



City Council Agenda 3/3/2020

Notice is hereby given of a regular meeting of the City Council of City of San Angelo to be held March 3, 2020 at 8:30 AM at the McNease Convention Center – South Meeting Room, 501 Rio Concho Drive, San Angelo, Texas, for the purpose of considering the following agenda items.

1. Call to Order

2. Chaplain Prayer

3. Pledges

4. Proclamations/Recognitions

- a. Proclamation of March 2020 as Developmental Disabilities Awareness Month

5. Special Announcement

This meeting will recess at 9:45 a.m. to hold a Special Joint Meeting with the Planning Commission.

This meeting will reconvene at the conclusion of the Special Joint Meeting.

6. Public Comment

Issues or concerns not on the Regular Agenda may be raised by the public at this time. Citizens should speak from the podium, address all comments to the dais, begin by stating their name and address or Single Member District, and limit remarks to less than three minutes.

7. Consent Agenda

- a. Consider approving the February 18, 2020 City Council regular meeting minutes (Julia Antilley)
- b. Consider authorizing the City Manager to negotiate and execute a Lease Agreement with Shannon Medical Center for San Angelo Health Department Nursing Division office and clinic space at 2030 Pulliam St., Suite 8 for \$35,570.88 annually (Sandra Villarreal)
- c. Consider a resolution authorizing applicant, Golden Antlers Corporation, to hold a special event at Lake Nasworthy, "Live 80," permitting specified activities; imposing requirements on applicant; and granting variances relating to rules and regulations of ordinances (Carl White)
- d. Consider items related to the May 2, 2020 General Election:
1. consider approving the Certification of Unopposed Candidates
 2. consider declaring the unopposed Chief of Police candidate, Frank Carter, elected
 3. consider a resolution accepting an order declaring the election cancelled (Julia Antilley)
- e. Consider confirming appointments to MHMR Services for the Concho Valley Board of Trustees recommended by the Liaison Representative Committee (Julia Antilley)
- f. Consider authorizing the City Manager to negotiate and execute a license use agreement with Jason and Dana Calhoun to allow for parking within the S. Johnson St. public right-of-way adjacent to 2607-2635 S. Johnson St. (Jon James)

- g. Consider authorizing the City Manager to negotiate and execute a license use agreement with Amberly Watkins, representing Siber Investments II, LLC, to allow for an opaque privacy fence within the S. Park St. public right-of-way adjacent to 909 W. Beauregard Ave. (Jon James)
- h. Second reading of ordinances approving:
 - 1. Case CP20-01, an amendment to the City of San Angelo Comprehensive Plan, changing certain lands from the Transitional and Neighborhood Future Land Uses to the Neighborhood Center Future Land Use, being 32.4 acres located between Lutheran Way, Sunset Dr., W. Loop 306 Frontage Rd. and near Foster Rd.
 - 2. Case Z20-01, a rezoning from the Low-Rise Multi-Family zoning district to the Neighborhood Commercial zoning district, located at 3536 Lutheran Way (Jon James)

8. Regular Agenda

Comments regarding items on the Regular Agenda may be made by the public when each item is discussed as outlined above. Applicants, proponents, and appellants are excepted from the time limit above and instead must limit their remarks to less than five minutes.

- a. Consider a resolution accepting the Tom Green County/City of San Angelo Hazard Mitigation Action Plan 2020 (Presentation made by Emergency Management Coordinator Jim Evans)
- b. Consider authorizing a cooperative purchase of High-Density Mineral Bond Surface Treatment (HA5) through an interlocal agreement with the City of Hurst, Texas in the amount of \$513,761.14 and authorizing the City Manager to negotiate and execute all related documents (Presentation made by Operations Assistant Director Patrick Frerich)
- c. Consider allocating up to \$476,100 for equipment replacement, safety improvements, and visitor enhancement projects from the Texas Bank Sports Complex fund balance for facility improvements (Presentation made by Parks and Recreation Director Carl White)
- d. Consider authorizing the City Manager to negotiate and execute a Task Order with KSA Engineers, Inc. under RFQ AP-02-15, for professional services in the amount of \$169,541, for reconstruction of the entrance road to the San Angelo Regional Airport—Mathis Field; providing for amendment of FAA PFC Funding Application #11; and executing all related documents (Presentation made by Airport Director Jeremy Valgardson)
- e. Consider a resolution directing publication of notice of intention to issue combination tax and revenue certificates of obligation to provide funds for street improvement projects; and resolving other matters relating to the subject (Presentation made by Finance Director Tina Dierschke)

- f. Consider adopting the following ordinances:
1. Consider adopting an ordinance authorizing the issuance of City of San Angelo, Texas, General Obligation Refunding Bonds, Series 2020; establishing procedures and delegating authority for the sale and delivery of the bonds; levying an ad valorem tax; providing for the security and payment of said bonds; providing an effective date; and enacting other provisions relating to the subject
 2. Consider adopting an ordinance authorizing the issuance and sale of City of San Angelo, Texas Waterworks and Sewer System Revenue Refunding Bonds, Taxable Series 2020; establishing procedures for the sale and delivery of the Bonds; providing for the security for and payment of such Bonds; and authorizing and enacting other matters and provisions relating to the subject (Presentation made by Finance Director Tina Dierschke)
- g. First public hearing and introduction of an ordinance amending the budget for the fiscal year beginning October 1, 2019, and ending September 30, 2020, for capital items and projects (Presentation made by Finance Director Tina Dierschke)

9. Closed Session

Executive Session under the provision of Government Code, Title 5. Open Government; Ethics, Subtitle A. Open Government, Chapter 551. Open Meetings, Subchapter D. Exceptions to Requirement that Meetings be Open under the following sections:

- a. 551.072 - Deliberations about Real Property regarding
 1. Angelo Heights Addition, Block 15
- b. 551.071 - Consultation with Attorney regarding
 1. Ford Ranch
 2. West Texas Water Partnership

10. Follow Up and Administrative Issues

- a. Consider items discussed in Closed Session, if needed
- b. Consideration of approving various Board nominations

Civic Events Advisory Board: Clara Freeze (SMD6) to a first term ending December 2021

Economic Development Corporation: Edward Carrasco (SMD1) to a third term and William Dendle (SMD2) to a third term, both ending February 2022

Public Art Commission: Anne Shahan (SMD4) to an unexpired term ending April 2021
- c. Announcements and consideration of Future Agenda Items

11. Adjournment

CERTIFICATION

I hereby certify that the above notice of meeting was posted on the bulletin board at City Hall in the City of San Angelo, Texas, on the 27th day of February 2020, at 3:00 p.m.



Julia Antilley, City Clerk

All agenda items are subject to action. The City Council reserves the right to consider business out of posted order and/or meet in a closed session on any agenda item should the need arise and if applicable pursuant to authorization by Title 5, Chapter 551, of the Texas Government Code.

In compliance with the Americans with Disabilities Act, the City of San Angelo will provide for reasonable accommodations for persons attending City Council meetings. To better serve you, requests should be received 48 hours prior to the meetings. Please contact the City Clerk's Office at 325-657-4405.

Citizen requests to display materials on the city's monitors must submit the request 96 hours prior to the meeting by email to Julia.Antilley@cosatx.us. Time limits for discussion are as stated above and materials cannot exceed 10-pages. Citizens bringing materials for distribution to City Council members during the meeting must bring a minimum of 12 copies.

City Council regular meetings are broadcast on SATV Channel 17-Government Access at 10:30 a.m. and 7:00 p.m. every day, beginning the evening of the meeting until the evening of the next meeting.

Proclamation

The month of March 2020 has been designated as Developmental Disabilities Awareness Month in order to celebrate and recognize people with disabilities.

Individuals with developmental disabilities, their families, friends, neighbors, and co-workers encourage everyone to focus on the abilities of all people.

Individuals with developmental disabilities are entitled to enjoy, participate in and share the same benefits, privileges and protection afforded other citizens of our city, county, state and nation.

We encourage all citizens to support opportunities for individuals with developmental disabilities that include full access to education, housing, employment and recreation.

THEREFORE, in order to recognize the many contributions and challenges of citizens with developmental disabilities living in San Angelo, I, Brenda Gunter, Mayor of the City of San Angelo, on behalf of the City Council, do hereby proclaim the month of March 2020 as

“DEVELOPMENTAL DISABILITIES AWARENESS MONTH”

and encourage all citizens to observe the month with appropriate programs and activities. Furthermore, we encourage all citizens to seek information from those organizations with expertise in matters concerning professionals who support individuals with intellectual and developmental disabilities.

In Witness Whereof, I have hereunto set my hand and have caused the Official Seal of the City of San Angelo to be affixed this 3th day of March, 2020.

Brenda Gunter
Mayor of the City of San Angelo

City of San Angelo, Texas
Regular City Council Meeting
Tuesday, February 18, 2020

Present:

Mayor Brenda Gunter
Mayor Pro tem Harry Thomas, SMD 3
Council Member Tommy Hiebert, SMD 1
Council Member Tom Thompson, SMD 2
Council Member Lucy Gonzales, SMD 4
Council Member Lane Carter, SMD 5
Council Member Billie F. DeWitt, SMD 6

1. Call to Order

With a quorum of the City Council Members present, Mayor Gunter called the regular session of the San Angelo City Council to order at 8:30 a.m. on Tuesday, February 18, 2020, in the San Angelo McNease Convention Center, 501 Rio Concho Drive, San Angelo, Texas 76903.

2. Legislative Prayer

San Angelo Police Department Chaplain Edward Lopez provided an invocation.

3. Pledges

Fourth, fifth, and sixth grade members of the Miles ISD Student Council led pledges.

4. Proclamations/Recognitions

No proclamations/recognitions.

5. Public Comment

No public comment.

6. Consent Agenda

- a. Approval of the February 4, 2020 City Council regular meeting minutes (Julia Antilley)
- b. Authorization of the City Manager to negotiate and execute such license agreements, easements, or other legal documents necessary to permit certain existing encroachments into the Chadbourne St. right-of-way to remain as approved by the City Engineer for the Chadbourne Street Improvement Project, in a form approved by the City Attorney (Cindy Preas and Lance Overstreet)
- c. Adoption of a resolution pledging to join with other leaders in the transportation industry to stop human trafficking (Jeremy Valgardson) (Pg. 123, 2020-022)
- d. Approval of an agreement under RFQ AP-02-15 for professional services with KSA Engineers, Inc., in the amount of \$85,919, for engineering services on the FAA approved Runway 18-36 Rehabilitation project, and authorizing the City Manager to negotiate and execute all related documents (Jeremy Valgardson)
- e. Approval of a renewal agreement with Gilbert Consulting Services, LLC in the amount of \$60,000 and authorizing the City Manager to negotiate and execute all related documents (Daniel Valenzuela)
- f. Award of a Master Service Agreement for Lake Nasworthy Wastewater System Improvements to CDM Smith Inc. and executing Task Order 1 in the amount of \$770,100 for Preliminary

Engineering Phase, to be funded by Lake Nasworthy Trust Fund ballot approval funds and authorizing the City Manager to negotiate and execute all related documents (Allison Strube)

- g. Ratification of a COSADC resolution authorizing the use of Sales and Use Tax funds in support of a Defense Economic Adjustment Assistance Grant award to Tom Green County for Goodfellow Air Force Base for construction of base improvements including network tower(s) and facilities bringing 5G wireless technology to GAFB, enhancing base resiliency, and constructing related improvements that will attract new military missions to the base, a project authorized under the Texas Development Corporation Act, Section 501.104 of The Local Government Code that totals \$10,462,730 (Guy Andrews)
- h. Approval of a janitorial services contract with ABM Building Services, LLC through 1GPA contract #16-08PV-01 in the amount of \$217,680 and authorizing the City Manager to negotiate and execute all related documents (Ron Lewis)
- i. Approval of a Memorandum of Understanding with AEP Texas North Division for energy consulting services (SCORE/City Smart Program) through Clearesult Consulting at no cost to the City and authorizing the City Manager to execute all related documents (Ron Lewis)
- j. Adoption of a resolution authorizing the Solid Waste Department to provide funding for future Keep San Angelo Beautiful (KSAB) cleanup events (Jeremy Miller) (Pg. 124, 2020-023)
- k. Adoption of a resolution allowing the adjacent property owners to remove trees from the S. Chadbourne St. and W. Ave. A public right-of-way consistent with Section 7.02.034 of the Code of Ordinances (Jon James) (Pg. 125, 2020-024)
- l. Approval of a Tax Increment Reinvestment Zone incentive funding for one private project in the North TIRZ area for the property located at 124 W. 4th St. totaling \$70,197 and seven private projects in the South TIRZ area for the properties located at 19 W. Beauregard, 40 W. Twohig, 109 N. Chadbourne, 136 E. Concho Ave., 226 S. Abe, 322 N. Chadbourne, and 909 W. Beauregard totaling \$172,582.94 (Jon James)
- m. Second reading of an ordinance approving Z19-19, a rezoning from the Single Family Residential zoning district to the High Rise Multifamily Residential zoning district on 12.097 acres generally located at the southeast corner of Blum St. and E. 40th St. (Jon James) (Pg. 128, 2020-025)
- n. Second reading of an ordinance annexing into the City of San Angelo, by petition of the property owner, an 8.401 acre tract generally described as an area of land out of Casper Berberich Survey 177, abstract no. 52 and also being out of a 25.361 acre tract described and recorded in instrument no. 20166044, official public records of Tom Green County, Texas and authorizing the City Manager to negotiate and execute all related documents (Jon James) (Pg. 131, 2020-026)

Motion: Council Member Carter made a motion, seconded by Council Member DeWitt, to approve the Consent Agenda, with the exception of items 6j and 6l. The motion carried unanimously (7) ayes to (0) nays.

Motion: Council Member DeWitt made a motion, seconded by Council Member Gonzales, to approve item 6j, as presented by Operations Assistant Director Patrick Frerich and Neighborhood Services Director Bob Salas. The motion carried unanimously (7) ayes to (0) nays.

Motion: Council Member Carter made a motion, seconded by Council Member Hiebert, to approve item 6l, as presented by Planning & Development Services Director Jon James. The motion carried unanimously (7) ayes to (0) nays.

7. Regular Agenda

- a. Public hearing on proposed developments and adoption of a resolution of general support for a Low Income Housing Tax Credit project known as Walnut Trails located at the northwest corner of Houston Harte Expy. and Northwest Dr., by Trinity Housing Development Texas, LLC to construct affordable housing apartments in San Angelo (Presentation made by Neighborhood Services Director Bob Salas and Trinity Development Representative Michael Fogel) (Pg. 141, 2020-027)

Realtor Steve Eustis spoke in support of the development

Citizen Diarmid Campbell requested information regarding Davis-Bacon wage rates.

Developer Justin McDonald spoke regarding the building height.

Motion: Council Member DeWitt made a motion, seconded by Council Member Carter, to approve the item, as presented. The motion carried unanimously (7) ayes to (0) nays.

- b. Consider authorizing applicant, Spring Creek Marina, to hold a special event at Lake Nasworthy, "Live 80," permitting specified activities; imposing requirements on applicant; and granting variances relating to rules and regulations of ordinances (Presentation made by Parks and Recreation Director Carl White)

Event organizer Ray Broadway spoke regarding specifics of the planned event.

Citizen Steve Hampton (SMD6) spoke regarding prior events at Lake Nasworthy.

Direction: Council Member Hiebert gave direction, seconded by Council Member Thompson, to incorporate the following into a resolution: 10:00 p.m. hard stop; public safety concerns allow for a shutdown at the Police Department's discretion; Park's staff will provide direction ensuring restroom availability is adequate; at applicant's expense suitable security, noise/traffic/crowd control, and parking control must be provided as directed by the Police Department. The motion for direction carried unanimously (7) ayes to (0) nays.

- c. First reading and public hearing of ordinances approving:
1. Case CP20-01, an amendment to the City of San Angelo Comprehensive Plan, changing certain lands from the Transitional and Neighborhood Future Land Uses to the Neighborhood Center Future Land Use, being 32.4 acres located between Lutheran Way, Sunset Dr., W. Loop 306 Frontage Rd. and near Foster Rd.
 2. Case Z20-01, a rezoning from the Low-Rise Multi-Family zoning district to the Neighborhood Commercial zoning district, located at 3536 Lutheran Way (Presentation made by Planning & Development Services Director Jon James)

Motion: Council Member Hiebert made a motion, seconded by Council Member Thompson, to approve the item, as presented. The motion carried unanimously (7) ayes to (0) nays.

8. Closed Session

The City Council of the City of San Angelo reserves the right to adjourn into Closed Session at any time during the course of this meeting to discuss any of the matters listed below, as authorized under the following sections of the Texas Government Code:

- a. 551.071 - Consultation with Attorney regarding
1. ~~Ford Ranch~~
 2. ~~West Texas Water Partnership~~
 3. ~~Water Rights~~

- b. 551.087 – Business Prospect/Economic Development regarding
 - 1. COSADC Project 2020-W001

9. Follow Up and Administrative Issues

- a. Consider items discussed in Closed Session, if needed

No action taken on this item.

- b. Consideration of approving various Board nominations
Economic Development Corporation: Edward Carrasco (SMD1) to a third term and William Dendle (SMD2) to a third term, both ending February 2022
- c. Discussion of upcoming meetings, April and May (Good Friday & Memorial Day holidays)
- d. Announcements and consideration of Future Agenda Items

10. Adjournment

Motion: Council Member Hiebert made a motion, seconded by Council Member Carter, to adjourn the meeting. The motion carried unanimously (7) ayes to (0) nays.

There being no further business, the meeting adjourned at 10:20 a.m.

THE CITY OF SAN ANGELO, TEXAS:

Brenda Gunter, Mayor

ATTEST:

Julia Antilley, City Clerk

In accordance with Chapter 2, Article 2.300, of the Official Code of the City of San Angelo, the minutes of this meeting consist of the preceding Minute Record and the Supplemental Minute Record. Details on Council meetings may be obtained from the City Clerk's Office or a video of the entire meeting may be purchased from the Public Information Officer at 481-2727. (Portions of the Supplemental Minute Record video tape recording may be distorted due to equipment malfunction or other uncontrollable factors.)

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Sandra Villarreal, Director of Health, Health Services, 325.657.4493

Meeting Date: March 3, 2020

Item type: Consent Item

Caption:

Consider authorizing the City Manager to negotiate and execute a Lease Agreement with Shannon Medical Center for San Angelo Health Department Nursing Division office and clinic space at 2030 Pulliam St., Suite 8 for \$35,570.88 annually (Sandra Villarreal)

Summary/History:

Because of the Master Plan and City Hall/Health Building Revitalization Project that began in 2010, the Nursing-Health Department was relocated to 2030 Pulliam Street, Suite 8. Terms of the current contract expire on March 31, 2020. The space is adequate for patients, with plenty of parking and a bus stop directly in front of the office building.

This new lease term will be April 1, 2020 through May 31, 2023.

The Nursing Division has occupied this location since 2010.

Financial Impact:

Rental rate proposed by Shannon Medical for the 3,222 square foot space is \$0.92, or \$2,964.24 per month for three years, a 3.0% increase from the original \$0.89. This is the first rate increase since 2010. In addition, the Nursing Division will pay its pro rata share of utilities.

Funding for the lease and utilities is provided for by the 1115 Waiver funds and currently budgeted in FY20.

No additional funding is required from Council at this time.

Other Information/Recommendation:

Attachments:

Presentation:

None

Approvals/Reviews:

Sandra Villarreal
Sandra Villarreal
Rick Weise
Theresa James

Created/Initiated
Approved
Approved
Approved

Nolan Sosa
Tina Dierschke
Theresa James
Julia Antilley

Approved
Approved
Approved
Final Approval

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Carl White, Parks and Recreation Director, Parks and Recreation, 325-657-4450

Meeting Date: March 3, 2020

Item type: Consent Item

Caption:

Consider a resolution authorizing applicant, Golden Antlers Corporation, to hold a special event at Lake Nasworthy, "Live 80," permitting specified activities; imposing requirements on applicant; and granting variances relating to rules and regulations of ordinances (Carl White)

Summary/History:

City Council, at the February 18, 2020 meeting, considered the applicant's request to hold a public concert special event at the newly leased property associated with the Spring Creek Marina. The agreement for the lease of this property was amended on November 19, 2019, to include the new leased property. The amendment specifically states, "In no event shall the Leased Premises be utilized to host concerts or similar events requiring staging, amplified sound systems, etc., unless otherwise authorized by City Council.", therefore we sought City Council's consideration.

At the February 18, 2020 meeting, City Council approved moving forward with authorizing the special event concert with stipulations. Those stipulations are documented in the attached resolution for consideration. In brief, they are: 1) the concert must end by 10:00 with no amplified noise or activities occurring past this time, 2) the San Angelo Police Department has the authority to terminate the event at their discretion for safety considerations to protect the public, 3) the applicant must have adequate restroom facilities for the intended crowd (one toilet per 250 people), 4) the applicant must cover the cost for security and traffic control for the event, and 5) all other requirements for special event applications must be met.

The "Live 80" event, hosted by Spring Creek Marina, would occur on the new leased area at Spring Creek Marina on April 11, 2020. Live, amplified music is scheduled to be performed from 7:00 p.m. until 10:00 p.m. The event is expected to draw up to 3,000 people.

Financial Impact:

There is negligible cost to the City to facilitate the event. In fact, with hundreds of participants, some from out of town, there is a notable and beneficial economic impact by allowing this event.

Other Information/Recommendation:

Attachments:

- | | |
|---|--|
| 1. Resolution - Live 80 | Resolution - Live 80.doc |
| 2. Exhibit A Live 80 Resolution | Exhibit A Live 80 Resolution.doc |
| 3. Spring Creek Marina event request for April 2020 | Spring Creek Marina event request for April 2020.pdf |

Presentation:

Approvals/Reviews:

Carl White
Theresa James
Tina Dierschke
Theresa James
Julia Antilley

Created/Initiated
Approved
Approved
Approved
Final Approval

A RESOLUTION OF THE CITY OF SAN ANGELO AUTHORIZING APPLICANT, GOLDEN ANTLERS, TO HOLD A SPECIAL EVENT KNOWN AS “LIVE 80” AND GRANTING VARIANCES FROM CITY ORDINANCES.

WHEREAS, the City Council for the City of San Angelo has approved a Special Event Application process through which individuals or groups may seek authorization to hold special events on public property; and,

WHEREAS, Chapter 9, Section 9.01.051 “Special Events” of the Code of Ordinances for the City of San Angelo provides that the City Council may authorize temporary variances from the prohibitions and requirements of City ordinances for such events; and,

WHEREAS, Golden Antlers Corporation doing business as Spring Creek Marina has requested for “LIVE 80” to take place at Spring Creek Marina; and,

WHEREAS, the City Council has taken into account the proximity of the event to residential areas; the probability of the event causing undue disturbance to users of the city property; the ability of the organizers to ensure the safety of participants and observers; and the effect on public safety of the granting of variances for the event.

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SAN ANGELO, TEXAS THAT:

Part 1: Golden Antlers Corporation (hereinafter Applicant), is hereby authorized to hold a special event in Lake Nasworthy, known as “LIVE 80”. The event, including set up and clean up, will take place from 8:00 AM Saturday, April 11, 2020 through 12:00 PM Sunday, April 12, 2020.

Part 2: The event may include those activities as described on that certain “City of San Angelo-Special Event Application” and attachments thereto (hereinafter collectively referred to as “Application”) submitted by Applicant, a copy of which is attached to this Resolution as **Exhibit A**, and made a part hereof for all purposes.

Part 6: A variance related to Section 8.01.005 Noises Prohibited for the event is hereby granted changing the time of prohibition on notice to 10:00 p.m. to 7:00 a.m.

PASSED and APPROVED THIS _____ DAY OF _____, 2020.

ATTEST:

CITY OF SAN ANGELO, TEXAS

Julia Antilley, City Clerk

Brenda Gunter, Mayor

APPROVED AS TO FORM

Theresa James, City Attorney

EXHIBIT A
SUPPLEMENT TO SPECIAL EVENTS PERMIT
“Live 80”
April 11, 2020

Permit Holder: Golden Antler’s Corp dba Spring Creek Marina & RV

Contact Person: Name Phone
 Ray Broadway 775-455-5745

Location of Event: Spring Creek Marina

Name of Event: “Live 80” (hereinafter “Event”)

Date of Event: April 11, 2020, April 12, 2020
Set up: April 11, 2020 8 a.m.
Clean up: April 12, 2020 12 p.m.

Anticipated
Attendance: up to 3,000

Hours of
Operation: Concert will start at 7 p.m. and end no later than 10 p.m. on April 11, 2020. No amplified noise or activities are to occur past 10 p.m.

This supplement to the special event permit is issued to Golden Antlers by the City of San Angelo (hereinafter “City”) subject to the conditions and requirements set forth below.

Permitted Activities

1. Any alcohol at the event shall be BYOB.
2. No parking for the event shall take place off the leased property.
3. The San Angelo Police Department retains their authority to terminate or otherwise limit the event if it becomes in the sole discretion of SAPD a danger to the public.

Requirements for Permit Holder

1. Sanitation.
 - a. Event will have adequate restroom facilities for the intended crowd (one toilet per 250 people, one of which must be handicap accessible)
 - b. Event will clean up area at the conclusion of event.
2. Insurance and Indemnification.

- a. Event shall provide insurance as required by the City of San Angelo's Risk Management Office and shall provide proof of such insurance.
3. Security. Event shall hire the number of security officers and traffic control officers as determined by the SAPD. All costs for the security and traffic officers will be the sole responsibility of the Permit Holder.

The City Manager or his designee shall have authority to require Golden Antler's to comply with the above-listed requirements and to correct any deficiencies. In case of a threat to the public health or safety, the City Manager or his designee or the Chief of Police or designee may terminate or suspend operations of the Event until deficiencies are corrected.

Variances: See Attachment 1 to this Exhibit.

Authority of City to Regulate Event

The City Manager or his designee shall have the authority to interpret this Permit and/or adopt new rules during the Event to ensure public health and safety and proper use of all public rights-of-way.

EVENT SPONSOR

Ray Broadway

Daniel Valenzuela, City Manager
Date

**Attachment 1 to Exhibit A
TO THE 2020 Spring Creek Marina “Live 80” Show**

Exhibit 1 to Event Resolution

Variances

- 1) Notwithstanding City ordinances to the contrary, event Sponsor shall not be required to pay for permits for tents.
- 2) Notwithstanding City ordinances to the contrary, event Sponsor shall not be required to obtain permits for signs.
- 3) Notwithstanding City ordinances to the contrary, flags, banners, and information signs shall be allowed for the Event. Placement shall be coordinated with and approved by the City Manager or his designee.
- 4) Notwithstanding City ordinances to the contrary, the noise ordinance will be enforceable after 10:00 p.m. on April 11, 2020.
- 5) Notwithstanding City ordinances to the contrary, event Sponsor may use amplified sound devices during the event.

City of San Angelo – Special Event Application (ver. June 15, 2015)

Complete and return this application to the City of San Angelo Parks and Recreation Department Office at 702 South Chadbourne St. at least 30 days prior to the event for events not requesting City Support, at least 90 days for events requesting City Support.

Event Information	
Event Name: <u>Live 80</u>	
Event Date(s) and Hours: <u>4/11/20 7PM - 10PM</u>	Event Purpose & Description: <u>Live music/concert</u>
Event Location(s): <u>NEW LEASED SPRING CREEK MARINA 2680 Camper</u>	
Attendance, Estimated Daily/Overall: <u>1500-2000 / 1</u>	
Type of Event (Check one – see Special Events Policy for additional information)	
☐ Non-Profit Event ☒ For-Profit Event * for private events contact Parks & Rec. Admin. at 325-657-4279 for reservations ☐ City Operated/Sponsored Event ☐ City Co-Sponsored Event ☐ Political or Ballot Issue Event ☐ Parade, Block Party, Road Run/Walk/Etc – Specify: _____ ☐ other (describe): _____	
Event Sponsor Information	
Legal Business Name: <u>Golden Antlers Corp dba Spring Creek Marina & RV</u>	
Address: <u>2680 Camper rd SAN Angelo Texas 76904</u>	
Mailing Address: <u>SAME</u>	
Telephone: <u>775 455 5745</u>	Email Address: <u>goldantlers72@gmail.com</u>
Contact Name: <u>Pat Broadway</u>	Title: <u>President</u>
Contact Number: <u>775 455 5745</u>	Email Address: <u>goldantlers72@gmail.com</u>
Event Information (continued)	
Estimated date/time for set up: <u>4/11 8AM</u>	Describe set up and clean up procedures: <u>Bring in stage.</u> <u>clean up properly</u> *Sponsoring organization may be required to supply a dumpster and portable restrooms.
Estimated date/time for clean up: <u>4/12 12PM</u>	
Will street closure and/or use be necessary? ☐ YES ☒ NO If yes, complete the street closure/use form. <u>If yes, show proposed road uses, emergency vehicle access, and barricade locations on your event map.</u> Note that the City of San Angelo does not have authority to close County and State roads.	
Describe crowd and parking control and security plans for this event: Sponsors of an event must have certified police officers present, if required. This requirement, as well as the number of officers needed, will depend on the type of event (including activities), number of anticipated attendees at the event, whether or not alcohol will be consumed at the event, as well as other factors. <u>would like to use PD/private company</u>	

Event Information (continued)

Will music be provided/included during the event? ☒ YES ☐ NO

Describe type of music proposed: ☒ Live ☐ Amplification ☐ Recorded ☐ Loudspeakers

Proposed time music will begin:

Proposed time music will end:

Describe noise control:

Show proposed location of live band/disc jockey/loudspeakers/equipment on your attached event map

Do you plan to have special event signs and banners? ☐ YES ☒ NO Signs must conform to City Ordinances

Describe the general nature of signage used for the event:

Show locations for proposed placement of banners and signs on your attached event map.

Will the event have activities such as inflatables, amusement rides, climbing walls, live animals, etc?

☐ YES ☒ NO Only inflatable jump vendors who meet insurance requirements and have been pre-approved by the Parks & Recreation Department will be allowed to operate in the parks.

If yes, describe in detail the types of attractions and activities proposed:

Show locations for all proposed activities on your attached event map.

Will the event have food, beverage, or concessions? ☐ YES ☒ NO

See Section F of the Special Events Policy for health department approvals and temporary food license requirements.

Describe in detail the general nature and scope of food, beverage, and concessions vendors:

At this point BYOB

Show locations for proposed placement of food, beverage, and concessions vendors on your attached event map.

Do you plan to have alcohol served at this event? ☐ YES ☒ NO

Public events which sell alcohol must use the services of the City's Concessionaire. The Parks & Recreation Staff can provide you with the contact information for the Concessionaire.

If alcohol is present at the event, describe measures to be taken to prohibit the sale and distribution of alcohol to minors:

BYOB At this time Leased properly

Will the following be placed or located in the event area?

No stakes of any kind allowed on any walkway, roadway, or other hard surface.

Item	Quantity	Item	Quantity
☒ Booths:	1	☒ Tables:	
☐ Tents*:		☐ Trash cans:	
☐ Awnings:		☒ Portable Toilets:	4
☐ Canopies:		(may be required depending on event)	
☐ Rides:		☐ other (describe):	

* Tents that exceed 120 square feet of area will require special permit. Contact Permits Office at 657-4421/2.

You must attach a plan of the proposed event map and layout. Include the proposed location of booths, tents, tables, portable toilets, rides, routes, etc.

Event Information (continued)**Application Check List** (failure to provide necessary documentation will delay application review and approval)

I have attached the following items:

- ☒ Completed Application ☒ Application Non-Refundable Permit Fee of \$35.00 ☐ Deposit (see policy)
- ☒ Certificate of Insurance (10 business days prior to first day of event) ☐ Street use and/or closure permit (if required)
- ☒ Detailed Event Map (showing road uses, signage, vending, tent, and activity locations, etc. Maps can be found on Google earth or www.cosatx.us, look under DEPARTMENTS & SERVICES > GEOGRAPHICAL INFORMATION SYSTEMS > Online mapping > Launch interactive online map)
- ☐ Temporary Health Permit (if required)

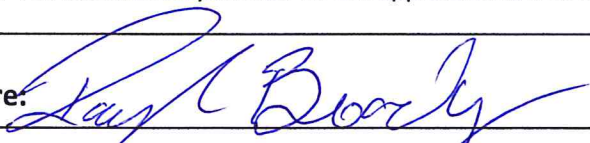
If any document is missing, please explain:**The applicant and sponsoring organization understands and agrees to:**

- provide a certificate of insurance with all coverage deemed necessary for the event, name the City of San Angelo as an additional insured on all applicable policies, and submit the certificate to the City Risk Management Office no later than 10 business days prior to the event (contact the Risk Management Office at 325-657-4359);
- comply with all City and County ordinances and applicable state laws, comply with City policies, and acknowledge that the special events permit does not relieve the applicant or sponsoring organization from meeting any application requirements of law or other public bodies or agencies; and
- promptly pay any billing for City services rendered or deemed necessary as part of the event and event approval.

Applicant and sponsoring organization further understands the approval of this special event may include additional requirements and/or limitations based on the City's review of this application, in accordance with the City's Special Events Policy. The applicant and sponsoring organization understand that it may be necessary to meet with City staff during the review of this application and that City Council approval may be necessary. The applicant agrees the sponsoring organization will operate the event in conformance with the written approval.

Sponsors of events, in which food and/or beverage vendors will be present, must contact the City of San Angelo Health Department **90 days** prior to of the event date. **Contact the City of San Angelo Health Department at 325-657-4493.**

As the duly authorized agent of the sponsoring organization, I hereby apply for approval of the Special Event and affirm the above understandings. The information provided on this application is true and complete to the best of my knowledge.

Applicant Signature:**Date:**

1/15/2020

Complete and return this application to the City of San Angelo Parks and Recreation Department Office at 702 South Chadbourne St. at least 30 days prior to the event for events not requesting City Support or at least 90 days prior for events requesting City Support. Contact the Parks & Recreation Department at 657-4279/4450 if you have any questions about this application, this policy, or your event.

**Final
Approval:****Date:****Application** 01-15-2020
Receipt Date & Time:

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Julia Antilley, City Clerk, City Clerk, 325-657-4405

Meeting Date: March 3, 2020

Item type: Consent Item

Caption:

Consider items related to the May 2, 2020 General Election:

1. consider approving the Certification of Unopposed Candidates
2. consider declaring the unopposed Chief of Police candidate, Frank Carter, elected
3. consider a resolution accepting an order declaring the election cancelled (Julia Antilley)

Summary/History:

Under the Texas Election Code 2.051-2.053, the City Council must accept the Certification of Unopposed Candidates as soon as possible after the write-in deadline if all positions are unopposed. The Council must then adopt in an Open Meeting an order declaring the election cancelled.

The unopposed candidate, who has been declared elected at the meeting ordering the cancellation, must wait until the prescribed canvassing period to be sworn in and assume their duties. This ceremony will be held at our regularly scheduled May 5, 2020 meeting.

Financial Impact:

Cancelling the election will save an estimate of between \$30,000 to \$60,000 based on prior general elections. Election costs vary depending on the number of participating entities and whether a runoff election is necessary.

The most recent payments for General Elections have been:

2017: \$28,503

2016: \$60,661

2015: \$28,313

Other Information/Recommendation:

Attachments:

1. 20-0192_CC CANCEL_ELEC_RES 5.2.2020 final 20-0192_CC CANCEL_ELEC_RES 5.2.2020 final.doc

Presentation:

Approvals/Reviews:

Julia Antilley
Dan Saluri
Theresa James

Created/Initiated
Approved
Approved

Julia Antilley

Final Approval

RESOLUTION #2020-0xx

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN ANGELO, TEXAS, RECEIVING THE CERTIFICATION OF UNOPPOSED CANDIDATE FROM THE CITY CLERK IN THE MAY 2, 2020 GENERAL CITY ELECTION FOR THE OFFICE OF CHIEF OF POLICE; DECLARING UNOPPOSED CANDIDATE TO BE ELECTED TO OFFICE; ORDERING CANCELATION OF THE CITY GENERAL ELECTION FOR MAY 2, 2020; PROVIDING FOR SEVERABILITY; AND, ESTABLISHING AN EFFECTIVE DATE

WHEREAS, the City Council of the City of San Angelo, Texas, on the 21st day of January, 2020 duly passed Resolution No. 2020-011 calling a general election to be held on the first Saturday in May, 2020, same being the 2nd day of May, 2020, for the purpose of electing one Chief of Police, and amended by Resolution No. 2020-021 of the City of San Angelo, Texas, on February 4, 2020, relating to the locations of designated polling places; and

WHEREAS, pursuant to Sections 143.007 and 146.054, Texas Election Code, the deadlines for filing applications for a place on the ballot and declaration of write-in candidacy for the City of San Angelo general election for May 2, 2020 have expired; and

WHEREAS, pursuant to Section 2.052 of the Texas Election Code, the City Clerk has certified in writing that Frank Carter is unopposed in the election for the respective office of Chief of Police; and

WHEREAS, pursuant to Section 2.053 of the Texas Election Code, on receipt of the certification, the governing body of the political subdivision by order or ordinance may declare an unopposed candidate elected to the office and cancel the election;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF SAN ANGELO, TEXAS THAT:

SECTION 1: That the City Council, hereby receives the City Clerk's Certification of Unopposed Candidates for the May 2, 2020 city general election.

SECTION 2: The City Council hereby declares that the following unopposed candidate for the May 2, 2020 city general election is elected to the respective office:

FRANK CARTER, CHIEF OF POLICE

SECTION 3: That the declared elected candidate shall assume the duties of office when the certificate of election is issued as provided for at law.

SECTION 4: The City of San Angelo City Council hereby orders that the city general election scheduled to be held on May 2, 2020 is cancelled, in accordance with Section 2.053(a) of the Texas Election Code.

SECTION 5: That the written Certification of Unopposed Candidates prepared by the City Clerk and delivered to the City Council is attached hereto as **Exhibit A** and is made a part hereof for all purposes.

SECTION 6: That the written Order of Cancellation prepared by the City Clerk is attached hereto as **Exhibit B** and is made a part hereof for all purposes.

SECTION 7: That a copy of the Order of Cancellation shall be posted on May 2, 2020, the day on which the election was to be held, by the poll workers at each polling place used or that would have been used in the election.

SECTION 8: Should any section, provision, clause, or word of this Resolution be declared unconstitutional or invalid for any reason, the remainder of this ordinance shall not be affected thereby.

SECTION 9: That this Resolution shall be in full force and effect from and after its passage and approval.

ADOPTED on this 3rd day of March, 2020.

CITY OF SAN ANGELO, TEXAS:

ATTEST:

Brenda Gunter, Mayor

Julia Antilley, City Clerk

APPROVED AS TO FORM:

Theresa James, City Attorney

EXHIBIT A

AW12-1
Prescribed by Secretary of State
Section 2.051 – 2.053, Texas Election Code
2/14

**CERTIFICATION OF UNOPPOSED CANDIDATES FOR
CHIEF OF POLICE**

To: Presiding Officer of Governing Body
Al: Presidente de la entidad gobernante

As the authority responsible for having the official ballot prepared, I hereby certify that the following candidates are unopposed for election to office for the election scheduled to be held on May 2, 2020

Como autoridad a cargo de la preparación de la boleta de votación oficial, por la presente certifico que los siguientes candidatos son candidatos únicos para elección para un cargo en la elección que se llevará a cabo el 2 de mayo de 2020.

List offices and names of candidates:
Lista de cargos y nombres de los candidatos:

Office(s) Cargo(s)
Chief of Police

Candidate(s) Candidato(s)
Frank Carter



Signature (Firma)

Julia W. Antilley
Printed name (Nombre en letra de molde)

City Clerk
Title (Puesto)

February 19, 2020
Date of signing (Fecha de firma)



(Seal) (sello)

EXHIBIT B

AW12-2
Prescribed by Secretary of State
Section 2.051 – 2.053, Texas Election Code
2/14

ORDER OF CANCELLATION
ORDEN DE CANCELACIÓN

The City of San Angelo City Council hereby cancels the election scheduled to be held on May 2, 2020 in accordance with Section 2.053(a) of the Texas Election Code.

The following candidates have been certified as unopposed and are hereby elected as follows:

El ciudad de San Angelo por la presente cancela la elección que, de lo contrario, se hubiera celebrado el 2 de Mayo, 2020 de conformidad, con la Sección 2.053(a) del Código de Elecciones de Texas. Los siguientes candidatos han sido certificados como candidatos únicos y por la presente quedan elegidos como se haya indicado a continuación:

Candidate (<i>Candidato</i>)	Office Sought (<i>Cargo al que presenta candidatura</i>)
Frank Carter	Chief of Police

A copy of this order will be posted on Election Day at each polling place that would have been used in the election.

El Día de las Elecciones se exhibirá una copia de esta orden en todas las mesas electorales que se hubieran utilizado en la elección.

Mayor (Alcalde)

City Clerk (Oficinista de la ciudad)

(seal) (*sello*)

March 3, 2020
Date of adoption (*Fecha de adopción*)

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Julia Antilley, City Clerk, City Clerk, 325-657-4405

Meeting Date: March 3, 2020

Item type: Consent Item

Caption:

Consider confirming appointments to MHMR Services for the Concho Valley Board of Trustees recommended by the Liaison Representative Committee (Julia Antilley)

Summary/History:

Council Member Gonzales serves as the Council Representative to the MHMR Liaison Representative Committee which presented the nominations.

The proposed unexpired term is March 1, 2020 through October 31, 2020 for:

- Donald W. McKee (new appointment)
- Sangeeta Singg (new appointment)

Financial Impact:

None

Other Information/Recommendation:

Attachments:

- | | | |
|----|-------------------------|-----------------------------|
| 1. | MHMR Board Appointments | MHMR Board Appointments.pdf |
|----|-------------------------|-----------------------------|

Presentation:

Approvals/Reviews:

Julia Antilley	Created/Initiated
Theresa James	Approved
Julia Antilley	Final Approval



MHMR SERVICES FOR THE CONCHO VALLEY

"Working Together To Help People Help Themselves"

TO: **Appointing Agencies**
Angelo State University- President
City of San Angelo-City Council
San Angelo Independent School District-Board of Trustees
Tom Green County-Commissioners Court

FROM: **Appointing Agencies - Liaison Representatives**
Dr. Bradley Petty, Angelo State University
Ms. Lucy Gonzales, City of San Angelo
Mr. Sammy Farmer, Tom Green County
Mr. Art Hernandez, San Angelo Independent School District

SUBJECT: Appointments to the Board of Trustees of the MHMR Services for the Concho Valley

DATE: February 12, 2020

The Liaison Representatives nominates the following persons to the MHMR Services for the Concho Valley Board of Trustees for two unexpired terms ending October 31, 2020:

Mckee, Donald W – March 1, 2020 through October 31, 2020 (new appointment)
Singg, Sangeeta – March 1, 2020 through October 31, 2020 (new appointment)

Official appointment of these nominees is requested by the Liaison Representatives to provide a duly constituted Board of Trustees as required by the Texas Laws Relating Mental Health and Mental Retardation. Documentation (notarized meeting minutes where applicable) of the appointments should be sent to the Annette Hernandez, Board Liaison, MHMR Services for the Concho Valley, 1501 West Beauregard, San Angelo, Texas 76901.

If you have any questions, please feel free to contact Ms. Annette Hernandez at (325) 658-7750 ext. 346.

