they purchased the building so the parking lot would be well lit and there were cameras on the parking lot for security purposes. Further, he added that the entrance to the dealership was chained on both sides. The hours of operation were 8:00 a.m. to 7:00 p.m. In response to Councilmember Falconer, Mr. Nimer stated there were about 65 parking spaces and they park approximately 35 vehicles; a maximum of 40. He stated he would be okay with a stipulation on the maximum number allowed. He also stated that only one of the dock doors was active and as the budget allows, he would consider changing the façade of the other dock doors.

Councilmember Andonian asked the applicant if he would be willing to bring the outdoor lighting into compliance with City Code and Mr. Nimer replied affirmatively.

Councilmember Babick moved approval of the case, Item 34 with an added stipulation allowing for a maximum of 45 vehicles for overnight storage subject to stipulation for lighting in accordance with City Code; second by Sutter. Deputy Mayor Pro Tem Wilder asked that the motion be amended to add a stipulation that the three garage bay doors to the left would be changed to the transparent paneling that was discussed. Councilmember Babick agreed to the amendment and Councilmember Sutter agreed to second. Discussion about the time frame to make the garage bay door replacement and Mr. Nimer agreed that 90 days should be okay. Discussion was held with regard to adding a stipulation to increase the landscaping and Councilmember Falconer suggested five to seven ornamental trees. Councilmember Babick voiced his agreement to amend the motion to include the additional

landscaping stipulation as did Councilmember Sutter. The motion was approved with a unanimous 7-0 vote.

35. Hold A Public Hearing And Consider An Ordinance To Rezone To Amend Planned Development District 124 To Remove An Approximately 36 Acre Tract And To Establish A New Planned Development District For The (MF-18) Multi-Family Residential, (O-2) Office And (LR-2) Local Retail Districts With Modified Development Standards. The Subject Tract Is Located On The South Side Of Hebron Parkway Between Huffines Boulevard And SH 121/Sam Rayburn Tollway. Case No. 03-15Z2 The Collection/Dimension Group. Case Coordinator: Christopher Barton.

Mr. Barton presented the case and specifically noted the requirement that all driveways have a minimum of 75 ft internal storage which staff felt was a little onerous noting that it was not a standard that was applied anywhere else in the City. He also referred to the requirement that 40% of the façade be windows noting the problems it created and offered the stipulation that would allow up to half of the 40% to be fake or false windows meaning from the street, it would still look like a window for the architectural interest but would not function like a window. Lastly staff recommended deleting the requirement that front doors be recessed into the side of the building by a minimum of 5 ft. He further noted that staff deleted redundancies in the PD regulations where requirements were found in other parts of the ordinance or the City Code. He advised that notice was sent to all property owners as required and one card was returned by a property owner across the street to the north however the objection was for a different case.

Mayor Marchant opened the public hearing inviting speakers to the podium. There being no speakers, he closed the public hearing.

Councilmember Babick moved approval of Item 35 as presented; second by Councilmember Falconer.

Councilmember Sutter asked the applicant to address the fake or false window design. The applicant stated the main windows would consist of the drive through window and the transit window located directly above and the remaining 20% would be the false windows. He stated anything more than 20% would be false glazing. Councilmember Sutter voiced a desire to reduce the requirement to 20%. Mr. Barton stated staff had no objection to the reduction to 20%.

Councilmember Babick agreed to amend his motion to reduce the glass requirement to 20% including the change in B2 design standard to strike the italicized portion regarding faux windows and Councilmember Falconer voiced agreement as well. The motion was approved with a unanimous 7-0 vote.

36. Hold A Public Hearing And Consider A Resolution For An Amendment To The Comprehensive Plan And The Future Land Use Map To Change An Approximately 3.4-Acre Site From Single-Family Residential Detached To Single-Family Residential Attached Uses Located In The Vicinity Of The Southwest Corner Of Frankford Road And McCoy Road. Case No. 03-15MD1 McCoy Villas Comprehensive Plan Amendment/Harlan Properties, Inc. Case Coordinator: Michael McCauley.

37. Hold A Public Hearing And Consider An Ordinance Amending PD-63 Changing The Zoning Of A Certain Tract From The (SF-12/20) Single-Family Residential District To The (SF-TH) Single-Family Townhouse Residential District With Special Development Standards; Amending Accordingly The Official Zoning Map. The Approximately 3.4-Acre Tract Is Located In The Vicinity Of The Southwest Corner Of Frankford Road And McCoy Road. Case No. 10-14Z3 McCoy Villas/Harlan Properties, Inc. Case Coordinator: Michael McCauley.

Mayor Marchant advised that Items 36 and 37 would be heard simultaneously.

Michael McCauley, Senior Planner, stated the applicant would like to construct a single family townhouse development on the subject site consisting of 36 lots, one of which would be for the detention area. The applicant was requesting to amend the PD to allow the base zoning to change from Single Family 12/20 Residential to Single Family Townhouse Residential with modified development standards. The applicant requested a minimum lot of 2500 sq ft rather than 3500 sq ft; lot coverage to increase from 45% to 70%; minimum lot width to decrease from 35 ft to 25 ft; front entry garage; no alley; and as part of the plat application, staff would require a relocation of the ingress/egress easement off of McCoy Road as well as relocation of the utility easement. Staff recommended that the easement be on the north side of the development to relieve congestion from Joy Drive. He referred to a revised zoning exhibit where Rainwater Court (formerly Joy Drive) would have visitors parking on the west end of the cul-d-sac as well as on the northwestern part of the site. Mr. McCauley provided photos of the Shoal Creek development to illustrate the product proposed by the developer and other townhouse developments with smaller lots most of which included alleys. He reported receiving four comment cards in opposition to the request and one in support of the request. Lastly he advised that the Planning Commission recommended approval of the request with stipulations.

Jim Dewy, JDJR Engineering, 2500 Texas Drive, Irving, stated he represented Harlan Properties and Sumeer Homes. He advised that Sumeer Homes had been building homes in the DFW market for 30 years. He stated the proposed townhouses would average \$250,000 and some would be around \$300,000. He stated the project would replace the driveway with a public street. He read a couple of excerpts from the traffic study as well as the conclusion and stated he did not feel there would be a problem. He addressed each of the elements to consider listed in the staff report and specifically stated that based on the traffic study, they feel that staff's requirement for a separate easement and driveway (second point of access) was completely unnecessary. He stated the applicant was not providing a transitional buffer because it was not required in the Code and further felt there was no point in constructing a buffer next to an alley. He explained why the developer felt front entry homes were a better product. He advised that the developer met with the HOA to the south who stated they did not want the developer to use the alley and was another reason why the developer proposed no alleys.

Mayor Marchant noted the combination of skinnier lots and no alley and stated an issue of concern was where the utilities would be placed. Mr. Dewy used a picture of Shoal Creek in Garland stating it was the exact product with the same amount of green space and setback that was proposed and there would be no issue with utility placement. He stated the gas meter was usually placed next to the unit and hidden by shrubs. With regard to trash cans, he stated the cans would not be allowed to anywhere in the front area and would have to be stored out of site. Also, there would be a stipulation that vehicles must be parked in the garage. With regard to

guest parking, he stated there were nine spaces available on the street and there would also be 10 off-street parking spaces at the end of the cul-d-sac. Councilmember Falconer stated he felt townhomes was an appropriate choice for the area and had an inherent disagreement on front entry versus alley. He noted although Palisades HOA did not want to share the alley, it was a public alley available for use and the second alley would be single loaded and would not need to be as wide. He voiced his preference for the rear entry and felt the developer could have the same buildable area for the neighborhood. He felt the rear entry product was more sustainable than front entry and suggested a possible further reduction in setbacks to accommodate the alleys.

Mayor Marchant opened the public hearing.

The following individuals submitted a card in opposition but did not wish to speak:

Raye Achilli, 1602 Mission Ridge Trail, Carrollton
J Watson, PO Box 111265, Carrollton

The following individuals submitted a card in support but did not wish to speak:

Cliff Erickson, 1737 Delaford Drive, Carrollton
Stephanie Johnson, 1100 Magnolia Dr., Carrollton
Kathy Joiner, 3257 Northview Dr., Carrollton
Sean Flynn, 1734 Bluffview Dr., Carrollton
Lori Vriend, 1366 Dogwood Trail, Lewisville
Jan Erickson, 1737 Delaford Dr., Carrollton
MaryRose Anderson, 4636 N. Josey #1926, Carrollton
Steve & Lyn Hau, 3617 Field Stone, Carrollton
Steve and Julie Walker, 6423 Garlinghouse, Dallas
Joe & Ellie Wakeman, 2109 Pueblo Dr., Carrollton
Heather Erickson, 1737 Delaford Dr., Carrollton (36 only)
Ana and Dan Belville, 3813 Branch Hollow Circle, Carrollton

The following individuals spoke in support of the request:

Coby & Shari Sparks, 2357 Highlands Creek Rd, Carrollton
David Johnson, 1100 Magnolia Drive, Carrollton
Gabe & Frances Cruz, 2909 Panorama Drive, Carrollton
Randall Chrisman, 1501 Broken Bow Trail, Carrollton
Mark Mohrweis, 1533 Brighton Dr, Carrollton
Marcia Seebachan, 2019 Stefani Court, Carrollton
Gene Burks, 3704 Standridge, Carrollton

Tracey Ramsey, 2927 Miawood, Carrollton, did not speak opposed or in support but voiced concern about school traffic and the traffic study results.

There being no other speakers, Mayor Marchant closed the public hearing.

Councilmember Hrbacek stated he was concerned about traffic congestion. He stated he would have like to hear more about the product and felt a rear entry development would be better. He suggested that the item be tabled to the May 5th meeting.

Councilmember Hrbacek moved to continue the case to the May 5, 2015 meeting; second by Councilmember Falconer.

Mr. Dewy stated he clearly understands what Councilmember Falconer proposed including reduction of setbacks and felt it showed a willingness on the part of the Council to make the development work. However, the developer has constructed the product in other areas and did not want to change to a rear entry product.

Councilmember Babick asked if there was a way to put the necessary utilities at the back of the houses along the church property. Mr. Dewy stated they would be willing to dedicate easements to put the utilities at the back (north) of the property and voiced concern with Oncor. He stated that he understood the concern about the utilities, but didn't feel it would be a problem but there would be utility boxes in the front of the homes.

Councilmember Sutter supported the front entry design and felt there would be fewer vehicles on the street with the front entry product and referred to the tenured development on Keller Springs Road.

Councilmember Andonian voiced concern with not having a valid drawing of what the product would look like and Mr. Dewy referred to the photographs of Shoal Creek and stated it would be essentially the same.

Councilmember Falconer talked about the safety of children walking on the sidewalk to get to the school with vehicles backing out of the drive and felt that was another reason for the product to be a rear entry product. He voiced concern about the sustainability of the neighborhood as a front entry product.

Mayor Pro Tem Garza felt it would be a quality product due to the expected price range and noted there would be traffic concern and congested.

Mayor Marchant voiced an idea that would involve a little bit of rear entry product. He felt that both sides being front entry with the skinny lots means a lot of pavement. He suggested that the southern side of the site would be rear entry using the existing alley with a 20 ft front building setback to capture green space in the back yards along with the restrictions requiring vehicles to be parked in the garage as well as storage of the trash cans.

There being no further discussion, Mayor Marchant called the question. **The motion to continue the case to May 5 was approved with a 4-3 vote, Councilmembers Wilder, Sutter and Babick opposed.**

Mayor Marchant provided direction to staff to look at alternatives to address the front entry and utility issues as well as obtain a rendering of the product.

Mayor Marchant adjourned the Regular Session at 10:50 p.m. to convene in Worksession and Executive Session.

*****EXECUTIVE SESSION*****

2. Council convened in **Executive Session** at 10:58 p.m. pursuant to Texas Government Code:

- **Section 551.071** for private consultation with the City Attorney to seek legal advice with respect to pending and contemplated litigation and including all matters on this agenda to which the City Attorney has a duty under the Texas Rules of Discipline and Professional conduct regarding confidential communication with the City Council.
 - Hamrla, et al v. City
 - Camelot Landfill Application

Council **recessed the Executive Session and reconvened in open session at 11:06 p.m.** to convene the Worksession.

*****WORKSESSION*****

Mayor Marchant called the Worksession to order at 11:09 p.m.

4. Discuss **New Police Headquarters Facility.**

Cesar Molina, City Engineer, introduced the team that had been working on the design of the facility; Andrew Combs, Phil Calson, and Chief Rex Redden. He stated they were ready to move to the formal final design phase. Mr. Combs reminded the Council that the three primary items of consideration were space, safety and the third had to do with physical deterioration. He referred to various challenges and the cross section of employees from the Police Department. Mr. Calson stated the plan was to totally gut part of the existing building, completely renovate the interior and systems, and talked about the design of the building as well as the parking and entry to the facility. With regard to previous discussion about using Jamestown for parking, Mr. Combs stated that they were able to meet Code and satisfy police vehicles on site, but the intent was to erect a fence around the parking on Jamestown with Oncor's approval. Mr. Calson used a color coded plan to describe the various aspects of the facility and talked about circulation. He reviewed a rendering of the concept of the design and elevation of the building. Lastly he talked about the desire to get the Construction Manager At Risk on board to get further input on construction costs. Mr. Combs stated that with Council's direction to proceed, they would move forward with the plan as the basis for design and with bringing the CMAR on board. Chief Redden voiced his feeling that the department was in good shape with what was inside the building. The thing he'd like to see was a covered area for the officers as they gather all of their things and check equipment and vehicle. He stated they were working on that. Another thing was some sort of secured parking for the people working during the dark hours. Mayor Marchant noted a consensus to move forward.

5. Discuss **The Solid Waste RFP Committee's Recommendations.**

Lon Fairless, IT Director, stated the Committee has reviewed the responses to the Solid Waste RFP. Mayor Marchant went through each recommendation and requested feedback from Council: ask for best and final on both weekly and biweekly recycling pickup; and agreed with remaining recommendations. Mr. Fairless explained that the item would be brought back to Council as soon as the responses were provided, probably within the next month.

6. Discuss Update On Landfill Expansion Process.

Mayor Marchant stated the update would be provided at the next meeting.

7. Discuss Request To Name A Street After The Rainwater Family.

Leonard Martin advised that he spoke with the Rainwater Family members about naming changing Joy Drive to Rainwater Court, but the Family stated they would really prefer renaming Jamestown to Rainwater because of the history of the family working in the area. The history of the Jamestown name was unknown and no objections were raised about the change.

8. Mayor and Council reports and information sharing.

This item was not discussed.

Mayor Marchant adjourned the Worksession at 12:32 a.m. to convene in Executive Session.