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Jeff Fisher, Sr. Planner, Planning and Development Services, 325.657.4210

Meeting Date: March 3, 2020

Item type: Consent Item

Caption:

Consider authorizing the City Manager to negotiate and execute a license use agreement with Jason and Dana Calhoun to allow for parking within the S. Johnson St. public right-of-way adjacent to 2607-2635 S. Johnson St. (Jon James)

Summary/History:

On January 22, 2020, the applicants submitted an application for a Right-Of-Way Encroachment to allow an existing parking lot located within the public right-of-way adjacent to the subject property at 2607-2635 South Johnson Street. The property has an existing retail commercial development and the parking lot for the property has been extended into the public right-of-way without approval since at least 2008, according to historic aerials.

Approval of this encroachment will legalize the existing parking lot in the right-of-way. The total encroachment area measures a width of 28 feet, length of 227 feet, and a total area of 6,356 square feet. After required revisions to ensure adequate maneuvering area, there will be a total of 17 parking spaces in the right-of-way that will face the property (in compliance with City ordinances, none will directly back out onto South Johnson Street).

As part of the approval, the applicant has agreed to installation of a 5-foot sidewalk to provide pedestrian connectivity and walkability along South Johnson Street where this property represents a gap in a largely continuous sidewalk from Angelo State to Knickerbocker. The applicant will also be installing four new pole lights for security within the right-of-way. The associated license agreement will include the parking lot, sidewalk, and lighting improvements.

This request was circulated to City departments and external utility providers for comments. There were no objections received.

Financial Impact:

N/A

Other Information/Recommendation:

Staff recommends **APPROVAL with three (3) Conditions of Approval:**

1. That the owners enter into a temporary nonexclusive right-of-way license use agreement for the encroachments.
2. That the owners obtain an alternative parking plan from the Planning and Development Services Director to allow parking in the public right-of-way; and,
3. That the owners obtain any required permits from the Permits and Inspections Division, including required electrical permit(s) for the new pole lights.

Attachments:

- | | | |
|----|--|---|
| 1. | PL_Agreement (2607-2635 S. Johnson St) | PL_Agreement (2607-2635 S. Johnson St).docx |
|----|--|---|

2. Encroachment plan_FINAL
3. aerial map

Encroachment plan_FINAL.pdf
aerial map.jpg

Presentation:

Jon James

Approvals/Reviews:

Jeff Fisher

Hillary Bueker

Jon James

Brandon Dyson

Jon James

Theresa James

Julia Antilley

Created/Initiated

Approved

Approved

Approved

Approved

Approved

Final Approval

THE STATE OF TEXAS §
TOM GREEN COUNTY §

WITNESSETH:

The “Licensed Use” as set forth herein, commencing from the foregoing effective date, is subject to the conditions, restrictions, covenants and exceptions hereinafter set forth:

1

hereof. Licensee does not and shall not claim at any time any interest or estate of any kind or extent whatsoever in Licensed Premises by virtue of this License or its use of Licensed Premises hereunder. Additionally, Licensee does not and shall not claim at any time any interest or estate of any kind or extent whatsoever in Licensed Premises by virtue of any expenditure of funds by Licensee for improvements, construction, repairs, partitions, or alterations to Licensed Premises which may be authorized by City.

2. Licensed Use: Licensed Premises shall be used for the limited purpose of constructing a new +/-6,356-square foot parking lot to service a commercial development on the adjacent property at 2607-2635 South Johnson Street; including a new sidewalk and pole light fixtures, substantially as described and depicted and described in **Exhibits “A” and “B”**, attached hereto and made a part hereof for all purposes.

3. Alternative Parking Plan approval required: Any design construction or installation shall be in accordance with an Alternative Parking Plan approval from the Director of Planning and Development Services in order to allow off-site parking.

3. Term: This License shall commence on the effective date set forth herein above and if not earlier terminated as herein provided, continue for a period of forty (40) years to _____, 2060, at which time this License shall automatically extend annually until terminated as herein provided.

4. Non-exclusive License: This license is non-exclusive and is made expressly subject and subordinate to the reserved right of the City to use or permit the use of the Licensed Premises for public sidewalk area, utility right-of-way or any other public purpose.

5. Right of Termination:

- (a) The City reserves the right to terminate and cancel this License by resolution passed by its Governing Body upon a finding that the License is inconsistent or incompatible with the reserved right of the City to use or permit the use of the Licensed Premises or whenever the purpose or use of the License is or has become a nuisance as determined in the discretion of the City Council, and all rights granted hereunder shall thereupon be considered fully terminated and canceled and the City

shall not be held liable by reason thereof. The parties hereto concur that said resolution shall be final and shall not be subject to review by the Courts.

- (b) Upon termination or cancellation by City or Licensee, this License shall become null and void and Licensee or anyone claiming any rights under this instrument shall remove, to the extent required by City, any or all improvements, appurtenances and encroachments owned by Licensee from the Licensed Premises at Licensee's expense, and shall restore the Licensed Premises to its condition at the effective date of this License at the sole cost of the Licensee. In the event that Licensee shall fail to remove its improvements, appurtenances and encroachments as required and to restore the Licensed Premises, City shall have the right to do the necessary work to remove said improvements, appurtenances and encroachments and to restore the Licensed Premises to its condition at the effective date of this License, or to cause such work to be done, and to assess reasonable allocated costs or the incurred cost of all such work against Licensee and premises of which Licensed Premises is a part.

6. Improvements: Licensee may utilize a designated portion of the public street right-of-way along the west side of South Johnson Street, immediately adjacent to a property at 2607-2635 South Johnson Street described as a 0.667-acre tract in Block 4 in the College Hills Addition, Section One, for the purpose of a new +/-6,356-square foot parking lot to service a commercial development on the property; including a new sidewalk and pole light fixtures, substantially as described and depicted and described in **Exhibits "A" and "B"**, attached hereto and made a part hereof for all purposes. Licensee shall not install any additional improvements or permanent fixtures on the Licensed Premises without first securing the written permission of City.

7. Codes, Ordinances and Regulations: Licensee shall comply with all applicable codes, ordinances and regulations of local, state and federal governments in the exercise of its use of the Licensed Premises. This requirement shall include, but not be limited to, compliance at all times with the Texas Architectural Barriers Act, Texas Accessibility Standards, Americans with Disabilities Act, as well as local ordinances and regulations relating to occupancy loads, unobstructed passage ways, entrances and exits, and signage.

8. Improvements and Maintenance: It is further understood that if and when the City, in the exercise of its discretion, shall determine that the grade of any street or sidewalk should be modified or changed, or that any other work should be done in connection with any public improvement which will affect the Licensed Premises, Licensee's improvements or appurtenances thereon, or the use thereof by Licensee, City may proceed with such improvement or work without liability to Licensee. Further, any modifications or changes to Licensees' facilities in the licensed area or in construction or reconstruction of any public improvement attributable to Licensees' use of the licensed area and/or its installations and improvements shall be made at the sole expense of Licensee and to the satisfaction of City.

9. Insurance and Indemnification: **At such time as this license is granted, it is agreed that Licensee shall hold harmless and indemnify City and procure and keep in full force and effect Insurance coverage of the kind and in the minimum amounts, all as set forth in Exhibit "C", attached and made a part hereof for all purposes, which provisions shall survive termination or expiration of the term of this License Agreement.**

10. Reservations: This License is subject and subordinate to any existing utilities or communication facilities, including drainage, presently located within or about the Licensed Premises, owned or operated by the City or any utility or communications company, public or private, and to any vested rights presently owned by any utility or communications company, public or private, for the use of the Licensed Premises for facilities presently located within the boundaries of said Licensed Premises. No improvement or appurtenance shall be constructed or placed upon, over or across the Licensed Premises in such a manner as to interfere with the operation of any utilities or communication facilities. All and any communication company and utility, both public and private, shall have the right to remove and keep removed all or parts of any improvement or appurtenance which may in any way endanger or interfere with the construction, maintenance or efficiency of its respective systems within the Licensed Premises. All communication companies and utilities, both public and private, shall have the full right to remove and keep removed all parts of any improvements or appurtenances which in any way may endanger or interfere with the construction, maintenance and efficiency of its respective system and shall at all times have the full right of ingress and egress to or from and upon the Licensed Premises for the purpose of constructing, relocating, inspecting, patrolling, maintaining and adding to or removing all or part of its respective systems without the necessity at any time of procuring the permission of Licensee.

11. Successors and Assigns: The terms of this License shall be binding upon the Licensee and Licensee's successors and assigns.

12. Non-assignable: This License may not be assigned by Licensee without the prior written approval from the City. The assignee shall deliver a copy of the assignment, along with the assignee's written acceptance of the provisions of this License, to the Director of Planning and Development Services for the City of San Angelo, or his designee, within ten (10) days of such assignment. Should Licensee fail to obtain prior written approval for assignment of this License or fail to provide the City with the required written acceptance and a copy of the assignment as provided, the Director of Planning and Development Services or his designee, may terminate this License.

IN WITNESS WHEREOF, the parties hereto have caused License to be executed in duplicate and intend to be legally bound thereby.

LICENSOR:
CITY OF SAN ANGELO

BY: _____
Daniel Valenzuela, City Manager

Date: _____, 2020

ATTEST:

Julia Antilley, City Clerk

LICENSEE:
JASON AND DANA CALHOUN

BY: _____
Jason Calhoun

BY: _____
Dana Calhoun

Date: _____, 2020

STATE OF TEXAS

§

COUNTY OF TOM GREEN §

 This instrument was acknowledged before me on the _____ day of _____, 2020,
by **Jason and Dana Calhoun**.

Notary Public, State of Texas

**TEMPORARY NONEXCLUSIVE RIGHT-OF-WAY USE LICENSE AGREEMENT
BETWEEN CITY OF SAN ANGELO AND JASON AND DANA CALHOUN**

APPROVED AS TO INSURANCE
REQUIRMENTS:

Charles Hagen,
Risk Manager

APPROVED AS TO FORM:

Brandon Dyson,
Assistant City Attorney

APPROVED AS TO CONTENT:

Jon James, AICP
Director of Planning and Development Services

EXHIBIT A
LEGAL DESCRIPTION
Page 1 of 2 pages

That portion of South Johnson Street public right-of-way described as follows:

COMMENCING along the southeast corner of the property, being the southeast corner of Block 4 of the College Hills Addition, Section One;

Proceeding easterly within the South Johnson Street right-of-way for a distance of 28 feet;

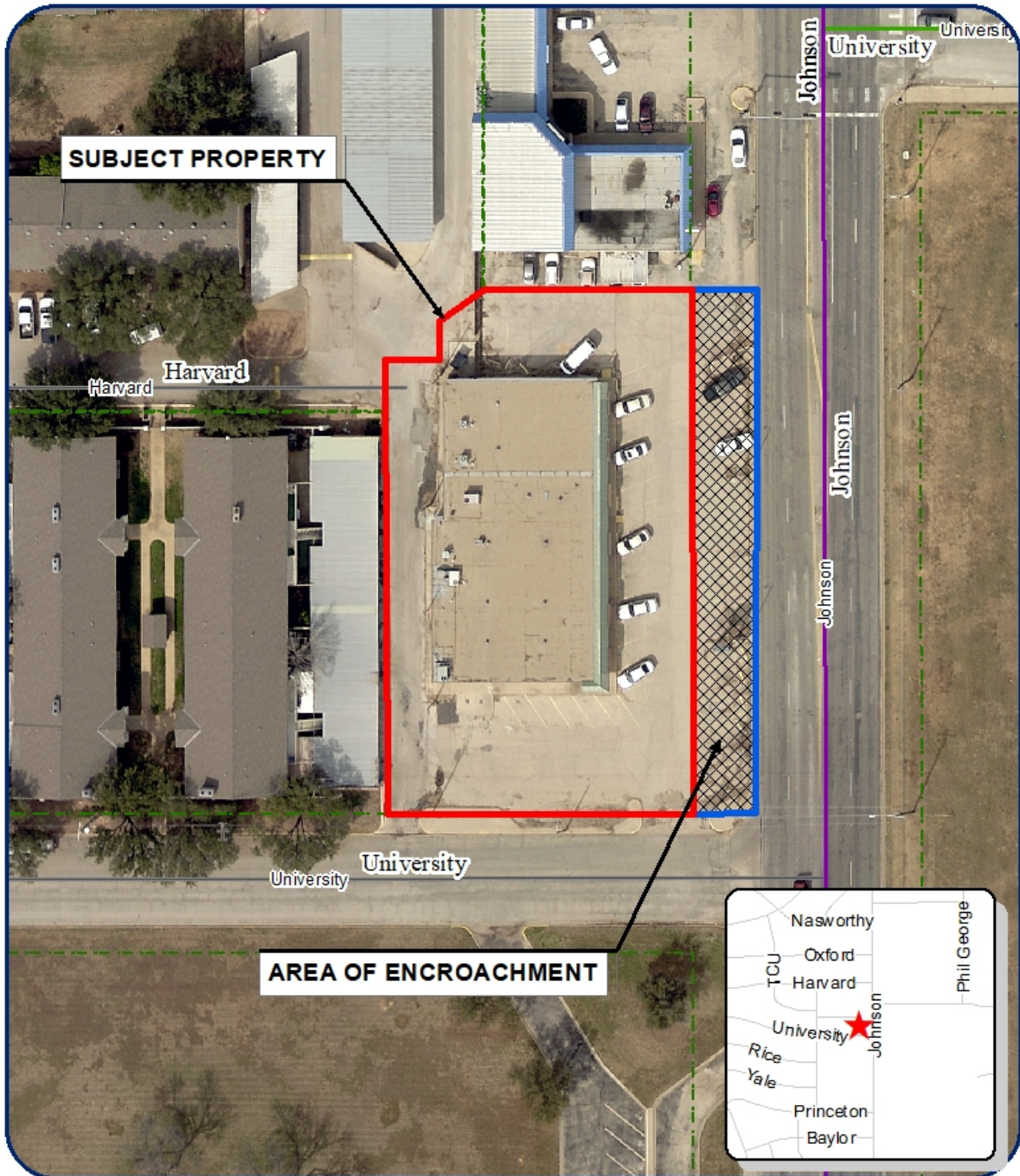
Proceeding northerly within the South Johnson Street right-of-way for a distance of 227 feet;

Proceeding westerly within the South Johnson Street right-of-way for a distance of 28 feet;

THENCE continuing south along the property line to said point of beginning, at a distance of 227 feet and comprising a total of 6,356 square feet as depicted on Exhibit "A" attached.

EXHIBIT A
PLAN VIEW

Page 2 of 2 pages



Right-Of-Way Encroachment

Calhoun

Council District: Lane Carter -District 5

Neighborhood: ASU - College Hills

Scale: 1" approx. = 55 ft

2607-2635 S. Johnson St

Legend

Subject Properties:

Current Zoning:

Requested Zoning Change:

Vision: **Neighborhood Center**



EXHIBIT B SITE PLAN

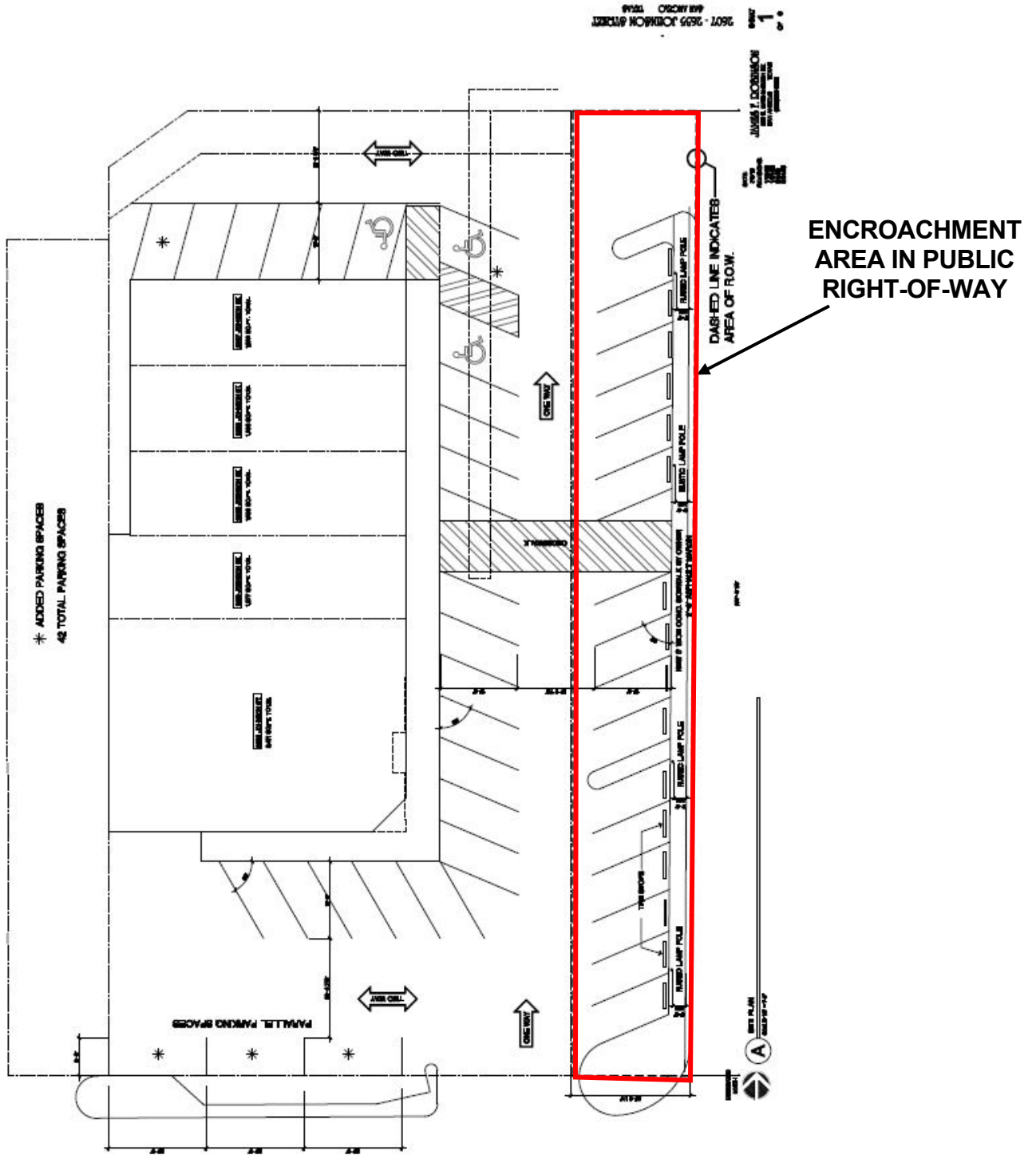


EXHIBIT “C”

TEMPORARY NONEXCLUSIVE SIDEWALK USE LICENSE AGREEMENT INSURANCE REQUIREMENTS

1. INDEMNIFICATION.

1.1 GENERAL INDEMNIFICATION. LICENSEE AGREES TO INDEMNIFY, DEFEND, AND HOLD CITY, ITS COUNCIL MEMBERS, BOARD AND COMMISSION MEMBERS, OFFICIALS, AGENTS, GUESTS, INVITEES, CONSULTANTS AND EMPLOYEES FREE AND HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, PROCEEDINGS, SUITS, JUDGMENTS, COSTS, PENALTIES, FINES, DAMAGES, LOSSES, ATTORNEYS’ FEES AND EXPENSES ASSERTED BY ANY PERSON OR PERSONS, INCLUDING AGENTS OR EMPLOYEES OF LICENSEE OR CITY, BY REASON OF DEATH OR INJURY TO PERSONS, OR LOSS OR DAMAGE TO PROPERTY, RESULTING FROM OR ARISING OUT OF, THE VIOLATION OF ANY LAW OR REGULATION OR IN ANY MANNER ATTRIBUTABLE TO ANY ACT OF COMMISSION, OMISSION, NEGLIGENCE OR FAULT OF LICENSEE, ITS AGENTS OR EMPLOYEES, OR THE JOINT NEGLIGENCE OF LICENSEE AND ANY OTHER ENTITY, AS A CONSEQUENCE OF ITS EXECUTION OR PERFORMANCE OF THIS CONTRACT OR SUSTAINED IN OR UPON THE PREMISES, OR AS A RESULT OF ANYTHING CLAIMED TO BE DONE OR ADMITTED TO BE DONE BY LICENSEE HEREUNDER. THIS INDEMNIFICATION SHALL SURVIVE THE TERM OF THIS CONTRACT AS LONG AS ANY LIABILITY COULD BE ASSERTED. NOTHING HEREIN SHALL REQUIRE LICENSEE TO INDEMNIFY, DEFEND OR HOLD HARMLESS ANY INDEMNIFIED PARTY FOR THE INDEMNIFIED PARTY’S OWN GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

1.3 PROSPECTIVE APPLICATION. ANY AND ALL INDEMNITY PROVIDED FOR IN THIS CONTRACT SHALL SURVIVE THE EXPIRATION OF THIS CONTRACT AND THE DISCHARGE OF ALL OTHER OBLIGATIONS OWED BY THE PARTIES TO EACH OTHER HEREUNDER AND SHALL APPLY PROSPECTIVELY NOT ONLY DURING THE TERM OF THIS CONTRACT BUT THEREAFTER SO LONG AS ANY LIABILITY (INCLUDING BUT NOT LIMITED TO LIABILITY FOR CLOSURE AND POST CLOSURE COSTS) COULD BE ASSERTED IN REGARD TO ANY ACTS OR OMISSIONS OF LICENSEE IN PERFORMING UNDER THIS CONTRACT.

2. Insurance.

2.1 General Conditions. The following conditions shall apply to all insurance policies obtained by Licensee for the purpose of complying with this Contract.

2.1.1 Satisfactory Companies. Coverage shall be maintained with insurers and under forms of policies satisfactory to City and with insurers licensed to do business in Texas.

2.1.2 Named Insureds. All insurance policies required herein shall be drawn in the name of Licensee, with City, its council members, board and commission members, officials, agents, guests, invitees, consultants and employees named as additional insureds, except on Workers' Compensation coverage.

2.1.3 Waiver of Subrogation. Licensee shall require its insurance carrier(s), with respect to all insurance policies, to waive all rights of subrogation against City, its council members, board and commission members, officials, agents, guests, invitees, consultants and employees.

2.1.4 Certificates of Insurance. At or before the time of execution of this Contract, Licensee shall furnish City's Risk Manager with certificates of insurance as evidence that all of the policies required herein are in full force and effect and provide the required coverages and limits of insurance. All certificates of insurance shall clearly state that all applicable requirements have been satisfied. The certificates shall provide that any company issuing an insurance policy shall provide to City not less than thirty (30) days advance notice in writing of cancellation, non-renewal or material change in the policy of insurance. In addition, Licensee and insurance company shall immediately provide written notice to City's Risk Manager upon receipt of notice of cancellation of any insurance policy, or of a decision to terminate or alter any insurance policy. Copies of required endorsements will be attached to the certificates to confirm the required endorsements are in effect. Certificates of insurance and notices of cancellations, terminations or alterations shall be furnished to City's Risk Manager at City Hall, 72 W College Avenue, San Angelo, Texas 76903.

2.1.5 Licensee's Liability. The procurement of such policy of insurance shall not be construed to be a limitation upon Licensee's liability or as a full performance on its part of the indemnification provisions of this Contract. Licensee's obligations are,

notwithstanding any policy of insurance, for the full and total amount of any damage, injury or loss caused by or attributable to its activities conducted at or upon the premises. Failure of Licensee to maintain adequate coverage shall not relieve Licensee of any contractual responsibility or obligation.

2.1.6 Sub-Licensees' Insurance. Licensee shall cause each Sub-Licensee and Sub-Sub-Licensee of Licensee to purchase and maintain insurance of the types and in the amounts specified below. Licensee shall require Sub-Licensees and Sub-sub-Licensees to furnish copies of certificates of insurance to Licensee's Risk Manager evidencing coverage for each Sub-Licensee and Sub-Sub-Licensee.

2.2 Types and Amounts of Insurance Required. Licensee shall obtain and continuously maintain in effect at all times during the term hereof, at Licensee's sole expense, insurance coverages as follows with limits not less than those set forth below:

2.2.1 Commercial General Liability. This policy shall be an occurrence-type policy and shall protect the Licensee and additional insureds against all claims arising from bodily injury, sickness, disease or death of any person (other than the Licensee's employees) and damage to property of the City or others arising out of the act or omission of the Licensee or its agents and employees. This policy shall also include protection against claims for the contractual liability assumed by Licensee under the paragraph of this Contract entitled "Indemnification." Coverage shall not be less than:

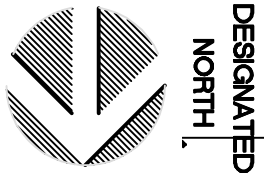
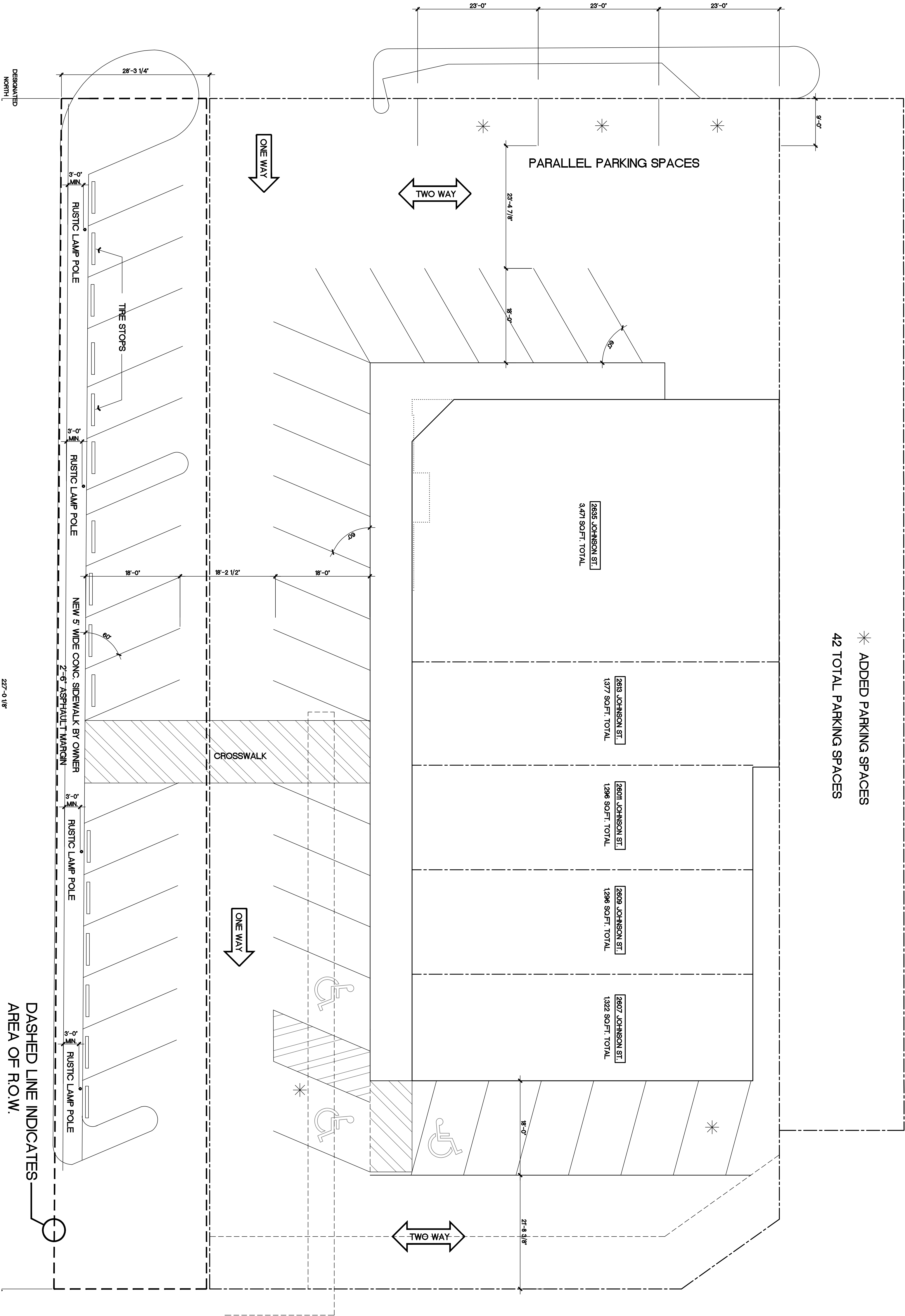
\$ 1,000,000.00 General Aggregate

\$ 1,000,000.00 Each Occurrence

2.2.2 Builder's Risk (All Risk). This insurance shall include contractual liability in its coverage, and the coverage under this policy shall survive the term of this Agreement as long as any liability could be asserted. Limit of liability per claim shall not be less than:

\$ 700,000.00 Combined Single Limits

* ADDED PARKING SPACES
42 TOTAL PARKING SPACES



A

SITE PLAN
SCALE: 1/8" = 1'-0"

DASHED LINE INDICATES
AREA OF R.O.W.

DATE: 7/8/19
REVISIONS:
1/18/20
2/6/20
2/24/20

JAMES F. ROBINSON
222 S. WASHINGTON ST.
SAN ANGELO, TEXAS
(325) 655-8299

SHEET
1
OF 0

2607 - 2635 JOHNSON STREET
SAN ANGELO, TEXAS

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Shelly Paschal, Planner, Planning and Development Services, 325-657-4210

Meeting Date: March 3, 2020

Item type: Consent Item

Caption:

Consider authorizing the City Manager to negotiate and execute a license use agreement with Amberly Watkins, representing Siber Investments II, LLC, to allow for an opaque privacy fence within the S. Park St. public right-of-way adjacent to 909 W. Beauregard Ave. (Jon James)

Summary/History:

On February 14, 2020, the applicant submitted an application for a right-of-way encroachment to allow an existing fence to remain within the public right-of-way adjacent to the subject property at 909 West Beauregard. The property is being redeveloped for an office and storage uses. The existing fence that encroaches is located 13 feet north of the southwest corner of the property, encroaches 6 feet into the South Park Street right-of-way and extends north a distance of 36 feet.

Approval of this encroachment will allow the existing fence to remain within the right-of-way. However, the City, or any utility provider, will not be responsible for repairing or replacing any damage to the fence related to utility repairs, installation of new utilities, or street improvements, including future sidewalk construction.

This request was circulated to City departments and external utility providers for comments. There were no objections received.

Financial Impact:

N/A

Other Information/Recommendation:

Attachments:

- | | |
|--|---|
| 1. Agreement (909 West Beauregard Ave) | Agreement (909 West Beauregard Ave).pdf |
| 2. Memo (909 West Beauregard Ave) | Memo (909 West Beauregard Ave).pdf |

Presentation:

Jon James

Approvals/Reviews:

Shelly Paschal	Created/Initiated
Hillary Bueker	Approved
Jon James	Approved
Brandon Dyson	Approved

Jon James
Theresa James
Julia Antilley

Approved
Approved
Final Approval

TEMPORARY NONEXCLUSIVE RIGHT-OF-WAY LICENSE USE AGREEMENT

THE STATE OF TEXAS

§

TOM GREEN COUNTY

§

THIS TEMPORARY NONEXCLUSIVE RIGHT-OF-WAY LICENSE USE AGREEMENT, hereinafter referred to as ("License"), is entered into by and between the City of San Angelo, a municipal corporation of the State of Texas, hereinafter referred to as ("Licensor" or "City"), and **Siber Investments II, LLC**, a Texas limited liability company hereinafter referred to as ("Licensee"), with an Effective Date of the _____ day of _____, 2020.

WITNESSETH:

That Licensor, for consideration of ten dollars (\$10.00) and other good and valuable consideration the receipt of which is hereby acknowledged, does hereby grant to Licensee the non-exclusive, temporary, revocable right, privilege and license to utilize a designated portion of the public street right-of-way along the east side of South Park Street, immediately adjacent to a property at 909 West Beauregard Avenue described as a 1.47-acre tract in Block 39 in the Angelo Heights Addition, for the purpose of a fence on the property; as more particularly described in **Exhibit "A"**, attached hereto and made a part hereof for all purposes (hereinafter collectively referred to as the "Licensed Premises"), and as depicted in **Exhibit "B"**.

The "Licensed Use" as set forth herein, commencing from the foregoing effective date, is subject to the conditions, restrictions, covenants and exceptions hereinafter set forth:

1. Interest Conferred by this License: This License confers no exclusive possession or tenancy of Licensed Premises. The Licensee cannot exclude City from Licensed Premises. This License solely authorizes Licensee to the temporary use of Licensed Premises for the limited purposes set forth herein and for no other purpose. The parties hereby agree that the provisions of this License do not constitute a lease. The rights of Licensee hereunder are not those of a tenant, but are a mere personal privilege to do certain acts of a temporary character on Licensed Premises and to use Licensed Premises, subject to the terms of this License. City retains dominion, possession and control of the Licensed Premises. Therefore, no lease interest in Licensed Premises is conferred upon Licensee under the provisions hereof. Licensee does not and shall not claim at any time any interest or estate of any kind or extent whatsoever in Licensed Premises by virtue of this License or its use of Licensed Premises hereunder. Additionally, Licensee does not and shall not claim at any time any interest or estate of any kind or extent whatsoever in Licensed Premises by

virtue of any expenditure of funds by Licensee for improvements, construction, repairs, partitions, or alterations to Licensed Premises which may be authorized by City.

2. Licensed Use: Licensed Premises shall be used for the limited purpose of constructing a fence on the adjacent property at 909 West Beauregard Avenue, substantially as described and depicted and described in **Exhibits “A” and “B”**, attached hereto and made a part hereof for all purposes.

3. Term: This License shall commence on the effective date set forth herein above and if not earlier terminated as herein provided, continue for a period of forty (40) years to _____, 2060, at which time this License shall automatically extend annually until terminated as herein provided.

4. Non-exclusive License: This license is non-exclusive and is made expressly subject and subordinate to the reserved right of the City to use or permit the use of the Licensed Premises for public sidewalk area, utility right-of-way or any other public purpose.

5. Right of Termination:

(a) The City reserves the right to terminate and cancel this License by resolution passed by its Governing Body upon a finding that the License is inconsistent or incompatible with the reserved right of the City to use or permit the use of the Licensed Premises or whenever the purpose or use of the License is or has become a nuisance as determined in the discretion of the City Council, and all rights granted hereunder shall thereupon be considered fully terminated and canceled and the City shall not be held liable by reason thereof. The parties hereto concur that said resolution shall be final and shall not be subject to review by the Courts.

(b) Upon termination or cancellation by City or Licensee, this License shall become null and void and Licensee or anyone claiming any rights under this instrument shall remove, to the extent required by City, any or all improvements, appurtenances and encroachments owned by Licensee from the Licensed Premises at Licensee's expense, and shall restore the Licensed Premises to its condition at the effective date of this License at the sole cost of the Licensee. In the event that Licensee shall fail to remove its improvements, appurtenances and encroachments as required and to restore the Licensed Premises, City shall have the right to do the necessary work to remove said improvements, appurtenances and encroachments and to restore the Licensed Premises to its condition at the effective date of this License, or to cause such work to

be done, and to assess reasonable allocated costs or the incurred cost of all such work against Licensee and premises of which Licensed Premises is a part.

6. **Improvements:** Licensee may utilize a designated portion of the public street right-of-way along the east side of South Park Street, immediately adjacent to a property at 909 West Beauregard Avenue described as a 1.47-acre tract in Block 39 in the Angelo Heights Addition, for the purpose of a fence, substantially as described and depicted and described in **Exhibits “A” and “B”**, attached hereto and made a part hereof for all purposes. Licensee shall not install any additional improvements or permanent fixtures on the Licensed Premises without first securing the written permission of City.

7. **Codes, Ordinances and Regulations:** Licensee shall comply with all applicable codes, ordinances and regulations of local, state and federal governments in the exercise of its use of the Licensed Premises. This requirement shall include, but not be limited to, compliance at all times with the Texas Architectural Barriers Act, Texas Accessibility Standards, Americans with Disabilities Act, as well as local ordinances and regulations relating to occupancy loads, unobstructed passage ways, entrances and exits, and signage.

8. **Improvements and Maintenance:** It is further understood that if and when the City, in the exercise of its discretion, shall determine that the grade of any street or sidewalk should be modified or changed, or that any other work should be done in connection with any public improvement which will affect the Licensed Premises, Licensee’s improvements or appurtenances thereon, or the use thereof by Licensee, City may proceed with such improvement or work without liability to Licensee. Further, any modifications or changes to Licensee’s facilities in the licensed area or in construction or reconstruction of any public improvement attributable to Licensee’s use of the licensed area and/or its installations and improvements shall be made at the sole expense of Licensee and to the satisfaction of City.

9. **Insurance and Indemnification:** **At such time as this license is granted, it is agreed that Licensee shall hold harmless and indemnify City and procure and keep in full force and effect Insurance coverage of the kind and in the minimum amounts, all as set forth in Exhibit “C”, attached and made a part hereof for all purposes, which provisions shall survive termination or expiration of the term of this License Agreement.**

10. **Reservations:** This License is subject and subordinate to any existing utilities or communication facilities, including drainage, presently located within or about the Licensed Premises, owned or operated by the City or any utility or communications company, public or private, and to any vested rights presently owned by any utility or communications company, public or private, for the use of the Licensed Premises

for facilities presently located within the boundaries of said Licensed Premises. No improvement or appurtenance shall be constructed or placed upon, over or across the Licensed Premises in such a manner as to interfere with the operation of any utilities or communication facilities. All and any communication company and utility, both public and private, shall have the right to remove and keep removed all or parts of any improvement or appurtenance which may in any way endanger or interfere with the construction, maintenance or efficiency of its respective systems within the Licensed Premises. All communication companies and utilities, both public and private, shall have the full right to remove and keep removed all parts of any improvements or appurtenances which in any way may endanger or interfere with the construction, maintenance and efficiency of its respective system and shall at all times have the full right of ingress and egress to or from and upon the Licensed Premises for the purpose of constructing, relocating, inspecting, patrolling, maintaining and adding to or removing all or part of its respective systems without the necessity at any time of procuring the permission of Licensee.

11. Successors and Assigns: The terms of this License shall be binding upon the Licensee and Licensee's successors and assigns.

12. Non-assignable: This License may not be assigned by Licensee without the prior written approval from the City. The assignee shall deliver a copy of the assignment, along with the assignee's written acceptance of the provisions of this License, to the Director of Planning and Development Services for the City of San Angelo, or his designee, within ten (10) days of such assignment. Should Licensee fail to obtain prior written approval for assignment of this License or fail to provide the City with the required written acceptance and a copy of the assignment as provided, the Director of Planning and Development Services, or his designee, may terminate this License.

IN WITNESS WHEREOF, the parties hereto have caused License to be executed in duplicate and intend to be legally bound thereby.

LICENSOR:
CITY OF SAN ANGELO

BY: _____
Daniel Valenzuela, City Manager

ATTEST:

Date: _____, 2020

Julia Antilley, City Clerk

LICENSEE:
SIBER INVESTMENTS II, LLC

BY: _____
Bobby Watkins, Managing Member

Date: _____, 2020

STATE OF TEXAS §

COUNTY OF TOM GREEN §

This instrument was acknowledged before me on the _____ day of _____, 2020, by
Bobby Watkins, as managing member of Siber Investments II, LLC, on behalf of said company.