*****EXECUTIVE SESSION*****

2. Council reconvened in Executive Session at 12:32 a.m. pursuant to Texas Government Code:

- **Section 551.071** for private consultation with the City Attorney to seek legal advice with respect to pending and contemplated litigation and including all matters on this agenda to which the City Attorney has a duty under the Texas Rules of Discipline and Professional conduct regarding confidential communication with the City Council.
 - Hamrla, et al v. City
 - Camelot Landfill Application

3. Council reconvened in open session at 1:23 a.m. to consider action, if any, on matters discussed in the Executive Session. No action taken.

ADJOURNMENT

Mayor Marchant adjourned the meeting at 1:23 a.m.

ATTEST:

Krystle Nelinson, City Secretary

Matthew Marchant, Mayor



City of Carrollton

Agenda Memo

File Number: 1977

Agenda Date: 4/21/2015

Version: 1

Status: Consent Agenda

In Control: City Council

File Type: Bid/Purchases

Agenda Number: *14.

CC MEETING: April 21, 2015

DATE: April 15, 2015

TO: Leonard Martin, City Manager

FROM: Kim Bybee, Athletics Manager, and Scott Whitaker, Parks and Recreation Director

Consider Approval Of The Purchase Of Court Resurfacing In An Amount Not To Exceed \$30,150.00.

BACKGROUND:

This project is part of the Park Amenities Fund, which was approved by council for the FY2014-15 budget. Courts and other park amenities were evaluated using set criteria to determine current conditions and to aid staff in prioritization of projects. Each amenity was given a grade and a preliminary list of projects was presented to council for completion in 2015 using the initial funds provided. The following courts were considered to be in bad condition and given grades of F and D-; Thomas Tennis Courts (F), Rhoton Tennis Courts (F), Mill Valley Tennis Court (D-), and Keller Springs Basketball Court (D-). Courts at all four locations needed to be repaired and resurfaced.

Quotes were requested from the following vendors:

American Tennis Courts (HUB Vendor) - \$37,800.00

Dobbs Tennis Courts - \$30,150.00

Game Court Services (HUB Vendor) - No Quote

FINANCIAL IMPLICATIONS:

The court resurfacing will be funded using Park Amenity Funds out of the following account.

ACCTG UNIT	ACCOUNT	BUDGET AMOUNT
854360	115370399	\$30,150.00

STAFF RECOMMENDATION/ACTION DESIRED:

Based on the outcome of the report card process and approval of the park amenity projects

presented to City Council in December 2014, staff made the assumption that the court resurfacing project was approved and therefore the low bidder was selected and the work has begun. In the future, staff will adhere to the Council policy to seek approval of all projects over \$25,000 prior to selecting a vendor and beginning work. Staff recommends Council approve the project with Dobbs Tennis Courts in an amount not to exceed \$30,150.00.



City of Carrollton

Agenda Memo

File Number: 1967

Agenda Date: 4/21/2015

Version: 1

Status: Consent Agenda

In Control: City Council

File Type:
Contracts/Agreements

Agenda Number: *15.

CC MEETING: April 21, 2015

DATE April 15, 2015

TO: Leonard Martin, City Manager

FROM: Robert Kopp, Director of Public Works

Consider Authorizing The City Manager To Approve A Project Specific Agreement (PSA) With Dallas County Road And Bridge District #4 For A Street Mill And Overlay Of The 1000 Through 1200 Blocks Of West Alan Avenue And The 1000 Through 1200 Blocks Of West Russell Avenue In An Amount Not To Exceed \$105,757.52.

BACKGROUND:

Under an existing Master Interlocal Agreement, the Dallas County Public Works Department provides road and bridge maintenance and repair on "Type E" roadways situated within the city of Carrollton. This has proven to be an economical arrangement when compared to the costs for a private contractor.

This proposed project will resurface the 1000 through 1200 blocks of West Alan Avenue and the 1000 through 1200 blocks of West Russell Avenue. Traffic control is provided for in the agreement by Dallas County and the city will provide message boards as necessary to notify the public.

FINANCIAL IMPLICATIONS:

Dallas County Public Works estimates the project cost to be \$105,757.52. Since this street classification does not include financial participation by Dallas County, the city of Carrollton will fund 100% of the costs. Funding is available from Account Unit 854460, Account 68210, Activity 114380499 bond revenue.

IMPACT ON COMMUNITY SUSTAINABILITY:

- Sustaining quality of life - Infrastructure improvements should enhance the overall appearance of the neighborhood, thereby encouraging residents to invest in the upkeep of properties in the neighborhood.
- Sustaining day-to-day operations - Dallas County's lower costs make this a beneficial arrangement for the city. Also, the repair of substandard street pavement will reduce the

need for non-scheduled repairs and will extend the life of the street before reconstruction.

STAFF RECOMMENDATION/ACTION DESIRED:

Staff recommends authorizing the City Manager to execute a Project Specific Agreement (PSA) with Dallas County to perform an asphalt overlay for the 1000 through 1200 blocks of West Alan Avenue and the 1000 through 1200 blocks of West Russell Avenue, in an amount not to exceed \$105,757.52.

PROJECT SPECIFIC AGREEMENT

Re: W. Alan and W. Russell

PURSUANT TO MASTER ROAD & BRIDGE INTERLOCAL MAINTENANCE AGREEMENT BETWEEN DALLAS COUNTY AND CITY OF CARROLLTON, TEXAS

This Project Specific Agreement, (hereinafter “PSA”), supplemental to the Master Interlocal Agreement, is made by and between Dallas County, Texas (hereinafter “County”) and the City of Carrollton, Texas (hereinafter “City”), acting by and through their duly authorized representatives and officials, for the purpose of transportation-related maintenance, repairs and improvements to be undertaken on public roadway in the City of Carrollton, Texas (“Project”).

WHEREAS, Chapter 791 of the Texas Government Code and Chapter 251 of the Texas Transportation Code provides authorization for local governments to contract amongst themselves for the performance of governmental functions and services;

WHEREAS, on or about August, 14, 2012, County and City entered into a Master Interlocal Agreement (“Agreement”), whereby County agreed to provide road and bridge maintenance and repair on “Type E” roadways, situated within the territorial limits and jurisdiction of City, such maintenance to be fully funded and paid for at City’s costs and expense; and

WHEREAS, City now desires County to perform such maintenance and repairs, consisting of asphalt overlays in the 1000 through 1200 blocks of W. Alan; and 1000 through 1200 blocks of W. Russell, all public roadways situated in the City of Carrollton, Texas, as more fully described on Attachment “A”;

NOW THEREFORE THIS PSA is made by and entered into by County and City, for the mutual consideration stated herein.

Witnesseth

Article I

Project Specific Agreement

This PSA is specifically intended to identify a Project authorized under the Master Agreement. This document sets forth the rights and responsibilities pertaining to each party hereto, and is additional and supplemental to the Master Agreement, and all amendments and supplements thereto, which are incorporated herein. All terms of the Master Agreement remain in full force and effect, except as modified herein. In the event of any conflict between the Master Agreement and this PSA, this PSA shall control.

Article II

Incorporated Documents

This PSA incorporates, as if fully reproduced herein word for word and number for number, the following items:

PSA- City of Carrollton (E streets 2015)

1. Master Agreement authorized by County Commissioners Court Order. 2012- 1318, dated August, 14, 2012, and additions thereto as incorporated herein,
2. The Construction Estimate (Attachment “A”), and
3. Map/Diagram of the Proposed Work Site (Attachment “B”).

Article III

Term of Agreement

This PSA becomes effective when signed by the last party whose signature makes the agreement fully executed and shall terminate upon the completion and acceptance of the Project by City or upon the terms and conditions in the Master Agreement.

Article IV

Project Description

This PSA is entered into by the parties for repair, maintenance and improvements conducted on “Type E” public roadways within the City of Carrollton, Texas. The Project shall consist of asphalt overlays in the 1000 through 1200 blocks of W. Alan; and 1000 through 1200 blocks of W. Russell, in the City of Carrollton, Texas, (hereinafter “Project”), and as more fully described in Attachments “A” and “B”. The Project is authorized by the aforementioned Master Agreement, with the parties’ obligations and responsibilities governed thereby, as well as by the terms and provisions of this PSA. The Project will facilitate the safe and orderly movement of public transportation to benefit both the City and County. The City has and hereby does give its approval for expenditure of County funds for the construction, improvement, maintenance, or repair of a street located within the municipality.

Article V

Fiscal Funding

Notwithstanding anything to the contrary herein, this PSA is expressly contingent upon the availability of County funding for each item and obligation contained herein. City shall have no right of action against the County of Dallas as regards this PSA, specifically including any funding by County of the Project in the event that the County is unable to fulfill its obligations under this PSA as a result of the lack of sufficient funding for any item or obligation from any source utilized to fund this PSA or failure of any funding party to budget or authorize funding for this PSA during the current or future fiscal years. In the event of insufficient funding, or if funds become unavailable in whole or part, the County, at its sole discretion, may provide funds from a separate source or terminate this PSA. In the event that payments or expenditures are made, they shall be made from current funds as required by Chapter 791, Texas Government Code.

Notwithstanding anything to the contrary herein, this PSA is expressly contingent upon the availability of City funding for each item and obligation contained herein. County shall have no right of action against the City as regards this PSA, specifically including any funding by City of the Project in the event that the City is unable to fulfill its obligations under this PSA as a result of the lack of sufficient funding for any item or obligation from any source utilized to fund this PSA or failure of any funding party to budget or authorize funding for this PSA during the current or future fiscal years. In the event of insufficient funding, or if funds become unavailable in whole or part, the City, at its sole discretion, may provide funds from a separate source or terminate this PSA. In the event that payments or expenditures are made, they shall be made from current funds as required by Chapter 791, Texas Government Code.

Article VI

Agreements

I. City's Responsibilities:

1. City, at its own expense, shall be responsible for the following: (a) informing the public of the Project construction activity, (b) acquiring any right-of-way necessary to complete the Project, (c) locating and marking all known City utilities (water, sewer, etc) within the Project, (d) making all utility relocations, (e) assisting County with manhole and water valve grade adjustments necessary for the Project, (f) remediation of any hazardous or regulated materials, or other environmental hazard on or near the Project site, and (g) requesting appropriate police presence to enable the Project to be completed in a timely and safe manner.
2. City shall be responsible for maintaining the Project site once the project is completed.

III. County Responsibilities:

1. County, shall be responsible for the following: (a) locating, marking and adjusting (with City assistance) all visible manholes and water valve covers within the Project, (b) contacting Texas 811 "Call before you dig" in compliance with State Law (c) providing appropriate work zone traffic control, including but not limited to flagging, cones, barricades, shadow vehicles, arrow boards, signage, etc., to enable the Project to be completed in a timely and safe manner.
2. County shall be responsible for performing all maintenance responsibilities and services contemplated hereunder, as more fully set forth in Attachment "A", in a good and workmanlike manner.

IV. Funding:

County and City mutually agree that City shall be responsible to pay One Hundred Percent (100%) of the costs and expenses necessary to carry out and to perform the Project, provided:

1. City shall only be liable and responsible for the amounts set forth in this PSA, and any properly executed amendments and/or supplements hereto, and
2. Should unforeseen and unforeseeable circumstances arise which adversely and materially impact the costs and expenses necessary to complete the Project as contemplated, County and City shall renegotiate the terms hereof, taking into proper account then-current conditions and estimated total costs to complete the Project.
3. Once approved by County, and before commencement of the Project by County, City shall segregate, set aside and place into an escrow account with the Dallas County Treasurer, One Hundred and Five Thousand, Seven Hundred and Fifty-Seven dollars and Fifty-Two cents (\$105,757.52) representing the full amount to be paid to County either through monthly invoicing or upon completion of the Project.

Article VII

Miscellaneous:

- I. **Indemnification.** County and City agree that each shall be responsible for its own negligent acts or omissions or other tortious conduct in the course of performance of this Agreement, without waiving any governmental immunity available to County or City or their respective

officials, officers, employees, or agents under Texas or other law and without waiving any available defenses under Texas or other law. Nothing in this paragraph shall be construed to create or grant any rights, contractual or otherwise, in or to any third persons or entities.

- II. No Third Party Beneficiaries. The terms and provisions of this PSA are for the benefit of the parties hereto and not for the benefit of any third party. It is the express intention of County and City that any entity other than County or City receiving services or benefits under this PSA shall be deemed an incidental beneficiary only. This PSA is intended only to set forth the contractual right and responsibilities of the parties hereto.
- III. Applicable Law. This PSA is and shall be expressly subject to the County's and City's Sovereign Immunity and/or Governmental Immunity of City, Title 5 of the Texas Civil Practice and Remedies Code, as amended, and all applicable Federal and State Law. This PSA shall be governed by and construed in accordance with the laws of the State of Texas. Exclusive venue for any legal action regarding this PSA shall lie in Dallas County, Texas.
- IV. Notice. All notices, requests, demands, and other communication under this PSA shall be tendered in writing and shall be deemed to have been duly given when either delivered in person, via e-mail, or via certified mail, postage prepaid, return receipt requested to the respective parties as follows:
- | COUNTY: | CITY: |
|--|---|
| Director of Public Works
Dallas County
411 Elm Street, Suite 400
Dallas, Texas 75202 | Director of Public Works
City of Carrollton
1945 East Jackson Road
Carrollton, Texas 75006 |
| Commissioner Mike Cantrell
Road & Bridge District 2
1701 N. Collins, Suite 1000
Richardson, Texas 75080 | |
| Commissioner Elba Garcia
Road & Bridge District 4
411 Elm Street, Suite 200
Dallas, Texas 75202 | |
- V. Assignment. This PSA may not be assigned or transferred by either party without the prior written consent of the other party.
- VI. Binding Agreement; Parties Bound. Upon execution by the parties, this PSA shall constitute a legal, valid and binding obligation of the parties, their successors and permitted assigns.
- VII. Amendment. This PSA may not be amended except in a written instrument specifically referring to this PSA and signed by the parties hereto.

- VIII. Counterparts. This PSA may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.
- IX. Severability. If one or more of the provisions in this PSA shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality or unenforceability shall not cause this PSA to be invalid, illegal or unenforceable, but this PSA shall be construed as if such provision had never been contained herein, and shall not affect the remaining provisions of this PSA, which shall remain in full force and effect.
- X. Entire Agreement. This PSA embodies the complete agreement of the parties, and except where noted, it shall supersede previous and/or contemporary agreements, oral or written, between the parties and relating to matters in the PSA.
- XI. Contingent. This PSA is expressly subject to and contingent upon formal approval by the Dallas County Commissioners Court and by resolution of the City of Carrollton.

The City of Carrollton, State of Texas, has executed the Agreement pursuant to duly authorized City Council Resolution _____ approved/passed on the _____ day of _____, 2015.

The County of Dallas, State of Texas, has executed this agreement pursuant to Commissioners Court Order Number _____ and passed on the _____ day of _____, 2015.

Executed this the _____ day of _____, 2015.

Executed this the _____ day of _____, 2015.

CITY OF CARROLLTON:

COUNTY OF DALLAS:

MATHEW MARCHANT
MAYOR


CLAY LEWIS JENKINS
COUNTY JUDGE

ATTEST:

CITY SECRETARY

APPROVED AS TO FORM:

DALLAS COUNTY
SUSAN HAWK
DISTRICT ATTORNEY

By: 
Sherri Turner
Assistant District Attorney

*By law, the District Attorney's Office may only advise or approve contracts or legal documents on behalf of its clients. It may not advise or approve a contract or legal document on behalf of other parties. Our review of this document was conducted solely from the legal perspective of our client. Our approval of this document was offered solely for the benefit of our client. Other parties should not rely on this approval, and should seek review and approval by their own respective attorney(s).

**Construction Estimate
Dallas County District 4
Dr. Elba Garcia, Commissioner**

Date: April 7, 2015**For:** City of Carrollton**Project:** Type E Streets (W. Alan & W. Russell)**Subject:** Project Cost EstimateTotal Cost Estimate: **\$105,757.52**

Cost/Sq. Yd: \$15.58

Scope of Work: Mill street surface 2 inches, mark all base repairs and mill down 6 inches. Repair base failures with cement treated base in 3 inch lifts and compact. Apply emulsion and overlay with 2 inches of Type (D) hot mix asphalt. Haul millings and sub-base material to temporary site at City of Carrollton Service Center until work is completed. Then haul milling and sub-base materials to Dallas County Langdon Yard.

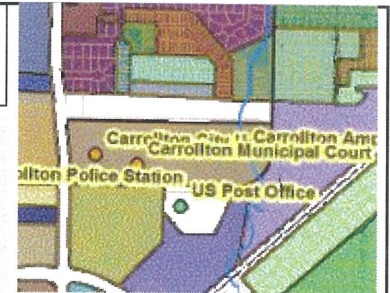
Labor Cost	Lbs./Sq.Yds.	Quantity	Units	Unit Cost	Total
Milling	220	5360	Sq.Yds.	\$1.50	\$ 8,040.00
Base Milling	660	1428	Sq.Yds.	\$4.30	\$ 6,140.40
Base in Place	660	1428	Sq.Yds.	\$4.30	\$ 6,140.40
Hauling	220	1061	Tons	\$4.92	\$ 5,220.12
Overlay	220	5360	Sq.Yds.	\$2.64	<u>\$14,150.40</u>
					\$39,691.32

Material Cost	Lbs./Sq.Yds.	Quantity	Units	Unit Cost	Total
CTB Base	660	471	Tons	\$16.00	\$ 7,536.00
Emulsion	0.15	1540	Gal	\$3.00	\$ 4,620.00
Type D Hot Mix	220	590	Tons	\$50.00	<u>\$29,500.00</u>
					\$41,656.00

Equipment Cost	Hours	Cost/Hrs.	Total
	642	\$38.00	\$24,410.20

Grand Total**\$105,757.52****Limits**

Street Blocks	From	To	Length	Width	Sq.Yds.	Base Repair	Total Sq.Yds.
1000-1200 W. Alan	Cottonwood	Denton	1,005	24	2,680	804	3,484
1000-1200 W. Russell	Cottonwood	Denton	1,005	24	<u>2,680</u>	<u>624</u>	<u>3,304</u>
					5,360	1464	6,788



Legend
 Project Limits

Notes
 City of Carrollton - Mill & Overlay 2015

662.3 0 331.15 662.3 U.S. Survey Feet

1: 3,974



Projection: NAD 1983 StatePlan Texas North Central FIPS 4202 Feet

THIS MAP IS NOT TO BE USED FOR NAVIGATION



City of Carrollton

Agenda Memo

File Number: 1971

Agenda Date: 4/21/2015

Version: 1

Status: Consent Agenda

In Control: City Council

File Type:
Contracts/Agreements

Agenda Number: *16.

CC Meeting: April 21, 2015

DATE: April 14, 2015

TO: Leonard Martin, City Manager

FROM: Peter J. Braster, Senior Development Manager

Consider Authorizing The City Manager To Approve A Contract Amendment For Demolition And Environmental Remediation Services With Lindamood Demolition In An Amount Not To Exceed \$37,145.00 For A Total Amended Contract Amount Of \$1,311,492.00.

BACKGROUND:

On August 19, 2014, City Council approved a Demolition and Environmental Remediation Service Contract with Lindamood Demolition in an amount not to exceed \$1,274,347.00. The scope of work included demolition, asbestos remediation, and site restoration (i.e. hydro mulch, temporary irrigation and fencing) of City-owned buildings in Downtown Carrollton, Trinity Mills, and the Crosby Creek Apartments.

This contract amendment, in the amount of \$37,145.00, covers the following:

1. 1309 South Broadway (Benz Auto Repair):
Scope includes: asbestos abatement (exterior stucco and roofing); selective demolition of the garage; demolition of the parking area; and a contingency for a cost of \$27,580.00.
2. 1104 Belt Line Road and 1005 West Main Street:
Abatement services for additional asbestos removal beyond the square footage identified in the bid: \$9,565.00.

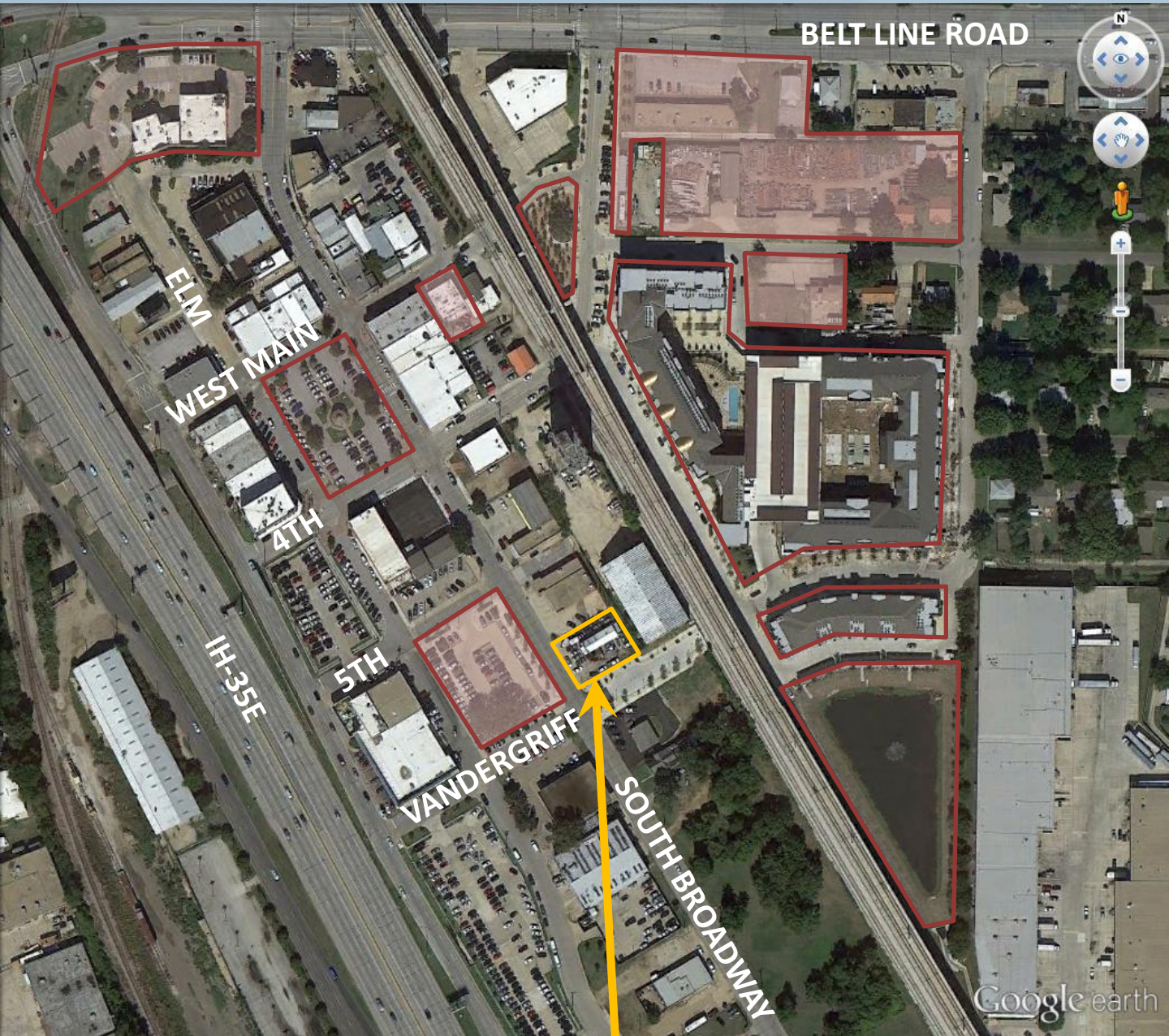
FINANCIAL IMPLICATIONS:

There are funds available for this work in the Transit-Oriented Development Capital Account.

STAFF RECOMMENDATION/ACTION DESIRED:

Staff recommends the approval of a contract amendment with Lindamood Demolition for an amount not to exceed \$37,145.00, for a total amended contract amount of \$1,311,492.00.

Attachment A Location Map



City Property

Subject Property

**1309
SOUTH
BROADWAY**

CONTRACT AMENDMENT NO. 1

Date: April 21, 2015

A. INTENT OF CONTRACT AMENDMENT:

The intent of this contract amendment is to modify the provisions of the contract entered into by the City of Carrollton, Texas and Lindamood Demolition, Inc. for the Demolition and Environmental Remediation Services, dated August 20, 2014.

B. DESCRIPTION OF CHANGE

This change order accommodates a change in the scope of work.

C. REASON FOR CHANGE

This change order adds costs for additional demolition and abatement services.

D. EFFECT OF CHANGE

This change order will have the following effect on the cost of this project:

1. 1309 South Broadway (Benz Auto Repair):

Scope includes: asbestos abatement (exterior stucco and roofing); selective demolition of the garage; demolition of the parking area; and a contingency for a cost of \$27,580.00.

2. 1104 Belt Line Road and 1005 West Main Street:

Abatement services for additional asbestos removal beyond the square footage identified in the bid: \$9,565.00.

Original Contract Amount	<u>\$1,224,347.00</u>
Contract Amount (Including Previous Contract Amendments)	<u>\$1,224,347.00</u>
Amount of this Contract Amendment	<u>\$ 37,145.00</u>
Revised Contract Amount	<u>\$1,261,492.00</u>
Total Percent Increase Including Previous Change Orders	<u>3.03%</u>

E. AGREEMENT

By the signatures below, duly authorized agent of the City of Carrollton, Texas and Lindamood Demolition, Inc., do hereby agree to append this Contract Amendment No. 1 to the original contract between themselves, dated August 20, 2014.

Lindamood Demolition, Inc.

Company

Senior Development Manager

2020 South Nursery

Address

Director of Development Services

Irving TX 75060

City State Zip

Assistant City Manager

(972)721-0898 (972)438-6745

Phone Number Fax Number

Contractor's Signature



City of Carrollton

Agenda Memo

File Number: 1972

Agenda Date: 4/21/2015

Version: 1

Status: Consent Agenda

In Control: City Council

File Type:
Contracts/Agreements

Agenda Number: *17.

CC MEETING: April 21, 2015

DATE: April 15, 2015

TO: Leonard Martin, City Manager

FROM: Cesar J. Molina, Jr., P.E., Director of Engineering

Consider Authorizing The City Manager To Approve A Professional Services Contract With Terracon Consultants, Inc. And Kleinfelder For Geotechnical And Material Testing Services In An Amount Not To Exceed \$500,000.00.

BACKGROUND:

As part of nearly all construction projects the City performs, material testing is a requirement to ensure that the contract requirements are met or exceeded. These tests include compaction and densities of roadway subgrades, concrete compressive strength and pipeline trench compaction. These costs vary due to a number of factors, but generally run between 1% and 3% of construction costs. These costs come out of the capital account for the specific project.

In some rare circumstances, geotechnical services may be used for special projects such as slope stability or small city facility projects. This contract would cover these projects.

A formal selection process was conducted. Ten firms submitted statements of qualifications. After evaluation by staff, Terracon Consultants, Inc. and Kleinfelder were deemed to be the best qualified for the services identified.

FINANCIAL IMPLICATIONS:

There are no direct financial implications associated with the approval of these agreements. Services will be provided as a work order on a project-by-project basis. Funding for these services will come from the respective capital project budget.

Staff is proposing a two-year term for this contract, with a total amount not to exceed \$500,000.00. While staff will try to split the fee equitably between the two firms, the variability in project size and scope requires some flexibility in the individual firm fees.

IMPACT ON COMMUNITY SUSTAINABILITY:

This project will contribute to community sustainability by:

- Ensure construction provided to the city meets project requirements;
- Reduce issues concerning maintenance bonds by reducing the potential for substandard material.

STAFF RECOMMENDATION/ACTION DESIRED:

Staff recommends that City Council authorize the City Manager to enter into a professional services agreement for geotechnical and materials testing services with Terracon Consultants, Inc. and Kleinfelder for a total fee not to exceed \$500,000.00.

Firm Rankings
Geotechnical / Materials Testing Services
March 2015

Firm	Rank
Terracon Engineers and Scientists, Inc.	1
Kleinfelder	2
Fugro Consultants, Inc.	3
ETTL Engineers & Consultants, Inc.	4
Alliance Geotechnical Group	5
Henley Johnston & Associates	6
GME Consulting Services	7
Reed Engineering Group	8
TEAM Consultants	9
Pavetex Engineering and Testing	10

THE STATE OF TEXAS §

COUNTY OF DALLAS §

Professional Services Contract
with _____

THIS CONTRACT is entered into on this _____ day of _____, 20____, by and between the **CITY OF CARROLLTON, TEXAS**, a municipal corporation located in Collin County, Texas, (hereinafter referred to as “City”), acting by and through its City Manager or his designee, and _____ (“hereinafter referred to as “Consultant”) whose address is _____.