Notary Public, State of Texas

**TEMPORARY NONEXCLUSIVE RIGHT-OF-WAY USE LICENSE AGREEMENT
BETWEEN CITY OF SAN ANGELO AND AMBERLY WATKINS**

APPROVED AS TO INSURANCE
REQUIREMENTS:

Charles Hagen,
Risk Manager

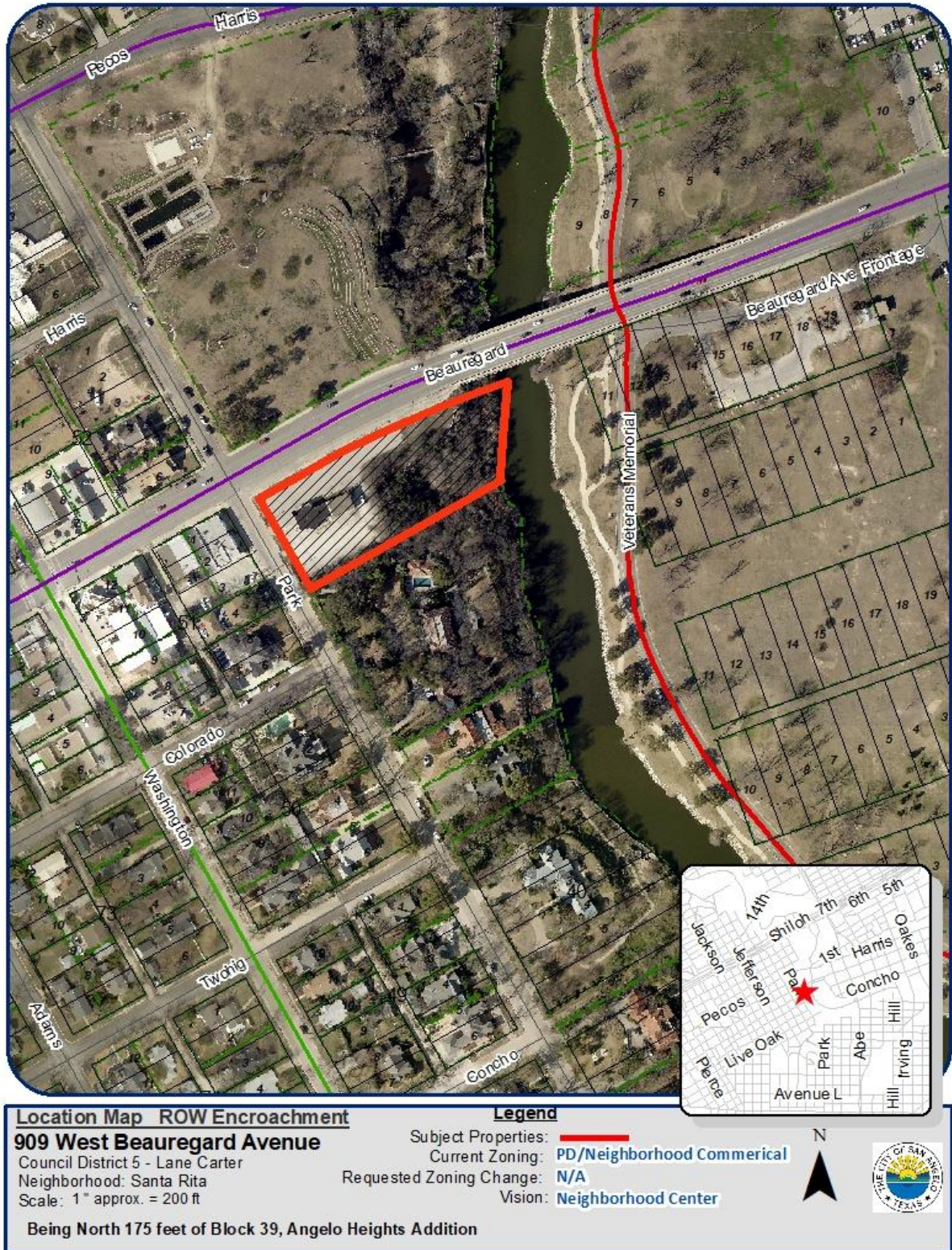
APPROVED AS TO FORM:

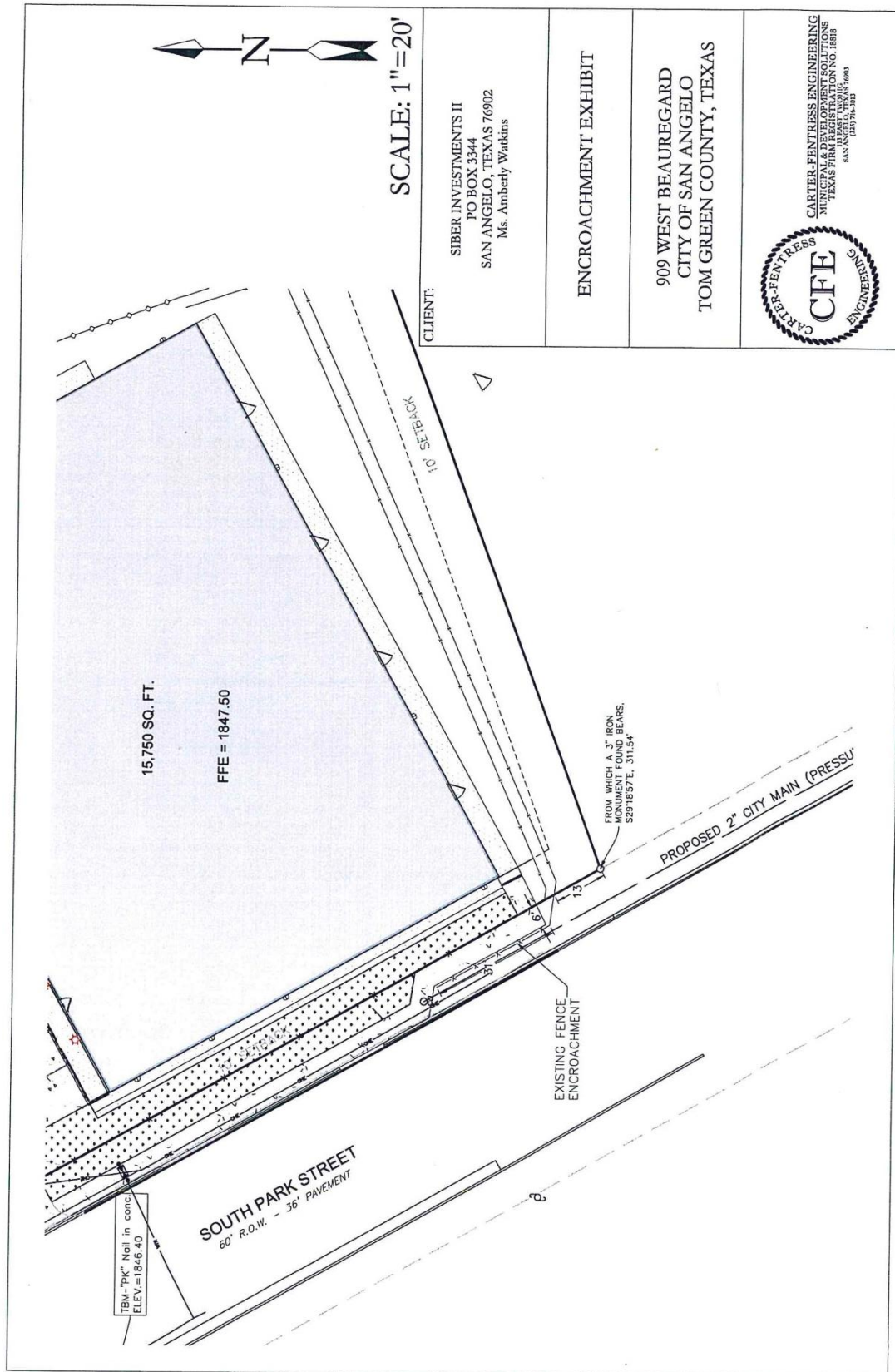
Brandon Dyson,
Assistant City Attorney

APPROVED AS TO CONTENT:

Jon James, AICP
Director of Planning and Development Services

EXHIBIT A





**EXHIBIT B
SITE PLAN**

EXHIBIT "C"

TEMPORARY NONEXCLUSIVE SIDEWALK USE LICENSE AGREEMENT
INSURANCE REQUIREMENTS

1. INDEMNIFICATION.

1.1 GENERAL INDEMNIFICATION. LICENSEE AGREES TO INDEMNIFY, DEFEND, AND HOLD CITY, ITS COUNCIL MEMBERS, BOARD AND COMMISSION MEMBERS, OFFICIALS, AGENTS, GUESTS, INVITEES, CONSULTANTS AND EMPLOYEES FREE AND HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, PROCEEDINGS, SUITS, JUDGMENTS, COSTS, PENALTIES, FINES, DAMAGES, LOSSES, ATTORNEYS' FEES AND EXPENSES ASSERTED BY ANY PERSON OR PERSONS, INCLUDING AGENTS OR EMPLOYEES OF LICENSEE OR CITY, BY REASON OF DEATH OR INJURY TO PERSONS, OR LOSS OR DAMAGE TO PROPERTY, RESULTING FROM OR ARISING OUT OF, THE VIOLATION OF ANY LAW OR REGULATION OR IN ANY MANNER ATTRIBUTABLE TO ANY ACT OF COMMISSION, OMISSION, NEGLIGENCE OR FAULT OF LICENSEE, ITS AGENTS OR EMPLOYEES, OR THE JOINT NEGLIGENCE OF LICENSEE AND ANY OTHER ENTITY, AS A CONSEQUENCE OF ITS EXECUTION OR PERFORMANCE OF THIS CONTRACT OR SUSTAINED IN OR UPON THE PREMISES, OR AS A RESULT OF ANYTHING CLAIMED TO BE DONE OR ADMITTED TO BE DONE BY LICENSEE HEREUNDER. THIS INDEMNIFICATION SHALL SURVIVE THE TERM OF THIS CONTRACT AS LONG AS ANY LIABILITY COULD BE ASSERTED. NOTHING HEREIN SHALL REQUIRE LICENSEE TO INDEMNIFY, DEFEND OR HOLD HARMLESS ANY INDEMNIFIED PARTY FOR THE INDEMNIFIED PARTY'S OWN GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

1.3 PROSPECTIVE APPLICATION. ANY AND ALL INDEMNITY PROVIDED FOR IN THIS CONTRACT SHALL SURVIVE THE EXPIRATION OF THIS CONTRACT AND THE DISCHARGE OF ALL OTHER OBLIGATIONS OWED BY THE PARTIES TO EACH OTHER HEREUNDER AND SHALL APPLY PROSPECTIVELY NOT ONLY DURING THE TERM OF THIS CONTRACT BUT THEREAFTER SO LONG AS ANY LIABILITY (INCLUDING BUT NOT LIMITED TO LIABILITY FOR CLOSURE AND POST CLOSURE COSTS) COULD BE ASSERTED IN REGARD TO ANY ACTS OR OMISSIONS OF LICENSEE IN PERFORMING UNDER THIS CONTRACT.

2. Insurance.

2.1 General Conditions. The following conditions shall apply to all insurance policies obtained by Licensee for the purpose of complying with this Contract.

2.1.1 Satisfactory Companies. Coverage shall be maintained with insurers and under forms of policies satisfactory to City and with insurers licensed to do business in Texas.

2.1.2 Named Insureds. All insurance policies required herein shall be drawn in the name of Licensee, with City, its council members, board and commission members, officials, agents, guests, invitees, consultants and employees named as additional insureds, except on Workers' Compensation coverage.

2.1.3 Waiver of Subrogation. Licensee shall require its insurance carrier(s), with respect to all insurance policies, to waive all rights of subrogation against City, its council members, board and commission members, officials, agents, guests, invitees, consultants and employees.

2.1.4 Certificates of Insurance. At or before the time of execution of this Contract, Licensee shall furnish City's Risk Manager with certificates of insurance as evidence that all of the policies required herein are in full force and effect and provide the required coverages and limits of insurance. All certificates of insurance shall clearly state that all applicable requirements have been satisfied. The certificates shall provide that any company issuing an insurance policy shall provide to City not less than thirty (30) days advance notice in writing of cancellation, non-renewal or material change in the policy of insurance. In addition, Licensee and insurance company shall immediately provide written notice to City's Risk Manager upon receipt of notice of cancellation of any insurance policy, or of a decision to terminate or alter any insurance policy. Copies of required endorsements will be attached to the certificates to confirm the required endorsements are in effect. Certificates of insurance and notices of cancellations, terminations or alterations shall be furnished to City's Risk Manager at City Hall, 72 W College Avenue, San Angelo, Texas 76903.

2.1.5 Licensee's Liability. The procurement of such policy of insurance shall not be construed to be a limitation upon Licensee's liability or as a full performance on its part of the indemnification provisions of this Contract. Licensee's obligations are, notwithstanding any policy of insurance, for the full and total amount of any damage, injury or loss caused by or attributable to its activities conducted at or upon the premises. Failure of Licensee to maintain adequate coverage shall not relieve Licensee of any contractual responsibility or obligation.

2.1.6 Sub-Licensee's Insurance. Licensee shall cause each Sub-Licensee and Sub-Sub-Licensee of Licensee to purchase and maintain insurance of the types and in the amounts specified below. Licensee shall require Sub-Licensee and Sub-sub-Licensee to furnish copies of certificates of insurance to Licensee's Risk Manager evidencing coverage for each Sub-Licensee and Sub-Sub-Licensee.

2.2 Types and Amounts of Insurance Required. Licensee shall obtain and continuously maintain in effect at all times during the term hereof, at Licensee's sole expense, insurance coverages as follows with limits not less than those set forth below:

2.2.1 Commercial General Liability. This policy shall be an occurrence-type policy and shall protect the Licensee and additional insureds against all claims arising from bodily injury, sickness, disease or death of any person (other than the Licensee's employees) and damage to property of the City or others arising out of the act or omission of the Licensee or its agents and employees. This policy shall also include protection against claims for the contractual liability assumed by Licensee under the paragraph of this Contract entitled "Indemnification." Coverage shall not be less than:

\$ 1,000,000.00 General Aggregate

\$ 1,000,000.00 Each Occurrence

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Shelly Paschal, Planning & Development Services, (325) 657-4210 x-1533

Meeting Date: March 3, 2020

Item type: Consent

Caption:

Consider authorizing the City Manager to negotiate and execute a license use agreement with Amberly Watkins, representing Siber Investments II, LLC, to allow for an opaque privacy fence within the South Park Street public right-of-way adjacent to 909 W. Beauregard Ave. (J. James).

Summary/History:

Currently at 909 West Beauregard Avenue there is an existing fence at the southwest corner of the property that is located within the right-of-way. The applicant is asking City Council to consider granting a license use agreement to allow the fence to remain in place. This 8 foot high metal fence was erected without a building permit so as a condition of approval the applicant will be required to obtain the necessary building permits.

On March 5, 2019, City Council approved a request for a Rezoning from the General Commercial/Heavy Commercial (CG/CH) Zoning District and Single-Family Residential (RS-1) Zoning District to a Planned Development (PD) Zoning District to allow Neighborhood Commercial (CN) uses, as well as Self-Service Storage and a Single-Detached Dwelling, on the subject property, subject to seven (7) conditions of approval. This PD included a concept plan as part of the approval. On August 19, 2019, the DHRC approved the main building which included 15,750-square feet of self-service storage and 1,834 square feet of office area, as well as associated fencing and landscaping. On October 10, 2019 the Planning Division approved the site plan for this project. On January 16, 2020, the DHRC approved a new 20-foot tall pole sign that is a 71.5-square foot LED illuminated freestanding sign, a 32-square foot LED illuminated wall sign, and exterior wall lighting.

Financial Impact:

N/A

Other Information/Recommendation:

Staff recommends **APPROVAL with two (2) Conditions of Approval:**

1. The applicant/owner enters into a license use agreement for encroachment of the fence within the public right-of-way.
2. The applicant/owner must obtain permits for all encroachments from the Permits and Inspections Division as required.

Attachments:

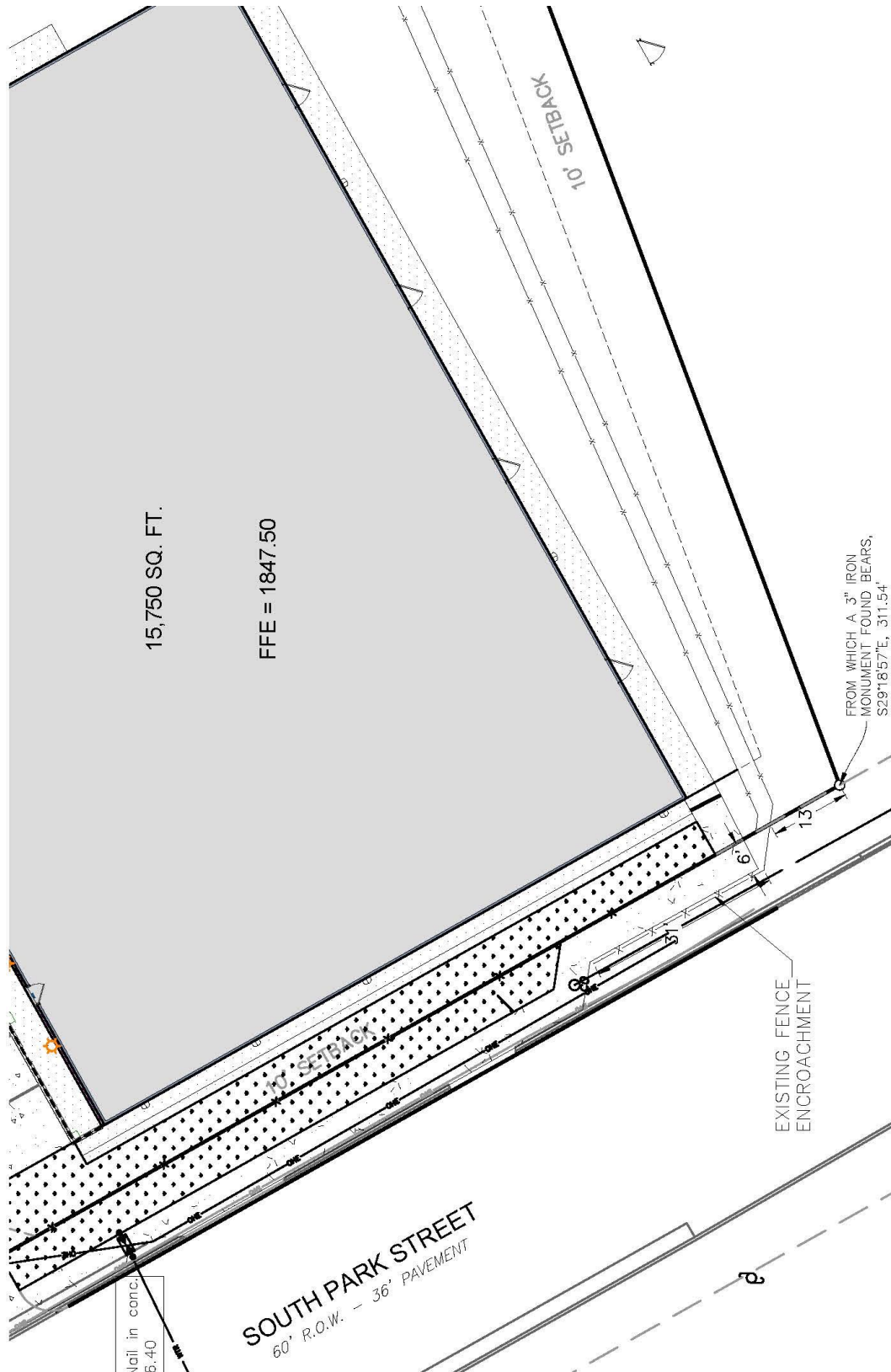
Encroachment Exhibit
Photo of subject fence

Concept Plan – Approved with PD
Application

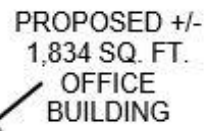
Approvals/Reviews:

Reviewed by Jon James, Planning & Development Services Director

Encroachment Exhibit



1



PROPOSED +/-
1,834 SQ. FT.
OFFICE
BUILDING

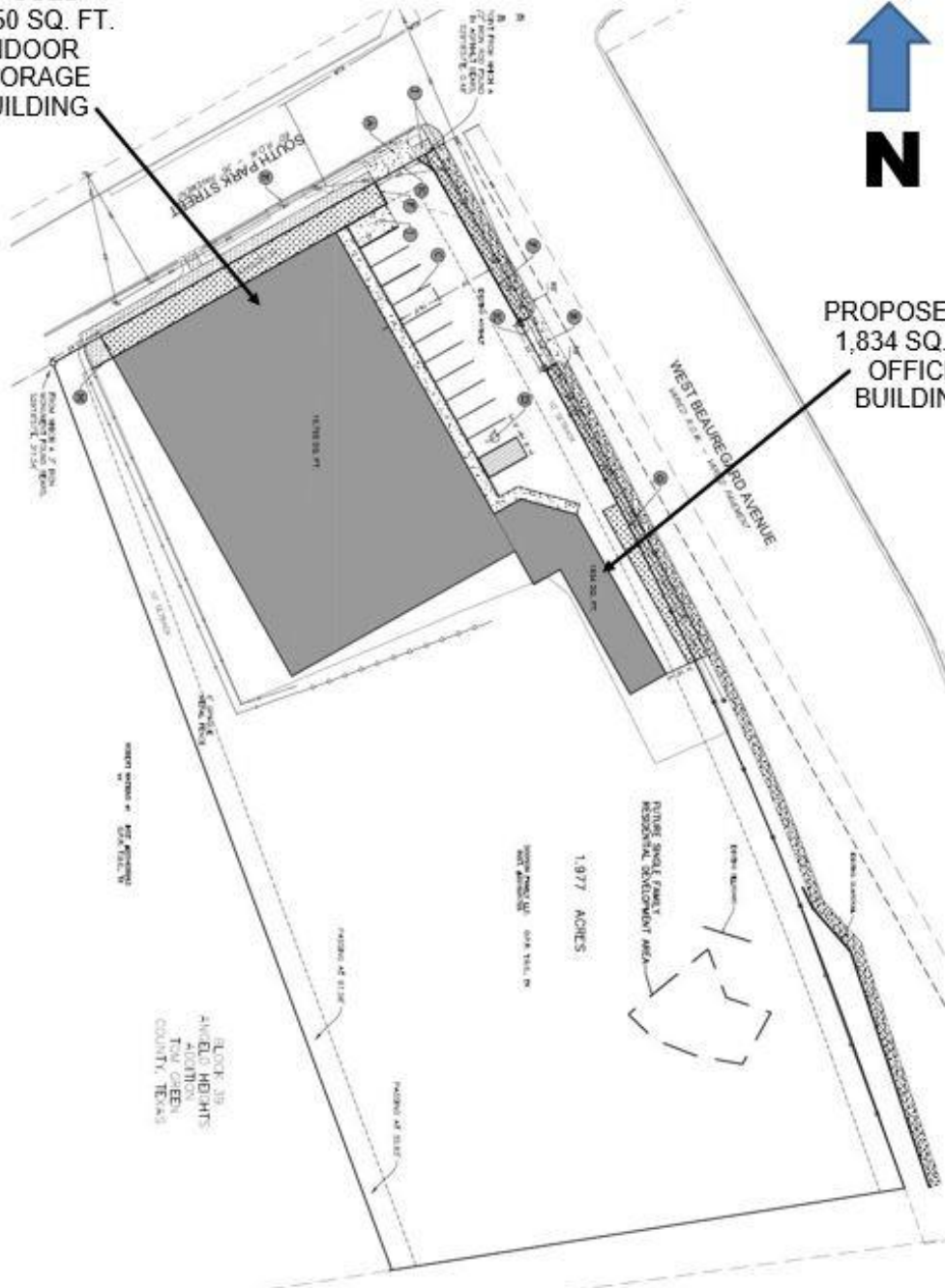


Photo of subject fence





City of San Angelo, Texas – Planning Division
52 West College Avenue
Application for Right-of-way Encroachment

**Section 1: Basic Information**Name of Applicant(s): Amberly Watkins
☒ Owner ☐ Representative (Affidavit Required)

PO BOX 3344 SAN ANGELO TX 76902
Mailing Address City State Zip Code

325.716.7144 amberlywatkins@gmail.com
Contact Phone Number Contact E-mail Address

909 WEST BEAUREGARD SAN ANGELO TX 76901
Subject Property Address City State Zip Code

BLK 39, ANGELO HEIGHTS ADDITION, NORTH 175 FEET OF BLOCK 39
Legal Description (can be found on property tax statement or at www.tamutecad.com)

Lot Size: 1.47 ACRES Zoning: PD
Encroachment Type:

- ☒ Surface or Aerial Easement (for physical encroachments such as walls, awnings and canopies but where no activities taking place)
- ☐ Sidewalk Use License (no physical encroachments but where area to be used for activities— i.e. tables, chairs, patio tables, retail display)
- ☐ Both (physical encroachments such as awnings and canopies and where area to be used for activities)

Section 2: Site Specific Details
General Description of Location*: Fence in Southwestern Corner of Property
ENCROACHING INTO ROW.

Reason for Encroachment*: THE ENCROACHMENT IS AN EXISTING FENCE. DUE TO
UTILITIES, THERE IS NOT ANOTHER REASONABLE LOCATION FOR THE
FENCE. THE FENCE AS IT STANDS PROVIDES A VIEW TO THE BACK
OF THE PROPOSED FACILITY. IT WILL NOT BE LANDSCAPED IN THE
BACK. AESTHETICALLY, THE FENCE SHOULD STAY AS IS.
*Use attachment if necessary.
Section 3: Applicant's acknowledgement

(By checking the boxes you indicate that you understand the following regulations)

- ☒ An application for Right-of-way Encroachment may only be made by the owner of the adjacent property, or an authorized representative of the property owner.
- ☒ No application will be processed if a zoning violation exists on the adjacent property, unless such processing is authorized by City Council. Use of the encroachment area and adjoining property for any new activity (not allowed by present zoning) cannot occur before City Council's approval of a zone change. Any such unauthorized use of the subject property is subject to prosecution in Municipal Court.

I/We the undersigned acknowledge that the information provided above is true and correct.

Signature of applicant or authorized representative

Date affirming the truth of the above statement.

Printed name of licensee or authorized representative

Name of business/Entity of representative

FOR OFFICE USE ONLY:

Date of Application: 2, 14, 20

Non-Refundable Fee: \$

Receipt #:

Date paid: 2, 14, 20

Date of hearing by City Council: / /

Date of hearing by City Council: / /

Reviewed/Accepted by:

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Shelly Paschal, Planner, Planning and Development Services, 325-657-4210

Meeting Date: March 3, 2020

Item type: Consent Item

Caption:

Second reading of ordinances approving:

1. Case CP20-01, an amendment to the City of San Angelo Comprehensive Plan, changing certain lands from the Transitional and Neighborhood Future Land Uses to the Neighborhood Center Future Land Use, being 32.4 acres located between Lutheran Way, Sunset Dr., W. Loop 306 Frontage Rd. and near Foster Rd.
2. Case Z20-01, a rezoning from the Low-Rise Multi-Family zoning district to the Neighborhood Commercial zoning district, located at 3536 Lutheran Way (Jon James)

Summary/History:

A request for an amendment to the City of San Angelo Comprehensive Plan, changing certain lands from the "Neighborhood" Future Land Use to "Neighborhood Center" on the subject property and nearby adjoining properties, and a request for approval of a rezoning from the Low-Rise Multi-Family (RM-1) zoning district to the Neighborhood Commercial (CN) zoning district on the subject property. The applicant is intending to continue to utilize the property as a church, school and early childhood center but proposed improvements would not be allowed by right in the existing zoning district (see additional information). A rezoning to the property would also warrant a Comprehensive Plan amendment as part of the criteria for approval per Section 212.G of the Zoning Ordinance.

Financial Impact:

N/A

Other Information/Recommendation:

On January 27, 2020, the Planning Commission unanimously recommended APPROVAL of the Comprehensive Plan Amendment and the Rezoning (6-0).

On February 18, 2020, the City Council unanimously approved this item on first reading by a vote of 7-0.

Attachments:

- | | |
|-----------------------------|------------------------------|
| 1. CP20-01_Z20-01_CC_report | CP20-01_Z20-01_CC_report.pdf |
| 2. CP20-01_Ordinance | CP20-01_Ordinance.docx |
| 3. Z20-01_Ordinance | Z20-01_Ordinance.docx |

Presentation:

Jon James

Approvals/Reviews:

Shelly Paschal
Hillary Bueker

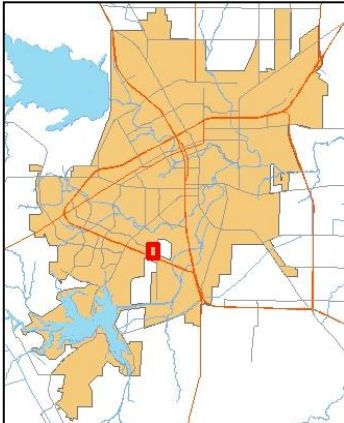
Created/Initiated
Approved

Jon James
Brandon Dyson
Jon James
Theresa James
Julia Antilley

Approved
Approved
Approved
Approved
Final Approval

CITY COUNCIL – February 18 & March 3, 2020
STAFF REPORT



APPLICATION TYPE:		CASES:	
Comprehensive Plan Amendment & Rezoning		CP20-01/Z20-01: Trinity Lutheran/COSA	
SYNOPSIS:			
A request for an amendment to the City of San Angelo Comprehensive Plan, changing certain lands from the “Neighborhood” Future Land Use to “Neighborhood Center” on the subject property and nearby adjoining properties, and a request for approval of a rezoning from the Low-Rise Multi-Family (RM-1) zoning district to the Neighborhood Commercial (CN) zoning district on the subject property. The applicant is intending to continue to utilize the property as a church, school and early childhood center but proposed improvements would not be allowed by right in the existing zoning district (see additional information). A rezoning to the property would also warrant a Comprehensive Plan amendment as part of the criteria for approval per Section 212.G of the Zoning Ordinance.			
LOCATION:		LEGAL DESCRIPTION:	
3512-3536 Lutheran Way & nearby adjoining properties		Being Lot 1A being 6.2510 acres Tract A (Replat) & 2.6980 acres of Lot 2A, Tract A (Replat) & 1.3840 acres of 2A, Sunset Joint Venture Addition, City of San Angelo, Tom Green County, Texas.	
SM DISTRICT / NEIGHBORHOOD:	ZONING:	FUTURE LAND USE:	SIZE:
SMD District 1 – Tommy Hiebert Neighborhood – Rio Vista	Low-Rise Multi-Family (RM-1)	Neighborhood	10.3 acres (RZ) 19.52 acres (CP)
THOROUGHFARE PLAN:			
Lutheran Way – Minor Collector, 60’ ROW required (80’ existing), 50’ pavement required (47’ provided) Sunset Drive – Major Collector, 60’ ROW required (80’ existing), 50’ pavement required (64’ provided) Nevada Drive – Local Street, 50’ ROW required (60’ existing), 40’ pavement required (48’ provided) West Loop 306 Frontage Road – TXDOT ROW			
NOTIFICATIONS:			
CP20-01: 67 notifications were mailed within a 200-foot radius on January 13, 2020. Z20-01: 17 notifications were mailed within a 200-foot radius on January 13, 2020. One response has been received in support and two in opposition.			
STAFF RECOMMENDATION:			
Staff recommends APPROVAL of a Comprehensive Plan Amendment changing the Future Land Use designation from the “Neighborhood” Future Land Use to “Neighborhood Center” and APPROVAL of a rezoning from Low-Rise Multi-Family (RM-1) zoning district to the Neighborhood Commercial (CN) zoning district.			
PROPERTY OWNER/PETITIONER:			
Ron Fritsche – Trinity Lutheran			
STAFF CONTACT:			
Shelly Paschal Planner (325) 657-4210, Extension 1533 shelly.paschal@cosatx.us			

Additional Information: The applicant originally applied for a Sign Variance for a new sign on the subject property. In reviewing the zoning ordinance, it became apparent that rezoning to Neighborhood Commercial (CN) was a better fit with what they hope to accomplish. They currently have a church, early childhood center and a school. Recently, Trinity Lutheran has grown and now has high school students on the campus. This growth makes the rezoning necessary.

The Future Land Use map for this area is incompatible for this zone change. However, when looking at the Comprehensive Plan and the Vision Plan for this area, the existing land use and the Future Land Use is consistent with the proposed change to Neighborhood Center. In exploring the rationale, we see that property directly adjoining the Loop is more appropriate for commercial. The proposed Neighborhood Center is still less intensive for the neighborhood to the north of Sunset Drive. Along Sunset Drive is a commercial strip center with commercial offices and other commercial uses. Those uses act as a buffer to the single family neighborhood which is directly north. Changing the Future Land Use for the subject properties would be a more appropriate fit for the existing uses.

Rezoning: Section 212(G) of the Zoning Ordinance requires that the Planning Commission and City Council consider, at minimum, seven (7) factors in determining the appropriateness of any Rezoning request:

1. **Compatible with Plans and Policies.** **Whether the proposed amendment is compatible with the Comprehensive Plan and any other land use policies adopted by the Planning Commission or City Council.** The proposed Comprehensive Plan Amendment from Neighborhood to Neighborhood Center would be consistent with the surrounding development pattern in the area and facilitate the associated rezoning to Neighborhood Commercial (CN). The subject property is designated "Neighborhood." The "Neighborhood" designation in the City's Comprehensive Plan intends to "promote vibrant and viable neighborhoods and improve relationship between adjacent commercial and residential land use adjacencies." The "Neighborhood Center" designation in the City's Comprehensive Plan intends to "contract retail commercial corridors into series of identifiable nodes or centers at key intersections." The subject property would be a better fit for the Neighborhood Center, due to the property being more commercial in use and the fact that it directly abuts Loop 306. The commercial strip center north of Sunset Drive acts as the buffer from the more extensive commercial to the single family residential direct north. The rezoning will allow the applicant to continue and expand with the church and uses thereof.
2. **Consistent with Zoning Ordinance.** **Whether and the extent to which the proposed amendment would conflict with any portion of this Zoning Ordinance.** The existing use of the subject property as an early childhood center (daycare) and elementary/junior high school are allowed uses within the existing RM-1 zoning classification. However, the church and high school are only allowed with RM-1 with specific approval of a Conditional Use. The church lawfully occupies the subject property, since it was existing before the change of the Zoning Ordinance in January of 2000. Therefore, the church is considered a lawful conditional use. However, the new expansion of a high school is not an allowed use on this property. The proposed zone change

allows all existing uses of the subject property.

3. **Compatible with Surrounding Area.** *Whether and the extent to which the proposed amendment is compatible with existing and proposed uses surrounding the subject land and is the appropriate zoning district for the land.* The property is located within an area that has mixed commercial and residential uses. There is a single-family residential neighborhood directly north and a high density multifamily apartment complex to the east of the subject property. Directly across Sunset Drive from the subject property is a strip center of a variety of commercial uses. The subject parcels fit in with the existing commercial development pattern, and would allow for continuance of the subject property.
4. **Changed Conditions.** *Whether and the extent to which there are changed conditions that require an amendment.* The low-rise multi-family development never developed on this property, the rezoning would make use of the land in a manner consistent with the proposed future land use change and existing adjacent mixed use development in the area.
5. **Effect on Natural Environment.** *Whether and the extent to which the proposed amendment would result in significant adverse impacts on the natural environment, including but not limited to water and air quality, noise, storm water management, wildlife, vegetation, wetlands and the practical functioning of the natural environment.* The Comprehensive Plan amendment and rezoning are anticipated to have little adverse impact on the natural environment. The existing uses of the subject property have little adverse impact on the natural environment.
6. **Community Need.** *Whether and the extent to which the proposed amendment addresses a demonstrated community need.* Allowing the site to rezone to Neighborhood Commercial would be reflective of the continuing need for commercial in the area, rather than allowing a continuance of a zoning designation that has not been fully utilized in the past and is not in keeping with the existing uses on the subject property.
7. **Development Patterns.** *Whether and the extent to which the proposed amendment would result in a logical and orderly pattern of urban development in the community.* The existing development pattern in the immediate area along Loop 306 is considerably commercial and higher intensity residential. These parcels will keep in continuity with the adjoining lots directly adjacent to along this corridor.

Planning Commission Recommendation:

On January 27, 2020, the Planning Commission recommended unanimous **APPROVAL by a vote of 6-0** of an amendment to the City of San Angelo Comprehensive Plan, changing from the Neighborhood Future Land Use to the Neighborhood Commercial Future Land Use; and recommend unanimous **APPROVAL by a vote of 6-0** of a rezoning from the Low-Rise Multi-Family (RM-1) Zoning District to the Neighborhood Commercial (CN) Zoning District at 3512-3536 Lutheran Way. The following is the complete excerpt of the draft minutes from the January 27, 2020, meeting for this case:

A. Trinity Lutheran/COSA

Items 2.A.i and 2.A.ii which apply to portions of the same property were presented concurrently with two separate motions.

i. CP20-01: COSA

Public hearing and consideration of an amendment to the City of San Angelo Comprehensive Plan, changing certain lands from the Transitional and Neighborhood Future Land Uses to the Neighborhood Center Future Land Use, being 19.52 acres located between Lutheran Way, Sunset Drive, West Loop 306 Frontage Road and near Foster Road.

ii. Z20-01: Trinity Lutheran

Public hearing and consideration of a request for approval of a rezoning from the Low-Rise Multi-Family (RM-1) Zoning District to the Neighborhood Commercial (CN) Zoning District, located at 3536 Lutheran Way.

Shelly Paschal, Planner, presented the proposed Comprehensive Plan Amendment and Rezoning. She indicated that she sent out 67 notices for the Comprehensive Plan Amendment and 17 notices for the Rezoning. Ms. Paschal explained that while she did not receive any responses in support or opposition, she did receive several phone calls asking for clarification and there were no major concerns.

Mr. Paschal, outlined Staff's rationale to approve the Comprehensive Plan Amendment and Rezoning on the grounds that the requested zone change will be consistent with the new Comprehensive Plan designation of Neighborhood Center; that the uses are allowed in new CN zoning; that the uses are compatible with the surrounding area which already has a mix of commercial and residential uses; that the current RM-1 zoning never developed in this way; and that the rezoning to CN would be reflective of the continuing need for commercial in this area.

Vice Chair Jackson opened public comment.

Commissioner Brooks asked what was allowed in Neighborhood Center.

Hillary Bueker, Planning Manager, explained that this is the future land use which allows light commercial zoning connected to a neighborhood. She explained that the church wanted to rezone to CN, a small scale designation to allow a new sign, as well recognize the existing church and school, and expand their high school program.

Mr. Rob Fritsche, the applicant with Trinity Lutheran School, explained that the two purposes of the request was to allow a new, taller digital sign, and to allow a high school

program and the CN zoning would allow both.

Vice Chair Jackson closed public comment.

Commissioner Smith made a motion to recommend APPROVAL of an amendment to the City of San Angelo Comprehensive Plan, on 19.52 acres from the Transitional and Neighborhood Future Land Uses to the Neighborhood Center Future Land Use, AND to recommend APPROVAL of a rezoning from the Low-Rise Multi-Family (RM-1) Zoning District to the Neighborhood Commercial (CN) Zoning District, located at 3536 Lutheran Way on 10.3 acres, as presented. Commissioner Self seconded the motion. The motion carried unanimously, 6-0.

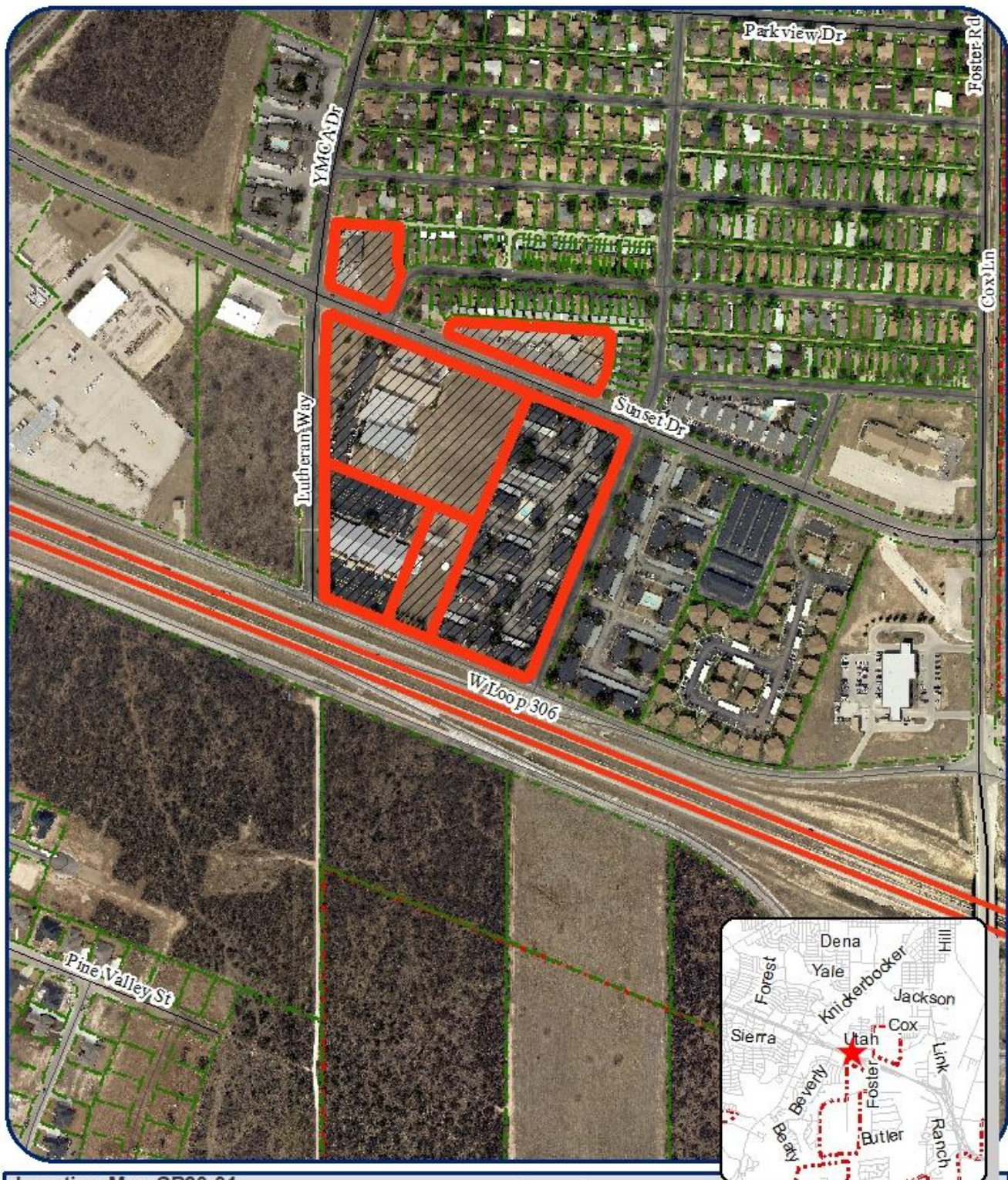
Recommendation:

Staff's recommendation is for City Council to: **APPROVE** a Comprehensive Plan Amendment changing the Future Land Use designation lands from the "Neighborhood" Future Land Use to the "Neighborhood Center"; and

APPROVE a rezoning from Low-Rise Multi-Family (RM-1) zoning district to the Neighborhood Commercial (CN) zoning district.

Attachments:

Aerial Map
Future Land Use Map
Zoning Map
Application
Photographs
Notification Maps
Notification Letters



Location Map CP20-01

Trinity Lutheran/COSA

Council District 1 - Tommy Hiebert

Neighborhood: Rio Vista

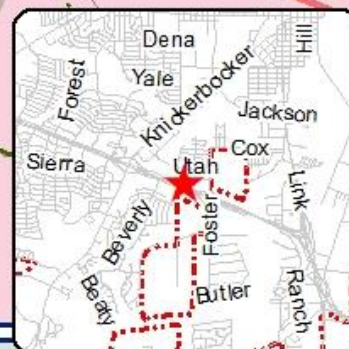
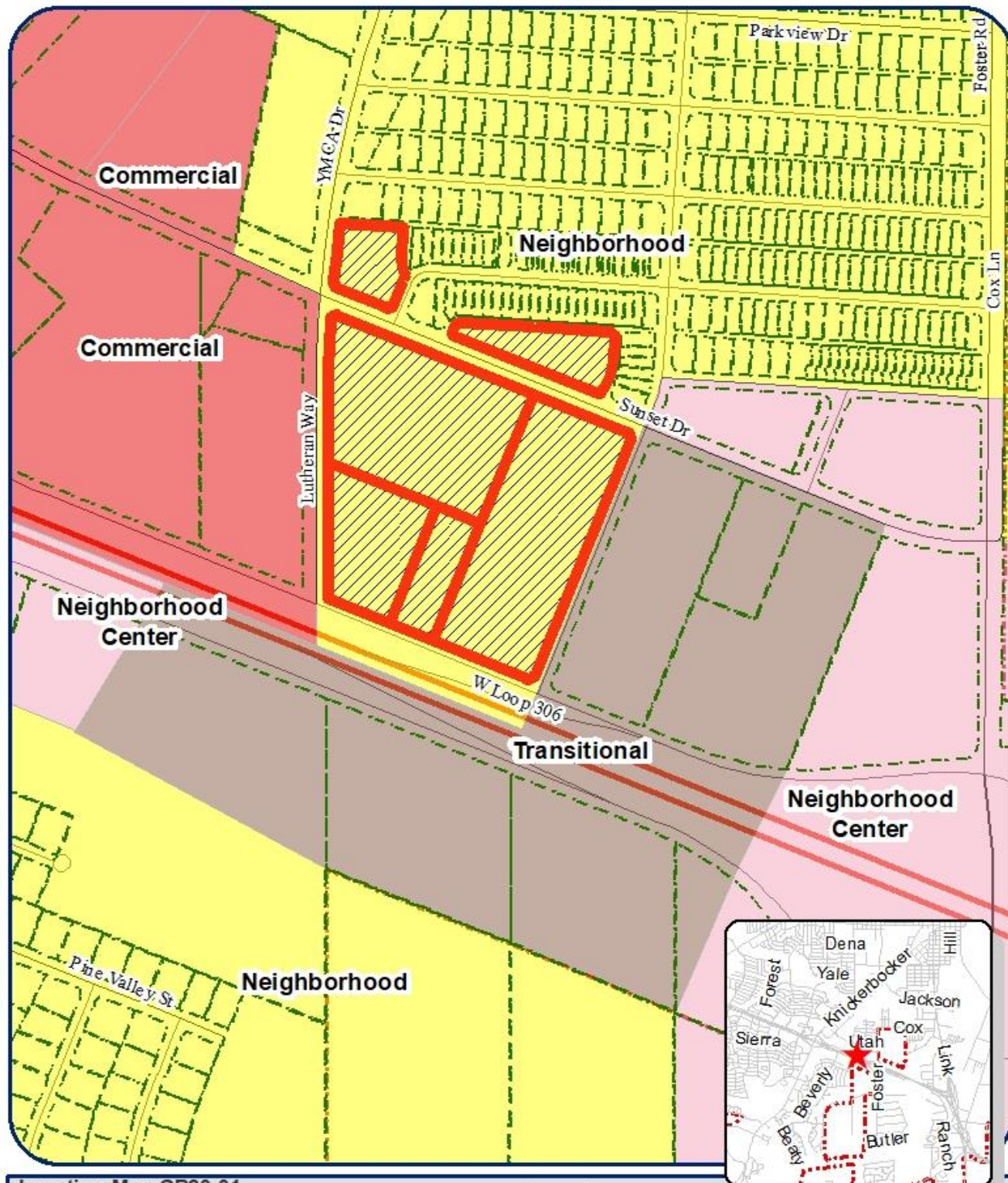
Scale: 1" approx. = 400 ft

3536 Lutheran Way and area nearby

Legend

Subject Properties: 
Current Zoning: RM-1/CN
Requested Zone Change: CN
Vision: Neighborhood





Location Map CP20-01

Trinity Lutheran/COSA

Council District 1 - Tommy Hiebert

Neighborhood: Rio Vista

Scale: 1" approx. = 400 ft

3536 Lutheran Way and area nearby

Legend

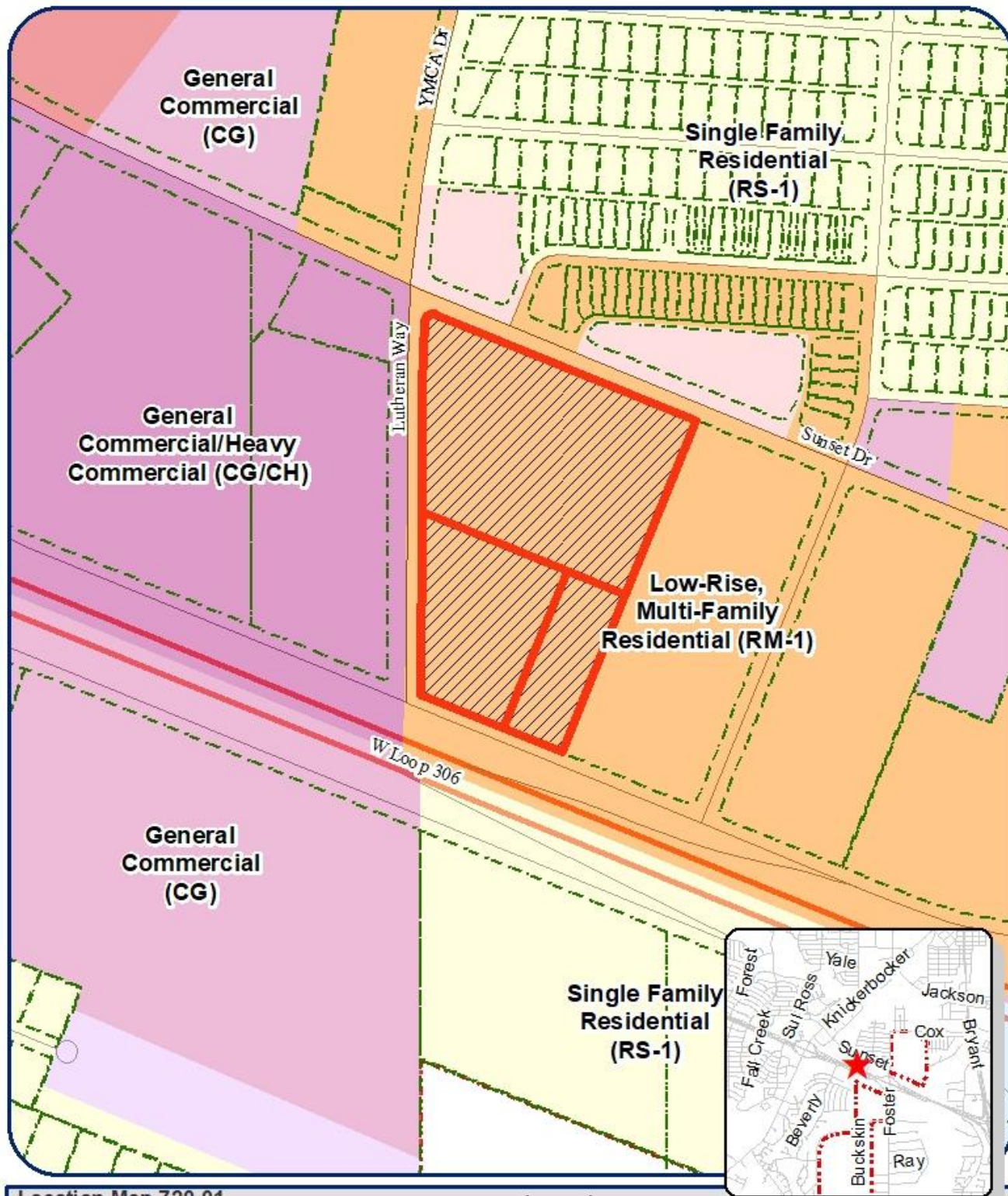
Subject Properties: —

Current Zoning: RM-1/CN

Requested Zone Change: CN

Vision: Neighborhood





Location Map Z20-01

Trinity Lutheran

Council District 1 - Tommy Hiebert
Neighborhood: Rio Vista
Scale: 1" approx. = 300 ft

3536 Lutheran Way

Legend

Subject Properties: —
Current Zoning: RM-1
Requested Zone Change: CN
Vision: Neighborhood



Effective January 3, 2017



City of San Angelo, Texas – Planning Division
52 West College Avenue
Application for Approval of a Zone Change

**Section 1: Basic Information**Name of Applicant(s): Trinity Lutheran Church and School☒ Owner☐ Representative (Notarized Affidavit Required)Mailing Address: 3536 Lutheran WayCity: San AngeloState: TxZip Code: 76904Contact Phone Number: 325-947-1275Contact E-mail Address: ron@tlcsanangelo.comSubject Property Address: 3536 Lutheran WayCity: San AngeloState: TxZip Code: 76904Legal Description (can be found on property tax statement or at www.tamgreenland.com): 6.251, Lot 1-A Being 6.251 Acres Tract A (Replat) Sunset Joint VentureExisting Zoning: RM-1 Proposed Zoning: CN Lot size: 10.3(Zoning Map available on [City Maps](#))**Section 2: Site Specific Details**Existing Use of Property: Church, School, Early Childhood Ctr.*Proposed Use of Property: Same

*Use separate attachment if necessary

Section 3: Applicant(s) Acknowledgement

(By checking the boxes you indicate that you understand below rules and regulations for the Planning Commissions case.)

- ☒ An application for a zone change on a property may only be made by the owner of that property, an authorized representative of the property owner, the Planning Director, the Planning Commission or City Council. An authorized representative shall present a notarized affidavit from the property owner.
- ☒ No application will be processed if a zoning violation exists on the property, unless such processing is authorized by City Council. Use of the subject property for any new activity (not allowed by present zoning) cannot occur before City Council's approval of the requested zone change. Any such unauthorized use of the subject property is subject to prosecution in Municipal Court.
- ☒ If approved, a zone change is applied to the property, not the property owner.
- ☒ The Planning Commission makes recommendations to City Council. If the Planning Commission recommends approval of a zone change request, the case must still go before City Council for final action.
- ☒ If a zone change request is granted by City Council, permits for building construction and/or utility connection may be obtained from the City's Permits and Inspections Department.
- ☒ Certain minimum building setbacks from some or all property lines must be maintained, and room for a minimum number of off-street parking spaces must be reserved on a subject property, based on that property's zoning classification and the nature of its proposed use. A privacy fence may also be required between more restrictive and less restrictive zoning districts. These requirements are outlined in San Angelo's Zoning Ordinance. It is to the applicant's benefit to make sure that any proposed development will fit onto the subject property, in compliance with these and other applicable requirements of the City's Code of Ordinances.
- ☒ One or more notice sign(s) will be placed on the subject property by the Planning Department. However, it is the applicant's responsibility to ensure that the notice sign(s) has/have been posted at least ten (10) days prior to the Planning Commission meeting. If notice sign(s) is/are not posted accordingly, City Council may delay a request. The Planning Department will also notify, in writing, owners of property within 200-feet of the subject property of the zone change request.
- ☒ If the Planning Commission recommends denial of a request, the applicant will have ten (10) days to appeal this decision, in writing, to the City Council. If an appeal is made within three (3) days from the Planning Commission meeting, no re-notification fee will be required. Otherwise, there will be a nonrefundable \$35 fee to re-notify owners of nearby property of City Council's public hearing date. If Planning Commission's recommendation of denial is not appealed, it will be the final action on a request.

Effective January 3, 2017

Section 3 continued : Applicant(s) Acknowledgement

☒ The applicant or an authorized representative should attend public hearing(s) pertaining to his/her request, prepared to present his/her case and to answer any relevant questions from Planning Commission or City Council members.

I/We the undersigned acknowledge that the information provided above is true and correct.

Owner Name (Print)	Signature	Company/Organization (If Applicable)	Date
<u>Ron Fritzsche</u>	<u>Ron Fritzsche</u>	<u>Trinity Lutheran</u>	<u>12-16-2019</u>
Representative Name (Print)	Signature	Company/Organization	Date

FOR OFFICE USE ONLY:

☐ Verified Complete ☐ Verified Incomplete

Date of Application: 12 / 16 / 19

Case No.: Z 20 -- 01

Fully-dimensioned site plan: ☐

Nonrefundable fee: \$ _____

Receipt #: 81285

Date paid: 12 / 16 / 19

Sign Deposit \$37.50

Receipt #: 81287

Date paid: 12 / 16 / 19

Affidavit attached? ☐ Yes ☐ No ☐ N/A Applicant's signature on information sheet? ☐ Yes ☐ No

Previous Zone Change Inquiry? ☐ Yes ☐ No If yes, ZCI case no.: _____

River Corridor Commission? ☐ Yes ☐ No If yes, RCC meeting date: ____/____/____

Planning Commission hearing date: 01 / 27 / 20 Date notifications due: ____/____/____

City Council hearing date: 2 / 18 / 20 Packets due date: ____/____/____

Publication date: ____/____/____

Reviewed/Accepted by: _____ Date: ____/____/____

Site Photos



Commercial across Sunset Drive

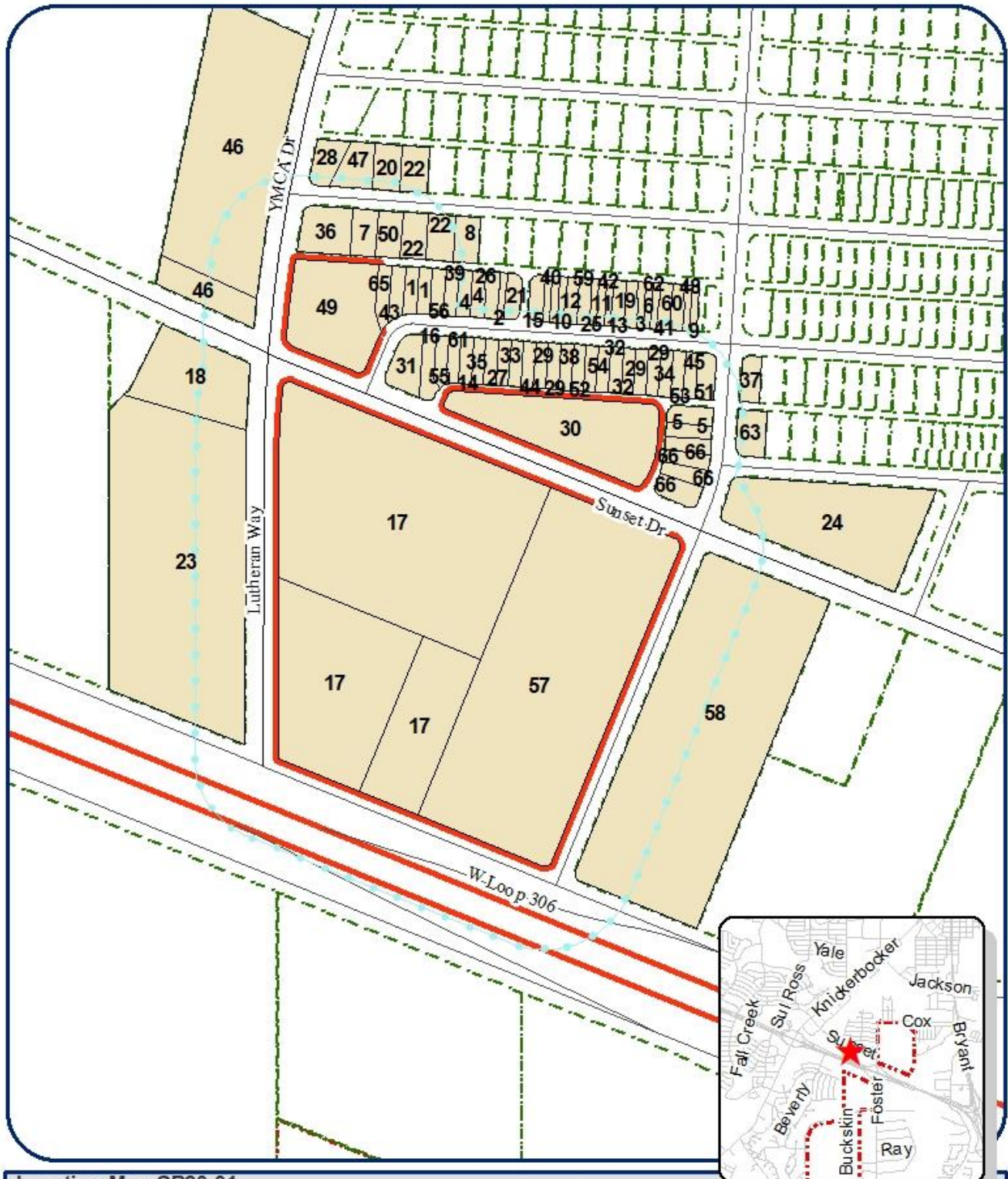


Adjoining properties



Apartments east of subject property





Location Map CP20-01

Trinity Lutheran/COSA

Council District 1 - Tommy Hiebert
 Neighborhood: Rio Vista
 Scale: 1" approx. = 300 ft

3536 Lutheran Way and area nearby

Legend

Subject Properties: —
 Current Zoning: RM-1/CN
 Requested Zone Change: CN
 Vision: Neighborhood





Location Map Z20-01

Trinity Lutheran

Council District 1 - Tommy Hiebert
Neighborhood: Rio Vista
Scale: 1" approx. = 200 ft

3536 Lutheran Way

Legend

Subject Properties: 
Current Zoning: RM-1
Requested Zone Change: CN
Vision: Neighborhood



TO BE FORMALLY ON RECORD IN FAVOR OR AGAINST THIS REQUEST, YOU MAY ALSO FILL OUT THIS FORM, SIGN IT AND MAIL IT BACK TO THE PLANNING DIVISION AT 52 W COLLEGE STREET IN SAN ANGELO, TEXAS 76903.

(☒) IN FAVOR () IN OPPOSITION

REASON(S) _____

NAME: Morgan Trainer Chegwidder

ADDRESS: 1710 Utah Ave San Angelo Tx 76901

SIGNATURE: 

Z20-01 & CP20-01: Trinity Lutheran/COSA

Property owner number: 60

If you have any questions about these proceedings, please call Shelly Paschal, Planner, with the City of San Angelo's Planning Division at (325) 657-4210 ext. 1533 or at shelly.paschal@cosatx.us.

TO BE FORMALLY ON RECORD IN FAVOR OR AGAINST THIS REQUEST, YOU MAY ALSO FILL OUT THIS FORM, SIGN IT AND MAIL IT BACK TO THE PLANNING DIVISION AT 52 W COLLEGE STREET IN SAN ANGELO, TEXAS 76903.

() IN FAVOR

(X) IN OPPOSITION

REASON(S) Children's safety & traffic

NAME: Shawna Kurlelman

ADDRESS: 1826 Wyoming Ave
San Angelo, TX 76904

SIGNATURE: [Signature]

Z20-01 & CP20-01: Trinity Lutheran/COSA

Property owner number: 28

If you have any questions about these proceedings, please call Shelly Paschal, Planner, with the City of San Angelo's Planning Division at (325) 657-4210 ext. 1533 or at shelly.paschal@cosatx.us.

TO BE FORMALLY ON RECORD IN FAVOR OR AGAINST THIS REQUEST, YOU MAY ALSO FILL OUT THIS FORM, SIGN IT AND MAIL IT BACK TO THE PLANNING DIVISION AT 52 W COLLEGE STREET IN SAN ANGELO, TEXAS 76903.

() IN FAVOR



IN OPPOSITION

REASON(S) Do Not want high school,
large grocery store, bars.
Do not want traffic, noise,
trash

NAME:

Nelen Rutledge

ADDRESS:

1708 Utah Ave
San Angelo, TX 76904
Phone 325-617-4081

SIGNATURE:

Nelen Rutledge

Z20-01 & CP20-01: Trinity Lutheran/COSA

Property owner number: 48

If you have any questions about these proceedings, please call Shelly Paschal, Planner, with the City of San Angelo's Planning Division at (325) 657-4210 ext. 1533 or at shelly.paschal@cosatx.us.

AN ORDINANCE OF THE CITY OF SAN ANGELO, TEXAS, AMENDING THE CITY'S COMPREHENSIVE PLAN BY CHANGING THE FUTURE LAND USE PLAN MAP DESIGNATION OF CERTAIN LANDS LOCATED EAST OF LUTHERAN WAY AND YMCA DRIVE, NORTH OF WEST LOOP 306, AND BOTH NORTH AND SOUTH OF SUNSET DRIVE BEING 19.52 ACRES IN BEING 2.6980 ACRES OUT OF LOT 2A, TRACT A, AND 1.3840 ACRES OUT OF LOT 2A, AND LOT 1A BEING 6.2510 ACRES OF TRACT A, SUNSET JOINT VENTURE ADDITION AND BLOCK 1, TRACT C BEING 1.1020 ACRES BEING SECTION 1, CAPITOL HEIGHTS ADDITION, AND LOT 16, SECTION 1 REPLAT TRACT A BEING 1.4580 ACRES, CAPITOL HEIGHTS ADDITION, AND TRACT B, BEING 6.6270 ACRES, SUNSET JOINT VENTURE ADDITION, FROM "NEIGHBORHOOD" TO "NEIGHBORHOOD CENTER"; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE

CP-20-01

WHEREAS, the City Council for the City of San Angelo, Texas, in accordance with the City Charter and Chapter 213 of the Texas Local Government Code, has adopted a Comprehensive Plan (Vision Plan and Future Land Use Map within the San Angelo Strategic Plan adopted by City Council as updated on October 20, 2009) to guide the long-range development of the City, manage the future growth of the City and promote the health, safety and welfare of its citizens; and

WHEREAS, the Comprehensive Plan includes a Future Land Use Map to serve as a geographical representation of anticipated land use patterns and long range development for the City; and

WHEREAS, inconsistencies have developed between current long standing land use and development patterns and development envisioned by the Future Land Use Map, which inconsistencies call for compatible revisions to the Future Land Use Map; and

WHEREAS, the Planning Commission and the City Council for the City of San Angelo, in compliance with the City Charter and Chapter 213 of the Texas Local Government Code regarding adoption and amendment of the City's Comprehensive Plan, having given requisite notice of public hearing by publication and otherwise, and having afforded a full and fair hearing to all property owners and persons interested, including persons situated in the vicinity of the affected area, being of the opinion that revision of the Comprehensive Plan and Future Land Use Map changes should be made as set out herein;

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF SAN ANGELO:

SECTION 1: The Future Land Use Plan Map, a component of the adopted Comprehensive Plan for the City of San Angelo be and the same is hereby amended to change the Future Land Use designations of the following described parcels as outlined below:

The real properties generally located east of Lutheran way and YMCA drive, north of West Loop 306, and both north and south of Sunset Drive being 19.52 acres in being 2.6980 acres out of Lot 2a, Tract A, and 1.3840 acres out of Lot 2a, and Lot 1A being 6.2510 acres of Tract A, Sunset Joint Venture Addition and Block 1, Tract C being 1.1020 acres being Section 1, Capitol Heights Addition, and Lot 16, Section 1 Replat Tract A being 1.4580 acres, Capitol Heights Addition, and Tract B, being 6.6270 acres, Sunset Joint Venture Addition, from “Neighborhood” to “Neighborhood Center”;

SECTION 2: The Director of the Planning and Development Services Department is hereby authorized and directed to amend the Future Land Use Planning Map maintained in the Office of the Director to incorporate the foregoing amendments, as further depicted on **Exhibit “A”** of this Ordinance.

SECTION 3: The terms and provisions of this Ordinance shall be deemed to be severable in that, if any portion of this Ordinance shall be declared to be invalid, the same shall not affect the validity of the other provisions of this Ordinance.

SECTION 4: This Ordinance shall be effective on, from and after the date of adoption.

INTRODUCED on the **18th day of February, 2020**, and finally ADOPTED on this the **3rd day of March, 2020**.

THE CITY OF SAN ANGELO

Brenda Gunter, Mayor

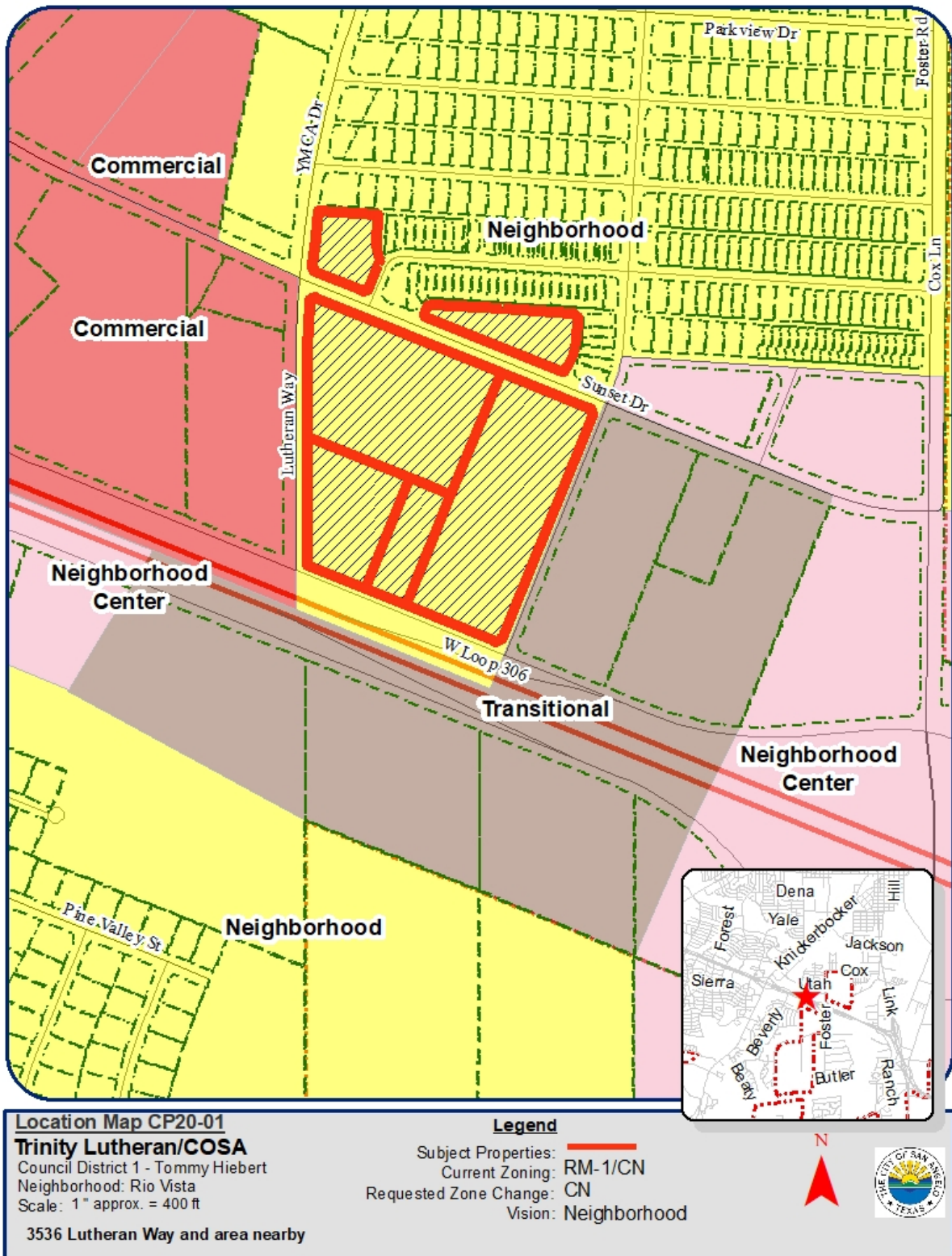
ATTEST:

APPROVED AS TO FORM:

Julia Antilley, City Clerk

Theresa James, City Attorney

EXHIBIT "A"



AN ORDINANCE AMENDING CHAPTER 12, EXHIBIT "A" OF THE CODE OF ORDINANCES, CITY OF SAN ANGELO, TEXAS, WHICH ADOPTS ZONING REGULATIONS, USE DISTRICTS AND A ZONING MAP, IN ACCORDANCE WITH A COMPREHENSIVE PLAN, BY CHANGING THE ZONING AND CLASSIFICATION OF THE FOLLOWING PROPERTY: **LOCATED AT 3512-3536 LUTHERAN WAY, GENERALLY LOCATED AT THE SOUTHEAST OF THE INTERSECTION OF LUTHERAN WAY AND SUNSET DRIVE, SAN ANGELO, TEXAS**, FROM LOW-RISE MULTI-FAMILY (RM-1) ZONING DISTRICT TO THE NEIGHBORHOOD COMMERCIAL (CN) ZONING DISTRICT; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE

Z20-01: Trinity Lutheran

WHEREAS, on the 27th day of January, 2020, the Planning Commission for the City of San Angelo in compliance with the City Charter, City ordinance and state law, and after holding a public hearing thereon, caused to be prepared and delivered a report and recommendation to City Council to approve the proposed Neighborhood Commercial (CN) Zoning District; and,

WHEREAS, on the 18th day of February, 2020, City Council held a public hearing on Z20-01, pursuant to published notice, and has considered the application, comments, reports and recommendations of the Planning Commission and staff, public testimony, and other relevant support materials;

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF SAN ANGELO:

SECTION 1: The basic zoning ordinance for the City of San Angelo, as enacted by the governing body for the City of San Angelo effective January 4, 2000, and included within Exhibit "A" of Chapter 12 of the Code of Ordinances of the City of San Angelo, and zoning map be and the same are hereby amended to designate the following described property permanently zoned NEIGHBORHOOD COMMERCIAL (CN) Zoning District:

The real property generally located at 3512-3536 Lutheran Way, specifically being 2.6980 acres out of Lot 2A, Tract A, and 1.3840 acres out of Lot 2A, and Lot 1A being 6.2510 acres of Tract A, Sunset Joint Venture Addition, San Angelo, Tom Green County, Texas.

SECTION 2: The Director of the Planning & Development Department, or his/her designee, is hereby directed to correct zoning district maps in the office of the Planning

& Development Department, to implement the zoning provision adopted herein, as further depicted on **Exhibit A** of this Ordinance.

SECTION 3: In all other respects, the use of the hereinabove described property shall be subject to all applicable regulations contained in Chapter 12 of the Code of Ordinances for the City of San Angelo, as amended.

SECTION 4. The remaining provisions of Chapter 12 of the Code of Ordinances of the City of San Angelo, Texas, not amended under Sections 1 and 2 of this Ordinance shall remain in full force and effect.

SECTION 5 The terms and provisions of this Ordinance shall be deemed to be severable in that, if any portion of this Ordinance shall be declared to be invalid, the same shall not affect the validity of the other provisions of this Ordinance.

SECTION 6: This Ordinance shall be effective on, from and after the date of adoption.

INTRODUCED on the **18th day of February, 2020**, and finally PASSED, APPROVED AND ADOPTED on this the **3rd day of March, 2020**.

THE CITY OF SAN ANGELO

Brenda Gunter, Mayor

ATTEST:

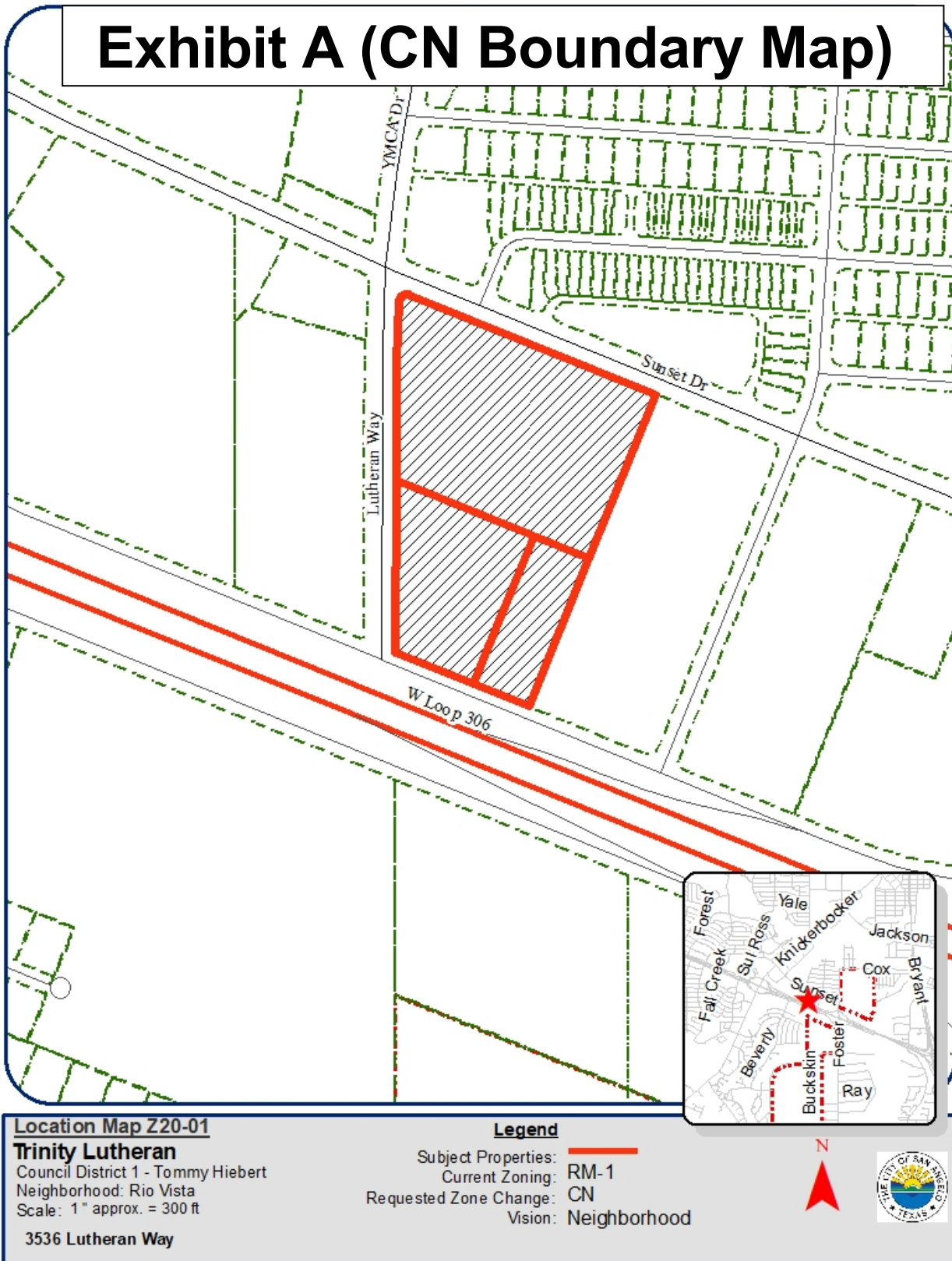
APPROVED AS TO FORM:

Julia Antilley, City Clerk

Theresa James, City Attorney

EXHIBIT "A"

Exhibit A (CN Boundary Map)



REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Jim Evans, Emergency Management Coordinator, Emergency Management, 325-657-4230

Meeting Date: March 3, 2020

Item type: Regular Item

Caption:

Consider a resolution accepting the Tom Green County/City of San Angelo Hazard Mitigation Action Plan 2020
(Presentation made by Emergency Management Coordinator Jim Evans)

Summary/History:

Every five years this plan is reviewed and update by city departments. The city contracted with H2O Partners, Inc. to write and submit the hazard mitigation plan to the state and Federal Emergency Management Agency (FEMA). A resolution adopting this plan is required by the federal government.

Financial Impact:

No funding is required for this resolution.

Other Information/Recommendation:

Attachments:

- | | |
|--|---|
| 1. Resolution 2020 | Resolution 2020.docx |
| 2. City of San Angelo Cover Page | City of San Angelo Cover Page.pdf |
| 3. City of San Angelo HMAP - Approved Plan (003) | City of San Angelo HMAP - Approved Plan (003).pdf |
| 4. TG Haz Resolution | TG Haz Resolution.pdf |

Presentation:

Approvals/Reviews:

Jim Evans	Created/Initiated
Brian Dunn	Approved
Theresa James	Approved
Tina Dierschke	Approved
Theresa James	Approved
Julia Antilley	Final Approval

A RESOLUTION BY THE CITY OF SAN ANGELO CITY COUNCIL ADOPTING THE TOM GREEN COUNTY/CITY OF SAN ANGELO HAZARD MITIGATION ACTION PLAN

WHEREAS, the City of San Angelo Office of Emergency Management serves the City of San Angelo and provides emergency management services in cooperation with county, state, and federal agencies; and

WHEREAS, the services provided in cooperation with county, state, and federal agencies helps the City of San Angelo and Tom Green County to be prepared for any disaster and helps to facilitate the resources necessary for first responders; and

WHEREAS, Tom Green County and the City of San Angelo have jointly created a Hazard Mitigation Action Plan; and

WHEREAS, this plan attached hereto as Exhibit "A" has been accepted at the county, state, and federal level and requires adoption by City Council; and

WHEREAS, the adoption of this plan could open grant funding opportunities in the hazard mitigation category post disaster for future events in the City.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF SAN ANGELO, TEXAS:

Part 1: The Tom Green County/City of San Angelo Hazard Mitigation Action Plan is hereby adopted.

Part 2: The City Manager is hereby authorized to execute any documents related to the adoption of this plan.

PASSED and APPROVED THIS 3rd DAY OF MARCH, 2020.

CITY OF SAN ANGELO, TEXAS

ATTEST:

Brenda Gunter, Mayor

Julia Antilley, City Clerk

APPROVED AS TO FORM:

Theresa James, City Attorney

Tom Green County / City of San Angelo

Hazard Mitigation Action Plan 2020



*Maintaining a Safe, Secure,
and Sustainable Future*

Tom Green County / City of San Angelo

Hazard Mitigation Action Plan 2019



*Maintaining a Safe, Secure,
and Sustainable Future*

For more information, visit our website at:

www.cosatx.us

www.co.tom-green.tx.us

Written comments should be forwarded to:

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Austin, Texas 78716

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Section 1 – Introduction

Background	1-1
Scope.....	1-2
Purpose	1-2
Authority	1-2
Summary of Sections	1-3

Section 2 – Planning Process

Plan Preparation and Development	2-1
Review and Incorporation of Existing Plans.....	2-6
Timeline for Implementing Mitigation Actions.....	2-9
Public and Stakeholder Involvement	2-9

Section 3 – Planning Area Profile

Overview	3-1
Population and Demographics.....	3-3
Future Development	3-4
Economic Impact	3-5
Existing and Future Land Use and Development Trends.....	3-5

Section 4 – Risk Overview

Hazard Description	4-1
Natural Hazards and Climate Change	4-4
Overview of Hazard Analysis	4-4

Section 5 – Drought

Hazard Description	5-1
Location	5-2
Extent	5-3

Historical Occurrences	5-5
Probability of Future Events	5-7
Vulnerability and Impact	5-7

Section 6 – Extreme Heat

Hazard Description	6-1
Location	6-1
Extent	6-1
Historical Occurrences	6-4
Probability of Future Events	6-5
Vulnerability and Impact	6-5

Section 7 – Hail

Hazard Description	7-1
Location	7-1
Extent	7-1
Historical Occurrences	7-3
Probability of Future Events	7-6
Vulnerability and Impact	7-7

Section 8 – Thunderstorm Wind

Hazard Description	8-1
Location	8-1
Extent	8-1
Historical Occurrences	8-3
Probability of Future Events	8-7
Vulnerability and Impact	8-7

Section 9 – Tornado

Hazard Description	9-1
Location	9-1
Extent	9-2
Historical Occurrences	9-5
Probability of Future Events	9-9
Vulnerability and Impact	9-9

Section 10 – Wildfire

Hazard Description	10-1
Location	10-1
Extent	10-3
Historical Occurrences	10-7
Probability of Future Events	10-9
Vulnerability and Impact	10-9

Section 11 – Winter Storm

Hazard Description	11-1
Location	11-3
Extent	11-3
Historical Occurrences	11-4
Probability of Future Events	11-6
Vulnerability and Impact	11-6

Section 12 – Lightning

Hazard Description	12-1
Location	12-1
Extent	12-1

Historical Occurrences	12-3
Probability of Future Events	12-4
Vulnerability and Impact	12-4

Section 13 – Flood

Hazard Description	13-1
Location	13-1
Extent	13-3
Historical Occurrences	13-6
Probability of Future Events	13-7
Vulnerability and Impact	13-7
NFIP Participation	13-10
NFIP Compliance and Maintenance	13-11
Repetitive Loss	13-12

Section 14 – Dam Failure

Hazard Description	14-1
Location	14-2
Extent	14-4
Historical Occurrences	14-7
Probability of Future Events	14-7
Vulnerability and Impact	14-7

Section 15 – Mitigation Strategy

Mitigation Goals	15-1
Goal 1	15-1
Goal 2	15-1
Goal 3	15-2
Goal 4	15-2

Goal 5	15-2
--------------	------

Section 16 – Mitigation Actions

Sumamry	16-1
City of San Angelo	16-2
Tom Green County – County-Wide.....	16-14
Tom Green County.....	16-19

Section 17 – Plan Maintenance

Plan Maintenance Procedures	17-1
Incorporation	17-1
Monitoring and Evaluation	17-4
Updating	17-5
Continued Public Involvement	17-6

Appendix A – Planning Team

Appendix B – Public Survey Results

Appendix C – Critical Facilities

Appendix D – Dam Locations

Appendix E – Meeting Documentation

Appendix F – Capability Assessment

Section 1: Introduction

Background.....	1
Scope.....	2
Purpose	2
Authority	2
Summary of Sections	3

Background

Tom Green County is located in west central Texas. The county seat, San Angelo is centrally located, and is 301 miles south of Amarillo and 258 miles west of Dallas.

Tom Green County is bordered by Coke County to the north, Runnels County to the northeast, Concho County to the east, Menard County to the southeast, Schleicher County to the south, Irion and Reagan Counties to the west, and Sterling County to the northwest. While agribusiness, farming, and ranching are the dominant economic force, there has been a healthy diversification, particularly in San Angelo. It is the regional center for communications, education, federal programs, health care, industry, recreation, retail, retirement, and tourism.

Texas is prone to extremely heavy rains and flooding with half of the world record rainfall rates (48 hours or less).¹ While flooding is a well-known risk, the City of San Angelo and Tom Green County are susceptible to a wide range of natural hazards, including but not limited to extreme heat, drought, hail, and winter storms. These life-threatening hazards can destroy property, disrupt the economy, and lower the overall quality of life for individuals.

While it is impossible to prevent an event from occurring, the effect from many hazards to people and property can be lessened. This concept is known as hazard mitigation, which is defined by the Federal Emergency Management Agency (FEMA) as *sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects*.² Communities participate in hazard mitigation by developing hazard mitigation plans. The Texas Division of Emergency Management (TDEM) is required to review the plan and FEMA has the authority to review and approve hazard mitigation plans through the Disaster Mitigation Act of 2000.

Hazard mitigation activities are an investment in a community's safety and sustainability. It is widely accepted that the most effective hazard mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately made. A comprehensive review to a hazard mitigation plan addresses hazard vulnerability that exists today and in the foreseeable future. Therefore, it is essential that a plan identify projected patterns of how future development will increase or decrease a community's overall hazard vulnerability.

¹ <http://www.floodsafety.com/texas/regional-info/san-antonio-flooding/>

² <http://www.fema.gov/hazard-mitigation-planning-resources>

Section 1: Introduction

Scope

The focus of the Plan is to identify activities to mitigate hazards classified as “high” or “moderate” risk, as determined through a detailed hazard risk assessment conducted for the City of San Angelo and Tom Green County. The hazard classification enables the participating jurisdictions to prioritize mitigation actions based on hazards which can present the greatest risk to lives and property in the geographic scope.

Purpose

The Plan was prepared by City of San Angelo, Tom Green County, and H2O Partners, Inc. The purpose of the Plan is to protect people and structures and to minimize the costs of disaster response and recovery. The goal of the Plan is to minimize or eliminate long-term risks to human life and property from known hazards by identifying and implementing cost-effective hazard mitigation actions. The planning process is an opportunity for the participating jurisdictions, stakeholders, and the general public to evaluate and develop successful hazard mitigation actions to reduce future risk of loss of life and damage to property resulting from a disaster in Tom Green County.

The Mission Statement of the Plan is, *“Maintaining a secure and sustainable future through the revision and development of targeted hazard mitigation actions to protect life and property.”*

The City of San Angelo and Tom Green County identified ten natural hazards to be addressed by the Plan. The specific goals of the Plan are to:

- Minimize disruption to participating jurisdictions within Tom Green County following a disaster;
- Streamline disaster recovery by articulating actions to be taken before a disaster strikes to reduce or eliminate future damage;
- Demonstrate a firm local commitment to hazard mitigation principles;
- Serve as a basis for future funding that may become available through grant and technical assistance programs offered by the State or Federal government. The Plan will enable participating jurisdictions to take advantage of rapidly developing mitigation grant opportunities as they arise; and
- Ensure that the City of San Angelo and Tom Green County maintain eligibility for the full range of future Federal disaster relief.

Authority



The Plan is tailored specifically for the City of San Angelo, Tom Green County, and plan participants including Planning Team members, stakeholders, and the general public who participated in the Plan development process. The Plan complies with all requirements promulgated by the Texas Division of Emergency Management (TDEM) and all applicable provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000) (P.L. 106-390), and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108-264), which amended the National Flood Insurance Act (NFIA) of 1968 (42 U.S.C. 4001, et al). Additionally, the Plan complies with the Interim Final Rules for the Hazard Mitigation Planning and Hazard Mitigation Grant Program (44 CFR, Part 201), which specify the criteria for approval of mitigation plans required in Section 322 of the DMA 2000 and

Section 1: Introduction

standards found in FEMA’s “Local Mitigation Plan Review Guide” (October 2011), and the “Local Mitigation Planning Handbook” (March 2013). Additionally, the Plan is developed in accordance with FEMA’s Community Rating System (CRS) Floodplain Management Plan standards and policies.

Summary of Sections

Sections 1 and 2 of the Plan outline the Plan’s purpose and development, including how Planning Team members, stakeholders, and members of the general public were involved in the planning process. Section 3 profiles Tom Green County’s population and economy.

Sections 4 through 14 present a hazard overview and information on individual natural hazards in the planning area. The hazards generally appear in order of priority based on potential losses to life and property, and other community concerns. For each hazard, the Plan presents a description of the hazard, a list of historical hazard events, and the results of the vulnerability and risk assessment process.