W I T N E S S E T H:

WHEREAS, City desires to obtain professional services from Consultant for _____; and

WHEREAS, Consultant is an architectural, engineering, professional planning, urban design, or landscape architecture firm qualified to provide such services and is willing to undertake the performance of such services for City in exchange for fees hereinafter specified; NOW, THEREFORE,

THAT IN CONSIDERATION of the covenants and agreements hereinafter contained and subject to the terms and conditions hereinafter stated, the parties hereto do mutually agree as follows:

I.

Employment of Consultant

Consultant will perform as an independent contractor all services under this Contract to the prevailing professional standards consistent with the level of care and skill ordinarily exercised by members of the architectural, engineering and planning professions, both public and private, currently practicing in the same locality under similar conditions including but not limited to the exercise of reasonable, informed judgments and prompt, timely action. If Consultant is representing that it has special expertise in one or more areas to be utilized in this Contract, then Consultant agrees to perform those special expertise services to the appropriate local, regional and national professional standards.

II.

Scope of Services

Consultant shall perform such services as are necessary to _____ specifically including, but not necessarily limited to, the tasks enumerated more fully in Attachment “A” hereto entitled “Scope of Work” (hereafter referred to as the “Project”). Attachment “A” is hereby incorporated herein by

reference and made a part hereof as if written word for word. However, in case of conflict in the language of Attachment "A" and this Contract, the terms and conditions of this Contract shall be final and binding upon both parties hereto.

III. Payment for Services

Total payment for services described herein shall be a sum not to exceed _____ Thousand _____ and No/100 Dollars (\$_____). Consultant will also be compensated for the following reimbursable expenses, if any, to the extent such expenses are directly related to Consultant's performance of the Project, and to the extent the total amount of such reimbursable expenses do not exceed _____ and No/100 Dollars (\$_____): printing; photocopying; long distance telephone calls; and, mileage at the allowable rate established by the Internal Revenue Service.

Consultant will bill City on an hourly basis at the hourly rates described in Attachment "B"; provided however that this Contract shall control in the event of any conflict between the language in Attachment "B" and the language in this Contract. If additional services, trips or expenses are requested, Consultant will not provide such additional services until authorized by City in writing to proceed. The scope of services shall be strictly limited. City shall not be required to pay any amount in excess of the amount identified in the preceding paragraph unless City shall have approved in writing in advance (prior to the performance of additional work) the payment of additional amounts.

Each month Consultant will submit to City an invoice for actual services performed and reimbursable expenses incurred by Consultant during the previous month. Each invoice shall be itemized to show the amount of work performed during that month broken down by the identity of the person(s) performing such work, the amount of time expended by such person(s) in performing that work, the billing rate for each such person, and a brief summary of the work performed by each such person. Each invoice shall also state the percentage of work completed on the Project, the total of the current invoice amount and a running total balance for the Project to date.

Within thirty (30) days of receipt of each such monthly invoice City shall make monthly payments in the amount shown by Consultant's approved monthly statements and other documentation submitted.

Nothing contained in this Contract shall require City to pay for any work that is unsatisfactory as determined by City or which is not submitted in compliance with the terms of this Contract, nor shall failure to withhold payment pursuant to the provisions of this section constitute a waiver of any right, at law or in equity, which City may have if Consultant is in default, including the right to bring legal action for damages or for specific performance of this Contract. Waiver of any default under this Contract shall not be deemed a waiver of any subsequent default.

IV.
Revisions of the Scope of Services

City reserves the right to revise or expand the scope of services after due approval by City as City may deem necessary, but in such event City shall pay Consultant equitable compensation for such services. In any event, when Consultant is directed to revise or expand the scope of services under this Section of the Contract, Consultant shall provide City a written proposal for the entire costs involved in performing such additional services. Prior to Consultant undertaking any revised or expanded services as directed by City under this Contract, City must authorize in writing the nature and scope of the services and accept the method and amount of compensation and the time involved in all phases of the Project.

It is expressly understood and agreed by Consultant that any compensation not specified in Paragraph III herein above may require Carrollton City Council approval and is subject to the current budget year limitations.

V.
Term

This Contract shall begin on the date first written above, and shall terminate when City has approved the Project as being final or otherwise terminates this Contract as provided herein.

VI.
Contract Termination Provision

This Contract may be terminated at any time by City for any cause by providing Consultant thirty (30) days written notice of such termination. Upon receipt of such notice, Consultant shall immediately terminate working on, placing orders or entering into contracts for supplies, assistance, facilities or materials in connection with this Contract and shall proceed to promptly cancel all existing contracts insofar as they are related to this Contract.

VII.
Ownership of Documents

All materials and documents prepared or assembled by CONSULTANT under this Contract shall become the sole property of City and shall be delivered to City without restriction on future use. CONSULTANT may retain in its files copies of all drawings, specifications and all other pertinent information for the work. CONSULTANT shall have no liability for changes made to any materials or other documents by others subsequent to the completion of the Contract.

VIII.
Insurance Requirements

- A. Before commencing work, Consultant shall, at its own expense, procure, pay for and maintain during the term of this Contract the following insurance written by companies approved by the state of Texas and acceptable to the City. Consultant shall furnish to the City of Carrollton Purchasing Manager certificates of insurance executed by the insurer or its authorized agent stating coverages, limits, expiration dates and compliance with all applicable required provisions. Certificates shall reference the project/contract number and be submitted to the City.
1. Commercial General Liability insurance, including, but not limited to Premises/Operations, Personal & Advertising Injury, Products/Completed Operations, Independent Contractors and Contractual Liability, with minimum combined single limits of \$1,000,000 per-occurrence, \$1,000,000 Products/Completed Operations Aggregate and \$1,000,000 general aggregate. Coverage must be written on an occurrence form. The General Aggregate shall apply on a per project basis.
 2. Workers' Compensation insurance with statutory limits; and Employers' Liability coverage with minimum limits for bodily injury: a) by accident, \$100,000 each accident, b) by disease, \$100,000 per employee with a per policy aggregate of \$500,000.
 3. Business Automobile Liability insurance covering owned, hired and non-owned vehicles, with a minimum combined bodily injury and property damage limit of \$1,000,000 per occurrence.
 4. Professional Liability Insurance to provide coverage against any claim which the consultant and all consultants engaged or employed by the consultant become legally obligated to pay as damages arising out of the performance of professional services caused by error, omission or negligent act with minimum limits of \$2,000,000 per claim, \$2,000,000 annual aggregate.
- NOTE:** If the insurance is written on a claims-made form, coverage shall be continuous (by renewal or extended reporting period) for not less than *thirty-six (36) months* following completion of the contract and acceptance by the City of Carrollton.
- B. With reference to the foregoing required insurance, the consultant shall endorse applicable insurance policies as follows:

1. A waiver of subrogation in favor of City of Carrollton, its officials, employees, and officers shall be contained in the Workers' Compensation insurance policy.
 2. The City of Carrollton, its officials, employees and officers shall be named as additional insureds on the Commercial General Liability policy, by using endorsement CG2026 or broader .
 - 3.. All insurance policies shall be endorsed to the effect that City of Carrollton will receive at least thirty (30) days notice prior to cancellation, non-renewal, termination, or material change of the policies.
- C. All insurance shall be purchased from an insurance company that meets a financial rating of B+VI or better as assigned by A.M. Best Company or equivalent.

IX. **Right to Inspect Records**

Consultant agrees that City shall have access to and the right to examine any directly pertinent books, documents, papers and records of Consultant involving transactions relating to this Contract. Consultant agrees that City shall have access during normal working hours to all necessary Consultant facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. City shall give Consultant reasonable advance notice of intended audits.

Consultant further agrees to include in subcontract(s), if any, a provision that any subcontractor or engineer agrees that City shall have access to and the right to examine any directly pertinent books, documents, papers and records of such engineer or subcontractor involving transactions to the subcontract, and further, that City shall have access during normal working hours to all such engineer or sub-contractor facilities and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of the paragraph. City shall give any such engineer or sub-contractor reasonable advance notice of intended audits.

X. **Successors and Assigns**

City and Consultant each bind themselves and their successors, executors, administrators and assigns to the other party to this contract and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Contract. Neither City nor Consultant shall assign or transfer its interest herein without the prior written consent of the other.

XI.
Consultant's Liability

Acceptance of the final plans by the City shall not constitute nor be deemed a release of the responsibility and liability of Consultant, its employees, associates, agents or consultants for the accuracy and competency of their designs, working drawings, specifications or other documents and work; nor shall such acceptance be deemed an assumption of responsibility by City for any defect in the designs, working drawings, specifications or other documents and work; nor shall such acceptance be deemed an assumption of responsibility by City for any defect in the designs, working drawings, specifications or other documents and work prepared by said Consultant, its employees, associates, agents or sub-consultants.

XII.
INDEMNIFICATION

CONSULTANT DOES HEREBY COVENANT AND CONTRACT TO WAIVE ANY AND ALL CLAIMS, RELEASE, DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY, ITS CITY COUNCIL, OFFICERS, EMPLOYEES, AND AGENTS, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, FROM AND AGAINST ALL LIABILITY, CAUSES OF ACTION, CITATIONS, CLAIMS, COSTS, DAMAGES, DEMANDS, EXPENSES, FINES, JUDGMENTS, LOSSES, PENALTIES OR SUITS, WHICH IN ANY WAY ARISE OUT OF, RELATE TO, OR RESULT FROM CONSULTANT'S PERFORMANCE UNDER THIS CONTRACT OR WHICH ARE CAUSED BY THE INTENTIONAL WRONGFUL ACTS OR NEGLIGENT ACTS OR OMISSIONS OF CONSULTANT, ITS SUBCONTRACTORS, ANY OFFICERS, AGENTS OR EMPLOYEES OF EITHER CONSULTANT OR ITS SUBCONTRACTORS, AND ANY OTHER THIRD PARTIES FOR WHOM OR WHICH CONSULTANT IS LEGALLY RESPONSIBLE (THE "INDEMNIFIED ITEMS") SUBJECT TO THE LIMITATIONS IN TEXAS LOCAL GOVERNMENT CODE § 271.904 (A) AND TEXAS CIVIL PRACTICE AND REMEDIES CODE, § 130.002 (B).

BY WAY OF EXAMPLE, THE INDEMNIFIED ITEMS MAY INCLUDE PERSONAL INJURY AND DEATH CLAIMS AND PROPERTY DAMAGE CLAIMS, INCLUDING THOSE FOR LOSS OF USE OF PROPERTY.

INDEMNIFIED ITEMS SHALL INCLUDE ATTORNEYS' FEES AND COSTS, COURT COSTS, AND SETTLEMENT COSTS. INDEMNIFIED ITEMS SHALL ALSO INCLUDE ANY EXPENSES, INCLUDING ATTORNEYS' FEES AND EXPENSES, INCURRED BY AN INDEMNIFIED INDIVIDUAL OR ENTITY IN ATTEMPTING TO ENFORCE THIS INDEMNITY.

In its sole discretion, the City shall have the right to approve counsel to be retained by Consultant in fulfilling its obligation to defend and indemnify the City.

Consultant shall retain approved counsel for the City within seven (7) business days after receiving written notice from the City that it is invoking its right to indemnification under this Contract. If Consultant does not retain counsel for the City within the required time, then the City shall have the right to retain counsel and the Consultant shall pay these attorneys' fees and expenses. The City retains the right to provide and pay for any or all costs of defending indemnified items, but it shall not be required to do so.

XIII.

Independent Contractor

Consultant's status shall be that of an Independent Contractor and not an agent, servant, employee or representative of City in the performance of this Contract. No term or provision of or act of Consultant or City under this Contract shall be construed as changing that status. Consultant will have exclusive control of and the exclusive right to control the details of the work performed hereunder, and shall be liable for the acts and omissions of its officers, agents, employees, contractors, subcontractors and engineers and the doctrine of respondeat superior shall not apply as between City and Consultant, its officers, agents, employees, contractors, subcontractors and engineers, and nothing herein shall be construed as creating a partnership or joint enterprise between City and Consultant.

XIV.

Default

If at any time during the term of this Contract, Consultant shall fail to commence the work in accordance with the provisions of this Contract or fail to diligently provide services in an efficient, timely and careful manner and in strict accordance with the provisions of this Contract or fail to use an adequate number or quality of personnel to complete the work or fail to perform any of its obligations under this Contract, then City shall have the right, if Consultant shall not cure any such default after thirty (30) days written notice thereof, to terminate this Contract. Any such act by City shall not be deemed a waiver of any other right or remedy of City. If after exercising any such remedy due to Consultant's nonperformance under this Contract, the cost to City to complete the work to be performed under this Contract is in excess of that part of the Contract sum which has not theretofore been paid to Consultant hereunder, Consultant shall be liable for and shall reimburse City for such excess. Consultant's liability under this provision shall be limited to the total dollar amount of this Contract.

City's remedies for Consultant's default or breach under this Contract shall be limited to one or more of the following remedies which may be exercised separately or in combination at City's sole exclusive choice:

- (a) Specific performance of the Contract;

- (b) Re-performance of this Contract at no extra charge to City; or,
- (c) Monetary damages in an amount not to exceed the greater of:
 - (1) The amount of any applicable insurance coverage Consultant is required to purchase and maintain under this Contract plus any deductible amount to be paid by Consultant in conjunction with said coverage regardless of whether Consultant has actually purchased and maintained said coverage; or,
 - (2) The total dollar amount of this Contract.

The terms of Sections XII entitled Indemnification, and XVII entitled Confidential Information shall survive termination of this Contract.

XV. Changes

City may, from time to time, require changes in the scope of services to be performed under this Contract. Such changes as are mutually agreed upon by and between City and Consultant shall be incorporated by written modification to this Contract.

XVI. Conflict of Interest

Consultant covenants and agrees that Consultant and its associates and employees will have no interest, and will acquire no interest, either direct or indirect, which will conflict in any manner with the performance of the services called for under this Contract. All activities, investigations and other efforts made by Consultant pursuant to this Contract will be conducted by employees, associates or subcontractors of Consultant.

XVII. Confidential Information

Consultant hereby acknowledges and agrees that its representatives may have access to or otherwise receive information during the furtherance of its obligations in accordance with this Contract, which is of a confidential, non-public or proprietary nature. Consultant shall treat any such information received in full confidence and will not disclose or appropriate such Confidential Information for its own use or the use of any third party at any time during or subsequent to this Contract. As used herein, "Confidential Information" means all oral and written information concerning City of Carrollton, its affiliates and subsidiaries, and all oral and written information concerning City or its activities, that is of a non-public, proprietary or confidential

nature including, without limitation, information pertaining to customer lists, services, methods, processes and operating procedures, together with all analyses, compilation, studies or other documents, whether prepared by Consultant or others, which contain or otherwise reflect such information. The term "Confidential Information" shall not include such materials that are or become generally available to the public other than as a result of disclosure of Consultant, or are required to be disclosed by a governmental authority.

XVIII.
Mailing Address

All notices and communications under this Contract to be mailed to City shall be sent to the address of City's agent as follows, unless and until Consultant is otherwise notified:

City of Carrollton
Post Office Box 10535
Carrollton, Texas 75011-0535.

Notices and communications to be mailed or delivered to Consultant shall be sent to the address of Consultant as follows, unless and until City is otherwise notified:

Any notices and communications required to be given in writing by one party to the other shall be considered as having been given to the addressee on the date the notice or communication is posted, faxed or personally delivered by the sending party.

XIX.
Applicable Law

The Contract is entered into subject to the Carrollton City Charter and ordinances of City, as same may be amended from time to time, and is subject to and is to be construed, governed and enforced under all applicable State of Texas and federal laws. Consultant will make any and all reports required per federal, state or local law including, but not limited to, proper reporting to the Internal Revenue Service, as required in accordance with Consultant's income. Situs of this Contract is agreed to be Dallas County, Texas, for all purposes, including performance and execution.

XX.
Severability

If any of the terms, provisions, covenants, conditions or any other part of this Contract are for any reason held to be invalid, void or unenforceable, the remainder of the terms, provisions, covenants, conditions or any other part of this Contract shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

XXI.
Remedies

No right or remedy granted herein or reserved to the parties is exclusive of any other right or remedy herein by law or equity provided or permitted; but each shall be cumulative of every other right or remedy given hereunder. No covenant or condition of this Contract may be waived without written consent of the parties. Forbearance or indulgence by either party shall not constitute a waiver of any covenant or condition to be performed pursuant to this Contract.

XXII.
Entire Agreement

This Contract embodies the complete agreement of the parties hereto, superseding all oral or written previous and contemporaneous agreements between the parties relating to matters herein, and except as otherwise provided herein cannot be modified without written agreement of the parties.

XXIII.
Non-Waiver

It is further agreed that one (1) or more instances of forbearance by City in the exercise of its rights herein shall in no way constitute a waiver thereof.

XXIV.
Headings

The headings of this Contract are for the convenience of reference only and shall not affect any of the terms and conditions hereof in any manner.

XXV.
Venue

The parties to this Contract agree and covenant that this Contract will be enforceable in Carrollton, Texas; and that if legal action is necessary to enforce this Contract, exclusive venue will lie in Dallas County, Texas.

XXVI.
No Third Party Beneficiary

For purposes of this Contract, including its intended operation and effect, the parties (City and Consultant) specifically agree and contract that: (1) the Contract only affects matters/disputes between the parties to this Contract, and is in no way intended by the parties to benefit or otherwise affect any third person or entity notwithstanding the fact that such third person or entity may be in contractual relationship with City or Consultant or both; and (2) the terms of this Contract are not intended to release, either by contract or operation of law, any third person or entity from obligations owing by them to either City or Consultant.

IN WITNESS WHEREOF, the parties hereto have set their hands by their representatives duly authorized on the day and year first written above.

CITY OF CARROLLTON

By: _____

Leonard Martin

City Manager

Date Signed: _____

ATTEST:

Ashley D. Mitchell
City Secretary

APPROVED AS TO FORM:

Meredith Ladd
City Attorney

(Consultant's Name)

By: _____

Name: _____

Title: _____

Date Signed: _____

THE STATE OF TEXAS §
COUNTY OF _____ §

This instrument was acknowledged before me on the _____ day of _____,
20____, by _____ in his capacity as _____ of
_____, a _____ Corporation, known to me to be the
person whose name is subscribed to the foregoing instrument, and acknowledged that he
executed the same on behalf of and as the act of _____.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE _____
DAY OF _____, 20_____.

Notary Public _____ County, Texas
My commission expires _____

Attachment “A”

Scope of Work

Attachment “B”

Hourly Rates



City of Carrollton

Agenda Memo

File Number: 1962

Agenda Date: 4/21/2015

Version: 1

Status: Consent Agenda

In Control: City Council

File Type: Resolution

Agenda Number: *18.

CC MEETING: April 21, 2015

DATE: April 13, 2015

TO: Leonard Martin, City Manager

FROM: Cesar J. Molina, Jr., P.E., Director of Engineering

Consider A Resolution Authorizing The City Manager Or His Designee To Enter Into An Agreement To Sell A 40,893 Square Feet Tract Of Land In Fee Simple, Which Tract Is Part Of A Parcel Of Land Located At 1825 North IH-35E; And Providing An Effective Date.

BACKGROUND:

This agenda item is to seek authorization to sell property to the Texas Department of Transportation (TxDOT) for the IH-35E managed lanes expansion project, phase 2. This sale consists of one partial tract of vacant property, known as 1825 North IH-35E. The partial tract is 40,893 square feet of land.

FINANCIAL IMPLICATIONS:

TxDOT has provided a full appraisal establishing the fair market value of the property. Proceeds from the sale (\$327,144.00) will be deposited in the City's General Fund.

IMPACT ON COMMUNITY SUSTAINABILITY:

The land will be used to expand existing roads in the city. The remainder of the city's property at Luna Road and North IH-35E can still be developed.

STAFF RECOMMENDATION/ACTION DESIRED:

Staff recommends approval of the attached resolution authorizing the City Manager or his designee to sell the tract of land to TxDOT.

RESOLUTION NO. _____

A RESOLUTION OF THE CITY OF CARROLLTON, TEXAS AUTHORIZING THE CITY MANAGER OR HIS DESIGNEE TO ENTER INTO AN AGREEMENT TO SELL A 40,893 SQUARE FEET TRACT OF LAND IN FEE SIMPLE, WHICH TRACT IS PART OF A PARCEL OF LAND LOCATED AT 1825 NORTH INTERSTATE HIGHWAY 35 EAST; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, there is approximately 40,893 square feet of land described in Exhibit A and shown in Exhibit B ("Property") which is part of a parcel of land located at 1825 North Interstate Highway 35 East and owned by the City of Carrollton ("City"); and

WHEREAS, the City has received an offer letter, attached as Exhibit C, from the State of Texas Department of Transportation to purchase the Property; and

WHEREAS, the State seeks to acquire the Property in fee simple for the public purpose of construction or improvement of Interstate Highway 35 East; and

WHEREAS, the City Council has determined that the sale of the Property in fee simple is in the best interests of the residents of the City of Carrollton; and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CARROLLTON, TEXAS, THAT:

SECTION 1:

The City Council of the City of Carrollton hereby authorizes the City Manager or his designee to enter into an agreement to sell in fee simple one tract of 40,893 square feet of land described in Exhibit A and shown on Exhibit B.

SECTION 2:

The City Council of the City of Carrollton hereby authorizes the City Manager or his designee to enter into an agreement to sell the parcel in fee simple for fair market value (\$327,144.00) as determined by an appraisal.

SECTION 3:

This resolution shall take effect immediately from and after its passage.

PASSED AND APPROVED April 21, 2015.

CITY OF CARROLLTON, TEXAS

By: _____
Matthew Marchant, Mayor

ATTEST:

Krystle Nelinson, City Secretary

Approved as to form:

Approved as to content:

Susan Keller, Assistant City Attorney

Cesar J. Molina, P.E.
Director of Engineering



1825 IH 35

Legend

- ROW
- CARGIS.GISADM.PARCELVIEW



EXHIBIT "A"
Description for Parcel 103

Being a 40,893 square feet parcel of land situated in the Martha P. Green Survey, Abstract No. 519, Dallas County, Texas, and being a part of that certain tract conveyed to City of Carrollton, Texas, as recorded in Volume 2000247, Page 2332 of the Deed Records, Dallas, County Texas, said 40,893 square feet tract being more particularly described as follows:

COMMENCING at an 1/2 inch iron rod with cap found at a reentrant corner of said City of Carrollton tract and being the northwest corner of the Campbell Brothers Addition, an addition to the City of Carrollton, Texas, as record in Volume 86054, Page 1036, of said Deed Records;

THENCE South 86 degrees 57 minutes 50 seconds East along a southern line of said City of Carrollton tract and the northern line of said Campbell Brothers Addition a distance of 56.17 feet to a 5/8 inch iron rod with TxDOT aluminum cap set on the new western right of way line of Interstate Highway 35E and being the POINT OF BEGINNING and being on a curve to the left having a radius of 10,635.00 feet, a central angle of 00 degrees 46 minutes 13 seconds, a chord that bears North 22 degrees 58 minutes 10 seconds West a chord distance of 142.96 feet;

1. THENCE along the new western right of way line of Interstate Highway 35E and said curve, an arc distance of 142.96 feet to a 5/8" iron rod with TxDOT aluminum cap set at the beginning of a reverse curve to the right having a radius of 3,567.00 feet, a central angle of 03 degrees 48 minutes 39 seconds, a chord that bears North 21 degrees 26 minutes 57 seconds West for a distance of 237.21 feet;
2. THENCE along the new western right of way line of Interstate Highway 35E and said curve an arc distance of 237.25 feet to a 5/8 inch iron rod with TxDOT aluminum cap set on the southern right of way line of Luna Road as shown on TxDOT Right of Way Map Account No. 6018-0-02;**
3. THENCE North 70 degrees 15 minutes 49 seconds East along the southern right of way line of Luna Road a distance of 85.54 feet to the existing western right of way line of Interstate Highway 35E;
4. THENCE South 25 degrees 54 minutes 50 seconds East along the existing western right of way line of Interstate Highway 35E a distance of 431.38 feet to an 1/2 inch iron rod found at a southeast corner of said City of Carrollton tract and being the northeast corner of said Campbell Brothers Addition;
5. THENCE North 86 degrees 57 minutes 50 seconds West along the common line of said City of Carrollton tract and said Campbell Brothers Addition a distance of 126.68 feet to the POINT OF BEGINNING, and containing an area of 40,893 square feet or 0.9388 acres of land, more or less.

County: Dallas
Highway: I.H. 35
R.O.W. CSJ: 0916-03-248

Page 2 of 3
May 9, 2011

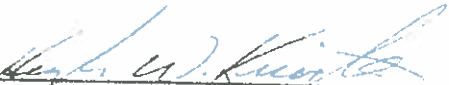


EXHIBIT "A"
Description for Parcel 103 cont.

A plat at even survey date herewith accompanies this legal description.

** The monument described and set in this call, if destroyed during construction, may be replaced with a TxDOT Type II Right of Way Marker upon the completion of the highway construction project under the supervision of a Registered Professional Land Surveyor, either employed or retained by TxDOT.

All bearings are based on the Texas State Plane Coordinate System, N.A.D. 83 (1993 Adj.), North Central Zone. All coordinates shown are surface and may be converted to grid by dividing by the TxDOT conversion factor of 1.000136506.



Hugh Wilson Knight, R.P.L.S.
Texas Registration No. 4872

Douphrate & Associates, Inc.
2235 Ridge Road, Suite 200
Rockwall, Texas 75087
Ph. (972) 771-9004



MARTHA P. GREEN SURVEY
ABSTRACT NO. 519

P.O.C. N 7037789.26
E 2454176.30
P.O.B. N 7037786.28
E 2454232.39

BILLY J. & DAVID K.
CAMPBELL
VOL. 85165, PG. 3035
D.R.D.C.T.

CAMPBELL BROTHERS ADDITION
VOL. 86054, PG. 1036
D.R.D.C.T.

P.O.C.
1/2" IR
W/ CAP

56.17'

S86°57'50"E

126.68'

N86°57'50"W

1/2" IR

56.17'

S86°57'50"E

126.68'

N86°57'50"W

1/2" IR

$\Delta = 00'46'13"$
R = 10,635.00
L = 142.96'
CHB = N22°58'10"W
CHL = 142.96'

$\Delta = 03'48'39"$
R = 3,567.00
L = 237.25'
CHB = N21°26'57"W
CHL = 237.21'

NEW RIGHT
OF WAY LINE

CITY OF CARROLLTON
VOL. 2000247, PG. 2332
D.R.D.C.T.

40,893 sq.ft.
0.9388 acres

S25°54'50"E
431.38'

IH 35E

EXISTING RIGHT
OF WAY LINE

N70°15'49"E
85.54'

LUNA ROAD BY
TXDOT R.O.W. MAP
ACCT. # 6018-0-02

GRAPHIC SCALE
0 25 50



LEGEND

- EXISTING RIGHT OF WAY LINE
- PROPERTY LINE
- COUNTY LINE
- CONTROL OF ACCESS LINE
- SURVEY LINE
- FENCE LINE
- CITY LIMITS
- EASEMENTS
- RAILROAD
- STRUCTURE
- ACCESS IS PROHIBITED ACROSS THE "CONTROL OF ACCESS LINE"
- O = 1/8" ALUMINUM CAP SET ON TOP OF A 5/8-INCH IRON ROD UNLESS OTHERWISE NOTED
- BO = 1/8" BRONZE DISK SET IN CONCRETE

A PLAT OF A SURVEY
PARCEL 103
FOR I.H. 35E

A 40,893 SQ. FT., (0.9388 AC.)
TRACT OF LAND IN THE

MARTHA P. GREEN SURVEY ABSTRACT NO. 519
CITY OF CARROLLTON

DALLAS COUNTY, TEXAS
MAY 9, 2011

CITY OF
CARROLLTON

ALL BEARINGS ARE ON THE TEXAS STATE PLANE
COORDINATE SYSTEM, NAD. 83 (1993 ADJ.)
NORTH CENTRAL ZONE, ALL DISTANCES AND
COORDINATES SHOWN ARE SURFACE AND MAY
BE CONVERTED TO GRID BY DIVIDING BY TXDOT
CONVERSION FACTOR OF 1.000136506