Section 15 presents hazard mitigation goals and objectives. Section 16 presents hazard mitigation actions for the City of San Angelo and Tom Green County. Section 17 identifies Plan maintenance mechanisms.

The list of planning team members and stakeholders is located in Appendix A. Public survey results are analyzed and presented in Appendix B. Appendix C contains a detailed list of critical facilities for the area, and Appendix D is dam locations. Appendix E contains information regarding workshops and meeting documentation. Capability Assessment results for participating jurisdictions are located in Appendix F.³

³ Information contained in some of these appendices are exempt from public release under the Freedom of Information Act (FOIA).

Section 2: Planning Process

Plan Preparation and Development	1
Overview of the Plan.....	1
Planning Team	2
Planning Process	4
Kickoff Workshop.....	4
Hazard Identification	4
Risk Assessment	5
Mitigation Review and Development	5
Review and Incorporation of Existing Plans.....	6
Review.....	6
Incorporation of Existing Plans into the HMAP Process	6
Incorporation of the HMAP into other Planning Mechanisms	7
Plan Review and Plan Update	9
Timeline for Implementing Mitigation Actions.....	9
Public and Stakeholder Involvement	9
Stakeholder Involvement.....	10
Public Meetings	11
Public Participation Survey	12

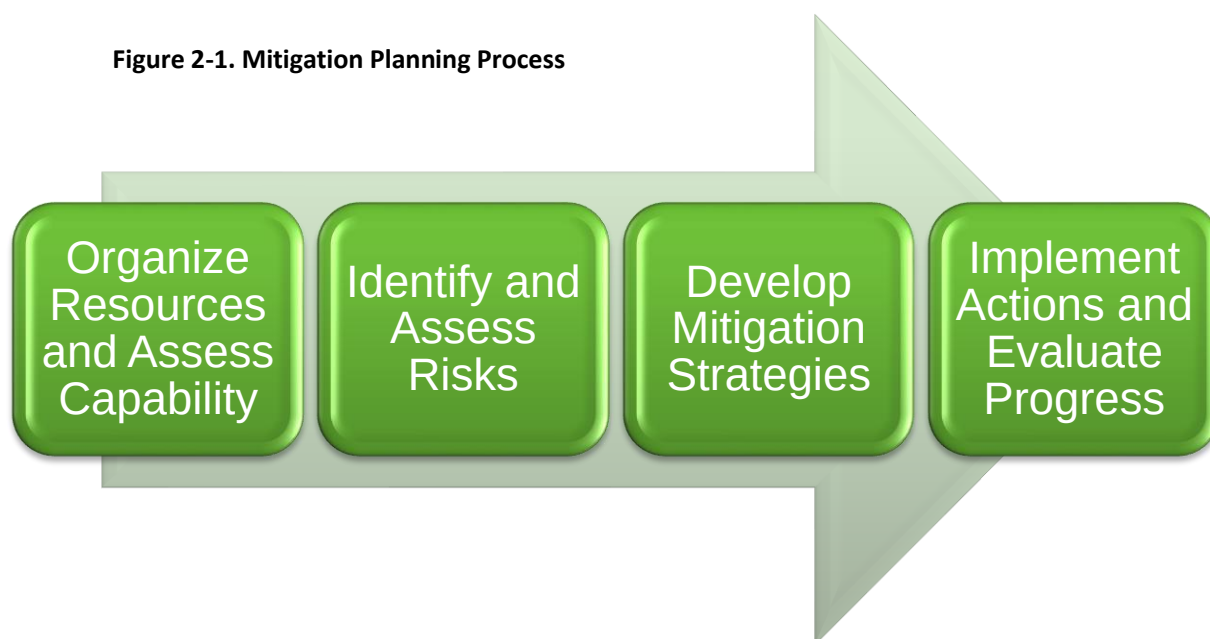
Plan Preparation and Development

Hazard mitigation planning involves coordination with various constituents and stakeholders to develop a more disaster-resistant community. Section 2 provides an overview of the planning process including the identification of key steps and a detailed description of how stakeholders and the public were involved.

Overview of the Plan

The City of San Angelo hired H2O Partners, Inc. (Consultant Team), to provide technical support and oversee the development of the Tom Green County / City of San Angelo Hazard Mitigation Plan 2019. The Consultant Team used the FEMA “Local Mitigation Plan Review Guide” (October 1, 2011), and the “Local Mitigation Planning Handbook” (March 2013) to develop the Plan. The overall planning process is shown in Figure 2-1 below.

Figure 2-1. Mitigation Planning Process



The City of San Angelo, Tom Green County and the Consultant Team met in August 2018 to begin organizing resources, identify Planning Team members, and conduct a Capability Assessment.

Planning Team

Key members of H2O Partners, Inc. developed the Plan in conjunction with the Planning Team. The Planning Team was established using a direct representation model. Some of the responsibilities of the Planning Team included: completing Capability Assessment surveys, providing input regarding the identification of hazards, identifying mitigation goals, and developing mitigation strategies. The Planning Team consisting of key personnel from each of the participating jurisdictions, shown in Table 2-1, was formed to coordinate planning efforts and request input and participation in the planning process.

Table 2-1. Planning Team

ORGANIZATION / DEPARTMENT	TITLE
City of San Angelo/Tom Green County	Emergency Management Coordinator
City of San Angelo	EM Assistant
City of San Angelo Engineering Services	City Engineer
City of San Angelo Finance	Finance Director
City of San Angelo Fire Department	Fire Chief
City of San Angelo Fire Department	Assistant Fire Chief
City of San Angelo Fire Department	Executive Office Coordinator

Section 2: Planning Process

ORGANIZATION / DEPARTMENT	TITLE
City of San Angelo Legal	City Attorney
City of San Angelo Operations	Operations Director
City of San Angelo Operations	Operations Assistant Director
City of San Angelo Stormwater	Program Manager
City of San Angelo Water Utility	Water Utility Director
City of San Angelo Water Utility	Water Utility Assistant Director
Tom Green County	Commission (Precinct 3)
Tom Green County Environmental Health	Senior Environmental Specialist

Additionally, a Stakeholder Group was invited to participate in the planning process via e-mail. The Consultant Team, Planning Team, and Stakeholder Group coordinated to identify mitigation goals, and develop mitigation strategies and actions for the Plan. Appendix A provides a complete listing of all participating Planning Team members and stakeholders by organization and title.

Based on results of completed Capability Assessment, the City of San Angelo and Tom Green County described methods for achieving future hazard mitigation measures by expanding existing capabilities. For example, neither has a community wildfire protection plan in place. Other options for improving capabilities include the following:

- Establishing Planning Team members with the authority to monitor the Plan and identify grant funding opportunities for expanding staff.
- Identifying opportunities for cross-training or increasing the technical expertise of staff by attending free training available through FEMA and the Texas Division of Emergency Management (TDEM) by monitoring classes and availability through preparingtexas.org.
- Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes.
- Developing ordinances that will require all new developments to conform to the highest mitigation standards.

Sample hazard mitigation actions developed with similar hazard risk were shared at the meetings. These important discussions resulted in development of multiple mitigation actions that are included in the Plan to further mitigate risk from natural hazards in the future.

The Planning Team developed hazard mitigation actions for mitigating risk from all of the hazards including potential flooding, wildfire, and extreme heat. The actions include but are not limited to drainage improvement projects, constructing firebreaks and clearing of underbrush, and educating citizens to practice hazard mitigation techniques.

Planning Process

The process used to prepare the Plan followed the four major steps included at Figure 2-1. After the Planning Team was organized, a capability assessment was developed and distributed at the Kick-Off Workshop. Hazards were identified and assessed, and results associated with each of the hazards were provided at the Risk Assessment Workshop. Based on the City's and County's identified vulnerabilities, specific mitigation strategies were discussed and developed at the Mitigation Action Strategy Workshop. Finally, Plan maintenance and implementation procedures were developed and are included in Section 17. Participation of Planning Team members, stakeholders, and the public at each of the workshops is documented in Appendix E.

At the Plan development workshops held throughout the planning process described herein, the following factors were taken into consideration:

- The nature and magnitude of risks currently affecting the community;
- Hazard mitigation goals to address current and expected conditions;
- Whether current resources will be sufficient for implementing the Plan;
- Implementation problems, such as technical, political, legal, and coordination issues that may hinder development;
- Anticipated outcomes; and
- How participating jurisdictions, agencies, and partners will participate in implementing the Plan.

Kickoff Workshop

The Kickoff Workshop was held at the San Angelo City Hall on August 8, 2018. The initial workshop informed participating officials and key department personnel about how the planning process pertained to their distinct roles and responsibilities and engaged stakeholder groups including, but not limited to Angelo State University, Howard College San Angelo, volunteer fire departments, Shannon Medical center, and surrounding Independent School Districts. In addition to the kickoff presentation, participants received the following information:

- Project overview regarding the planning process;
- Public survey access information;
- Hazard Ranking form; and
- Capability Assessment survey for completion.

A risk ranking exercise was conducted at the Kickoff Workshop to get input from the Planning Team and stakeholders pertaining to various risks from a list of natural hazards affecting the planning area. Participants ranked hazards high to low in terms of perceived level of risk, frequency of occurrence, and potential impact.

Hazard Identification

At the Kickoff Workshop, and through e-mail and phone correspondence, the Planning Team conducted preliminary hazard identification. The Planning Team in coordination with the Consultant Team reviewed and considered a full range of natural hazards. Once identified, the teams narrowed the list to significant hazards by reviewing hazards affecting the area as a whole, the 2018 State of Texas Hazard Mitigation Plan, and initial study results from reputable sources such as federal and state agencies. Based on this initial analysis, the teams identified a total of ten natural hazards which pose a significant threat to the planning area.

Section 2: Planning Process

Risk Assessment

An initial risk assessment for the City of San Angelo and Tom Green County was completed in December 2018 and results were presented to Planning Team members at the Risk Assessment Workshop held on December 11, 2018. At the workshop, the characteristics and consequences of each hazard were evaluated to determine the extent to which the planning area would be affected in terms of potential danger to property and citizens.

Property and crop damages were estimated by gathering data from the National Centers for Environmental Information (NCEI) and National Oceanic and Atmospheric Administration (NOAA). The assessment also examined the impact of various hazards on the built environment, including general building stock, critical facilities, lifelines, and infrastructure. The resulting risk assessment profiled hazard events, provided information on previous occurrences, estimated probability of future events, and detailed the spatial extent and magnitude of impact on people and property. Each participant at the Risk Assessment Workshop was provided a risk ranking sheet that asked participants to rank hazards in terms of the probability or frequency of occurrence, extent of spatial impact, and the magnitude of impact. The results of the ranking sheets identified unique perspectives on varied risks throughout the planning area.

The assessments were also used to set priorities for hazard mitigation actions based on potential loss of lives and dollar losses. A hazard profile and vulnerability analysis for each of the hazards can be found in Sections 4 through 14.

Mitigation Review and Development

Developing the Mitigation Strategy for the Plan involved identifying mitigation goals and new mitigation actions. A Mitigation Action Strategy Workshop was held at the San Angelo City Hall on March 19, 2019. In addition to the Planning Team, stakeholder groups were invited to attend the workshop. Regarding hazard mitigation actions, workshop participants emphasized the desire for flood and wildfire projects. Additionally, the participating jurisdictions were proactive in identifying mitigation actions to lessen the risk of all the identified hazards included in the Plan.

An inclusive and structured process was used to develop and prioritize new hazard mitigation actions for the Plan. The prioritization method was based on FEMA's STAPLE+E criteria and included social, technical, administrative, political, legal, economic, and environmental considerations. As a result, each Planning Team Member assigned an overall priority to each hazard mitigation action. The overall priority of each action is reflected in the hazard mitigation actions found in Section 16.

Planning Team Members then developed action plans identifying proposed actions, costs and benefits, the responsible organization(s), effects on new and existing buildings, implementation schedules, priorities, and potential funding sources.

Specifically, the process involved:

- Listing optional hazard mitigation actions based on information collected from previous plan reviews, studies, and interviews with federal, state, and local officials. Workshop participants reviewed the optional mitigation actions and selected actions that were most applicable to their area of responsibility, cost-effective in reducing risk, easily implemented, and likely to receive institutional and community support.
- Workshop participants inventoried federal and state funding sources that could assist in implementing the proposed hazard mitigation actions. Information was collected, including the program name,

Section 2: Planning Process

authority, purpose of the program, types of assistance and eligible projects, conditions on funding, types of hazards covered, matching requirements, application deadlines, and a point of contact.

- Planning Team Members considered the benefits that would result from implementing the hazard mitigation actions compared to the cost of those projects. Although detailed cost-benefit analyses were beyond the scope of the Plan, Planning Team Members utilized economic evaluation as a determining factor between hazard mitigation actions.
- Planning Team Members then selected and prioritized mitigation actions.

Hazard mitigation actions identified in the process were made available to the Planning Team for review. The draft Plan was made available to the general public for review on the City of San Angelo's website, along with Tom Green County's website, with the chance to comment via sending an email.

Review and Incorporation of Existing Plans

Review

Background information utilized during the planning process included various studies, plans, reports, and technical information from sources such as FEMA, the United States Army Corps of Engineers (USACE), the U.S. Fire Administration, National Oceanic and Atmospheric Administration (NOAA), the Texas Water Development Board (TWDB), the Texas Commission on Environmental Quality (TCEQ), the Texas State Data Center, Texas Forest Service, the Texas Division of Emergency Management (TDEM), and local hazard assessments and plans. Section 4 and the hazard-specific sections of the Plan (Sections 5-14) summarize the relevant background information.

Specific background documents, including those from FEMA, provided information on hazard risk, hazard mitigation actions currently being implemented, and potential mitigation actions. Previous hazard events, occurrences, and descriptions were identified through NOAA's National Centers for Environmental Information (NCEI). Results of past hazard events were found through searching the NCEI. The USACE studies were reviewed for their assessment of risk and potential projects in the region. State Data Center documents were used to obtain population projections. The State Demographer webpages were reviewed for population and other projections and included in Section 3 of the Plan. Information from the Texas Forest Service was used to appropriately rank the wildfire hazard, and to help identify potential grant opportunities. Materials from FEMA and TDEM were reviewed for guidance on Plan development requirements.

Incorporation of Existing Plans into the HMAP Process

A Capability Assessment was completed by key departments from the City of San Angelo and Tom Green County which provided information pertaining to existing plans, policies, ordinances and regulations to be integrated into the goals and objectives of the Plan. The relevant information was included in a master Capability Assessment, Appendix F.

Existing projects and studies were utilized as a starting point for discussing hazard mitigation actions among Planning and Consultant Team members. For example, Tom Green County recently worked on an improvement to the floodplain map for a portion of Tom Green County which included a portion of the City of San Angelo. Additionally, policies and ordinances were reviewed. Actions have been included to develop and implement inspections restricting construction within flood prone areas and fire prevention regulations. Other plans were reviewed, such as Emergency Operations Plans and Capital Improvement Plan, to identify any

Section 2: Planning Process

additional mitigation actions. Finally, the 2018 State of Texas Hazard Mitigation Plan, developed by TDEM, was discussed in the initial planning meeting in order to develop a specific group of hazards to address in the planning effort. The 2018 State Plan was also used as a guidance document, along with FEMA materials, in the development of the Tom Green County / City of San Angelo Hazard Mitigation Action Plan 2019.

Incorporation of the HMAP into other Planning Mechanisms

Planning Team members will integrate implementation of the Plan with other planning, such as the Emergency Operations Plan. Existing plans for the City of San Angelo and Tom Green County will be reviewed and incorporated into the Plan, as appropriate. This section discusses how the Plan will be implemented by the participating jurisdictions. It also addresses how the Plan will be evaluated and improved over time, and how the public will continue to be involved in the hazard mitigation planning process.

The City of San Angelo and Tom Green County will be responsible for implementing hazard mitigation actions contained in Section 16. Each hazard mitigation action has been assigned to a specific City and County department that is responsible for tracking and implementing the action.

A funding source has been listed for each identified hazard mitigation action and may be utilized to implement the action. An implementation time period has also been assigned to each hazard mitigation action as an incentive and to determine whether actions are implemented on a timely basis.

The City of San Angelo and Tom Green County will integrate hazard mitigation actions contained in the Plan with existing planning mechanisms such as Storm Water Management Plans and ordinances, Emergency Operations or Management Plans, Evacuation Plans, and other local and area planning efforts. The City of San Angelo and Tom Green County will work closely with area organizations to coordinate implementation of hazard mitigation actions that benefit the planning area in terms of financial and economic impact.

Upon formal adoption of the Plan, Planning Team members will review existing plans along with building codes to guide development and ensure that hazard mitigation actions are implemented. Each of the jurisdictions will be responsible for coordinating periodic review of the Plan to ensure integration of hazard mitigation strategies into these planning mechanisms and codes. The Planning Team will also conduct periodic reviews of various existing planning mechanisms and analyze the need for any amendments or updates in light of the approved Plan. The City of San Angelo and Tom Green County will ensure that future long-term planning objectives will contribute to the goals of the Plan to reduce the long-term risk to life and property from moderate and high risk hazards. Within one year of formal adoption of the Plan, existing planning mechanisms will be reviewed and analyzed as they pertain to the Plan.

Planning Team members will review and revise, as necessary, the long-range goals and objectives in its strategic plan and budgets to ensure that they are consistent with the Plan.

Furthermore, the City of San Angelo and Tom Green County will work with neighboring jurisdictions to advance the goals of the Plan as it applies to ongoing, long-range planning goals and actions for mitigating risk to natural hazards throughout the planning area.

Table 2-2 identifies types of planning mechanisms and examples of methods for incorporating the Plan into other planning efforts.

Table 2-2. Examples of Methods of Incorporation

Planning Mechanism	Incorporation of Plan
Annual Budget Review	Various departments and key personnel that participated in the planning process will review the Plan and mitigation actions therein when conducting their annual budget review. Allowances will be made in accordance with grant applications sought, and mitigation actions that will be undertaken, according to the implementation schedule of the specific action.
Capital Improvement Plans	Tom Green County has a Capital Improvement Plan (CIP) in place. Prior to any revisions to the CIP, County departments will review the risk assessment and mitigation strategy sections of the HMAP, as limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.
Comprehensive Plans	The City of San Angelo has a Long-term Comprehensive Development Plan in place. Since comprehensive plans involve developing a unified vision for a community, the mitigation vision and goals of the Plan will be reviewed in the development or revision of a Comprehensive Plan.
Floodplain Management Plans	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding, and information found in Section 13 of this Plan discussing the people and property at risk to flood, will be reviewed and revised when the City of San Angelo and Tom Green County update their management plans or develop new plans.
Grant Applications	The Plan will be evaluated by the City of San Angelo and Tom Green County when grant funding is sought for mitigation projects. If a project is not in the Plan, an amendment may be necessary to include the action in the Plan.
Regulatory Plans	Currently, the City of San Angelo and Tom Green County have regulatory plans in place, such as Emergency Management Plans, Continuity of Operations Plans, Economic Development, and Evacuation Plans. The Plan will be consulted when County and City departments review or revise their current regulatory planning mechanisms, or in the development of regulatory plans that are not currently in place.

Section 2: Planning Process

Appendix F provides an overview of Planning Team members' existing planning and regulatory capabilities to support implementation of mitigation strategy objectives. Appendix F also provides further analysis of how each intends to incorporate hazard mitigation actions into existing plans, policies, and the annual budget review as it pertains to prioritizing grant applications for funding and implementation of identified hazard mitigation projects.

It should be noted for the purposes of the Plan that the HMAP has been used as a reference when reviewing and updating all plans and ordinances for the entire planning area, including all participating jurisdictions. The Emergency Management Plans developed independently by the City of San Angelo and Tom Green County are updated every 5 years and incorporates goals, objectives and actions identified in the mitigation plan.

Plan Review and Plan Update

As with the development of Plan, the City of San Angelo and Tom Green County will oversee the review and update process for relevance and to necessary make adjustments. At the beginning of each fiscal year, Planning Team Members will meet to evaluate the Plan and review other planning mechanisms to ensure consistency with long-range planning efforts. In addition, planning participants will also meet twice a year, by conference call or presentation, to re-evaluate prioritization of the hazard mitigation actions.

Timeline for Implementing Mitigation Actions

The Planning Team (Table A-1, Appendix A) will engage in discussions regarding a timeframe for how and when to implement each hazard mitigation action. Considerations include when the action will be started, how existing planning mechanisms' timelines affect implementation, and when the action should be fully implemented. Timeframes may be general, and there will be short, medium, and long-term goals for implementation based on prioritization of each action, as identified on individual Hazard Mitigation Action worksheets included in the Plan.

The Planning Team will evaluate and prioritize the most suitable hazard mitigation actions for the community to implement. The timeline for implementation of actions will partially be directed by participating jurisdictions' comprehensive planning process, budgetary constraints, and community needs. The City of San Angelo and Tom Green County are committed to addressing and implementing hazard mitigation actions that may be aligned with and integrated into the Plan.

Overall, the Planning Team is in agreement that goals and actions of the Plan shall be aligned with the timeframe for implementation of hazard mitigation actions with respect to annual review and updates of existing plans and policies.

Public and Stakeholder Involvement

An important component of hazard mitigation planning is public participation and stakeholder involvement. Input from individual citizens and the community as a whole provides the Planning Team with a greater understanding of local concerns and increases the likelihood of successfully implemented hazard mitigation actions. If citizens and stakeholders, such as local businesses, non-profits, hospitals, and schools are involved, they are more likely to gain a greater appreciation of the risks that hazards may present in their community and take steps to reduce or mitigate their impact.

Section 2: Planning Process

The public was involved in the development of the Tom Green County / City of San Angelo Hazard Mitigation Action Plan 2019 at different stages prior to official Plan approval and adoption. Public input was sought using three methods: (1) open public meetings; (2) survey instruments; and (3) making the draft Plan available for public review at the City of San Angelo's and Tom Green County's websites.

The draft Plan was made available to the general public for review and comment on the City of San Angelo's and Tom Green County's websites. The public was notified at the public meetings that the draft Plan would be available for review. No feedback was received on the draft Plan, although it was given on the public survey, and all relevant information was incorporated into the Plan. Public input was utilized to assist in identifying hazards that were of most concern to the public and what actions they felt should be included and prioritized.

The Plan will be advertised and posted on the City of San Angelo's and Tom Green County's websites upon approval from FEMA, and a copy will be kept at San Angelo City Hall.

Stakeholder Involvement

Stakeholder involvement is essential to hazard mitigation planning since a wide range of stakeholders can provide input on specific topics and from various points of view. Throughout the planning process, members of community groups, local businesses, neighboring jurisdictions, schools, and hospitals were invited to participate in development of the Plan. The Stakeholder Group (Table A-2 in Appendix A, and Table 2-3, below), included a broad range of representatives from both the public and private sector and served as a key component in the City of San Angelo's and Tom Green County's outreach efforts for development of the Plan. Documentation of stakeholder meetings is found in Appendix E. A list of organizations invited to attend via e-mail is found in Table 2-3.

Table 2-3. Stakeholder Working Group

AGENCY	TITLE	PARTICIPATED
Angelo State University	President	
Angelo State University	Executive Assistant to the President	
Angelo State University	Director of Risk and Emergency Management	X
Christoval ISD	Superintendent of Schools	
Christoval ISD	Superintendent's Administrative Assistant	
East Concho Volunteer Fire Department	Volunteer Firefighter	X
Grape Creek ISD	District Superintendent	X
Grape Creek ISD	Assistant to District Superintendent	
Grape Creek ISD	Executive Director of School Operations	X
Howard College San Angelo	Workforce & Community Development Officer	
San Angelo	Resident	X
San Angelo	Resident	X

Section 2: Planning Process

AGENCY	TITLE	PARTICIPATED
San Angelo	Resident	X
San Angelo	Resident	X
San Angelo	Resident	X
San Angelo ISD	Superintendent	
San Angelo ISD	Deputy Superintendent of Administrative Services	
San Angelo REACT	Participant	
Shannon Medical Center	President / CEO	
Shannon Medical Center	COO	
Texas House District 72	Texas State Representative	
Texas Senate District 28	Texas State Senator	
Tom Green County	Judge	X
Tom Green County	Risk Manager	X
Veribest ISD	School Board President	
Veribest ISD	School Board Vice President	
Wall ISD	Superintendent	
Wall ISD	Administrative Assistant	
Walter Valley ISD	Superintendent	
Walter Valley ISD	Administrative Assistant	

Stakeholders and participants from neighboring communities that attended the Planning Team and public meetings played a key role in the planning process. For example, tornado was one of the major concerns to the public, so Tom Green County included an action to build safe room shelters at various locations throughout the county.

Public Meetings

A series of public meetings were held to collect public and stakeholder input. Topics of discussion included the purpose of hazard mitigation, discussion of the planning process, and types of natural hazards. Each jurisdiction released information regarding the public meetings in their area to increase public participation in the Plan development process, through posting on their website, on social media sources including Facebook and Twitter, through the local media, and/or posting the information on bulletin boards in public facilities. A sampling of these notices can be found in Appendix E, along with the documentation on the public meetings. Representatives from area neighborhood associations and area residents were invited to participate.

Section 2: Planning Process

Public meetings were held on the following dates and locations:

- August 8, 2018, San Angelo Council Chambers
- December 11, 2018, San Angelo Council Chambers
- March 19, 2019, Emergency Operations Center

Public Participation Survey

In addition to public meetings, the Planning and Consultant Teams developed a public survey designed to solicit public input during the planning process from citizens and stakeholders and to obtain data regarding the identification of any potential hazard mitigation actions or problem areas. The survey was promoted by local officials and a link to the survey was posted on participating jurisdictions' websites. A total of 30 surveys were completed online. The survey results are analyzed in Appendix B. The City of San Angelo and Tom Green County reviewed the input from the surveys and decided which information to incorporate into the Plan as hazard mitigation actions. For example, many citizens mentioned concerns about road issues, regarding drainage issues and the need for additional ingress/egress to neighborhoods. In response, the City of San Angelo has included an action to construct a bridge structure as well as a secondary access to the subdivision.

Section 3: Planning Area Profile

Overview	1
Population and Demographics.....	3
Population Growth.....	4
Future Development.....	4
Economic Impact	5
Existing and Future Land Use and Development Trends	5

Overview

The “Concho Country” which included Tom Green County, was known to the Spanish 300 years before Texas became a republic. The Indians of this area were the Jumanos. Early explorers noted the friendliness of the Jumanos, abundance of pecan trees and mussel shells and vast herds of buffalo. By the mid-eighteenth century the Apaches – pushed south by the stronger Comanches – had allied with and then absorbed the Jumanos. The Apaches, by the early nineteenth century, were forced west by the Comanches and their allies. The Comanches remained in control of the Concho Country until they were overwhelmed by westward expansion of Anglo-Americans in the second half of the nineteenth century.

Following the Civil War, Ben Ficklin opened a stage station by the same name on the Concho River. In 1867, near Ben Ficklin, Camp Hatch was established between the North and Middle Concho rivers near their confluence. The camp was renamed Camp Kelly in January of 1868 and in March was renamed Fort Concho. The same year Bartholomew J. DeWitt from San Antonio bought a large tract of land across the river from Fort Concho. The small community that was developed on the tract included a saloon and a few gambling houses. It was first called Over the River, but was later named Santa Angela after Mrs. DeWitt or her sister, who was the mother superior of the Ursuline Convent in San Antonio. The name was later changed to San Angelo for approval of a post office application. The establishment of Fort Concho was the watershed event in the history of Tom Green County.

The county was officially established by an act of the state legislature on March 13, 1874, from Bexar land, and was named in honor of Confederate Brig. Gen. Thomas Green. By 1880, there were four post offices – Ben Ficklin, Fort Concho, Knickerbocker, and San Angelo. Ben Ficklin was completely destroyed by flood in August of 1882. Sixty-five people were killed, and the county seat was moved to safer San Angelo, where a courthouse was built in 1884. In 1885 San Angelo organized the first fire department. A major factor in the development of agriculture was the first rail connection completed in September of 1888 by the Santa Fe Railroad. This provided direct access to market for cattle, sheep, goats, and wool and other products. By the turn of the century an estimated 3,500 to 5,000 railroad cars of cattle were shipped annually – making San Angelo the largest range cattle-shipping station in the United States. The decade of the 1880s ended with the incorporation of San Angelo as a city and the closing of Fort Concho in 1889.

The principal river in the county is the Concho, which is formed by the convergence of the North, Middle, and South Concho rivers. The North Concho River and its tributaries, Bald Eagle, Chalk, Dry, Grape, Little, Mulberry, and Walnut creeks, drain the northwest portion of the county. The Middle Concho and its tributaries, Brushy, Dove, Dry Rocky, East Rocky, West Rocky, and Spring creeks drain the west central and southwest portions of

Section 3: Planning Area Profile

the county. The South Concho and its tributaries, Burks and Pecan creeks, drain the southern part of the county. And finally the Concho and its tributaries, Catelan, Erica, Hog Marsh, Kickapoo, Lipan, and Snake creeks, drain the southeastern part of the county. There are three major impoundments: O.C. Fisher lake, Twin Buttes Reservoir, and Lake Nasworthy.

Figure 3-1 shows the general location of the City of San Angelo within Tom Green County.

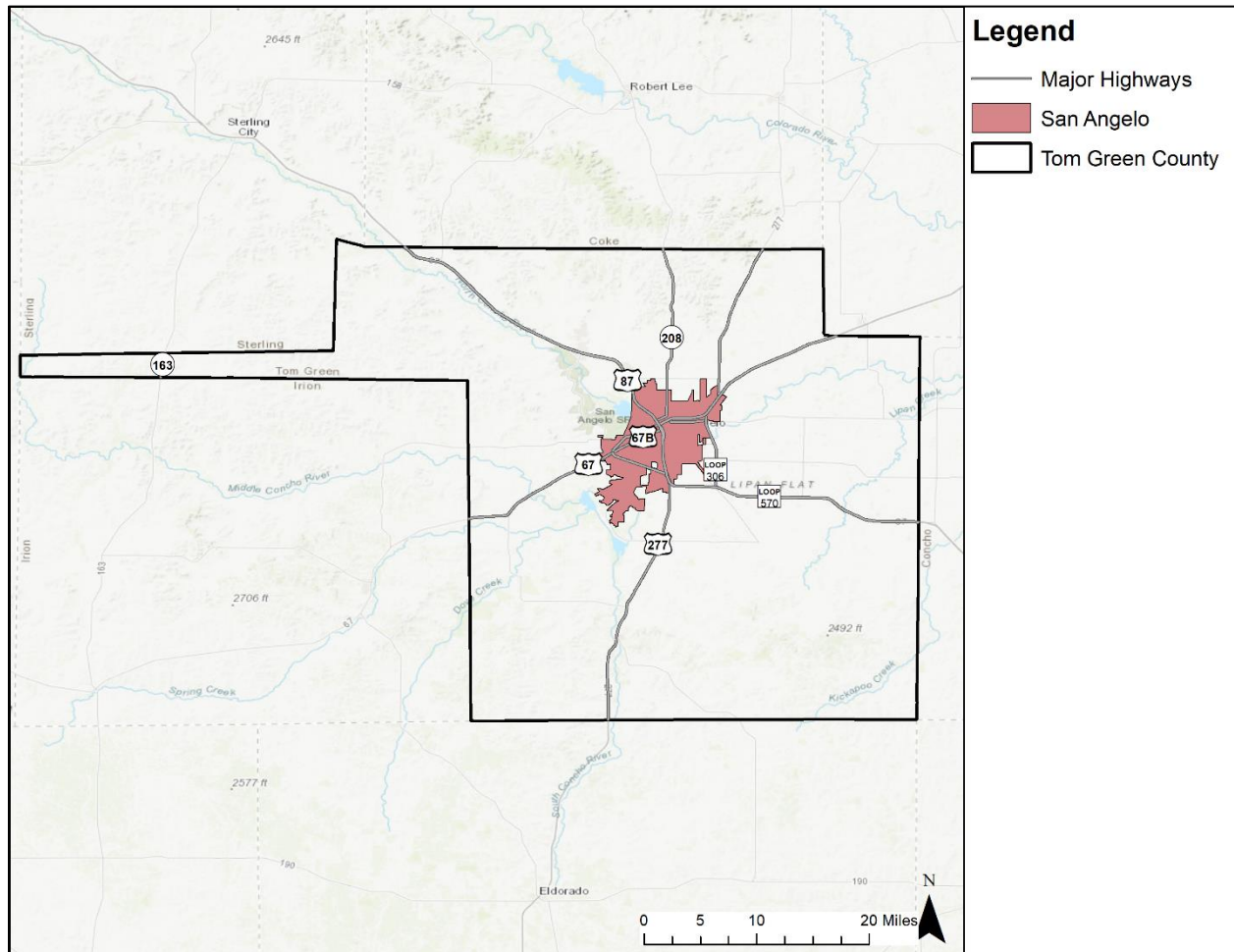
Figure 3-1. Location of Tom Green County



Figure 3-2 shows Tom Green County and the City of San Angelo that are covered in the risk assessment analysis of the Plan.

Section 3: Planning Area Profile

Figure 3-2. City of San Angelo and Tom Green County Planning Area



Provided in Table 3-1 below is a listing of the jurisdictions that participated in the Tom Green County / City of San Angelo Hazard Mitigation Action Plan 2019.

Table 3-1. Participating Jurisdictions

PARTICIPATING JURISDICTIONS
City of San Angelo
Tom Green County

Population and Demographics

In the official Census population count, as of April 1, 2010, Tom Green County has a population of 110,224 residents. By July 2017, the number was estimated at 117,689, and by July 2018, the population was estimated

Section 3: Planning Area Profile

at 118,189. Table 3-3 provides the population distribution by jurisdiction within Tom Green County based on the 2010 Census information.¹

Between official U.S. Census population counts, the estimate uses a formula based on new residential building permits and household size. It is simply an estimate and there are many variables involved in achieving an accurate estimation of people living in a given area at a given time.

Table 3-2. Population Distribution by Jurisdiction

JURISDICTION	TOTAL 2010 POPULATION	PERCENTAGE	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS		
			Under 5	Elderly (Over 65)	Below Poverty Level
City of San Angelo	93,200	85%	6,830	12,847	13,171
Tom Green County	110,224	100%	7,726	15,265	14,339

Population Growth

The official 2010 Tom Green County population is 110,224. Overall, the City of San Angelo and Tom Green County experienced an increase in population between 1980 and 2010. The City of San Angelo experienced an increase by 27.25%, or an increase by 19,960. Tom Green County experienced an increase by 30.01%, or an increase by 25,440. Between 2000 and 2010, both the City of San Angelo and Tom Green County as a whole experienced a population growth. Table 3-3 provides historic growth rates.

Table 3-3. Population for City of San Angelo / Tom Green County, 1980-2010

JURISDICTIONS	1980	1990	2000	2010	POP CHANGE 1980-2010	PERCENT OF CHANGE	POP CHANGE 2000-2010	PERCENT OF CHANGE
City of San Angelo	73,240	84,474	88,439	93,200	19,960	27.25%	4,761	5.38%
Tom Green County	84,784	98,458	104,010	110,224	25,440	30.01%	6,214	5.97%

Future Development

To better understand how future growth and development in the County might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. This section includes an analysis of the projected population change and economic impacts.

Population projections from 2010 to 2040 are listed in Table 3-4, as provided by the Office of the State Demographer, Texas State Data Center, and the Institute for Demographic and Socioeconomic Research. Population projections are based on a 0.5 scenario growth rate, which is 50 percent of the population growth rate that occurred during 2000-2010. This information is only available at the County level; however, the

¹ Source: <https://www.census.gov/quickfacts/fact/table/tomgreencountytexas,US/PST040218>

Section 3: Planning Area Profile

population projection shows an increase in population density for the County, which would mean overall growth for the County.

Table 3-4. Tom Green County Population Projections

County	LAND AREA (SQ MI)	2010		2020		2030		2040	
		Population							
		Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)
Tom Green	1,522	110,224	72.42	115,884	76.14	121,881	80.08	126,657	83.22

Economic Impact

Building and maintaining infrastructure depends on the economy, and therefore, protecting infrastructure from risk due to natural hazards in the planning area is important to the City of San Angelo and Tom Green County. Whether it's expanding culverts under a road that washes out during flash flooding, shuttering a fire station, or flood-proofing a wastewater facility, infrastructure must be mitigated from natural hazards in order to continue providing essential utility and emergency response services in a fast-growing planning area.

Major employers in the area are critical to the health of the economy, as well as effective transportation connectivity. The Economic Development Department serves as the economic development arm of the City of San Angelo Development Corporation (COSADC). The vision/mission statement of the Economic Development Department is to serve the community as an organization comprised of highly trained professionals leveraging resources to diversify the economy, expand the tax base, foster business growth, and increase job opportunities.

Working with economic development partners, COSADC will retain, strengthen and diversify the job base of the community to ensure a vibrant business climate for the City of San Angelo and the region. Through job creation and retention, recruitment and expansion, special project funding and various other activities, the development corporation has concentrated its efforts towards improving opportunities and enhancing the lives of the citizens to grow a better City of San Angelo.

Existing and Future Land Use and Development Trends

While many cities are defined by large, iconic buildings, the City of San Angelo distinguishes itself with vibrant neighborhoods. The City of San Angelo's strength, diversity, and vitality are all rooted in its neighborhoods, where pride and cultures are cherished and celebrated. Although each neighborhood has its own personality and distinct appeal, all of the neighborhoods demonstrate the City of San Angelo's rich West Texas history, heritage, and diversity.

The Planning & Development Services Department is responsible for preserving and maintaining the City of San Angelo's historic, diverse neighborhoods by facilitating orderly growth and development. The department is comprised of the Office of the Director and three divisions. Streamlining development processes is one of

Section 3: Planning Area Profile

the City Council's five approved priorities. The Planning & Development Services Department is regularly reviewing local building codes for needed updates, re-examining processes, and regularly meeting with the development community and citizens to get their feedback. They increasingly use technology to provide customers faster information about their projects, applications and inspections.

The Planning Division assists and guides citizens and City leaders towards more productive, orderly, and attractive patterns of physical and economic development that enhances the quality of the in the City of San Angelo. The Planning Division serves as liaison to the Planning Commission, the Zoning Board of Adjustment and the Design & Historic Review Commission.

Section 4: Risk Overview

Hazard Description.....	1
Natural Hazards and Climate Change	4
Overview of Hazard Analysis.....	4

Hazard Description

Section 4 is the first phase of the Risk Assessment, providing background information for the hazard identification process and descriptions for the hazards identified. The Risk Assessment continues with Sections 5 through 14, which include hazard descriptions and vulnerability assessments.

Upon a review of the full range of natural hazards suggested under FEMA planning guidance, the City of San Angelo and Tom Green County identified ten natural hazards that are addressed in the Hazard Mitigation Plan. Of the hazards identified, nine natural hazards and one quasi-technological¹ hazard (dam failure) were identified as significant, as shown in Table 4-1. The hazards were identified through input from Planning Team members and a review of the current 2018 State of Texas Hazard Mitigation Plan (State Plan). Readily available online information from reputable sources such as federal and state agencies were also evaluated and utilized to supplement information as needed.

In general, there are three main categories of hazards: atmospheric, hydrologic, and technological. Atmospheric hazards are events or incidents associated with weather generated phenomenon. Atmospheric hazards that have been identified as significant for the City of San Angelo and Tom Green County include extreme heat, hail, lightning, thunderstorm wind, tornado, and winter storm (Table 4-1).

Hydrologic hazards are events or incidents associated with water related damage and account for over 75 percent of Federal disaster declarations in the United States. Hydrologic hazards identified as significant for the planning area include flood and drought.

Technological hazards refer to the origins of incidents that can arise from human activities, such as the construction and maintenance of dams. They are distinct from natural hazards primarily because they originate from human activity. The risks presented by natural hazards may be increased or decreased as a result of human activity, however they are not inherently human-induced. Therefore, dam failure is classified as a quasi-technological hazard and referred to as “technological,” in Table 4-1 for purposes of description.

For the Risk Assessment, the wildfire hazard is considered “other,” since this hazard is not considered atmospheric, hydrologic, nor technological.

¹ While dam failure is generally considered a quasi-technological hazard, it is profiled in the Plan as a natural hazard, i.e. a breach caused by extensive rainfall or flooding.

Section 4: Risk Overview

Table 4-1. Hazard Descriptions

HAZARD	DESCRIPTION
ATMOSPHERIC	
Extreme Heat	Extreme heat is the condition whereby temperatures hover ten degrees or more above the average high temperature in a region for an extended period of time.
Hail	Hailstorms are a potentially damaging outgrowth of severe thunderstorms. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and subsequent cooling of the air mass.
Lightning	Lightning is a sudden electrostatic discharge that occurs during an electrical storm. This discharge occurs between electrically charged regions of a cloud, between two clouds, or between a cloud and the ground.
Thunderstorm Wind	A thunderstorm occurs when an observer hears thunder. Radar observers use the intensity of the radar echo to distinguish between rain showers and thunderstorms. Lightning detection networks routinely track cloud-to-ground flashes, and therefore thunderstorms.
Tornado	A tornado is a violently rotating column of air that has contact with the ground and is often visible as a funnel cloud. Its vortex rotates cyclonically with wind speeds ranging from as low as 40 mph to as high as 300 mph. The destruction caused by tornadoes ranges from light to catastrophic, depending on the location, intensity, size, and duration of the storm.
Winter Storm	Severe winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Blizzards, the most dangerous of all winter storms, combine low temperatures, heavy snowfall, and winds of at least 35 miles per hour, reducing visibility to only a few yards. Ice storms occur when moisture falls and freezes immediately upon impact on trees, power lines, communication towers, structures, roads, and other hard surfaces. Winter storms and ice storms can down trees, cause widespread power outages, damage property, and cause fatalities and injuries to human life.
HYDROLOGIC	
Drought	A prolonged period of less than normal precipitation such that the lack of water causes a serious hydrologic imbalance. Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality.

Section 4: Risk Overview

HAZARD	DESCRIPTION
Flood	The accumulation of water within a body of water, which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, and shallow flooding.
OTHER	
Wildfire	A wildfire is an uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase the risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors.
TECHNOLOGICAL	
Dam Failure	Dam failure is the collapse, breach, or other failure of a dam structure resulting in downstream flooding. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and severe property damage if development exists downstream of the dam.

Hazards that weren't considered significant and were not included in the Plan are located in Table 4-2, along with the evaluation process used for determining the significance of each of these hazards. Hazards not identified for inclusion at this time may be addressed during future evaluations and updates.

Table 4-2. Other Hazards Deferred

HAZARD CONSIDERED	REASON FOR DETERMINATION
Coastal Erosion	The planning area is not located on the coast, therefore coastal erosion does not pose a risk.
Hurricane	The planning area is not located within 200 miles of the coast; therefore, hurricanes do not pose a risk. Any remnants of a hurricane or tropical storm system would only include thunderstorm winds and rainfall and would be covered under flood or thunderstorm wind mitigation measures.
Land Subsidence	There are no historical occurrences of land subsidence for the planning area and it is located in an area where occurrences are considered rare. There is no history of impact to critical structures, systems, populations or other community assets or vital services as a result of land subsidence and none is expected in the future.

Section 4: Risk Overview

HAZARD CONSIDERED	REASON FOR DETERMINATION
Earthquake	According to the State Plan, an earthquake occurrence for the planning area is considered exceedingly rare. Earthquake events are not considered to pose a risk to the planning area. There is no history of impact to critical structures, systems, populations, or other community assets or vital services as a result of earthquakes and none is expected in the future.
Expansive Soils	There is no history of impact to critical structures, systems, populations, or other community assets or vital services as a result of expansive soils and none is expected in the future.