A LEGAL DESCRIPTION AT EVEN
SURVEY DATE HEREWITH
ACCOMPANIES THIS PLAT

HUGH WILSON KNIGHT
R.P.L.S. NO. 4872

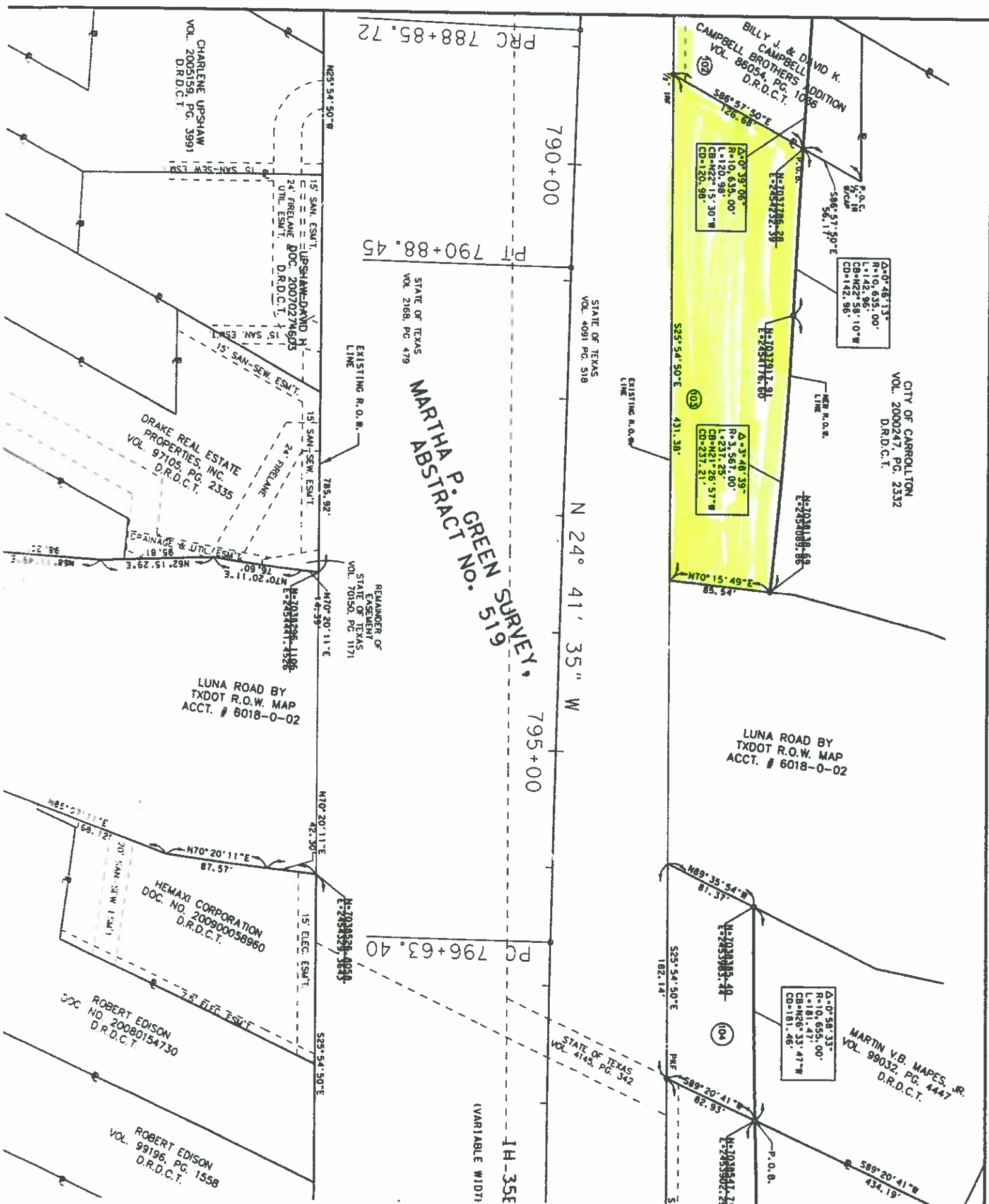


Exhibit C



Date: April 7, 2015

County: Denton
Federal Project No.:
Highway: IH 35E

ROW CSJ: 0196-03-248
Parcel: 103
From : Interstate Highway 635
To: President George Bush Turnpike

BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED NO. 7014 0150 0000 4563 9995

City of Carrollton
Attn: Ed Cropp, Real Estate Manager
1945 E. Jackson Road
Carrollton, Texas 75006-1737

Dear Sirs,

In acquiring property for the highway system of Texas, the Texas Department of Transportation (the "Department") follows a definite procedure for appraising the land needed and for handling personal negotiations with each owner. As has been or will be explained by the State's negotiator, Stacie L. Walton, a portion of your property located 1825 North I35E, Carrollton, Texas 75006, as described in the enclosed property description, is to be acquired for the construction or improvement of the above-referenced highway project.

We believe at this stage of the purchase process it is mutually beneficial to confirm that, based on an appraisal, the State is authorized to offer you \$327,144.00 for your property, which includes \$327,144.00 for the property to be purchased and \$0.00 for damages to your remaining property. This amount is the total amount of just compensation for all interests in the portion of your property to be acquired, as determined in accordance with State law, less oil, gas and sulphur, subject to clear title being conveyed to the State. In accordance with State law, it is the policy of the Department to negotiate with the fee owner(s) of the real property with the understanding that you will, in turn, negotiate with any lessee or other party who may own any interest in the land or improvements, with the exception of public utility easements, which will be handled separately by the Department.

This offer to purchase includes the contributory values of the improvement(s) listed below, which are considered to be part of the real property. Since the improvement(s) must be removed, it is the policy of the Department to permit owners who convey voluntarily to the Department to thereafter retain the improvement(s), if they wish to do so. The retention values shown below are the estimated amounts the improvement(s) would bring if sold on public bids. If you wish to retain title to any of the following improvement(s) and remove it (them) from the right of way, the amount of the above offer must be reduced by the appropriate retention amount(s). This option to retain the improvement(s) does NOT apply should it become necessary for the Department to acquire the real property by eminent domain.

	<u>Improvement</u>	<u>Amount to be Subtracted if Retained</u>
None		\$0.00
		\$



If you wish to accept the offer based upon this appraisal, please contact Stacie L. Walton as soon as possible, at (214)356-8882, so that the process of issuing your payment may be started. If you are not willing to accept this offer, you may submit a written request for administrative settlement/counteroffer, setting forth a counteroffer amount and the basis for such amount, provided such settlement request is received in writing within 30 days from the date of this letter. Please note that your opportunity to submit an administrative settlement shall be forfeited if such a settlement request is not received by the Department within the 30 day time deadline.

In the event the condition of the property changes for any reason, the State shall have the right to withdraw or modify this offer.

After the date of payment of the purchase price, or the date of deposit in court of funds to satisfy the award of compensation as determined through eminent domain proceedings to acquire real property, you will be reimbursed for any fair and reasonable incidental expenses necessarily incurred in transferring title to the property for use by the Texas Department of Transportation. Expenses eligible for reimbursement may include (1) recording fees, transfer taxes and similar expenses incidental to conveying the real property to the Department and (2) penalty costs for prepayment of any preexisting recorded mortgage entered into in good faith encumbering the real property. Voluntary unnecessary expenses or expenses incurred in clearing questionable title will not be eligible for reimbursement. Eligible incidental expenses will be reimbursed upon submission of a claim supported by receipted bills or other evidence of actual expenses incurred. You may file a written request for review if you believe that the Department failed to properly determine the eligibility for, or the amount of, incidental expenses to be reimbursed. There is no standard form on which to request a review of a claim; however, the claim must be filed with this office within six months after you are notified of the Department's determination on any claim for reimbursement.

You may be entitled to additional payments and services under the State's Relocation Assistance Program. It is emphasized, however, that any benefits to which you may be entitled under this program will be handled entirely separate from and in addition to this transaction. You will receive a brochure entitled "Relocation Assistance" which will inform you of eligibility requirements, payments and services which are available.

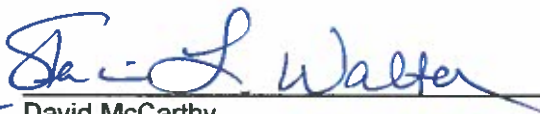
You have the right to discuss with others any offer or agreement regarding the Department's acquisition of the subject property, or you may (but are not required to) keep the offer or agreement confidential from others, subject to the provisions of Chapter 552, Government Code (the Public Records Act) as it may apply to the Department.

Attached is a copy of the Texas Department of Transportation brochure entitled "Right of Way Purchase" which we trust will give you a better understanding of the procedures followed by the Department in purchasing property. We respectfully request the opportunity to meet with you or to otherwise discuss and answer any questions you may have regarding the details of the type of facility to be built, or concerning the Department's offer or proposed purchase transaction. Also, please do not hesitate to contact Stacie L. Walton at the telephone number provided above regarding any question you may have.

Please see the enclosed copy of the Texas Landowner Bill of Rights.

Finally, we enclose copies of all appraisal reports relating to your property being acquired which were prepared in the ten (10) years preceding the date of this offer and produced or acquired by the Department, including the appraisal on which this offer is based.

Sincerely,


David McCarthy
Right of Way Manager, McCarthy Partners

ENCLOSURES:

Appraisal Report(s)
Landowner Bill of Rights
Brochure ("Right of Way Purchase")



City of Carrollton

Agenda Memo

File Number: 1970

Agenda Date: 4/21/2015

Version: 1

Status: Consent Agenda

In Control: City Council

File Type: Resolution

Agenda Number: *19.

CC MEETING: April 21, 2015

DATE: April 14, 2015

TO: Leonard Martin, City Manager

FROM: Scott Hudson, Environmental Services Director

Consider A **Resolution Authorizing The City Manager To Approve A Contract With BBC Research And Consulting To Prepare The Analysis Of Impediments To Fair Housing** In An Amount Not To Exceed \$37,560.00.

BACKGROUND:

A regulatory condition of continued participation in the federal Community Development Block Grant (CDBG) program is to periodically provide a new Analysis of Impediments to Fair Housing. The last analysis was completed in 2008.

The Analysis of Impediments (AI) is intended to help cities ensure opportunities for all persons to reside in any given housing development, regardless of race, color, religion, sex, disability, familial status, or national origin and identifying any barriers to fair housing choice. The AI study serves as the framework for a community-wide dialogue to identify housing priorities that align and focus funding from the CDBG program and other city efforts. The study includes community input and socioeconomic analysis.

Conclusions of the AI are then incorporated into and addressed by Annual Action Plans, which provide a concise summary of the actions, activities, and specific federal and non-federal resources used each year to address the priority needs and goals identified. The city reports on accomplishments and progress toward goals in the Consolidated Annual Performance and Evaluation Report.

A request for qualifications for this study resulted in responses from two qualified companies. Staff ranking, based on criteria published with the solicitation, led to the selection of BBC Research and Consulting to conduct this study and prepare the required report.

FINANCIAL IMPLICATIONS:

Federal funds for this study have been allocated in the CDBG Grant Planning and

Administration budget. No additional city funding will be required.

IMPACT ON COMMUNITY SUSTAINABILITY:

By periodically analyzing community needs and conditions, the city ensures optimum use of CDBG funds to ensure fair housing opportunities while sustaining vital and attractive neighborhoods.

STAFF RECOMMENDATION/ACTION DESIRED:

Staff recommends City Council approval of the attached resolution authorizing the City Manager to contract with BBC Research and Consulting for the Analysis of Impediments to Fair Housing study and report in an amount not to exceed \$37,560.00.

RESOLUTION NO _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CARROLLTON, TEXAS, AUTHORIZING THE CITY MANAGER TO ENTER INTO A CONTRACT WITH BBC RESEARCH AND CONSULTING FOR THE PREPARATION OF THE ANALYSIS OF IMPEDIMENTS TO FAIR HOUSING IN AN AMOUNT NOT TO EXCEED \$37,560.00; ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the Fair Housing Act of 1968, as amended, requires the Secretary of the Department of Housing and Urban Development (HUD) to administer the Department's housing and urban development programs in a manner to affirmatively further fair housing;

WHEREAS, the Housing and Community Development Act of 1974, as amended, regulates the Community Development Block Grant (CDBG) program, requiring that each grantee certify that it will administer the awarded grant according to the Fair Housing Act and will work diligently to affirmatively further fair housing;

WHEREAS, the City of Carrollton participates in HUD's CDBG program;

WHEREAS, the City of Carrollton has certified through the Consolidated Plan process its commitment to 1) examine and attempt to alleviate housing discrimination within its jurisdiction; (2) promote fair housing choice for all persons; (3) provide opportunities for all persons to reside in any given housing development, regardless of race, color, religion, sex, disability, familial status, or national origin; (4) promote housing that is accessible to and usable by persons with disabilities; (5) and comply with the non-discrimination requirements of the Fair Housing Act;

WHEREAS, conducting an Analysis of Impediments to Fair Housing and addressing impediments thereby identified fulfills the HUD criteria for Fair Housing Planning; and

WHEREAS, upon full review and consideration of the project, and all matters attendant and related thereto, the City Council is of the opinion that the contract for the Analysis of Impediments to Fair Housing Choice is necessary and that the City Manager shall be authorized to execute it on behalf of the City of Carrollton;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF CARROLLTON, TEXAS, THAT:

SECTION I

The above and foregoing premises are found to be true and correct and are incorporated herein and made part hereof for all purposes.

SECTION 2

The City Manager is hereby authorized to execute a contract with BBC Research and Consulting for the preparation of the Analysis of Impediments to Fair Housing in an amount not

to exceed \$37,560.00 and to take those steps reasonable and necessary to comply with the intent of this resolution.

SECTION 3

This resolution shall take effect upon passage.

DULY PASSED AND APPROVED by the City Council of the City of Carrollton, Texas this 21st day of April, 2015

Matthew Marchant, Mayor

ATTEST:

Krystle Nelinson, City Secretary

APPROVED AS TO FORM:

APPROVED AS TO CONTENT:

Meredith Ladd, City Attorney

Scott Hudson, Environmental Services Director



City of Carrollton

Agenda Memo

File Number: 1960

Agenda Date: 4/21/2015

Version: 1

Status: Public Hearing/Consent
Agenda

In Control: City Council

File Type: Public Hearing

Agenda Number: *20.

CC MEETING: April 21, 2015

DATE: April 13, 2015

TO: Leonard Martin, City Manager

FROM: Christopher Barton, Chief Planner

Hold A Public Hearing And Consider An **Ordinance To Rezone To Establish A Special Use Permit For A Temporary Surface Parking Lot With Special Conditions Located Across Two Parcels On An Approximately 0.2-Acre Tract Located At 1101 Carroll Avenue And A Second Approximately 0.41-Acre Tract Located At 1104 East Belt Line Road; Amending Accordingly The Official Zoning Map. Case No. 04-15SUP2 Downtown Temporary Parking Lot 5/City of Carrollton. Case Coordinator: Christopher Barton.**

BACKGROUND:

This is a City-initiated request for approval of a special use permit for a temporary public parking lot. The parking lot will be located across two parcels. The first parcel is an approximately 0.2-acre site located at 1101 Carroll Avenue and a second parcel is an approximately 0.41-acre tract located at 1104 East Belt Line Road. Both parcels are zoned for the (TC) Transit Center District, Urban General Sub-District.

STAFF RECOMMENDATION/ACTION DESIRED:

On April 2, 2015 the Planning & Zoning Commission recommended **APPROVAL** as presented. The attached ordinance reflects the action of the Commission. Because the action of the Commission was unanimous and no public opposition has been received, this item is being placed on the Public Hearing - Consent portion of the agenda.