Natural Hazards and Climate Change

Climate change is defined as a long-term hazard which can increase or decrease the risk of other weather hazards. It directly endangers property due to sea level rise and biological organisms due to habitat destruction.

Global climate change is expected to exacerbate the risks of certain types of natural hazards impacted through rising sea levels, warmer ocean temperatures, higher humidity, the possibility of stronger storms, and an increase in wind and flood damages due to storm surges. While sea level rise is a natural phenomenon and has been occurring for several thousand years, the general scientific consensus is that the rate has increased in the past 200 years, from 0.5 millimeters per year to 2 millimeters per year.

Texas is considered one of the more vulnerable states in the U.S. to both abrupt climate changes and to the impact of gradual climate changes to the natural and built environments. Mega-droughts can trigger abrupt changes to regional ecosystems and the water cycle, drastically increase extreme summer temperature and fire risk, and reduce availability of water resources, as Texas experienced during 2011-2012.

Paleoclimate records also show that the climate over Texas had large changes between periods of frequent mega-droughts and the periods of mild droughts that Texas is currently experiencing. While the cause of these fluctuations is unclear, it would be wise to anticipate that such changes could occur again, and may even be occurring now.

Overview of Hazard Analysis

The methodologies utilized to develop the Risk Assessment are a historical analysis and a statistical approach. Both methodologies provide an estimate of potential impact by using a common, systematic framework for evaluation.

Records retrieved from National Centers for Environmental Information (NCEI) and National Oceanic and Atmospheric Administration (NOAA) were reported for the City of San Angelo and Tom Green County. Remaining records identifying the occurrence of hazard events in the planning area and the maximum recorded magnitude of each event were also evaluated.

The use of geographic information system (GIS) technology to identify and assess risks for the City of San Angelo and Tom Green County, and evaluate community assets and their vulnerability to the hazards.

Section 4: Risk Overview

The four general parameters that are described for each hazard in the Risk Assessment include frequency of return, approximate annualized losses, a description of general vulnerability, and a statement of the hazard's impact.

Frequency of return was calculated by dividing the number of events in the recorded time period for each hazard by the overall time period that the resource database was recording events. Frequency of return statements are defined in Table 4-3, and impact statements are defined in Table 4-4 below.

Table 4-3. Frequency of Return Statements

PROBABILITY	DESCRIPTION
Highly Likely	Event is probable in the next year.
Likely	Event is probable in the next three years.
Occasional	Event is probable in the next five years.
Unlikely	Event is probable in the next ten years.

Table 4-4. Impact Statements

POTENTIAL SEVERITY	DESCRIPTION
Substantial	Multiple deaths. Complete shutdown of facilities for 30 days or more. More than 50 percent of property destroyed or with major damage.
Major	Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities for at least two weeks. More than 25 percent of property destroyed or with major damage.
Minor	Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for more than one week. More than 10 percent of property destroyed or with major damage.
Limited	Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

Each of the hazard profiles includes a description of a general Vulnerability Assessment. Vulnerability is the total of assets that are subject to damages from a hazard, based on historic recorded damages. Assets in the region were inventoried and defined in hazard zones where appropriate. The total amount of damages, including property and crop damages, for each hazard is divided by the total number of assets (building value totals) in that community to determine the percentage of damage that each hazard can cause to the community.

To better understand how future growth and development in the City of San Angelo and Tom Green County might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. Hazard vulnerability for all participating jurisdictions was reviewed based on recent development changes that

Section 4: Risk Overview

occurred throughout the planning area. Tom Green County has grown slightly between 2010 and 2018 according to the U.S. Census Bureau, therefore there has been no significant factors or development trends with a consequential effect or increase in vulnerability to the population, infrastructure and buildings for hazards.

Once loss estimates and vulnerability were known, an impact statement was applied to relate the potential impact of the hazard on the assets within the area of impact.

Section 5: Drought

Hazard Description.....	1
Location	2
Extent.....	3
Historical Occurrences	5
Significant Events	7
Probability of Future Events	7
Vulnerability and Impact.....	7
Assessment of Impacts	8

Hazard Description

Drought is a period of time without substantial rainfall that persists from one year to the next. Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of anticipated natural precipitation reduction over an extended period of time, usually a season or more in length. Droughts can be classified as meteorological, hydrologic, agricultural, and socioeconomic. Table 5-1 presents definitions for these different types of drought.



Droughts are one of the most complex of all natural hazards as it is difficult to determine their precise beginning or end. In addition, droughts can lead to other hazards such as extreme heat and wildfires. Their impact on wildlife and area farming is enormous, often killing crops, grazing land, edible plants, and even in severe cases, trees. A secondary hazard to drought is wildfire because dying vegetation serves as a prime ignition source. Therefore, a heat wave combined with a drought is a very dangerous situation.

Table 5-1. Drought Classification Definitions¹

METEOROLOGICAL DROUGHT	The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
HYDROLOGIC DROUGHT	The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
AGRICULTURAL DROUGHT	Soil moisture deficiencies relative to water demands of plant life, usually crops.
SOCIOECONOMIC DROUGHT	The effect of demands for water exceeding the supply as a result of a weather-related supply shortfall.

¹ Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA

Location

Droughts occur regularly throughout Texas as well as the City of San Angelo and Tom Green County and are a normal condition. However, they can vary greatly in their intensity and duration. The Drought Monitor shows the planning area is currently experiencing normal conditions (Figure 5-1). However, the planning area has experienced abnormally dry to exceptional drought conditions over the last ten years (Figure 5-2). There is no distinct geographic boundary to drought; therefore, it can occur throughout the planning area equally.

Figure 5-1. U.S. Drought Monitor, May 2019

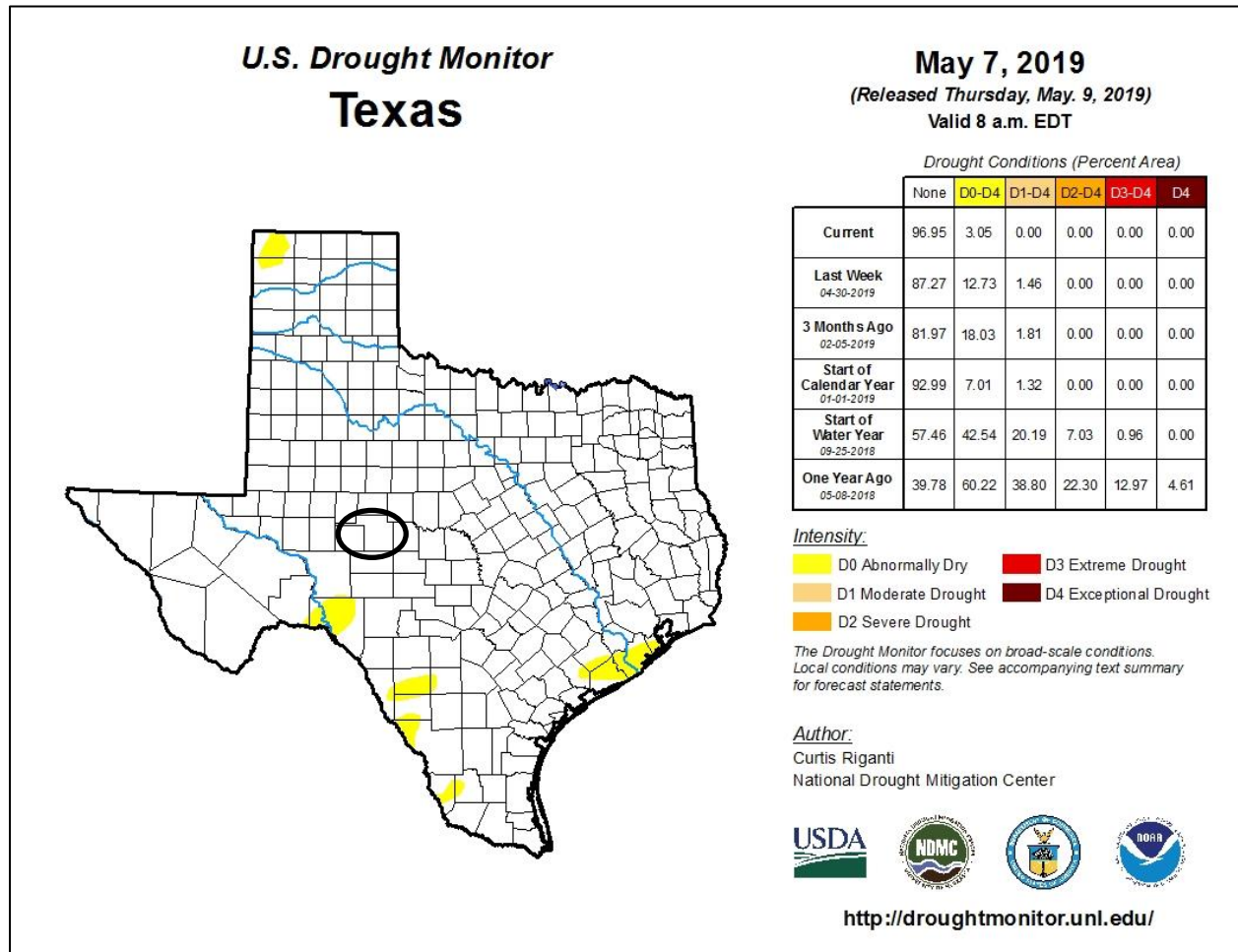
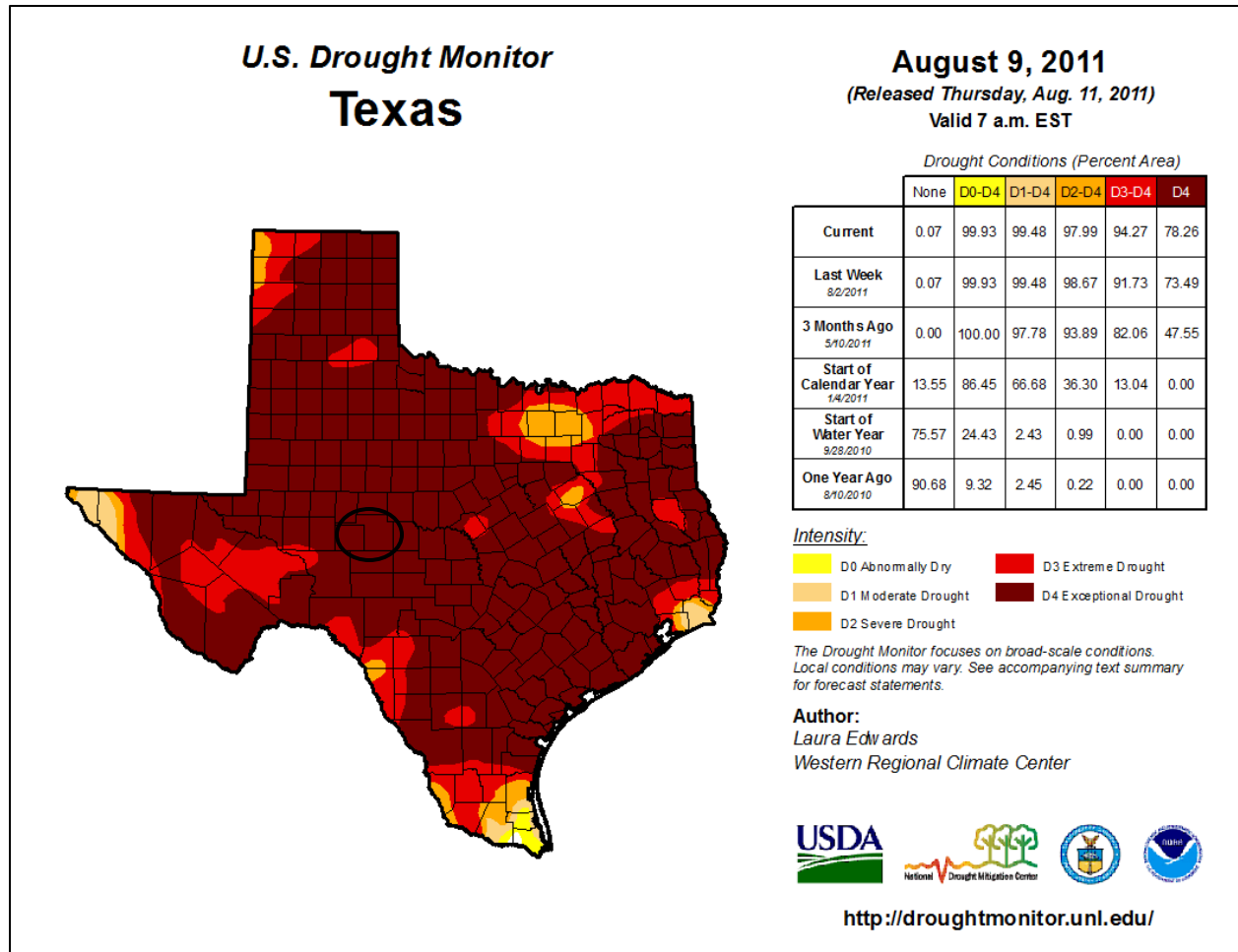


Figure 5-2. U.S. Drought Monitor, August 2011



Extent

The Palmer Drought Index is used to measure the extent of drought by measuring the duration and intensity of long-term drought-inducing circulation patterns. Long-term drought is cumulative, with the intensity of drought during the current month dependent upon the current weather patterns plus the cumulative patterns of previous months. The hydrological impacts of drought (e.g., reservoir levels, groundwater levels, etc.) take longer to develop. Table 5-2 depicts magnitude of drought, while Table 5-3 describes the classification descriptions.

Section 5: Drought

Table 5-2. Palmer Drought Index

DROUGHT INDEX	DROUGHT CONDITION CLASSIFICATIONS						
	Extreme	Severe	Moderate	Normal	Moderately Moist	Very Moist	Extremely Moist
Z Index	-2.75 and below	-2.00 to -2.74	-1.25 to -1.99	-1.24 to +.99	+1.00 to +2.49	+2.50 to +3.49	n/a
Meteorological	-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above
Hydrological	-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above

Table 5-3. Palmer Drought Category Descriptions²

CATEGORY	DESCRIPTION	POSSIBLE IMPACTS	PALMER DROUGHT INDEX
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.	-1.0 to -1.9
D1	Moderate Drought	Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested.	-2.0 to -2.9
D2	Severe Drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed.	-3.0 to -3.9
D3	Extreme Drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions.	-4.0 to -4.9
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies.	-5.0 or less

Drought is monitored nationwide by the National Drought Mitigation Center (NDMC). Indicators are used to describe broad scale drought conditions across the U.S. and correspond to the intensity of drought.

Based on the historical occurrences for drought and the location of the City of San Angelo and Tom Green County, the area can anticipate a range of drought from abnormally dry to exceptional, or D0 to D4, based on

² Source: National Drought Mitigation Center

Section 5: Drought

the Palmer Drought Category. The City of San Angelo and Tom Green County have experienced exceptional drought conditions. This is the most extreme drought conditions the planning area can anticipate in the future.

Historical Occurrences

The City of San Angelo and Tom Green County may typically experience a severe drought. Table 5-4 and 5-5 list historical events that have occurred in the planning area as reported in the National Centers for Environmental Information (NCEI). Historical drought information shows drought activity across a multi-county forecast area for each event, the appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event. Historical drought data for the City of San Angelo and Tom Green County are provided on a county-wide basis per the NCEI database.

Table 5-4. Historical Drought Years, 1996-2018

DROUGHT YEAR
1998
1998
2000
2000
2006
2009
2011
2012
2013
2014
10 unique events

Table 5-5. Historical Drought Events, 1996-2018

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	6/1/1998	0	0	\$0	\$0
Tom Green County	8/1/1998	0	0	\$0	\$18,444,819
Tom Green County	5/1/2000	0	0	\$0	\$126,589,955
Tom Green County	8/1/2000	0	0	\$0	\$0
Tom Green County	11/1/2006	0	0	\$0	\$0

Section 5: Drought

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	12/1/2006	0	0	\$0	\$0
Tom Green County	1/1/2007	0	0	\$0	\$0
Tom Green County	2/1/2007	0	0	\$0	\$0
Tom Green County	3/1/2007	0	0	\$0	\$0
Tom Green County	1/1/2009	0	0	\$0	\$0
Tom Green County	2/1/2009	0	0	\$0	\$0
Tom Green County	3/1/2009	0	0	\$0	\$0
Tom Green County	4/1/2009	0	0	\$0	\$0
Tom Green County	3/1/2011	0	0	\$0	\$0
Tom Green County	4/1/2011	0	0	\$0	\$0
Tom Green County	5/1/2011	0	0	\$0	\$0
Tom Green County	6/1/2011	0	0	\$0	\$0
Tom Green County	7/1/2011	0	0	\$0	\$0
Tom Green County	8/1/2011	0	0	\$0	\$0
Tom Green County	9/1/2011	0	0	\$0	\$0
Tom Green County	10/1/2011	0	0	\$0	\$0
Tom Green County	11/1/2011	0	0	\$0	\$0
Tom Green County	12/1/2011	0	0	\$0	\$0
Tom Green County	1/1/2012	0	0	\$0	\$0
Tom Green County	7/1/2012	0	0	\$0	\$0
Tom Green County	8/1/2012	0	0	\$0	\$0
Tom Green County	9/1/2012	0	0	\$0	\$0
Tom Green County	2/1/2013	0	0	\$0	\$0
Tom Green County	3/1/2013	0	0	\$0	\$0
Tom Green County	4/1/2013	0	0	\$0	\$0
Tom Green County	5/1/2013	0	0	\$0	\$0
Tom Green County	6/1/2013	0	0	\$0	\$0

Section 5: Drought

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	3/1/2014	0	0	\$0	\$0
Tom Green County	4/1/2014	0	0	\$0	\$0
Tom Green County	5/1/2014	0	0	\$0	\$0
TOTALS		0	0	\$0	\$145,034,774

Significant Events

August 1998 – City of San Angelo/Tom Green County

The devastating drought of 1998 that began when little or no rain fell during the normally wet spring months continued through the end of summer. The two main crops across the area, wheat and cotton, were both total losses, with additional losses to cattle, sheep, and goat industries. Preliminary loss figures top \$150 million.

May – August 2000 – City of San Angelo/Tom Green County

A devastating drought continued across West Central Texas impacting Tom Green County starting in May and continued through August. The City of San Angelo reached 59 consecutive days without measurable rainfall. Information from the USDA indicated that crop losses totaled in excess of \$85 million for the spring alone, not including losses to the cattle and sheep ranching industries.

Probability of Future Events

Based on available records of historic events, there have been ten extended time periods of drought (ranging in length from approximately 30 days to over 330 days) within a 23 year reporting period, which provides a probability of one event every two to three years. This frequency supports a likely probability of future events. The City of San Angelo events are included under the County.

Vulnerability and Impact

Loss estimates were based on 23 years of statistical data from the NCEI. A drought event frequency-impact was then developed to determine an impact profile on agriculture products and estimate potential losses due to drought in the area. Table 5-6 shows annualized exposure.

Table 5-6. Potential Annualized Losses for Tom Green County

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Tom Green County	\$145,034,774	\$6,305,860

Drought impacts large areas and crosses jurisdictional boundaries. All existing and future buildings, facilities, and populations are exposed to this hazard and could potentially be impacted. However, drought impacts are mostly experienced in water shortages and crop/livestock losses on agricultural lands and typically have no impact on buildings.

Section 5: Drought

In terms of vulnerability, population, agriculture, property, socioeconomics and environment are all vulnerable to drought in the City of San Angelo and Tom Green County. Typical demand can deplete water resources during extreme drought conditions. As resources are depleted, potable water is in short supply and overall water quality can suffer, elevating health concerns for all residents but especially vulnerable populations – typically children, the elderly, the ill, and those living below the poverty level. In addition, potable water is used for drinking, sanitation, patient care, sterilization, equipment, heating and cooling systems, and many other essential functions in medical facilities.

The average person will survive only a few days without potable water, and this timeframe can be drastically shortened for those people with more fragile health – typically children, the elderly, and the ill. Population over 65 in the City of San Angelo and Tom Green County is estimated at 14.6% of the total population, and children under the age of 5 are estimated at 6.9% or an estimated total of 8,019 potentially vulnerable residents in the planning area based on age. In addition, an estimated 12.9% of the planning area population live below the poverty level (Table 5-7) which may contribute to overall health impacts of a drought.

Table 5-7. Populations at Greater Risk by Jurisdiction

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Tom Green County ³	17,079	8,019	15,081
City of San Angelo	14,438	6,970	13,978

The economic impact of droughts can be significant as they produce a complex web of impacts that spans many sectors of the economy and reach well beyond the area experiencing physical drought. This complexity exists because water is integral to our ability to produce goods and provide services. If droughts extend over a number of years, the direct and indirect economic impact can be significant.

Habitat damage is a vulnerability of the environment during periods of drought for both aquatic and terrestrial species. The environment also becomes vulnerable during periods of extreme or prolonged drought due to severe erosion and land degradation.

Impact of droughts experienced in the City of San Angelo and Tom Green County has resulted in no injuries or fatalities supporting a “Limited” severity of impact meaning injuries and/or illnesses are treatable with first aid, shutdown of facilities and services for 24 hours or less, and less than 10% of property is destroyed or with major damage. Annualized loss over the 23-year reporting period in Tom Green County and the City of San Angelo is estimated at \$6,305,860, all in crop losses.

Assessment of Impacts

The Drought Impact Reporter was developed in 2005 by the University of Nebraska-Lincoln to provide a national database of drought impacts. Droughts can have an impact on: the agriculture; business and industry; energy; fire; plants and wildlife; relief, response, and restrictions; society and public health; tourism and recreation; and water supply and quality. The reports are submitted from individuals from Federal, State, and local agencies, as well as the general public. Table 5-8 lists the drought impacts to the Tom Green County

³ County totals includes all incorporated jurisdictions and unincorporated areas.

Section 5: Drought

planning area, including the City of San Angelo, from 2005 to 2018 based on reports received by the Drought Impact Reporter.

Table 5-8. Drought Impacts, 2005-2018

DROUGHT IMPACTS 2005-2018	
Agriculture	68
Business & Industry	2
Energy	1
Fire	13
Plants & Wildlife	30
Relief, Response & Restrictions	13
Society & Public Health	7
Tourism & Recreation	0
Water Supply & Quality	21

Drought has the potential to impact people in the in City of San Angelo and Tom Green County. While it is rare that drought, in and of itself, leads to a direct risk to the health and safety of people in the U.S., severe water shortages could result in inadequate supply for human needs. Drought also is frequently associated with a variety of impacts, including:

- The number of health-related low-flow issues (e.g., diminished sewage flows, increased pollution concentrations, reduced firefighting capacity, and cross-connection contamination) will increase as the drought intensifies.
- Public safety from forest/range/wildfires will increase as water availability and/or pressure decreases.
- Respiratory ailments may increase as the air quality decreases.
- There may be an increase in disease due to wildlife concentrations (e.g., rabies, Rocky Mountain spotted fever, Lyme disease).
- Jurisdictions and residents may disagree over water use/water rights, creating conflict.
- Political conflicts may increase between municipalities, counties, states, and regions.
- Water management conflicts may arise between competing interests.
- Increased law enforcement activities may be required to enforce water restrictions.
- Severe water shortages could result in inadequate supply for human needs as well as lower quality of water for consumption.
- Firefighters may have limited water resources to aid in firefighting and suppression activities, increasing risk to lives and property.
- During drought there is an increased risk for wildfires and dust storms.

Section 5: Drought

- The community may need increased operational costs to enforce water restriction or rationing.
- Prolonged drought can lead to increases in illness and disease related to drought.
- Utility providers can see decreases in revenue as water supplies diminish.
- Utilities providers may cut back energy generation and service to their customers to prioritize critical service needs.
- Hydroelectric power generation facilities and infrastructure would have significantly diminished generation capability. Dams simply cannot produce as much electricity from low water levels as they can from high water levels.
- Fish and wildlife food and habitat will be reduced or degraded over time during a drought and disease will increase, especially for aquatic life.
- Wildlife will move to more sustainable locations creating higher concentrations of wildlife in smaller areas, increasing vulnerability and further depleting limited natural resources.
- Severe and prolonged drought can result in the reduction of a species, or cause the extinction of a species altogether.
- Plant life will suffer from long-term drought. Wind and erosion will also pose a threat to plant life as soil quality will decline.
- Dry and dead vegetation will increase the risk of wildfire.
- Drought poses a significant risk to annual and perennial crop production and overall crop quality leading to higher food costs.
- Drought related declines in production may lead to an increase in unemployment.
- Drought may limit livestock grazing resulting in decreased livestock weight, potential increased livestock mortality, and increased cost for feed.
- Negatively impacted water suppliers may face increased costs resulting from the transport water or develop supplemental water resources.
- Long term drought may negatively impact future economic development.

The overall extent of damages caused by periods of drought is dependent on its extent and duration. The level of preparedness and pre-event planning done by government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a drought event.

Section 6: Extreme Heat

Hazard Description.....	1
Location	1
Extent.....	1
Historical Occurrences.....	4
Probability of Future Events	5
Vulnerability and Impact.....	5
Assessment of Impacts	6

Hazard Description

Extreme heat is a prolonged period of excessively high temperatures and exceptionally humid conditions. Extreme heat during the summer months is a common occurrence throughout the State of Texas, and the City of San Angelo and Tom Green County are no exception. The entire planning area typically experience extended heat waves. A heat wave is an extended period of extreme heat and is often accompanied by high humidity.



Although heat can damage buildings and facilities, it presents a more significant threat to the safety and welfare of citizens. The major human risks associated with severe summer heat include: heat cramps; sunburn; dehydration; fatigue; heat exhaustion; and even heat stroke. The most vulnerable population to heat casualties are children and the elderly or infirmed who frequently live on low fixed incomes and cannot afford to run air-conditioning on a regular basis. This population is sometimes isolated, with no immediate family or friends to look out for their well-being.

Location

Though one fatality was recorded at a specific location in the County, there is no specific geographic scope to the extreme heat hazard. Extreme heat could occur anywhere within the City of San Angelo and Tom Green County.

Extent

The magnitude or intensity of an extreme heat event is measured according to temperature in relation to the percentage of humidity. According to the National Oceanic Atmospheric Administration (NOAA), this relationship is referred to as the “Heat Index” and is depicted in Figure 6-1. This index measures how hot it feels outside when humidity is combined with high temperatures.

Section 6: Extreme Heat

Figure 6-1. Extent Scale for Extreme Summer Heat¹

Temperatures (°F)		Temperatures (°F)		Temperatures (°F)		Temperatures (°F)	
40	80 - 88: CAUTION	40	90 - 96: EXTREME CAUTION	40	98 - 106: DANGER	40	108 - 110: EXTREME DANGER
45	80 - 88: CAUTION	45	90 - 94: EXTREME CAUTION	45	96 - 104: DANGER	45	106 - 110: EXTREME DANGER
50	80 - 86: CAUTION	50	88 - 94: EXTREME CAUTION	50	96 - 102: DANGER	50	104 - 110: EXTREME DANGER
55	80 - 86: CAUTION	55	88 - 92: EXTREME CAUTION	55	94 - 100: DANGER	55	102 - 110: EXTREME DANGER
60	80 - 84: CAUTION	60	86 - 90: EXTREME CAUTION	60	92 - 98: DANGER	60	100 - 110: EXTREME DANGER
65	80 - 84: CAUTION	65	86 - 90: EXTREME CAUTION	65	92 - 96: DANGER	65	98 - 110: EXTREME DANGER
70	80 - 84: CAUTION	70	86 - 88: EXTREME CAUTION	70	90 - 94: DANGER	70	96 - 110: EXTREME DANGER
75	80 - 82: CAUTION	75	84 - 88: EXTREME CAUTION	75	90 - 94: DANGER	75	96 - 110: EXTREME DANGER
80	80 - 82: CAUTION	80	84 - 86: EXTREME CAUTION	80	88 - 92: DANGER	80	94 - 110: EXTREME DANGER
85	80 - 82: CAUTION	85	84 - 86: EXTREME CAUTION	85	88 - 90: DANGER	85	92 - 110: EXTREME DANGER
90	80: CAUTION	90	82 - 84: EXTREME CAUTION	90	86 - 90: DANGER	90	92 - 110: EXTREME DANGER
95	80: CAUTION	95	82 - 84: EXTREME CAUTION	95	86 - 88: DANGER	95	90 - 110: EXTREME DANGER
100	80: CAUTION	100	82 - 84: EXTREME CAUTION	100	86 - 88: DANGER	100	90 - 110: EXTREME DANGER

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

The Extent Scale in Figure 6-1 displays varying categories of caution depending on the relative humidity combined with the temperature. For example, when the temperature is at 90 degrees Fahrenheit (°F) or lower, caution should be exercised if the humidity level is at or above 40 percent.

The shaded zones on the chart indicate varying symptoms or disorders that could occur depending on the magnitude or intensity of the event. “Caution” is the first category of intensity, and it indicates when fatigue due to heat exposure is possible. “Extreme Caution” indicates that sunstroke, muscle cramps, or heat exhaustion are possible, and a “Danger” level means that these symptoms are likely. “Extreme Danger” indicates that heat stroke is likely. The National Weather Service (NWS) initiates alerts based on the Heat Index as shown in Table 6-1.

Table 6-1. Heat Index and Warnings

CATEGORY	HEAT INDEX	POSSIBLE HEAT DISORDERS	WARNING TYPE
Extreme Danger	125°F and higher	Heat stroke or sun stroke likely.	A heat advisory will be issued to warn that the Heat Index may exceed 105°F.
Danger	103 – 124°F	Sunstroke, muscle cramps, and/or heat exhaustion are likely. Heatstroke possible with prolonged exposure and/or physical activity.	
Extreme Caution	90 – 103°F	Sunstroke, muscle cramps, and/or heat exhaustion possible with	An Excessive Heat Warning is issued if the Heat Index rises

¹ Source: NOAA

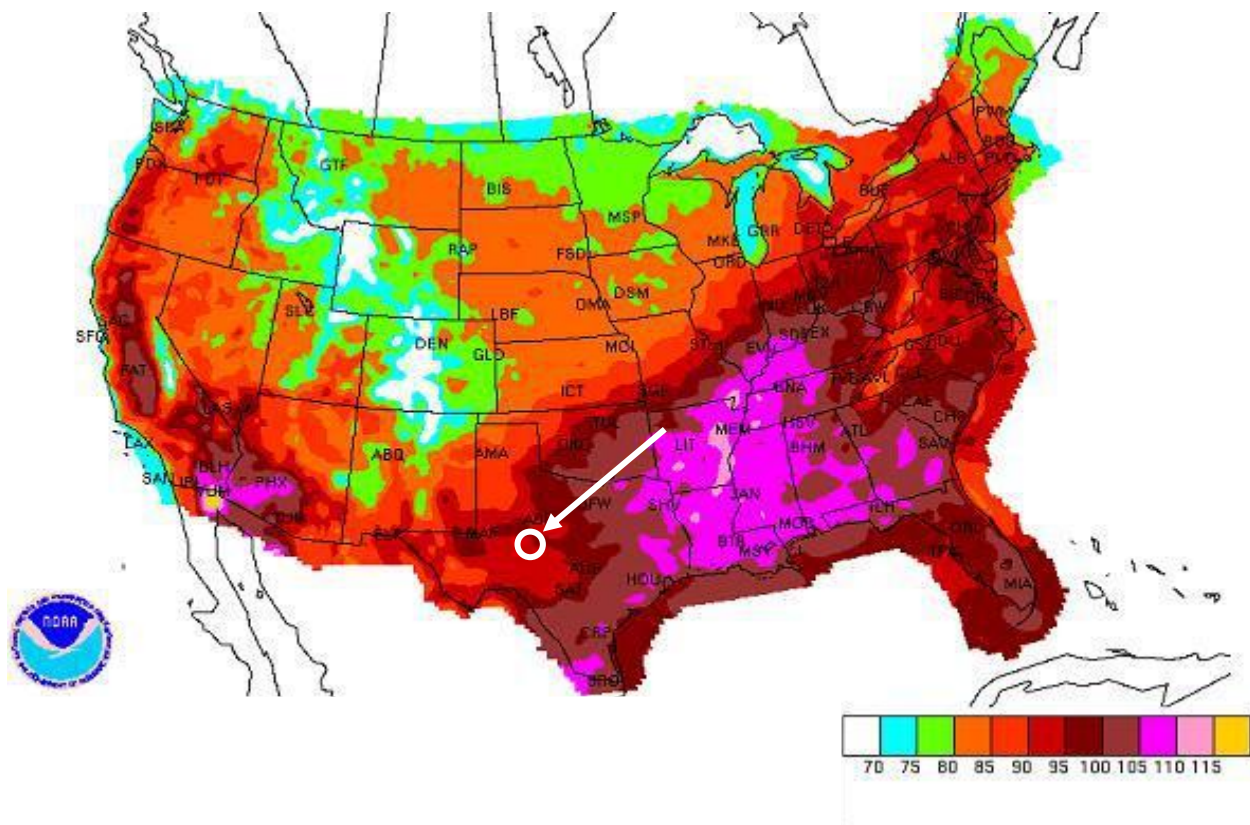
Section 6: Extreme Heat

CATEGORY	HEAT INDEX	POSSIBLE HEAT DISORDERS	WARNING TYPE
		prolonged exposure and/or physical activity.	above 105°F at least 3 hours during the day or above 80°F at night.
Caution	80 – 90°F	Fatigue is possible with prolonged exposure and/or physical activity.	

Tom Green County's terrain is even to slightly hilly. It comprises 1,541 square miles in West Central Texas. The county has a 235-day growing season, an average temperature range of 32°F in January and 97°F in July, an average annual precipitation of 18.2 inches, and an elevation variation of 1,717 feet to 2,480 feet. The principal river in the county is the Concho, which is formed by the convergence of the North, Middle, and South Concho rivers.

Figure 6-2 displays the daily maximum heat index as derived from NOAA based on data compiled from 1838 to 2015. The white circle shows the planning area. The red colors indicate a daily maximum heat index of 90° to 100°F. The City of San Angelo and Tom Green County could experience extreme heat from 90° to 100°F for the future. The record high temperature for the City of San Angelo and Tom Green County was 111° in 1960. This is the highest temperature (Danger category) the planning area can expect.

Figure 6-2. Average Daily Maximum Heat Index Days²



² Source: NRDC and the white circle indicates the City of San Angelo/Tom Green County planning area.

Historical Occurrences

Every summer, the hazard of heat-related illness becomes a significant public health issue throughout much of the US. Mortality from all causes increases during heat waves, and excessive heat is an important contributing factor to deaths from other causes, particularly among the elderly. Table 6-2 depicts historical occurrences of mortality from heat from 1994 to 2004 from the Texas Department of State Health Services and 2005 to 2018 from the NCEI database.

Table 6-2. Extreme Heat Related Deaths in Texas

YEAR	DEATHS
1994	1
1995	12
1996	10
1997	2
1998	66
1999	22
2000	71
2001	20
2002	1
2003	0
2004	3
2005	49
2006	2
2007	2
2008	7
2009	120
2010	4
2011	46
2012	3
2013	2
2014	0
2015	5

Section 6: Extreme Heat

YEAR	DEATHS
2016	6
2017	3
2018	2

Because the Texas Department of State Health Services reports on total events statewide, previous occurrences for extreme heat are derived from the NCEI database. While there have been no heat related incidents reported for the planning area, average high temperatures through the summer months indicate extreme heat events occur every year throughout the entire planning area.

Probability of Future Events

Average high temperatures for the planning area through the summer months indicate a probability of one event or more every year. This frequency supports a highly likely probability of future events.

Vulnerability and Impact

There is no defined geographic boundary for extreme heat events. While the entire planning area, is exposed to extreme temperatures, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from extreme heat events. Therefore, any estimated property losses associated with the extreme heat hazard are anticipated to be minimal across the area.

Extreme temperatures do however present a significant threat to life and safety for the population of the County as a whole. Heat casualties for example are typically caused by a lack of adequate air-conditioning or heat exhaustion. The most vulnerable population to heat casualties are the elderly, or infirmed who frequently live on low fixed incomes and cannot afford to run air-conditioning on a regular basis. This population is sometimes isolated, with no immediate family or friends to look out for their well-being. In addition, populations living below the poverty level are unable to run air-conditioning on a regular basis and are limited in their ability to seek medical treatment. Another segment of the population at risk are those whose jobs consist of strenuous labor outdoors. Additionally, livestock and crops can become stressed, decreasing in quality or in production, during times of extreme heat.

The population over 65 in the City of San Angelo and Tom Green County is estimated at 14.6% of the total population and children under the age of 5 are estimated at 6.9%, or an estimated total of 8,019 potentially vulnerable residents in the planning area based on age. In addition, an estimated 12.9% of the planning area population live below the poverty level (Table 6-3).

Section 6: Extreme Heat

Table 6-3. Populations at Greater Risk by Jurisdiction

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Tom Green County	17,079	8,019	15,081
City of San Angelo	14,438	6,970	13,978

Extreme high temperatures can have significant secondary impacts, leading to droughts, water shortages, increased fire danger, and prompt excessive demands for energy. The possibility of rolling blackouts increases with unseasonably high temperatures in what is a normally mild month with low power demands.

Typically more than 12 hours of warning time would be given before the onset of an extreme heat event. Only minor property damage would result. The potential impact of excessive summer heat is considered “Minor” as injuries and/or illnesses do not result in permanent disability for the City of San Angelo and Tom Green County.

In terms of vulnerability to structures, the impact from extreme heat would be negligible. It is possible that critical facilities and infrastructure could be shut down for 24 hours if cooling units are running constantly, leading to a temporary power outage. Less than ten percent of residential and commercial property could be damaged if extreme heat events lead to structure fires.

The potential impact of extreme heat for the City of San Angelo and Tom Green County can be considered “Minor,” resulting in few injuries and minimal disruption to the quality of life. Based on historical records over a 23-year period, annualized losses for the planning area are negligible.

Assessment of Impacts

The greatest risk from extreme heat is to public health and safety. Potential impacts the community may include:

- Vulnerable populations, particularly the elderly and children under 5, can face serious or life-threatening health problems from exposure to extreme heat including hyperthermia, heat cramps, heat exhaustion, and heat stroke (or sunstroke).
- Response personnel, including utility workers, public works personnel, and any other professions where individuals are required to work outside, are more subject to extreme heat related illnesses since their exposure would typically be greater.
- High energy demand periods can outpace the supply of energy, potentially creating the need for rolling brownouts which would elevate the risk of illness to vulnerable residents.
- Highways and roads may be damaged by excessive heat causing asphalt roads to soften and concrete roads to shift or buckle.
- Vehicles engines and cooling systems typically run harder during extreme heat events resulting in increases in mechanical failures.
- Extreme heat events during times of drought can exacerbate the environmental impacts associated with drought, decreasing water and air quality and further degrading wildlife habitat.
- Extreme heat increases ground-level ozone (smog), increasing the risk of respiratory illnesses.
- Food suppliers can anticipate an increase in food costs due to increases in production costs and crop and livestock losses.

Section 6: Extreme Heat

- Fisheries may be negatively impacted by extreme heat, suffering damage to fish habitats (either natural or man-made) and a loss of fish and/or other aquatic organisms due to decreased water flows or availability.
- Negatively impacted water suppliers may face increased costs resulting from the transport of water resources or development of supplemental water resources.
- Outdoor activities such as fishing, boating, and camping activities at the San Angelo State Park, OC Fisher Lake, Lake Nasworthy, and Twin Buttes Reservoir may see an increase in injury or illness during extreme heat events.

The economic and financial impacts of extreme heat on the community will depend on the duration of the event, demand for energy, drought associated with extreme heat, and many other factors. The level of preparedness and the amount of planning done by the jurisdiction, local businesses, and citizens will impact the overall economic and financial conditions before, during, and after an extreme heat event.

Section 7: Hail

Hazard Description.....	1
Location	1
Extent.....	1
Historical Occurrences	3
Significant Events	6
Probability of Future Events	6
Vulnerability and Impact.....	7
Assessment of Impacts	8

Hazard Description



Hailstorm events are a potentially damaging outgrowth of severe thunderstorms. During the developmental stages of a hailstorm, ice crystals form within a low pressure front due to the rapid rising of warm air into the upper atmosphere, and the subsequent cooling of the air mass. Frozen droplets gradually accumulate into ice crystals until they fall as precipitation that is round or irregularly shaped masses of ice typically greater than 0.75 inches in diameter. The size of hailstones is a direct result of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a by-product of heating on the Earth's surface. Higher temperature gradients above Earth's surface result in increased suspension time and hailstone size.

Location

Hailstorms are an extension of severe thunderstorms that could potentially cause severe damage. As a result, they are not confined to any specific geographic location and can vary greatly in size, location, intensity, and duration. Therefore, the City of San Angelo and Tom Green County are equally at risk to the hazard of hail.

Extent

The National Weather Service (NWS) classifies a storm as “severe” if there is hail three-quarters of an inch in diameter (approximately the size of a penny) or greater, based on radar intensity or as seen by observers. The intensity category of a hailstorm depends on hail size and the potential damage it could cause, as depicted in the National Centers for Environmental Information (NCEI) Intensity Scale in Table 7-1.

Section 7: Hail

Table 7-1. Hail Intensity and Magnitude¹

SIZE CODE	INTENSITY CATEGORY	SIZE (Diameter Inches)	DESCRIPTIVE TERM	TYPICAL DAMAGE
H0	Hard Hail	Up to 0.33	Pea	No damage
H1	Potentially Damaging	0.33 – 0.60	Marble	Slight damage to plants and crops
H2	Potentially Damaging	0.60 – 0.80	Dime	Significant damage to plants and crops
H3	Severe	0.80 – 1.20	Nickel	Severe damage to plants and crops
H4	Severe	1.2 – 1.6	Quarter	Widespread glass and auto damage
H5	Destructive	1.6 – 2.0	Half Dollar	Widespread destruction of glass, roofs, and risk of injuries
H6	Destructive	2.0 – 2.4	Ping Pong Ball	Aircraft bodywork dented and brick walls pitted
H7	Very Destructive	2.4 – 3.0	Golf Ball	Severe roof damage and risk of serious injuries
H8	Very Destructive	3.0 – 3.5	Hen Egg	Severe damage to all structures
H9	Super Hailstorms	3.5 – 4.0	Tennis Ball	Extensive structural damage, could cause fatal injuries
H10	Super Hailstorms	4.0 +	Baseball	Extensive structural damage, could cause fatal injuries

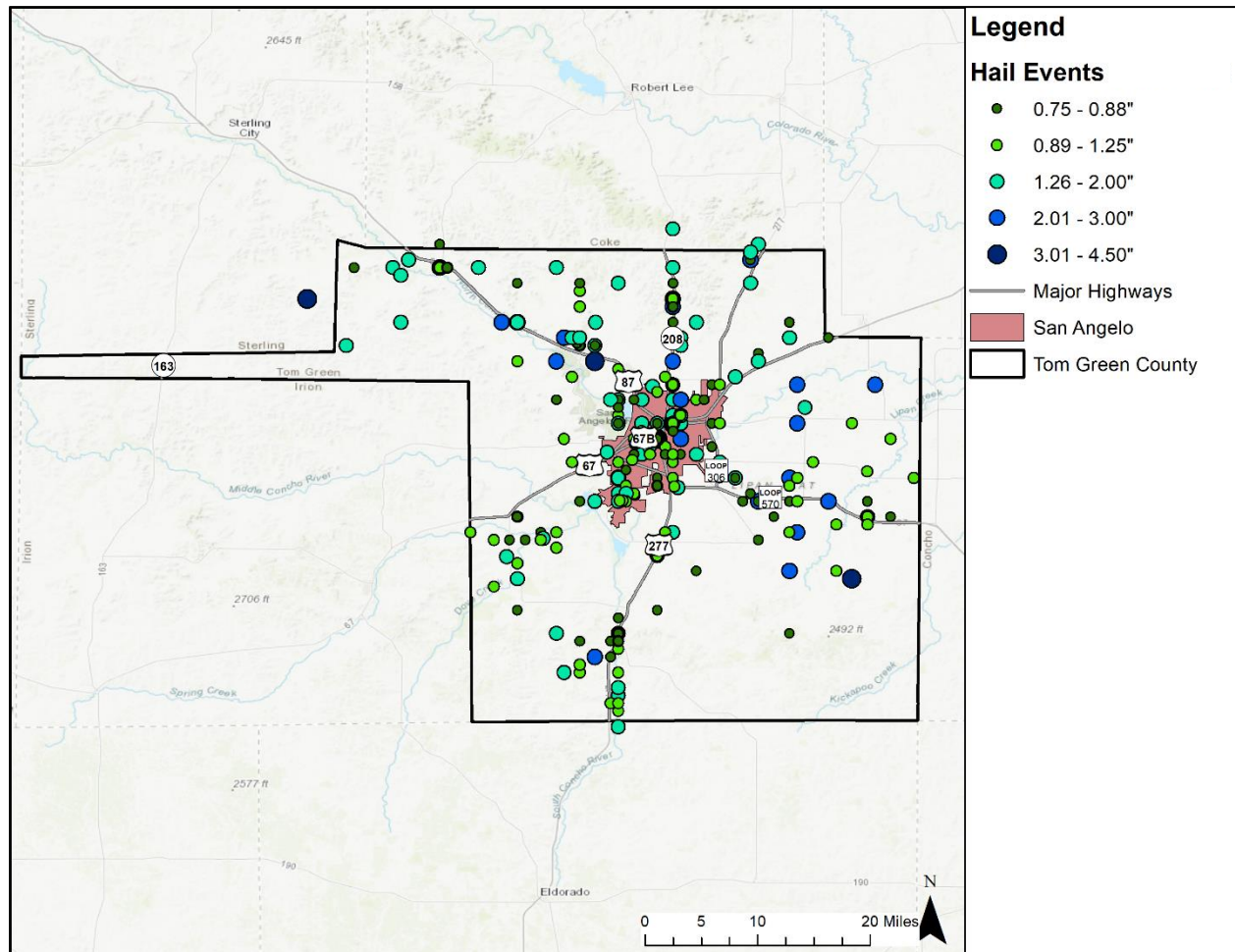
The intensity scale in Table 7-1 ranges from H0 to H10, with increments of intensity or damage potential in relation to hail size (distribution and maximum), texture, fall speed, speed of storm translation, and strength of the accompanying wind. Based on available data regarding the previous occurrences for the planning area, the City of San Angelo and Tom Green County may experience hailstorms ranging from an H0 to an H10. The planning area can mitigate a storm from low risk or hard hail to a very destructive super hailstorm with baseball size hail that leads to extensive structural damage and could cause fatal injuries. The largest hail event in the City of San Angelo and Tom Green County resulted in hail measuring 5.0 inches in diameter, or a H10, Super Hailstorm. This is the worst extent the planning area can anticipate in the future.

¹ NCEI Intensity Scale, based on the TORRO Hailstorm Intensity Scale.

Historical Occurrences

Historical evidence shown in Figure 7-1 demonstrates that the planning area is vulnerable to hail events overall, which typically result from severe thunderstorm activity. Historical events with reported damages, injuries, or fatalities are shown in Table 7-2. A total of 500 reported historical hail events impacted the City of San Angelo and Tom Green County between 1957 through 2018 (Summary Table 7-3). These events were reported to NCEI and NOAA databases and may not represent all hail events to have occurred during the past 62 years. Only those events for the planning area latitude and longitude available were plotted (Figure 7-1 and 7-2).

Figure 7-1. Tom Green County Spatial Historical Hail Events, 1957-2018



Section 7: Hail

Figure 7-2. City of San Angelo Spatial Historical Hail Events, 1957-2018

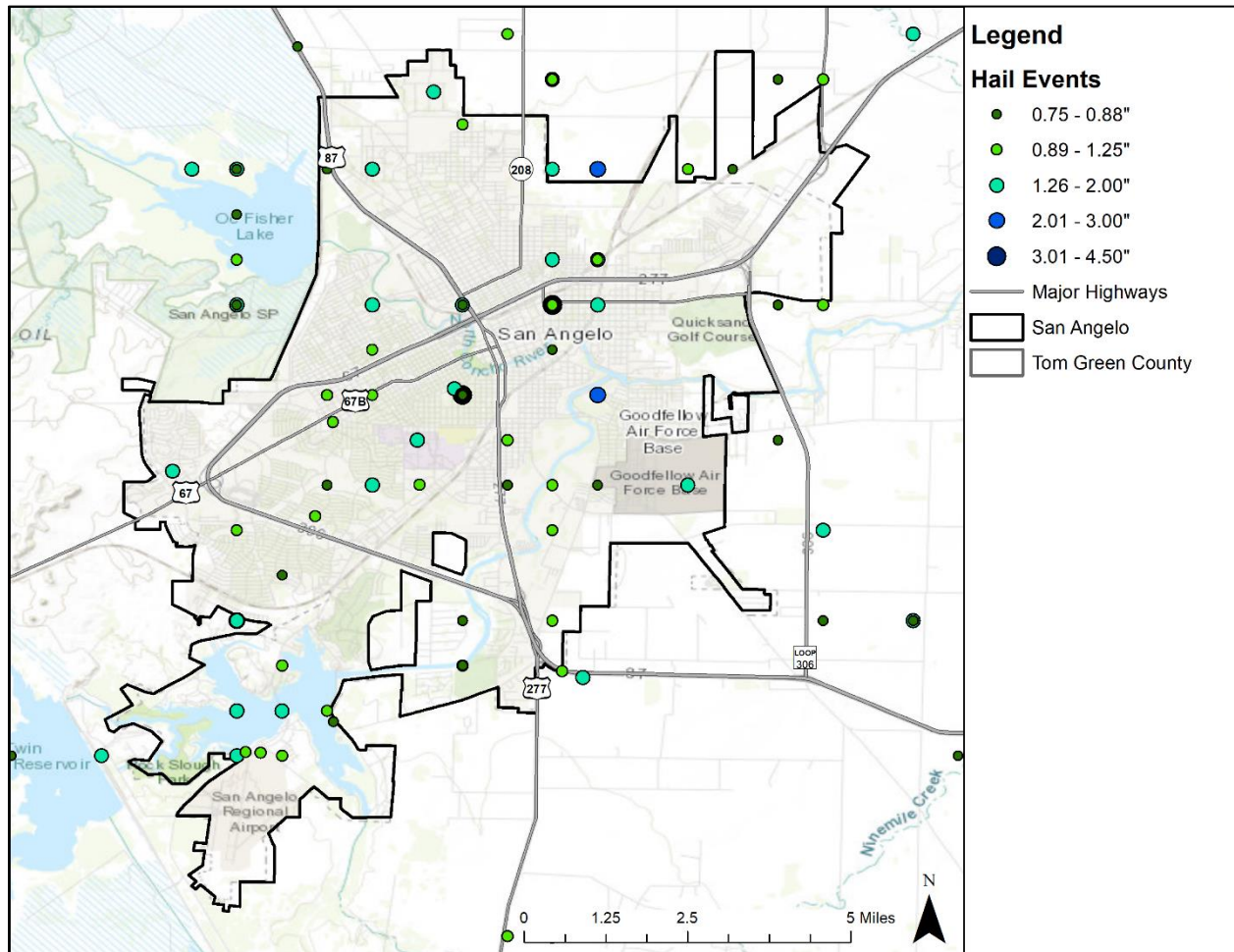


Table 7-2. Historical Hail Events, 1957-2018²

JURISDICTION	DATE	MAGNITUDE	INJURIES	FATALITIES	PROPERTY DAMAGE	CROP DAMAGE
San Angelo	2/10/1993	1	0	0	\$892	\$0
San Angelo	3/29/1993	0.75	0	0	\$89	\$0
San Angelo	5/1/1993	1	0	0	\$886	\$0
San Angelo	5/5/1993	0.75	0	0	\$89	\$0
San Angelo	5/5/1993	1.75	0	0	\$885,624	\$886
San Angelo	5/5/1993	3	0	0	\$88,562,361	\$886
San Angelo	5/29/1993	0.75	0	0	\$89	\$0

² Only recorded events with fatalities, injuries, and/or damages are listed.

Section 7: Hail

JURISDICTION	DATE	MAGNITUDE	INJURIES	FATALITIES	PROPERTY DAMAGE	CROP DAMAGE
San Angelo	5/11/1995	1.75	0	0	\$33,563	\$0
Tom Green County	5/14/1995	2.75	1	0	\$16,781	\$0
Tom Green County	5/14/1995	2.75	0	0	\$25,172	\$0
San Angelo	5/14/1995	2.75	0	0	\$67,126	\$0
Tom Green County	5/28/1995	1.75	0	0	\$67,126	\$16,781
Tom Green County	5/28/1995	1	0	0	\$16,781	\$0
San Angelo	5/28/1995	2.75	10	0	\$83,907	\$0
San Angelo	5/28/1995	1.75	0	0	\$8,390,731	\$0
San Angelo	5/28/1995	1.75	0	0	\$8,390,731	\$167,815
San Angelo	5/28/1995	4	10	0	\$33,562,924	\$0
San Angelo	5/28/1995	4.5	10	0	\$41,953,655	\$0
San Angelo	5/28/1995	1.75	0	0	\$83,907	\$0
San Angelo	5/28/1995	1.75	0	0	\$83,907	\$0
Tom Green County	6/2/1996	0.88	0	0	\$162,995	\$162,995
San Angelo	6/16/1997	1	0	0	\$39,834	\$39,834
San Angelo	3/19/2002	1.75	0	0	\$22,855,826	\$0
San Angelo	5/4/2002	1.75	0	0	\$710,272	\$0
San Angelo	5/27/2002	1.75	0	0	\$71,027	\$0
San Angelo	5/27/2002	1.75	0	0	\$71,027	\$0
San Angelo	6/1/2003	2.5	0	0	\$13,903,857	\$0
San Angelo	6/1/2003	1.75	0	0	\$5,561,543	\$0
San Angelo	6/3/2003	4.25	0	0	\$1,112,309	\$0
Tom Green County	5/31/2005	2.75	0	0	\$26,277	\$0
San Angelo	5/31/2005	2.75	0	0	\$39,416	\$0
San Angelo	5/31/2005	2.75	0	0	\$13,139	\$0
San Angelo	5/31/2005	4	0	0	\$39,416	\$0
San Angelo	5/31/2005	1.5	0	0	\$10,511	\$0

Section 7: Hail

JURISDICTION	DATE	MAGNITUDE	INJURIES	FATALITIES	PROPERTY DAMAGE	CROP DAMAGE
San Angelo	4/28/2006	1.75	0	0	\$19,013	\$0
Tom Green County	5/6/2007	1.75	0	0	\$11,054	\$0
Tom Green County	5/29/2007	1.75	0	0	\$7,370	\$0
Tom Green County	6/3/2007	1	0	0	\$6,129	\$0
Tom Green County	6/15/2007	1.75	0	0	\$8,581	\$0
Tom Green County	6/15/2007	1.75	0	0	\$9,807	\$0
TOTALS		(Max Extent)	31	0	\$227,294,941	

Table 7-3. Historical Hail Events Summary, 1957-2018

JURISDICTION	NUMBER of EVENTS	MAGNITUDE	INJURIES	FATALITIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	259	5.0 inches	1	0	\$358,073	\$179,776
City of San Angelo	241	4.5 inches	30	0	\$226,547,671	\$209,421
TOTAL LOSSES	500	(Max Extent)	31	0	\$227,294,941	

Significant Events

March 19, 2002 – City of San Angelo

Hail up to golf ball size pounded the southern half of San Angelo shortly after noon, creating drifts several feet deep in places. Around 3,500 homes suffered light to moderate damage, along with around 4,000 automobiles. Many trees were stripped of their leaves. Hail stayed on the ground for at least 8 hours in some places.

June 1, 2003 – City of San Angelo/Tom Green County

Severe thunderstorms erupted over much of west central Texas on June 1st. The most significant storm of the day formed in southern Coke County and moved southeast towards San Angelo. This storm caused significant hail and wind damage as it moved through Tom Green County. The storm produced golf ball size hail and winds up to 70 mph over the north and east portions of San Angelo. This produced considerable damage to cars, roofs, and businesses.

Probability of Future Events

Based on available records of historic events, 500 events in a 62-year reporting period for City of San Angelo and Tom Green County provides a probability of eight to nine events per year. This frequency supports a highly likely probability of future events for the planning area.

Vulnerability and Impact

Damage from hail approaches 1 billion dollars in the U.S. each year. Much of the damage inflicted by hail is to crops. Even relatively small hail can shred plants to ribbons in a matter of minutes. Vehicles, roofs of buildings and homes, and landscaping are most commonly damaged by hail.

Utility systems on roofs at school districts and critical facilities would be vulnerable and could be damaged. Hail could cause a significant threat to people as they could be struck by hail and falling trees and branches. Outdoor activities and events may elevate the risk to residents and visitors when a hailstorm strikes with little warning. Portable buildings typically utilized by schools and commercial sites such as construction areas would be more vulnerable to hail events than the typical site built structures.

The City of San Angelo and Tom Green County features mobile or manufactured home parks sporadically throughout the planning area. These parks are typically more vulnerable to hail events than typical site-built structures. The US Census data indicates a total of 3,018 (6.3%) manufactured homes located in the City of San Angelo and Tom Green County (Table 7-4). In addition, 61 % (approximately 29,265 structures) of the single family residential (SFR) structures in the City of San Angelo and Tom Green County were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damages during significant hail events. In addition, an estimated 12.9% of the planning area population live below the poverty level. Populations below the poverty level suffer greater adverse impacts from natural disaster events.

Table 7-4. Structures at Greater Risk by Jurisdiction

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980	POPULATION BELOW POVERTY LEVEL
Tom Green County ³	3,018	29,265	15,081
City of San Angelo	1,301	26,270	13,978

The following critical facilities would be vulnerable to hail events in each participating jurisdiction:

Table 7-5. Critical Facilities at Risk by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Tom Green County	2 Medical Facilities, 1 Law Enforcement Facility, 1 Emergency Operations Facility, 10 Fire Stations, 7 Schools
City of San Angelo	14 Medical Facilities, 1 Government Facility (COG), 9 Fire Stations, 1 Police Station, 1 Sheriff's Department, 1 EOC, 1 Airport, 2 Higher Education Facilities, 42 Education Facilities/Schools, 10 Fire Stations, 58 Lift Stations, 6 Water Storage Facilities, 15 Wells, 5 Dams, 6 Critical Generators, 1 Pump Station, 2 WWTP Facilities, 1 Communications Tower, 1 Water Treatment Plant, 2 Critical Operations Facilities

³ County totals includes all incorporated jurisdictions and unincorporated areas.

Section 7: Hail

Hail has been known to cause injury to humans and occasionally has been fatal. Overall, the average loss estimate of property and crops (in 2019 dollars) is \$227,294,941, having an approximate annual loss estimate of \$3,666,047. Based on historic loss and damages, the impact of hail damages on the City of San Angelo and Tom Green County can be considered “Limited” severity of impact meaning injuries and illness can be treated with first aid, county area facilities are shut down for 24 hours or less, and less than ten percent of property destroyed or with major damage.

Table 7-6. Potential Annualized Losses by Jurisdiction

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Tom Green County	\$537,849	\$8,675
City of San Angelo	\$226,757,092	\$3,657,372
Planning Area	\$227,294,941	\$3,666,047

Assessment of Impacts

Hail events have the potential to pose a significant risk to people and can create dangerous situations. Impacts to the planning area can include:

- Hail may create hazardous road conditions during and immediately following an event, delaying first responders from providing for or preserving public health and safety.
- Individuals and first responders who are exposed to the storm may be struck by hail, falling branches, or downed trees resulting in injuries or possible fatalities.
- Residential structures can be damaged by falling trees, which can result in physical harm to occupants.
- Large hail events will likely cause extensive roof damage to residential structures along with siding damage and broken windows, creating a spike in insurance claims and a rise in premiums.
- Automobile damage may be extensive depending on the size of the hail and length of the storm.
- Hail events can result in power outages over widespread areas increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage can result in an increase in structure fires and/or carbon monoxide poisoning, as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- First responders are exposed to downed power lines, damaged structures, hazardous spills, and debris that often accompany hail events, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Downed power lines and large debris, such as downed trees, can result in the inability of emergency response vehicles to access areas of the community.
- Hazardous road conditions may prevent critical staff from reporting for duty, limiting response capabilities.
- Economic disruption negatively impacts the programs and services provided by the community due to short and long term loss in revenue.
- Some businesses not directly damaged by the hail event may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.

Section 7: Hail

- Businesses that are more reliant on utility infrastructure than others may suffer greater damages without a backup power source.
- Hazardous road conditions will likely lead to increases in automobile accidents, further straining emergency response capabilities.
- Depending on the severity and scale of damage caused by large hail events, damage to power transmission and distribution infrastructure can require days or weeks to repair.
- A significant hail event could significantly damage agricultural crops, resulting in extensive economic losses for the community and surrounding area.
- Hail events may injure or kill livestock and wildlife.
- A large hail event could impact the accessibility of recreational areas and parks due to extended power outages or debris clogged access roads.

The economic and financial impacts of hail will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning conducted by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of any hail event.

Section 8: Thunderstorm Wind

Hazard Description.....	1
Location	1
Extent.....	1
Historical Occurrences	3
Significant Events	6
Probability of Future Events	7
Vulnerability and Impact.....	7
Assessment of Impacts	9

Hazard Description

Thunderstorms create extreme wind events which includes straight line winds. Wind is the horizontal motion of the air past a given point, beginning with differences in air pressures. Pressure that is higher at one place than another sets up a force pushing from the high toward the low pressure; the greater the difference in pressures, the stronger the force. The distance between the area of high pressure and the area of low pressure also determines how fast the moving air is accelerated.

Thunderstorms are created when heat and moisture near the Earth's surface are transported to the upper levels of the atmosphere. By-products of this process are the clouds, precipitation, and wind that become the thunderstorm.

According to the National Weather Service (NWS), a thunderstorm occurs when thunder accompanies rainfall. Radar observers use the intensity of radar echoes to distinguish between rain showers and thunderstorms.



Straight line winds are responsible for most thunderstorm wind damages. One type of straight-line wind, the downburst, is a small area of rapidly descending air beneath a thunderstorm. A downburst can cause damage equivalent to a strong tornado and make air travel extremely hazardous.

Location

Thunderstorms wind events can develop in any geographic location and are considered a common occurrence in Texas. Therefore a thunderstorm wind event could occur at any location within the City of San Angelo and Tom Green County, as these storms develop randomly and are not confined to any geographic area within the County. It is assumed that the planning area is uniformly exposed to the threat of thunderstorms winds.

Extent

The extent or magnitude of a thunderstorm wind event is measured by the Beaufort Wind Scale. Table 8-1 describes the different intensities of wind in terms of speed and effects, from calm to violent and destructive.

Section 8: Thunderstorm Wind

Table 8-1. Beaufort Wind Scale¹

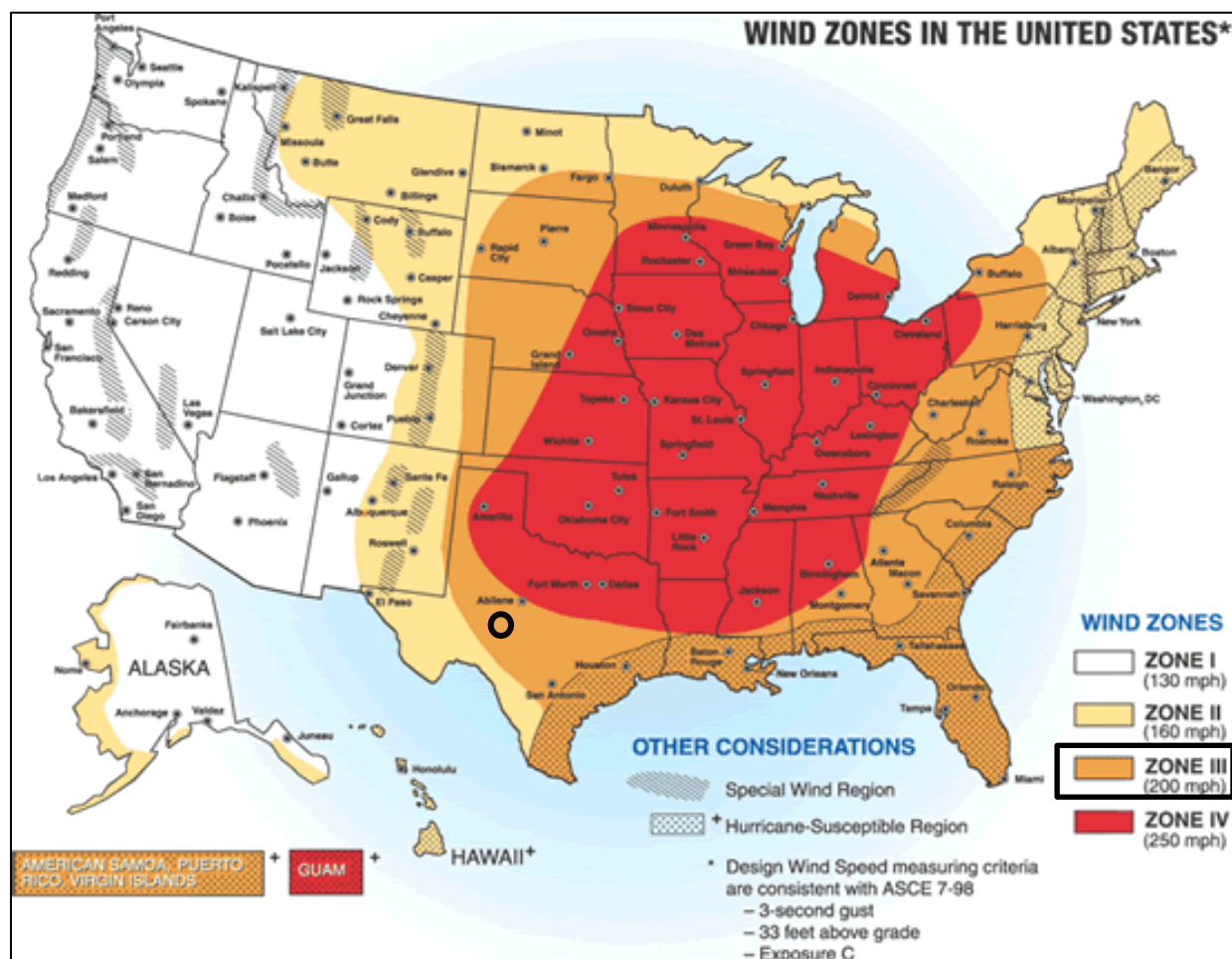
FORCE	WIND (MHP)	WMO CLASSIFICATION	APPEARANCE OF WIND EFFECTS
0	Less than 1	Calm	Calm, smoke rises vertically
1	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-8	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	9-14	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	15-21	Moderate Breeze	Dust, leaves and loose paper lifted, small tree branches move
5	22-28	Fresh Breeze	Small trees in leaf begin to sway
6	29-36	Strong Breeze	Larger tree branches moving, whistling in wires
7	37-44	Near Gale	Whole trees moving, resistance felt walking against wind
8	45-53	Gale	Whole trees in motion, resistance felt walking against wind
9	54-62	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	63-72	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	73-83	Violent Storm	If experienced on land, widespread damage
12	84+	Hurricane	Violence and destruction

Figure 8-1 displays the wind zones as derived from NOAA.

¹ Source: World Meteorological Organization

Section 8: Thunderstorm Wind

Figure 8-1. Wind Zones in the United States²



On average, the planning area experiences four to five thunderstorm wind events every year. The County is located in Zone III, meaning they can experience winds up to 200 mph. The City of San Angelo and Tom Green County have experienced a significant wind event or an event with winds in the range of “Force 11” on the Beaufort Wind Scale with winds at or above 83 mph. This can be anticipated for the planning area in the future.

Historical Occurrences

Tables 8-2, 8-3, and 8-4 depict historical occurrences of thunderstorm wind events for the City of San Angelo and Tom Green County according to the National Centers for Environmental Information (NCEI) data. Since January 1955, 300 thunderstorm wind events are known to have impacted the planning area based upon NCEI records. Table 8-3 presents information on known historical events impacting the City of San Angelo and Tom Green County with resulting damages, injuries or fatalities. It is important to note that high wind events associated with other hazards, such as tornadoes, are not accounted for in this section.

² Tom Green County and the City of San Angelo is indicated by the circle.

Section 8: Thunderstorm Wind

The NCEI is a national data source organized under the National Oceanic and Atmospheric Administration. The NCEI is the largest archive available for climate data; however, it is important to note that the only incidents recorded are those that are reported to the NCEI from 1955 to 2018 have been factored into this risk assessment. In the tables that follow throughout this section, some occurrences seem to appear multiple times in one table. This is due to reports from various locations throughout the County. In addition, property damage estimates are not always available. Where an estimate has been provided in a table for losses, the dollar amounts have been altered to indicate the damage in 2019 dollars.

Historical thunderstorm wind data for the participating jurisdictions are provided on a County-wide basis per the NCEI database.

Table 8-2. Historical Thunderstorm Wind Events with Reported Damages, 1955-2018

MAXIMUM WIND SPEED RECORDED (MPH)	NUMBER OF REPORTED EVENTS
0-30	37
31-40	0
41-50	14
51-60	158
61-70	64
71-80	9
81-90	3
91-100	0
Unknown	19

Table 8-3. Historical Thunderstorm Wind Events, 1955-2018³

JURISDICTION	DATE	MAGNITUDE (MPH)	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	7/26/1988	65	1	0	\$0	\$0
San Angelo	4/3/1993	59	0	0	\$8,869	\$89
San Angelo	5/29/1993	55	0	0	\$886	\$0
San Angelo	10/17/1993	Unknown	2	0	\$876,506	\$0
San Angelo	10/17/1993	Unknown	0	0	\$87,651	\$0
San Angelo	3/25/1995	Unknown	0	0	\$1,687	\$0

³ Only recorded events with fatalities, injuries or damages are listed. Magnitude is listed when available. Damage values are in 2019 dollars.

Section 8: Thunderstorm Wind

JURISDICTION	DATE	MAGNITUDE (MPH)	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
San Angelo	5/28/1995	75	50	0	\$100,688,771	\$0
San Angelo	6/28/1995	Unknown	0	0	\$16,748	\$0
Tom Green County	5/10/1996	70	0	0	\$81,550	\$0
San Angelo	8/5/1996	Unknown	0	0	\$81,187	\$0
San Angelo	11/23/1996	70	0	0	\$322,086	\$0
San Angelo	2/20/1997	56	0	0	\$480,101	\$0
Tom Green County	6/12/1997	50	0	0	\$7,967	\$0
San Angelo	6/14/1997	Unknown	0	0	\$159,335	\$39,834
San Angelo	7/4/1997	66	0	0	\$79,568	\$0
San Angelo	5/26/1998	Unknown	0	0	\$2,353	\$0
San Angelo	5/26/1998	Unknown	0	0	\$4,707	\$0
San Angelo	5/26/1998	Unknown	0	0	\$3,138	\$0
San Angelo	5/9/1999	Unknown	0	0	\$1,537	\$0
Tom Green County	8/28/1999	Unknown	0	0	\$764	\$0
San Angelo	4/10/2001	Unknown	0	0	\$2,888	\$0
San Angelo	9/18/2001	Unknown	0	0	\$21,487	\$0
San Angelo	9/18/2001	Unknown	0	0	\$14,325	\$0
San Angelo	3/19/2002	Unknown	0	0	\$2,143	\$0
San Angelo	3/19/2002	Unknown	0	0	\$2,857	\$0
Tom Green County	5/27/2002	Unknown	0	0	\$35,514	\$0
Tom Green County	6/13/2002	Unknown	0	0	\$4,259	\$0
San Angelo	6/27/2002	52	0	0	\$5,679	\$0
San Angelo	7/28/2002	Unknown	0	0	\$14,182	\$0
San Angelo	8/30/2003	60	0	0	\$13,836	\$0
Tom Green County	3/4/2004	52	0	0	\$13,629	\$0
San Angelo	3/4/2004	52	0	0	\$5,452	\$0
Tom Green County	7/4/2005	61	0	0	\$10,457	\$0

Section 8: Thunderstorm Wind

JURISDICTION	DATE	MAGNITUDE (MPH)	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
San Angelo	7/9/2005	61	0	0	\$13,071	\$0
San Angelo	4/28/2006	61	0	0	\$19,013	\$0
Tom Green County	5/2/2007	52	0	0	\$12,283	\$0
Tom Green County	5/2/2007	52	0	0	\$12,283	\$0
Tom Green County	5/2/2007	65	0	0	\$9,826	\$0
San Angelo	5/8/2007	52	0	0	\$14,739	\$0
Tom Green County	6/20/2007	52	0	0	\$613	\$0
San Angelo	6/24/2007	52	0	0	\$3,678	\$0
San Angelo	6/24/2007	52	0	0	\$4,904	\$0
Tom Green County	4/9/2008	65	0	0	\$1,189	\$0
Tom Green County	7/16/2014	70	1	0	\$0	\$0
Tom Green County	6/23/2017	82	0	0	\$7,298,879	\$0

Table 8-4. Summary of Historical Thunderstorm Wind Events, 1955-2018

JURISDICTION	NUMBER OF EVENTS	MAGNITUDE	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	181	82	2	0	\$7,489,213	\$0
City of San Angelo	119	83	52	0	\$102,953,384	\$39,923
TOTAL LOSSES	300	(Max Extent)	54	0	\$110,482,520	

Significant Events

October 17, 1993 – Tom Green County

Ham radio operators and storm spotters reported severe weather in and near San Angelo late on the 17th. In North San Angelo, two mobile homes were demolished, with multiple roofs, fences, power lines, and outbuildings damaged. Two people in one the trailers sustained minor cuts and bruises. The damage was believed to be caused by a microburst. Golfball-size hail was reported by a spotter in Carlsbad at 9:12 PM CDT. Around 10:10 PM CDT, another microburst damaged an athletic supply building and the roof of a high school in north San Angelo. Later, quarter-size hail was reported in north San Angelo by an NWS employee. At 11:45 PM CDT, an NWS employee reported Ping-Pong-size hail 4 miles northeast of the San Angelo airport.

July 16, 2014 - Tom Green County

A powerful microburst struck about 5 miles northeast of Grape Creek and produced one injury and extensive damage across the Indian Creek neighborhood located near the intersection of Glass Road and Grape Creek

Section 8: Thunderstorm Wind

Road. Shingles were blown off several residences, a single wide mobile home was moved off its block, and several windows in mobile homes and vehicles were broken by the wind-driven hail. Mobile home skirting was blown off by the strong thunderstorm winds. In addition, several outbuildings were destroyed, a large metal building housing large hay bales was also destroyed as the metal was strewn a couple of hundred yards into a nearby field.

June 26, 2017 – Tom Green County

Several storms produced damaging thunderstorm winds. A line of storms formed just north of San Angelo and quickly began producing damaging downburst winds across San Angelo and the Concho Valley. A National Weather Service Damage Survey team found evidence of downburst thunderstorm winds of 75 to 85 mph with some gusts to around 95 mph between Grape Creek and the San Angelo State Park. The downburst winds extended across San Angelo and was approximately 35 miles long and about 20 miles wide. At 7:44 PM CDT the damaging winds began near Grape Creek and snapped or fell about 24 power poles. These damaged poles were located near the Baptist church on the south side of Grape Creek and they continued southeast along U.S. Highway 87. At 7:45 PM CDT, the West Texas Mesonet located just south of Grape Creek measured a 69 mph wind gust. By 7:54 PM CDT, these winds reached Mathis Field where the NWS San Angelo ASOS measured 78 mph. There was widespread roof damage across San Angelo. Lots of shingles and metal roofs were blown off, some windows were broken, businesses and vehicles, a few garage doors were blown out, and many utility poles and power lines also were blown down. Lots of trees were uprooted and large trunks were broken. A couple of hotels in downtown San Angelo, Shannon Hospital, and several apartment buildings lost some of their roofs. An apartment complex off of North Bryant near the Walmart lost a lot of roofing material. One of the walls on the north side of this apartment complex lost its brick veneer as it collapsed when the roof was slightly lifted. The ASOS at Mathis Field in San Angelo measured its last severe sustained wind of 58 mph at 8:16 PM CDT, along with a wind gust of 77 mph.

Probability of Future Events

Most thunderstorm winds occur during the months of March, April, May, and September. Based on available records of historic events, there have been 300 events in a 64-year reporting period, which provides a probability of four to five events every year. Even though the intensity of thunderstorm wind events is not always damaging for the City of San Angelo and Tom Green County, the frequency of occurrence for a thunderstorm wind event is highly likely. This means that an event is probable within the next year for the planning area.

Vulnerability and Impact

Vulnerability is difficult to evaluate since thunderstorm wind events can occur at different strength levels, in random locations, and can create relatively narrow paths of destruction. Due to the randomness of these events, all existing and future structures and facilities in the City of San Angelo and Tom Green County could potentially be impacted and remain vulnerable to possible injury and property loss from strong winds.

Trees, power lines and poles, signage, manufactured housing, radio towers, concrete block walls, storage barns, windows, garbage receptacles, brick facades, and vehicles, unless reinforced, are vulnerable to thunderstorm wind events. More severe damage involves windborne debris; in some instances, patio furniture and other lawn items have been reported to have been blown around by wind and, very commonly, debris

Section 8: Thunderstorm Wind

from damaged structures in turn have caused damage to other buildings not directly impacted by the event. In numerous instances roofs have been reported as having been torn off of buildings. The portable buildings typically used at schools and construction sites would be more vulnerable to thunderstorm wind events than typical site-built structures and could potentially pose a greater risk for wind-blown debris.

The US Census data indicates a total of 3,018 manufactured homes (approximately 6.3%) are located in the City of San Angelo and Tom Green County (Table 8-5). In addition, 61.0% (approximately 29,265 structures) of the residential structures in the planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damages during significant wind events. In addition, an estimated 12.9% of the planning area population live below the poverty level. Populations below the poverty level suffer greater adverse impacts from natural disaster events.

Table 8-5. Structures at Greater Risk by Jurisdiction

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980	POPULATION BELOW POVERTY LEVEL
Tom Green County ⁴	3,018	29,265	15,081
City of San Angelo	1,301	26,270	13,978

The following critical facilities would be vulnerable to thunderstorm wind events in each participating jurisdiction:

Table 8-6. Critical Facilities at Risk by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Tom Green County	2 Medical Facilities, 1 Law Enforcement Facility, 1 Emergency Operations Facility, 10 Fire Stations, 7 Schools
City of San Angelo	14 Medical Facilities, 1 Government Facility (COG), 9 Fire Stations, 1 Police Station, 1 Sheriff's Department, 1 EOC, 1 Airport, 2 Higher Education Facilities, 42 Education Facilities/Schools, 10 Fire Stations, 58 Lift Stations, 6 Water Storage Facilities, 15 Wells, 5 Dams, 6 Critical Generators, 1 Pump Station, 2 WWTP Facilities, 1 Communications Tower, 1 Water Treatment Plant, 2 Critical Operations Facilities

A thunderstorm wind event can also result in traffic disruptions, injuries and in rare cases, fatalities. Impact of thunderstorms winds experienced in the City of San Angelo and Tom Green County have resulted in fifty-four injuries and no fatalities. Impact of thunderstorm wind events experienced in the City of San Angelo and Tom Green County would be "Minor," and injuries and illnesses do not result in permanent disability, more that ten percent of property may be damaged or destroyed, and facilities would be shut down for one week or more. Overall, the average loss estimate (in 2019 dollars) is \$110,482,520, having an approximate annual loss estimate of \$1,726,289 (Table 8-7).

⁴ County totals includes all jurisdictions and unincorporated areas within the county.

Section 8: Thunderstorm Wind

Table 8-7. Potential Annualized Losses by Jurisdiction

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Tom Green County	\$7,489,213	\$117,019
City of San Angelo	\$102,993,307	\$1,609,270
Planning Area	\$110,482,520	\$1,726,289

Assessment of Impacts

Thunderstorm wind events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. Impacts to the planning area can include:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- During exceptionally heavy wind events, first responders may be prevented from responding to calls, as the winds may reach a speed in which their vehicles and equipment are unsafe to operate.
- Thunderstorm wind events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning, as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.
- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.
- Critical staff may be unable to report for duty, limiting response capabilities.
- City or county departments may be damaged, delaying response and recovery efforts for the entire community.
- Private sector entities that the City and its residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by thunderstorm wind events may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.

Section 8: Thunderstorm Wind

- Older structures built to less stringent building codes may suffer greater damage as they are typically more vulnerable to thunderstorm winds.
- Large scale wind events can have significant economic impact on the affected area, as it must now fund expenses such as infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damages without a backup power source.
- Activities at locations such the San Angelo State Park, OC Fisher Lake, and Twin Buttes Reservoir may attract tourism including hiking, camping, boating, and fishing throughout the year. A large thunderstorm wind event could impact recreational activities, placing visitors in imminent danger, potentially requiring emergency services or evacuations.
- Recreational areas and parks may be damaged or inaccessible due to downed trees or debris, causing temporary impacts to area businesses.

The economic and financial impacts of thunderstorm winds on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any thunderstorm wind event.

Section 9: Tornado

Hazard Description.....	1
Location	1
Extent.....	2
Historical Occurrences.....	5
Significant Events.....	9
Probability of Future Events	9
Vulnerability and Impact.....	9
Assessment of Impacts	11

Hazard Description



Tornadoes are among the most violent storms on the planet. A tornado is a rapidly rotating column of air extending between, and in contact with, a cloud and the surface of the earth. The most violent tornadoes are capable of tremendous destruction and have wind speeds of 250 miles per hour or more. In extreme cases, winds may approach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long.

The most powerful tornadoes are produced by “Supercell Thunderstorms.” These thunderstorms are created when horizontal wind shears (winds moving in different directions at different altitudes) begin to rotate the storm. This horizontal rotation can be tilted vertically by violent updrafts, and the rotation radius can shrink, forming a vertical column of very quickly swirling air. This rotating air can eventually reach the ground, forming a tornado.

Table 9-1. Variations among Tornadoes

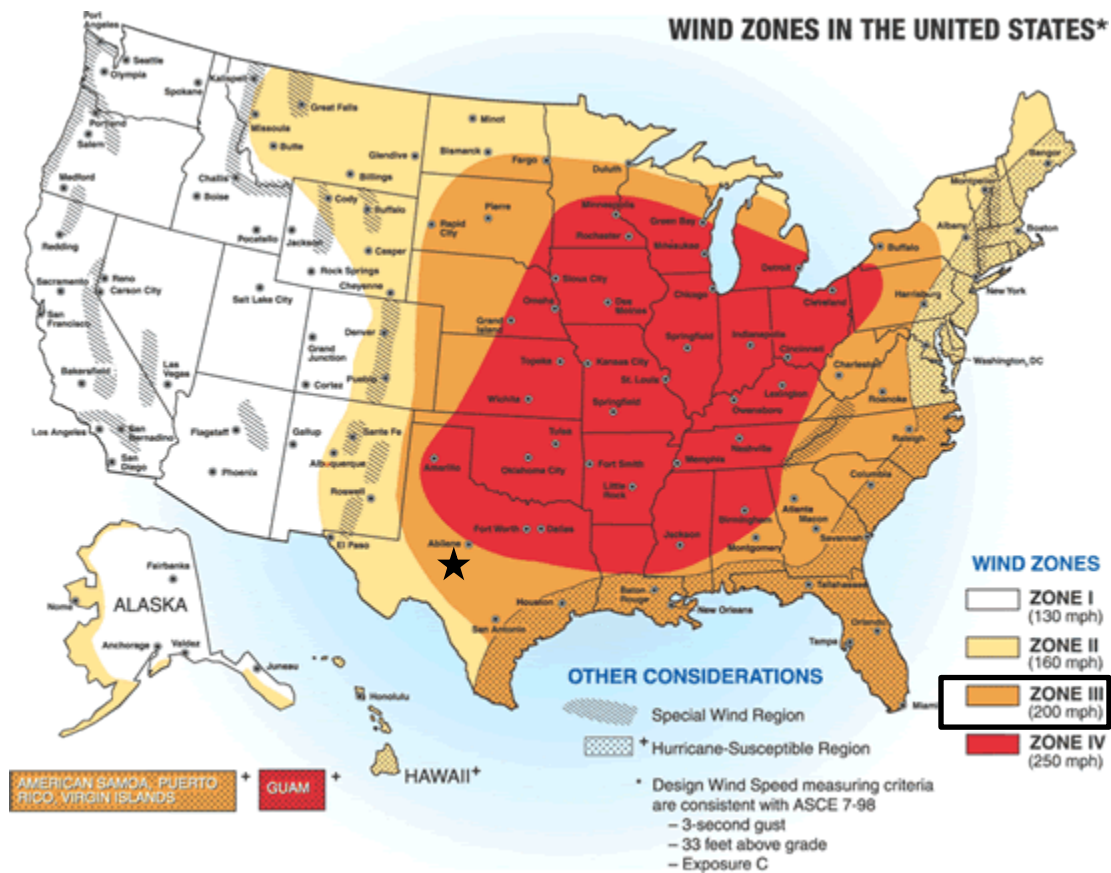
WEAK TORNADOES	STRONG TORNADOES	VIOLENT TORNADOES
69% of all tornadoes - Less than 5% of tornado deaths - Lifetime 1-10+ minutes - Winds less than 110 mph	29% of all tornadoes - Nearly 30% of all tornado deaths - May last 20 minutes or longer - Winds 110 – 205 mph	2% of all tornadoes 70% of all tornado deaths - Lifetime can exceed one hour - Winds greater than 205 mph

Location

Tornadoes do not have any specific geographic boundary and can occur throughout the County uniformly. It is assumed that the City of San Angelo and Tom Green County are uniformly exposed to tornado activity. The entire planning area is located in Wind Zone III (Figure 9-1), where tornado winds can be as high as 200 mph.

Section 9: Tornado

Figure 9-1. FEMA Wind Zones in the United States¹



Extent

The destruction caused by tornadoes ranges from light to inconceivable, depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damage to structures of light construction, such as residential homes (particularly mobile homes).

¹ Tom Green County and the City of San Angelo is indicated by the star.