RESULT SHEET

Date: 04/22/15

Case No./Name: 04-15SUP2 Downtown Temp. Parking Lot 5

A. STIPULATIONS AND RECOMMENDATIONS

Staff recommends **APPROVAL** with the following stipulations:

1. The urban streetscape design standards found in the General Design Standards of the City of Carrollton (including streetlights, street trees, enhanced paving, etc.) shall not be installed along streets abutting the tracts as part of this project.
2. Construction/paving standards for the surface parking lot (not including fire lanes) may be the same as those used for the first City-owned “temporary” parking lot in downtown Carrollton (located at 1109 S. Main Street) as follows:
 - Sub-base pulverized with sheep’s foot and compacted by roller to 95% density
 - Four-inch thick HMAC Base Course (type B, over the graded dirt/sub-base)
 - Three-inch thick HMAC Surface Course (type C; finer gravel)... Or equivalent as approved by the City Manager or designee.
3. In accordance with Section E, Article XX (TC) Transit Center District of the Comprehensive Zoning Ordinance, a Special Use Permit for the surface parking lot shall be for a period of up to five (5) years, with subsequent review for continued appropriateness thereafter. However, this SUP would be limited to thirty (30) months to run concurrent with the City’s lease for the 1101 Carroll Ave. land. The thirty month period shall begin when both surface parking lots are completed and open to the public.

B. P&Z RECOMMENDATION from P&Z meeting: 04/02/15
Result: **APPROVED** /Vote: 7 – 0 (Krauss & Stotz absent)

C. CC RECOMMENDATION from CC meeting: 04/21/15
Result: /Vote:

SPECIAL USE PERMIT

Case Coordinator: Christopher Barton

GENERAL PROJECT INFORMATION

SITE ZONING: (TC) Transit Center District, Urban General Sub-Districts.

SURROUNDING ZONING

SURROUNDING LAND USES

NORTH (TC) Transit Center District

Vacant Lot

SOUTH (TC) Transit Center District

Existing mixed-use (Across
Carroll Ave.)

EAST (TC) Transit Center District

Vacant

WEST (TC) Transit Center District

Existing downtown development
(Across S. Main St.)

REQUEST: Approval of a new Special Use Permit to allow for a temporary public surface parking lot

PROPOSED USE: Temporary public parking

ACRES/LOTS: 0.61 acres/2 lots

LOCATION: 1101 Carroll Avenue and 1104 E. Belt Line Road

HISTORY: It is unknown when the subject tract was platted into a lot of legal record.

Current zoning was established in April, 2005. Prior to that, the area was zoned for the (ODC) Old Downtown Commercial District (established in 1989).

COMPREHENSIVE PLAN: Mixed Use/Urban (Transit) Uses

TRANSPORTATION PLAN: Belt Line Road is designated as an (A6D) Six-Lane Divided Arterial. Carroll Avenue is designated as a (C2U) Two-Lane Undivided Collector.

OWNER: City of Carrollton

REPRESENTED BY: Christopher Barton/City of Carrollton

STAFF ANALYSIS

PROPOSAL/BACKGROUND

This is a City-initiated request for approval of a Special Use Permit for a temporary surface parking lot to provide interim downtown parking.

The first City-initiated public temporary parking lot was located at the southeast corner of Carroll Avenue and South Main Street. This tract is now the site of a portion of *The Union at Carrollton Square* mixed-use development. SUP 331 was enacted in January 2006 and expired in January 2011.

The second City-initiated public temporary parking lot is located at the southwest corner of Broadway Street and Fifth Avenue. SUP 368 was enacted in January 2009 and was reassessed for continued appropriateness in January 2015.

The third and fourth City-initiated public temporary parking lots are located at 1200 S. Broadway Street and 1211 S. Broadway Street. SUP 3580 was enacted on November 2013.

ORDINANCE REQUIREMENTS

According to the Comprehensive Zoning Ordinance, in the (TC) Transit Center District, all surface parking lots are only allowed upon approval of a Special Use Permit, that the SUP be approved for only an initial five-year period with subsequent reassessment thereafter for continued appropriateness.

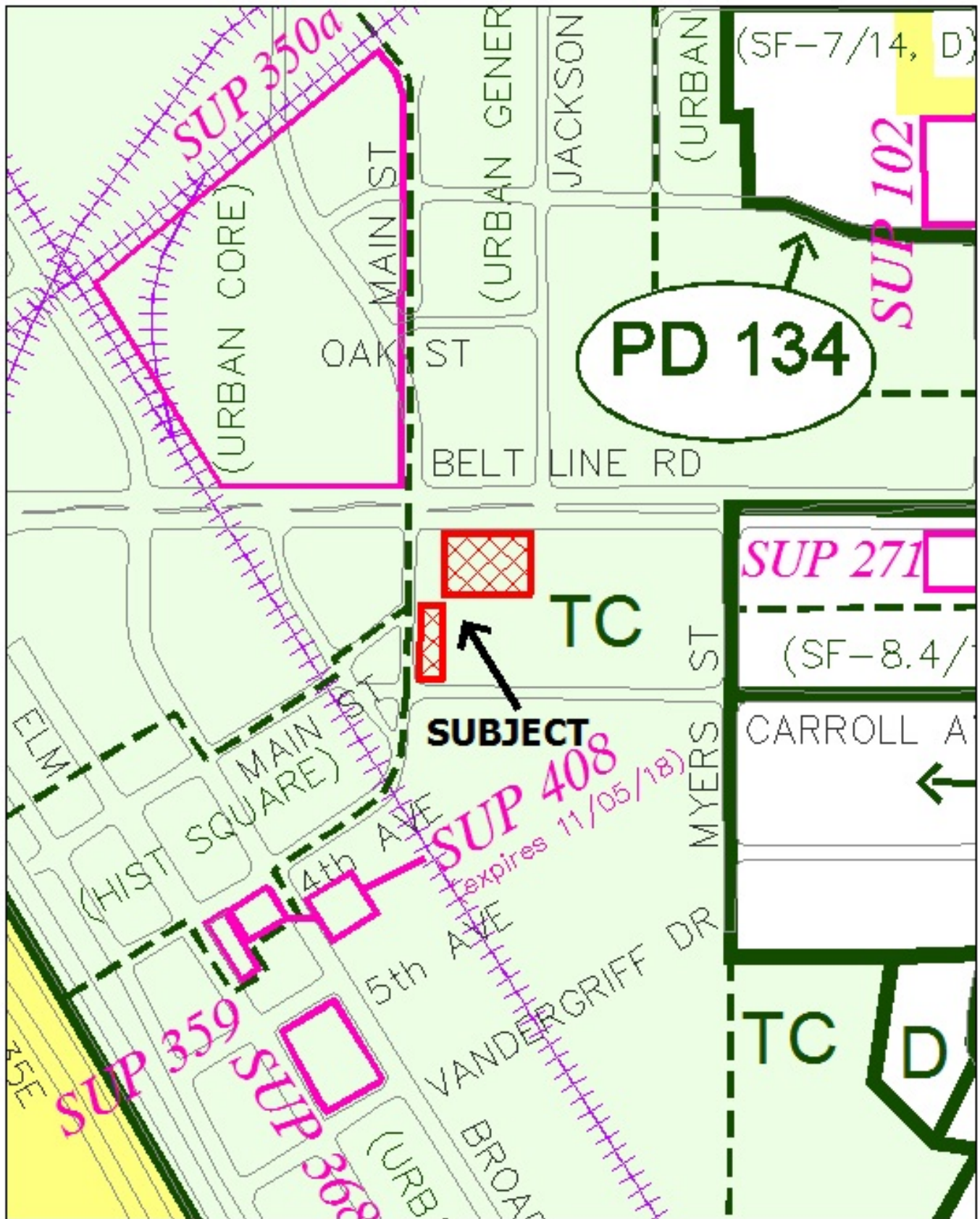
ELEMENTS TO CONSIDER

- The City currently owns the property 1104 E. Belt Line Rd. and leases the property at 1101 Carroll Avenue.
- The parking lots will be open to the public.
- According to the (TC) Transit Center Zoning District, since the proposed parking lot is a temporary use, typical internal landscaping and buffering as stated in the Landscape Ordinance is not required.
- The proposed lots will provide approximately 28 additional parking spaces for the downtown area.
- The lot will be constructed by the City of Carrollton. Paving will be designed for a short lifespan, as the two parking lots are not anticipated to be permanent.
- The proposed stipulations are the same as have been used in previous cases.

CONCLUSION

The request appears appropriate.

SITE LOCATION AND ZONING MAP



**Excerpt from Draft Minutes
Planning & Zoning Commission
Meeting of April 2, 2015**

Hold A Public Hearing And Consider An **Ordinance To Rezone To Establish A Special Use Permit For A Temporary Surface Parking Lot** With Special Conditions Located Across Two Parcels. An Approximately 0.2-Acre Tract Located At 1101 Carroll Avenue And A Second Approximately 0.41-Acre Tract Located At 1104 East Belt Line Road; Amending Accordingly The Official Zoning Map. **Case No. 04-15SUP2 Downtown Temporary Parking Lot 5**/City of Carrollton. Case Coordinator: Christopher Barton.

Barton presented the case noting that it was a City initiated request and the intent was to provide reliever parking for the Old Downtown Square area. He explained that because the lot would be short term in nature, it would not be constructed with the standard of a long term parking lot and would include minimal landscaping.

Chair McAninch opened the public hearing and invited speakers to the podium; there being no speakers, she closed the public hearing.

- *Chadwick moved approval of Case No. 04-15SUP2 Downtown Temporary Parking Lot 5 with stipulations; second by Kiser and the motion was approved with a unanimous 7-0 vote.*

ORDINANCE NO. _____
Case No. 04-15SUP2 Downtown Temp. Parking Lot 5

PLANNING
City of Carrollton
Date: 05/05/15

SPECIAL USE PERMIT NO. 425

ORDINANCE NUMBER _____

ORDINANCE NO. _____ OF THE CITY OF CARROLLTON
AMENDING ITS COMPREHENSIVE ZONING ORDINANCE BY
ESTABLISHING SPECIAL USE PERMIT NUMBER 425 FOR A
TEMPORARY PARKING LOT UPON PROPERTY LOCATED AT 1104
EAST BELT LINE ROAD AND 1101 CARROLL AVENUE;
AMENDING ACCORDINGLY THE OFFICIAL ZONING MAP;
PROVIDING PENALTY, SEVERABILITY, REPEALER AND
SAVINGS CLAUSES; AND PROVIDING FOR AN EFFECTIVE DATE
ON AND AFTER ITS ADOPTION AND PUBLICATION.

WHEREAS, at a public hearing held on the Second day of April, 2015, the Planning & Zoning Commission considered and made recommendation on a request regarding a Special Use Permit (Case No. 04-15SUP2), and:

WHEREAS, this change of zoning is in accordance with the adopted Comprehensive Plan of the City of Carrollton, as amended; and

WHEREAS, the City Council, after determining all legal requirements of notice and hearing have been met, has further determined the following amendment to the zoning laws would provide for and would be in the best interest of the health, safety, morals, and general welfare:

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF CARROLLTON, TEXAS, THAT:

Section 1.

All of the above premises are found to be true and correct legislative and factual findings of the City Council, and they are hereby approved, ratified and incorporated into the body of this Ordinance as if copied in their entirety.

Section 2.

Special Use Permit Number 425 is hereby established for a certain approximately 0.5-acre of land located at 1104 East Belt Line Road and a certain approximately 0.2-acre tract of land located at 1101 Carroll Avenue as more specifically described on Exhibit A and generally depicted on Exhibit B, which exhibits are attached hereto and incorporated herein by reference for all purposes allowed by law, providing for the following use:

“Temporary Surface Parking Lot”

Section 3.

Development shall be in accordance with the following special conditions, restrictions, and regulations:

1. The urban streetscape design standards found in the General Design Standards of the City of Carrollton (including streetlights, street trees, enhanced paving, etc.) shall not be installed along streets abutting the tracts as part of this project.
2. Construction/paving standards for the surface parking lot (not including fire lanes) shall be as follows:
 - Sub-base pulverized with sheep’s foot and compacted by roller to 95% density.
 - Four-inch thick HMA Base Course (type B, over the graded dirt/sub-base).
 - Three-inch thick HMA Surface Course (type C; finer gravel)....or equivalent as approved by the City Manager or his designee.
3. This Special Use Permit is limited to a thirty (30) month period to run concurrent with the City’s lease for the 1101 Carroll Avenue land. The thirty month period shall begin when both surface parking lots are completed and open to the public.

Section 4.

The Comprehensive Zoning Ordinance and the Official Zoning Map are hereby amended to reflect the action taken herein.

Section 5.

Any person, firm or corporation violating a provision of this ordinance, upon conviction, is guilty of an offense punishable as provided in Section 10.99 of the Carrollton City Code.

Section 6.

The provisions of this ordinance are severable in accordance with Section 10.07 of the Carrollton City Code.

Section 7.

This ordinance shall be cumulative of all provisions of ordinances of the City of Carrollton, Texas, except where the provisions of this ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

Section 8.

Ordinance Number 1470, otherwise known as the Comprehensive Zoning Ordinance and the Official Zoning Map, as amended, shall remain in full force and effect.

ORDINANCE NO. _____
Case No. 04-15SUP2 Downtown Temp. Parking Lot 5

Section 9.

This ordinance shall become and be effective on and after its adoption and publication.

PASSED AND APPROVED this the Fifth day of May, 2015.

CITY OF CARROLLTON

By: _____
Matthew Marchant, Mayor

ATTEST:

Krystle Nelinson
City Secretary

APPROVED AS TO FORM:

APPROVED AS TO CONTENT:

Susan Keller
Assistant City Attorney

Christopher Barton
Chief Planner

ORDINANCE NO. _____

Case No. 04-15SUP2 Downtown Temp. Parking Lot 5

EXHIBIT A
Legal Descriptions

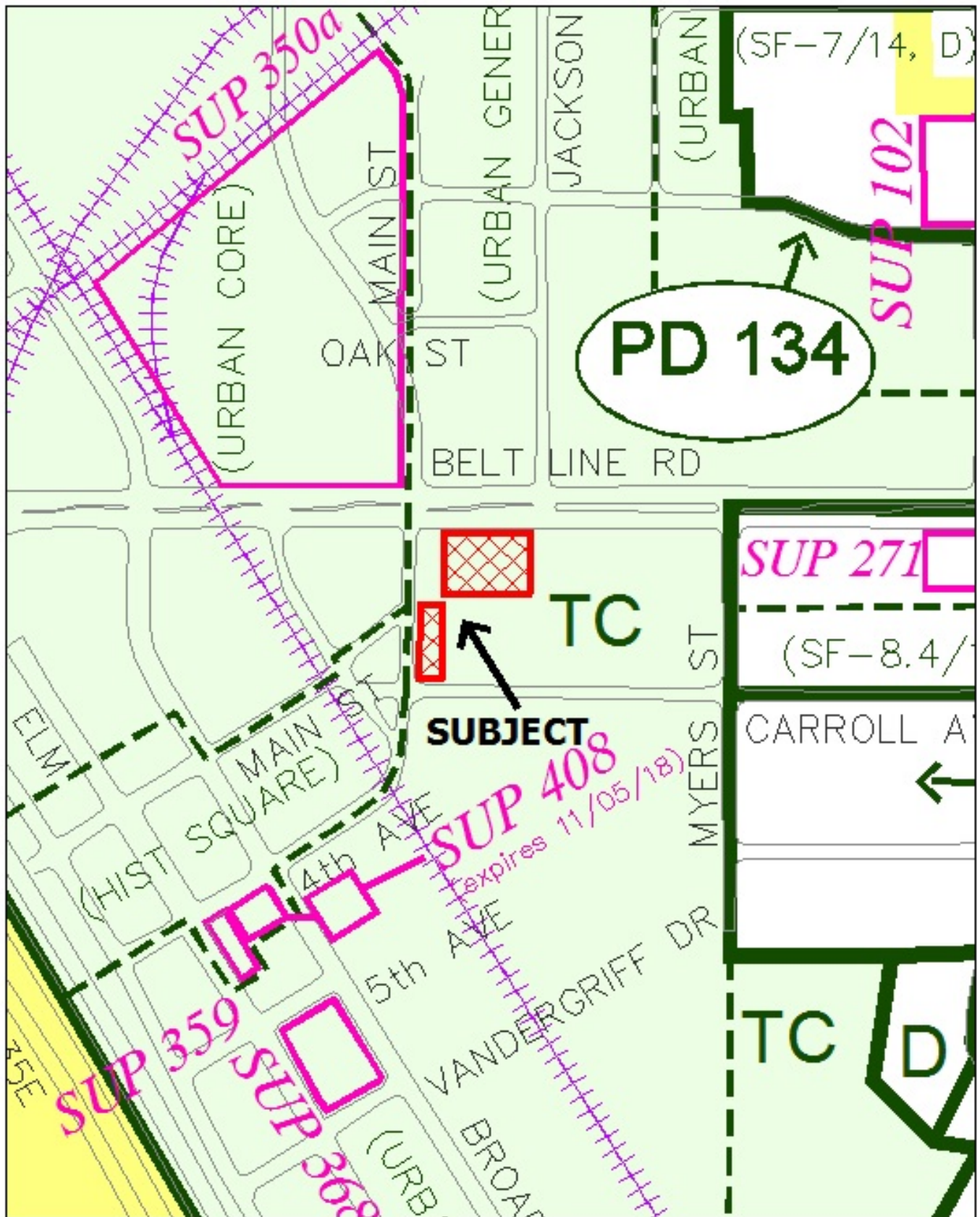
For 1104 E. Belt Line Road:

Lots 18 – 20, Block A
D.C. Perry Addition
(less right-of-way)

For 1101 Carroll Avenue:

Lot 2, Block A
D.C. Perry Addition
(less right-of-way)

EXHIBIT A
Location Map





City of Carrollton

Agenda Memo

File Number: 1982

Agenda Date: 4/21/2015

Version: 1

Status: Other Business

In Control: City Council

File Type: Procedural Item

Agenda Number: 21.

CC MEETING: April 21, 2015

DATE: April 15, 2015

TO: Mayor and City Council

FROM: Meredith A. Ladd, City Attorney

Consider **Appeal Under Section 52.084 Of The Carrollton City Code Of The Applicability Of The Impact Fees To The Development At 2226 Arbor Crest Drive.**

BACKGROUND:

Pursuant to Chapter 52 of the Carrollton City Code, Matt Garrett, a property owner, was assessed impact fees based on the installation, at Mr. Garrett's request, of a 1.5" meter to replace the existing 5/8" meter during an existing City water line replacement project. Carrollton City Code Section 52.084 provides that a property owner may appeal the imposition of an impact fee to City Council. Mr. Garrett is appealing the applicability of the impact fees. The burden is on the property owner to prove the impact fee collected was not calculated pursuant to Carrollton City Code.

FINANCIAL IMPLICATIONS:

The possible financial implication for a finding in favor of the property owner is the amount of any refund of the impact fees assessed. The fee assessed was \$2,550.00.

IMPACT ON COMMUNITY SUSTAINABILITY:

Waiver of the requirements of the Impact Fee Ordinance could result in increased demand, without recovery of costs for such demand increase, to the City's water system that was not anticipated in the City's capital improvement plan.

STAFF RECOMMENDATION/ACTION DESIRED:

Staff recommends denial. The plain language of the Impact Fee Ordinance was complied with.

From: Matt Garrett [<mailto:mgarrett@mcsmk8.com>]

Sent: Friday, March 27, 2015 11:00 PM

To: Leonard Martin

Cc: Robert Kopp; Classic Performance; Thomas L. Davis; Steve Woods; Marc Guy; Erin Rinehart; Anthony Wilder; Bob Garza; Doug Hrbacek; Jeff Andonian; Kevin Falconer; Lisa Sutter; Matthew Marchant; Steve Babick; Camille Pasternak; Gary Pasternak; Jody Byerly; Krystle Nelinson

Subject: Arbor crest water line - Update - Impact Fee Appeal

Neighbors, City staff and Council members,

This is an update on the upper Arbor Crest water service issues and an appeal to the impact fees enclosed.

Yesterday we completed the larger water meter and tie in to my home at 2226. This went from the small service 5/8 meter to the 1.5 meter, which is also had by 2231, 2232, 2234. All other homes have 5/8 or 1" service. In our research comparisons, we found that 3 homes (2231, 2232, 2234) are the only ones in the 2224-2234 range that did not suffer from poor water service as the remainder have suffered. Just doing this cut over is a 100% improvement in service, using my example. I can now turn a sink on and flush a toilet. For the first time in 17 years I know what a refrigerator ice maker sounds like when it tries to fill up. We can now use the built in water dispenser on the door. The garden hose actually can spray with its sprayer from 3 ft to about 12. Time from 10 mins to 2 mins the bathtub fills up. The key factor here is NO CHANGE was made to the home plumbing between the cut over from yesterday and today and NO additional water pressure was provided at the street. The only factor is the volume difference and only to the existing home line, which is eventually reduced down to 3/4 at the inlet point of the house. Service has gone from horrible to very satisfactory with the still lower pressure maintained vs a massive pressure drop on any light load. With a heavy load, complete shut down to all fixtures. As many of you have been told over the years, the problem was always your house. Well, that is not the case.

So why did I have to compensate with a bigger service for the lower water pressure and at my own expense and why was your only choice to do the same??? That is a question I hope Council and Staff will address not only for us, but for anyone who has these type of situations, especially when things are under construction. Our situation may be very unique, so the understanding may not be there with staff, but the complaints over the years should not have been brushed under the rug. If these situations do not fit into some "box" or ordinance, it seems that it takes a whole lot of effort to make those that should be listening aware. As we have said as a group in our appearance at the public forum, we did not mind paying a little to get satisfactory service. I still think our situation should have been included in the redesign and the costs involved are exactly for what we pay taxes and our water bills. So here you see my charges. No one thinks this is "a little fee." With the impact fees added in, it is exorbitant.

Attached are what these improvements cost on the city side only; \$3725 on top of a \$125.00 permit fee, for \$3850.00, city fees only. My home is now adequate and I am pleased with the before and after, but take the stance that the impact fees are completely unjust in this scenario.

Impact fees are there for a surcharge of how the size of a water service line "impacts" the water system. A 5/8 meter is looked at as being able to flow less water than a 1.5" meter. That is basic physics, obviously. However, a 1.5" meter at 40PSI will only do a little more than a 5/8 meter at 80PSI. It is now very obvious that those impact fees were never properly calculated using a pressure factor. If they were, we would be owed an impact credit since the 70s vs homes that have inherent higher pressure.

A 5/8 supply and meter at high pressures in the 80s can flow 36GPM, but at 40PSI, the flow comes down to the 15GPM range. This is what we had here and it is simply not enough to work well.

A 1.5 supply and meter at higher pressures can flow at 100GPM+, That is a ton of water, really too much for any residential home. The question of "why you would need this" is always raised. Well at 40psi it's about 35GPM and puts it right there with a 5/8 service at 80.... and that is why.

We can blame the homes, but here is the key; our homes are existing. They are not new construction or redesigned projects that should be subject to impact fees. When the homes of the 70s and 80s were built, water pressure was not an issue, even on the hill on Arbor Crest. It was not great, but it was adequate. Over the years with the growth and northern additions to the water system in this area, the water pressure has dropped. The new water tower did not help anything either. The promised water line replacement did not help. It was just new. 3 homes have larger meters and work fine. There is no record in the city why these homes have 1.5 meters, but they do even to public works disbelief, leaving an easy working model to duplicate on the others. So, all that leaves is us as homeowners of older homes bearing the cost to upgrade and compensate for what was once supplied at one pressure from the city and in 2015 is not. A \$4000 tax, so to speak. I am appealing the impact portion of these fees. They are totally not applicable in this scenario. The amount is \$2550.00.

The public works guys doing the job really have done their best to make this go smoothy. I know the neighbors are tired of the mess, but really in this scope of work, they have done a great job. They should be complemented from the top down. I also want to throw a compliment out to Jody Byerly with Carrollton PW for really being the front person neighbors have had to push their frustrations on. He really deserves recognition for being what is short of a punching bag here taking everything professionally and courteously. I think if Jody was allowed to accommodate this situation, he would have. But the answer was always "hands are tied". A

little loosening of the binds from the top down is sometimes called for in unique situations.

Respectfully,

Matt Garrett
214-878-3823

CITY OF CARROLLTON
BUILDING INSPECTION DEPARTMENT
1945 E JACKSON RD
CARROLLTON TX 75006

DATE: 3/20/15
TIME: 11:55:22

RECEIPT #: 0000209924
CASHIER: GUAGOMEZ

APPLICATION NBR: 15-00001708
REFERENCE: MATT GARRETT

ITEM DESCRIPTION	PAID
R.O.W. INSPECTION FEE69010	125.00
WATER METER W/PERMIT42300	305.00
IMPACT FEES 40985	2550.00

TOTAL AMOUNT PAID: 2980.00
PAYMENT TYPE: CHECK
CHECK NBR: 000001842

- **Sec. 52.084. - Appeals.**

- (A) The property owner or applicant for new development may appeal the following decisions to the City Council.
 - (1) The applicability of an impact fee to the development;
 - (2) The method of calculating the amount of the impact fee due;
 - (3) The availability or the amount of an offset, credit or rebate;
 - (4) The application of an offset or credit against an impact fee due; and
 - (5) The amount of a refund due, if any.
- (B) The burden of proof shall be on the appellant to demonstrate that the amount of the fee or the amount of the offset, credit or rebate was not calculated according to section 52.079 or the guidelines established for determining offsets, credits and rebates as set forth in section 52.081
- (C) The appellant must file a notice of appeal with the City Secretary within 30 days following the determination of the amount of the impact fees to be paid by the development. If the notice of appeal is accompanied by a bond or other sufficient surety satisfactory to the City Attorney in an amount equal to the original determination of the impact fee due, the development application may be processed while the appeal is pending.

(Ord. 1648, passed 8-7-90)

- **Sec. 52.079. - Computation and collection of impact fees.**

- (A) The impact fee due for the new development shall be collected at the time a building permit is issued by the city, unless an agreement between the developer and the city has been executed providing for a different time of payment.
- (B) The impact fees due for the new development shall be calculated in the following manner:
 - (1) The impact fee per service unit for each category of capital improvements, which is to be paid by each new development within the service area, shall be that established by ordinance by the City Council, as may amended from time to time, and shall be not more than the maximum impact fee per service unit established in section 52.077. Unless technical information and studies are submitted in accordance with division (B) of this section, the impact fees which are to be paid by new development shall be as set forth in Appendix B of this chapter.
 - (2) The developer may submit or the Director of Public Works and Engineering may require the submission of a study, prepared by a professional engineer, licensed in the state, clearly indicating the number of water and/or wastewater service units which will be consumed or generated by the new development. The Director of Public Works and Engineering will review the information for completeness and conformity with generally accepted engineering practices and will, when satisfied with the completeness and conformity of the study, multiply the number of service units times the impact fee per service unit contained in Appendix B of this chapter to determine the total impact fee to be collected for the development.

- (C) The amount of any impact fee due for any new development shall not exceed the amount computed by multiplying the maximum impact fee per service unit under section 52.077 by the number of new service units consumed or generated by the development.
- (D) Impact fee schedules as set forth in Appendices A and B of this chapter may be amended from time to time utilizing the amendment procedure set forth in section 52.086

(Ord. 1648, passed 8-7-90; Am. Ord. 2322, passed 3-24-98)

- **Sec. 52.073. - Definitions.**

For the purpose of this subchapter the following definitions shall apply unless the context clearly indicates or requires a different meaning:

New development. A project involving the construction, reconstruction, redevelopment, conversion, structural alteration, relocation or enlargement of any structure, or any use or extension of land, which has the effect of increasing the requirements for capital improvements or facility expansions, measured by the service units to be generated by that activity, and which requires either the approval and filing of a plat or replat pursuant to the city's subdivision regulations, the issuance of a building permit, or connection to the city's water or wastewater system.

(Ord. 1648, passed 8-7-90; Am. Ord. 1958, passed 2-1-94; Am. Ord. 2322, passed 3-24-98)

- **APPENDIX B: FEE COLLECTION SCHEDULE**

SCHEDULE 2
FEE COLLECTION SCHEDULE (PER SERVICE METER)

5/8"	\$ 560.00	\$ 190.00	\$ 750.00
3/4"	780.00	270.00	1,050.00
1"	1,310.00	440.00	1,750.00
1 1/2"	2,460.00	840.00	3,300.00
2"	3,920.00	1,330.00	5,250.00
4"	15,380.00	5,220.00	20,600.00
6"	34,040.00	11,560.00	45,600.00
8"	39,560.00	13,440.00	53,000.00
10"	90,960.00	30,890.00	121,850.00

(Ord. 1648, passed 8-7-90; Am. Ord. 1958, passed 2-1-94; Am. Ord. 2322, passed 3-24-98; Am. Ord. 2677, passed 4-16-02)