Section 9: Tornado

Table 9-2. The Fujita Tornado Scale²

F-SCALE NUMBER	INTENSITY	WIND SPEED (MPH)	TYPE OF DAMAGE DONE	PERCENT OF APPRAISED STRUCTURE VALUE LOST DUE TO DAMAGE
F0	Gale Tornado	40 – 72	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.	None Estimated
F1	Moderate Tornado	73 – 112	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off roads; attached garages may be destroyed.	0% – 20%
F2	Significant Tornado	113 – 157	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.	50% – 100%
F3	Severe Tornado	158 – 206	Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.	100%
F4	Devastating Tornado	207 – 260	Well-constructed homes leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.	100%
F5	Incredible Tornado	261 – 318	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles flying through the air in excess of 330 yards; trees debarked; steel reinforced concrete badly damaged.	100%

² Source: <http://www.tornadoproject.com/fscale/fscale.htm>

Section 9: Tornado

Tornado magnitudes prior to 2005 were determined using the traditional version of the Fujita Scale (Table 9-2). Since February 2007, the Fujita Scale has been replaced by the Enhanced Fujita Scale (Table 9-3), which retains the same basic design and six strength categories as the previous scale. The newer scale reflects more refined assessments of tornado damage surveys, standardization, and damage consideration to a wider range of structures.

Table 9-3. Enhanced Fujita Scale for Tornadoes

STORM CATEGORY	DAMAGE LEVEL	3 SECOND GUST (MPH)	DESCRIPTION OF DAMAGES	PHOTO EXAMPLE
EF0	Gale	65 – 85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damages sign boards.	
EF1	Weak	86 – 110	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off roads; attached garages may be destroyed.	
EF2	Strong	111 – 135	Considerable damage; roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.	
EF3	Severe	136 – 165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.	
EF4	Devastating	166 – 200	Well-constructed homes leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.	
EF5	Incredible	200+	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles flying through the air in excess of 330 yards; trees debarked; steel reinforced concrete badly damaged.	

Both the Fujita Scale and Enhanced Fujita Scale should be referenced in reviewing previous occurrences since tornado events prior to 2007 will follow the original Fujita Scale. The largest magnitude reported within the planning area is an EF4 on the Enhanced Fujita Scale, a “Devastating Tornado.” Based on the planning area

Section 9: Tornado

location in Wind Zone III, the planning area could experience anywhere from an EF0 to EF5 depending on the wind speed.

The events in Tom Green County and the City of San Angelo have been between EF0 and EF5 (Table 9-4). Therefore, the range of intensity that the City of San Angelo and Tom Green County would be expected to mitigate is a tornado event that would be a low to incredible risk, an EF0 to EF5. Historically, the strongest tornado to strike the planning area was a F4, which would be an EF5 on the Enhanced Fujita Scale. This is the strongest event the planning area can anticipate in the future.

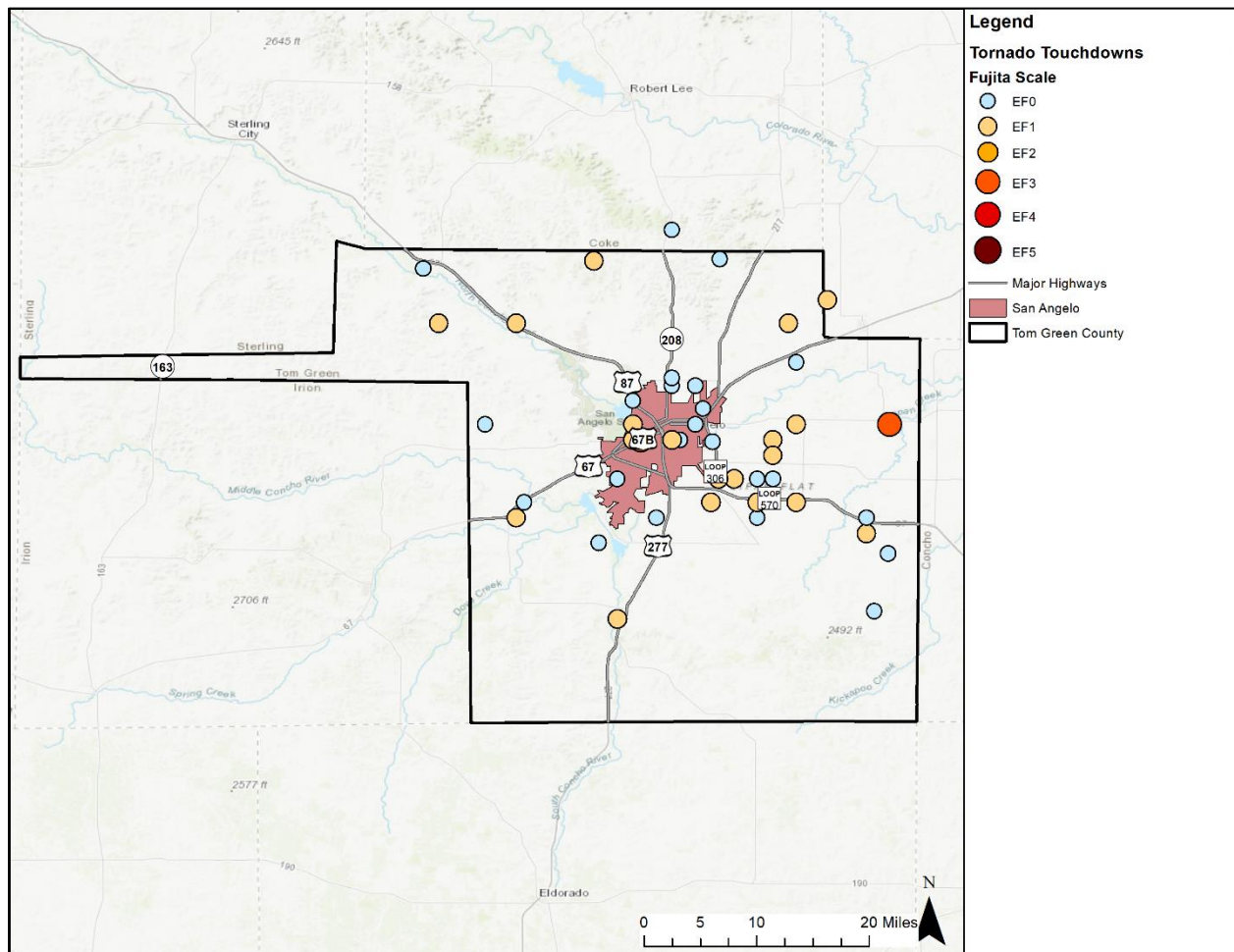
Historical Occurrences

Only reported tornadoes were factored into the Risk Assessment. It is likely that a high number of occurrences have gone unreported over the past 67 years.

Figure 9-2 identifies the locations of previous occurrences in the City of San Angelo and Tom Green County from 1952 through 2018. A total of 52 events have been recorded by the Storm Prediction Center (NOAA) and NCEI databases for the planning area.

Section 9: Tornado

Figure 9-2. Tom Green County Spatial Historical Tornado Events, 1952-2018³



³ Source: NOAA Records

Section 9: Tornado

Figure 9-3. City of San Angelo Spatial Historical Tornado Events, 1952-2018

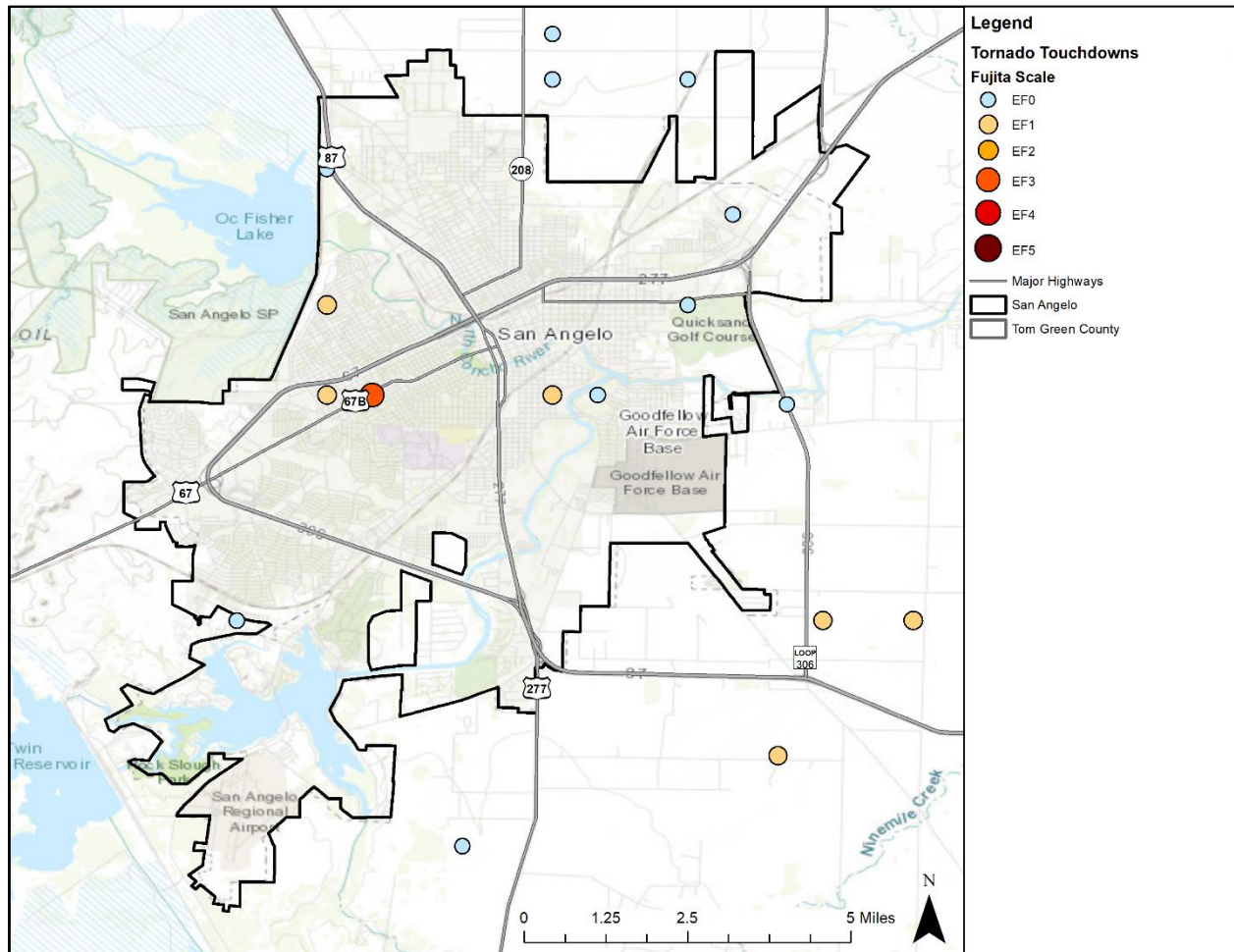


Table 9-4. Historical Tornado Events, 1952-2018⁴

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	4/30/1952	F3	0	6	\$2,418,692	\$0
Tom Green County	5/23/1952	F1	0	1	\$24,187	\$0
Tom Green County	5/11/1953	F4	13	159	\$23,915,154	\$0
Tom Green County	3/10/1973	F2	1	7	\$1,474,676	\$0
Tom Green County	5/4/1974	F1	0	0	\$158	\$0
Tom Green County	5/29/1977	F1	0	0	\$127	\$0

⁴ Only recorded events with fatalities, injuries or damages are listed. Magnitude is listed when available. Damage values are in 2019 dollars.

Section 9: Tornado

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	4/20/1981	F1	0	0	\$86	\$0
Tom Green County	5/18/1982	F1	0	0	\$66,653	\$0
Tom Green County	6/5/1984	F1	1	0	\$61,575	\$0
Tom Green County	5/14/1989	F1	0	0	\$51,578	\$0
Tom Green County	5/15/1989	F1	0	0	\$515,779	\$0
Tom Green County	5/13/1992	F1	0	0	\$4,571	\$0
Tom Green County	5/14/1995	F0	0	0	\$16,781	\$0
Tom Green County	5/14/1995	F3	0	0	\$503,444	\$0
Tom Green County	5/14/1995	F1	0	2	\$419,537	\$0
Tom Green County	5/14/1995	F1	0	0	\$251,722	\$0
Tom Green County	5/10/1996	F1	0	0	\$1,630,995	\$0
Tom Green County	5/26/1998	F1	0	2	\$2,039,545	\$784,441
Tom Green County	3/19/2002	F1	0	0	\$14,285	\$0
San Angelo	3/19/2002	F1	0	0	\$2,857	\$0
Tom Green County	3/4/2004	F1	0	0	\$272,587	\$0
San Angelo	5/31/2005	F1	0	0	\$394,157	\$0
San Angelo	5/31/2005	F1	0	0	\$131,386	\$0
San Angelo	5/31/2005	F0	0	0	\$10,511	\$0
Tom Green County	4/9/2008	EF1	0	0	\$178,343	\$0
Tom Green County	4/9/2008	EF0	0	0	\$11,890	\$0
Tom Green County	4/9/2008	EF0	0	0	\$59,448	\$0
San Angelo	4/9/2008	EF1	0	0	\$7,133,701	\$0
Tom Green County	10/13/2018	EF2	0	0	\$202,000	\$0

Section 9: Tornado

Table 9-5. Summary of Historical Events, 1952-2018⁵

JURISDICTION	Number of Events	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	41	EF4	15	177	\$34,133,813	\$784,441
City of San Angelo	11	EF1	0	0	\$7,672,612	\$0
TOTAL LOSSES	52	(Max Extent)	15	177	\$42,590,866	

Significant Events

May 26, 1998 - Tom Green County & City of San Angelo

A supercell developed just north of San Angelo near Grape Creek and drifted very slowly eastward towards Veribest in northeast Tom Green County. This supercell spawned at least 2 tornadoes, including one that destroyed two mobile homes and damaged 15 homes. Two people were injured in one of the mobile homes. Numerous farm buildings and farming machinery were also heavily damaged. Hail of the size of baseballs and torrential rainfall accompanied this storm, causing extensive flooding across the Grape Creek and Quail Valley areas. Later in the evening, a line of severe storms swept through much of the Concho Valley and Heartland, bringing damaging winds and up to golf ball size hail.

April 29, 2018 – City of San Angelo

The NWS storm survey team found a tornado track across the Houston Harte Expressway that caused severe damage to a large distribution warehouse. The tornado overturned 2 trailers, knocked down a communication tower, utility poles, and power lines, flipped cars, damaged roofs and road signs along the expressway. A couple of truck drivers who rode out the storm reported their tractor trailers were lifted at times during the tornado. One motorist in a smaller truck reported being lifted up while he was in his vehicle and seeing a small tornado.

Probability of Future Events

Tornadic storms can occur at any time of year and at any time of day, but they are typically more common in the spring months during the late afternoon and evening hours. A smaller, high frequency period can emerge in the fall during the brief transition between the warm and cold seasons. According to historical records, the City of San Angelo and Tom Green County can experience a tornado touchdown approximately once every year. This frequency supports a highly likely probability of future events for the City of San Angelo and Tom Green County.

Vulnerability and Impact

Because tornadoes often cross jurisdictional boundaries, all existing and future buildings, facilities, and populations in the planning area are considered to be exposed to this hazard and could potentially be impacted.

⁵ Damages reported in 2019 dollars.

Section 9: Tornado

The damage caused by a tornado is typically a result of high wind velocity, wind-blown debris, lightning, and large hail.

The average tornado moves from southwest to northeast, but tornadoes have been known to move in any direction. Consequently, vulnerability of humans and property is difficult to evaluate since tornadoes form at different strengths, in random locations, and create relatively narrow paths of destruction. Although tornadoes strike at random, making all buildings vulnerable, three types of structures are more likely to suffer damage:

- Manufactured Homes;
- Homes on crawlspaces (more susceptible to lift); and
- Buildings with large spans, such as shopping malls, gymnasiums, and factories.

Tornadoes can cause a significant threat to people as they could be struck by flying debris, falling trees/branches, utility lines, and poles. Blocked roads could prevent first responders to respond to calls. Tornadoes commonly cause power outages which could cause health and safety risks to residents and visitors, as well as to patients in hospitals.

The City of San Angelo and Tom Green County features multiple mobile or manufactured home parks throughout the planning area. These parks are typically more vulnerable to tornado events than typical site-built structures. In addition, manufactured homes are located sporadically throughout the planning area which would also be more vulnerable. The US Census data indicates a total of 3,018 manufactured homes located in the City of San Angelo and Tom Green County (6.3%)(Table 9-6). In addition, 61.0% (approximately 29,265 structures) of the single family residential (SFR) structures in the planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damages during significant tornado events. In addition, an estimated 12.9% of the planning area population live below the poverty level. Populations below the poverty level suffer greater adverse impacts from natural disaster events.

Table 9-6. Structures and Populations at Greater Risk by Jurisdiction

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980	POPULATION BELOW POVERTY LEVEL
Tom Green County ⁶	3,018	29,265	15,081
City of San Angelo	1,301	26,270	13,978

The following critical facilities would be vulnerable to tornado events in each participating jurisdiction:

⁶ County totals includes all incorporated jurisdictions and unincorporated areas.

Section 9: Tornado

Table 9-7. Critical Facilities at Risk by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Tom Green County	2 Medical Facilities, 1 Law Enforcement Facility, 1 Emergency Operations Facility, 10 Fire Stations, 7 Schools
City of San Angelo	14 Medical Facilities, 1 Government Facility (COG), 9 Fire Stations, 1 Police Station, 1 Sheriff's Department, 1 EOC, 1 Airport, 2 Higher Education Facilities, 42 Education Facilities/Schools, 10 Fire Stations, 58 Lift Stations, 6 Water Storage Facilities, 15 Wells, 5 Dams, 6 Critical Generators, 1 Pump Station, 2 WWTP Facilities, 1 Communications Tower, 1 Water Treatment Plant, 2 Critical Operations Facilities

The average loss estimate of property and crop is \$42,590,866 (in 2019 dollars), having an approximate annual loss estimate of \$635,685 (Table 9-8). Based on historic loss and damages, the impact of tornado on the City of San Angelo and Tom Green County can be considered "Limited," with less than 10 percent of property expected to be destroyed, injuries that are treatable with first aid, and critical facilities shut down for 24 hours or less.

Table 9-8. Potential Annualized Losses by Jurisdiction

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Tom Green County	\$34,918,254	\$521,168
City of Seymour	\$7,672,612	\$114,517
Planning Area	\$42,590,866	\$635,685

Assessment of Impacts

Tornadoes have the potential to pose a significant risk to the population and can create dangerous situations. Often times, providing and preserving public health and safety is difficult. Impacts to the planning area can include:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Manufactured homes may suffer substantial damage as they would be more vulnerable than typical site-built structures.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- Tornadoes often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.

Section 9: Tornado

- Extended power outages can result in an increase in structure fires and/or carbon monoxide poisoning as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- Tornadoes can destroy or make residential structures uninhabitable, requiring shelter or relocation of residents in the aftermath of the event.
- First responders must enter the damage area shortly after the tornado passes to begin rescue operations and to organize cleanup and assessments efforts, therefore they are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Emergency operations and services may be significantly impacted due to damaged facilities, loss of communications, and damaged emergency vehicles and equipment.
- City or county departments may be damaged or destroyed, delaying response and recovery efforts for the entire community.
- Private sector entities that the City and its residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Damage to infrastructure may slow economic recovery since repairs may be extensive and lengthy.
- Some businesses not directly damaged by the tornado may be negatively impacted while roads and utilities are being restored, further slowing economic recovery.
- When the community is affected by significant property damage it is anticipated that funding would be required for infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Residential structures destroyed by a tornado may not be rebuilt for years, reducing the tax base for the community.
- Large or intense tornadoes may result in a dramatic population fluctuation, as people are unable to return to their homes or jobs and must seek shelter and/or work outside of the affected area.
- Businesses that are uninsured or underinsured may have difficulty reopening, which results in a net loss of jobs for the community and a potential increase in the unemployment rate.
- Recreation activities may be unavailable and tourism can be unappealing for years following a large tornado, devastating directly related local businesses.

The economic and financial impacts of a tornado event on the community will depend on the scale of the event, what is damaged, costs of repair or replacement, lost business days in impacted areas, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a tornado event.

Section10: Wildfire

Hazard Description.....	1
Location	1
Extent.....	3
Historical Occurrences.....	7
Probability of Future Events	9
Vulnerability and Impact.....	9
Assessment of Impacts	12

Hazard Description

A wildfire event can rapidly spread out of control and occurs most often in the summer when the brush is dry and flames can move unchecked through a highly vegetative area. Wildfires can start as a slow burning fire along the forest floor, killing and damaging trees. The fires often spread more rapidly as they reach the tops of trees with wind carrying the flames from tree to tree. Usually, dense smoke is the first indication of a wildfire.

A wildfire event often begins unnoticed and spreads quickly, lighting brush, trees, and homes on fire. For example, a wildfire may be started by a campfire that was not doused properly, a tossed cigarette, burning debris, or arson.

Texas has seen a significant increase in the number of wildfires in the past 30 years, which included wildland, interface, or intermix fires. Wildland fires are fueled almost exclusively by natural vegetation, while interface or intermix fires are urban/wildland fires in which vegetation and the built-environment provide the fuel.

Location

A wildfire event can be a potentially damaging consequence of drought. Wildfires can vary greatly in terms of size, location, intensity, and duration. While wildfires are not confined to any specific geographic location, they are most likely to occur in open grasslands. The threat to people and property from a wildfire event is greater in the fringe areas where developed areas meet open grass lands, such as the WUI. (Figures 10-1 through 10-2). It is estimated that 37.7 percent of the total population in Tom Green County live within the WUI. However, the entire Tom Green County is at risk for wildfires.

Figure 10-1. Wildland Urban Interface Map – Tom Green County

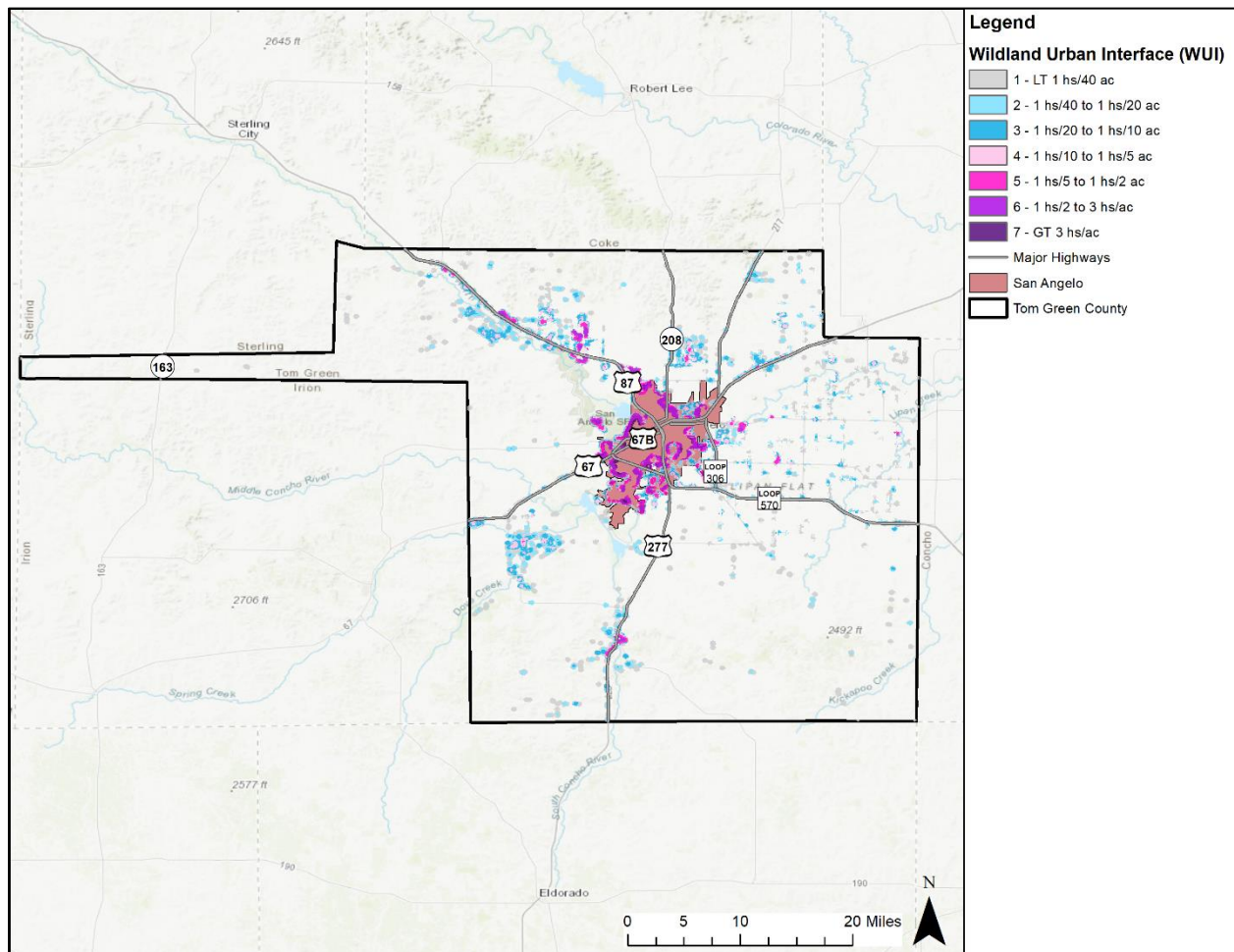
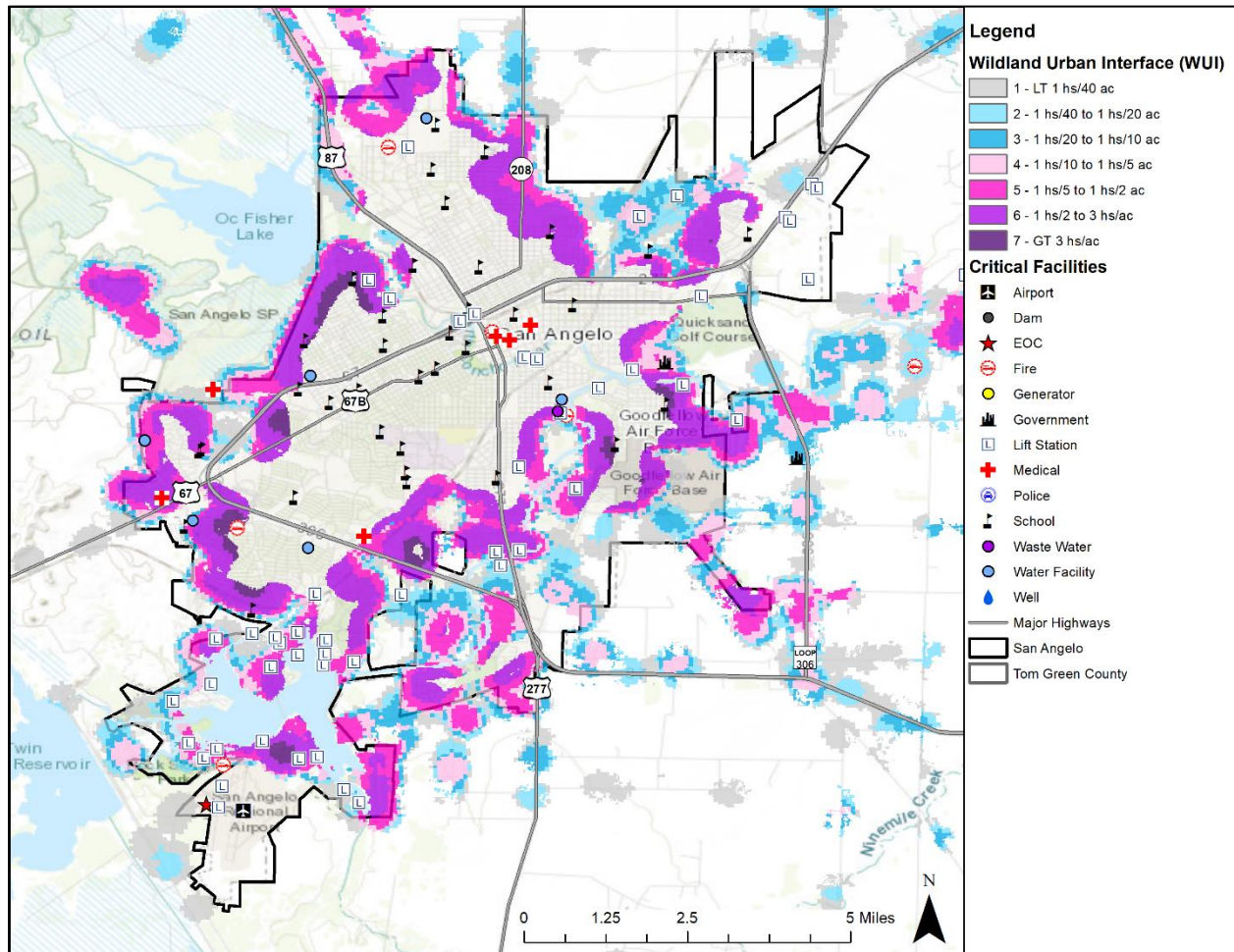


Figure 10-2. Wildland Urban Interface Map – City of San Angelo



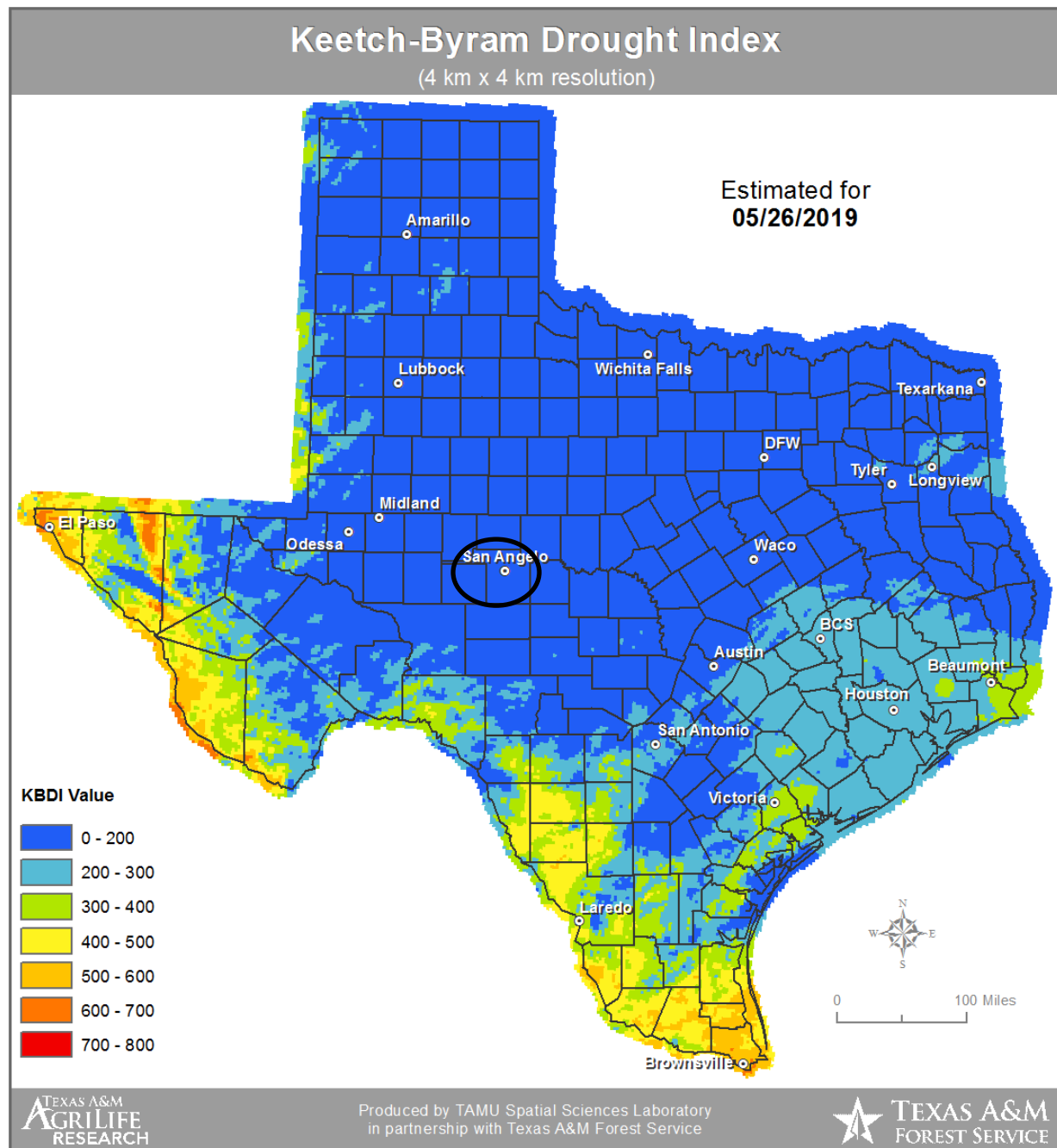
It is estimated that 28.4 percent of the total population in the City of San Angelo live within the WUI. However, the entire City of San Angelo is at risk for wildfires.

Extent



Risk for a wildfire event is measured in terms of magnitude and intensity using the Keetch Byram Drought Index (KBDI), a mathematical system for relating current and recent weather conditions to potential or expected fire behavior. The KBDI determines forest fire potential based on a daily water balance, derived by balancing a drought factor with precipitation and soil moisture (assumed to have a maximum storage capacity of eight inches), and is expressed in hundredths of an inch of soil moisture depletion.

Figure 10-3. Keetch-Byram Drought Index (KBDI) for the State of Texas, 2019¹



Fire behavior can be categorized at four distinct levels on the KBDI:

- **0 -200:** Soil and fuel moisture are high. Most fuels will not readily ignite or burn. However, with sufficient sunlight and wind, cured grasses and some light surface fuels will burn in spots and patches.

¹ Tom Green County and the City of San Angelo is located within the black circle.

Section 10: Wildfire

- **200 -400:** Fires more readily burn and will carry across an area with no gaps. Heavier fuels will not readily ignite and burn. Expect smoldering and the resulting smoke to carry into and possibly through the night.
- **400 -600:** Fires intensity begins to significantly increase. Fires will readily burn in all directions exposing mineral soils in some locations. Larger fuels may burn or smolder for several days creating possible smoke and control problems.
- **600 -800:** Fires will burn to mineral soil. Stumps will burn to the end of underground roots and spotting will be a major problem. Fires will burn through the night and heavier fuels will actively burn and contribute to fire intensity.

The KBDI is a good measure of the readiness of fuels for a wildfire event. It should be referenced as the area experiences changes in precipitation and soil moisture, while caution should be exercised in dryer, hotter conditions.

The range of intensity for the City of San Angelo and Tom Green County in a wildfire event is within 176 to 636. The average extent to be mitigated for the entire planning area is a KBDI of 461. At this level fires intensity begins to significantly increase. Fires will readily burn in all directions exposing mineral soils in some locations. The worst the City of San Angelo and Tom Green County can anticipate based on historical occurrences and readily available fuel is 600-800 as 636 falls within this range. At this level fires will burn to mineral soil. Stumps will burn to the end of underground roots and spotting will be a major problem. Fires will burn through the night and heavier fuels will actively burn and contribute to fire intensity.

The Texas Forest Service's Fire Intensity Scale identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on weighted average of four percentile weather categories. The City of San Angelo and Tom Green County are between a potential limited to low wildfire intensities. Figures 10-4 and 10-5 identify the wildfire intensity for the City of San Angelo and Tom Green County.

Figure 10-4. Fire Intensity Scale Map –Tom Green County

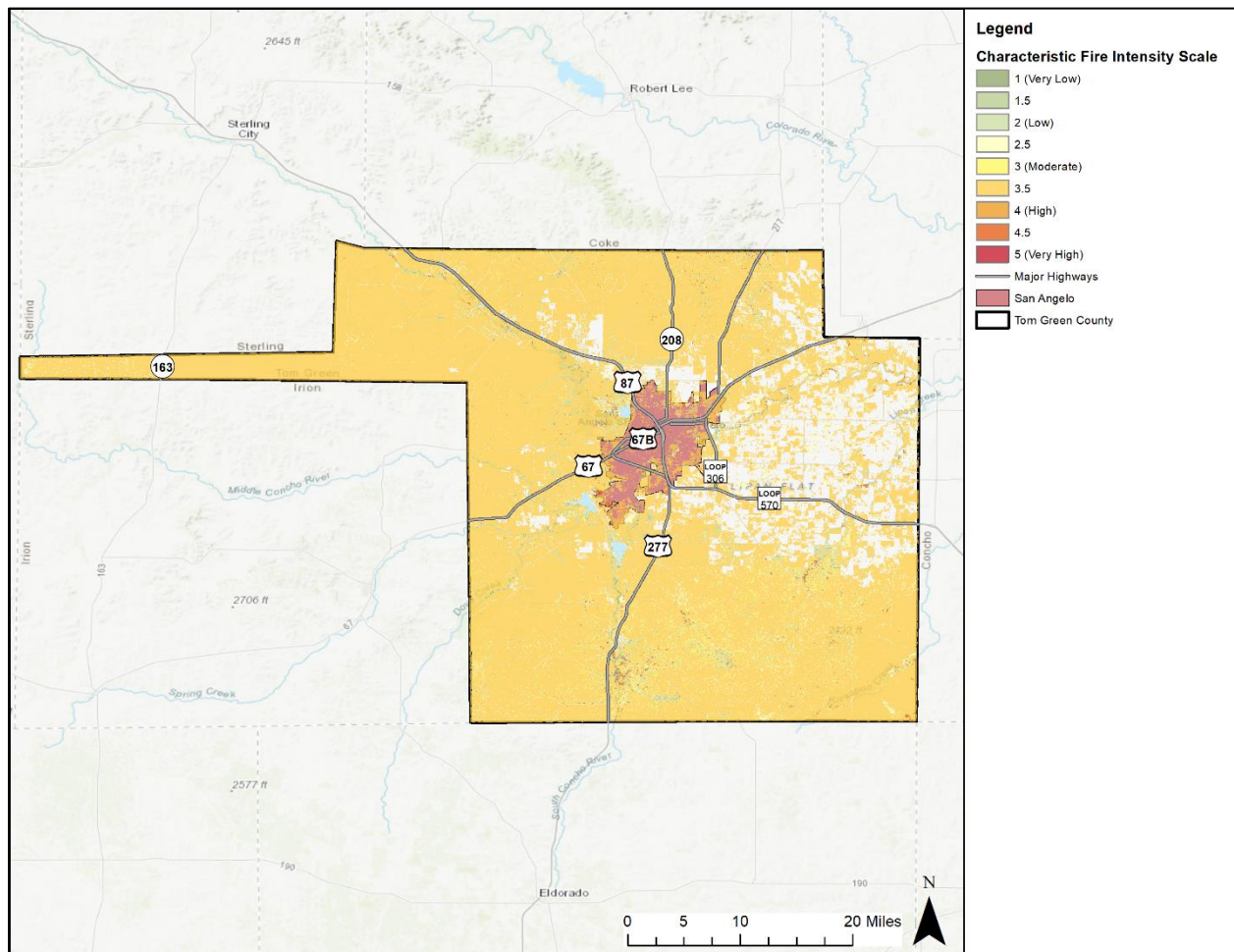
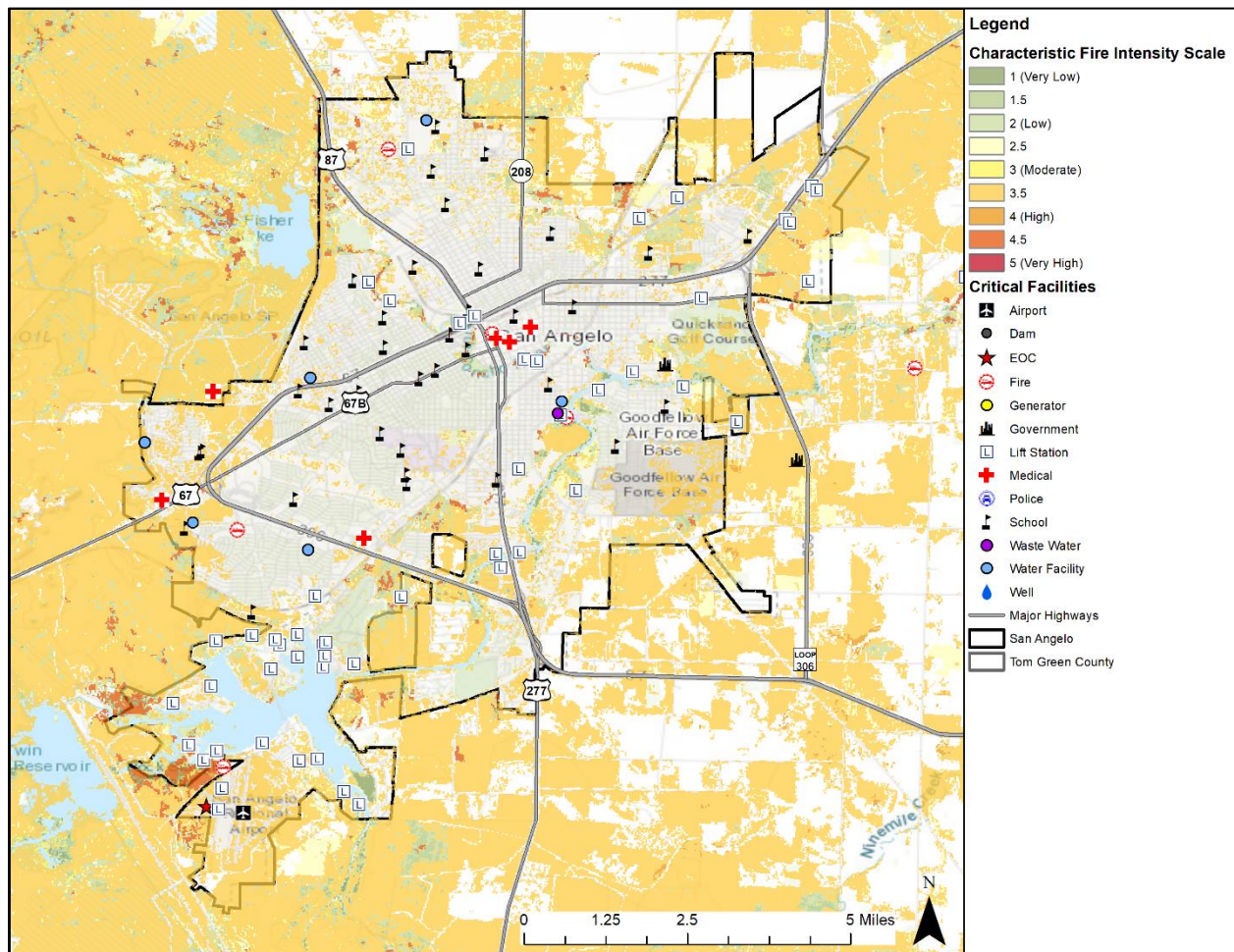


Figure 10-5. Fire Intensity Scale Map – City of San Angelo



Historical Occurrences

The Texas Forest Service reported 1,143 wildfire events between 2005 and 2015. The National Center for Environmental Information (NCEI) did not have any reported events from 2016 through 2018. Due to a lack of recorded data for wildfire events prior to 2005 and after 2015², frequency calculations are based on an eleven-year period using only data from recorded years. The map below shows approximate locations of wildfires, which can be grass or brushfires of any size (Figure 10-6). Table 10-1 identifies the number of wildfires by jurisdiction and total acreage burned.

² The Texas Forest Service data is currently only available through 2015.

Section 10: Wildfire

Figure 10-6. Location and Historic Wildfire Events for City of San Angelo and Tom Green County

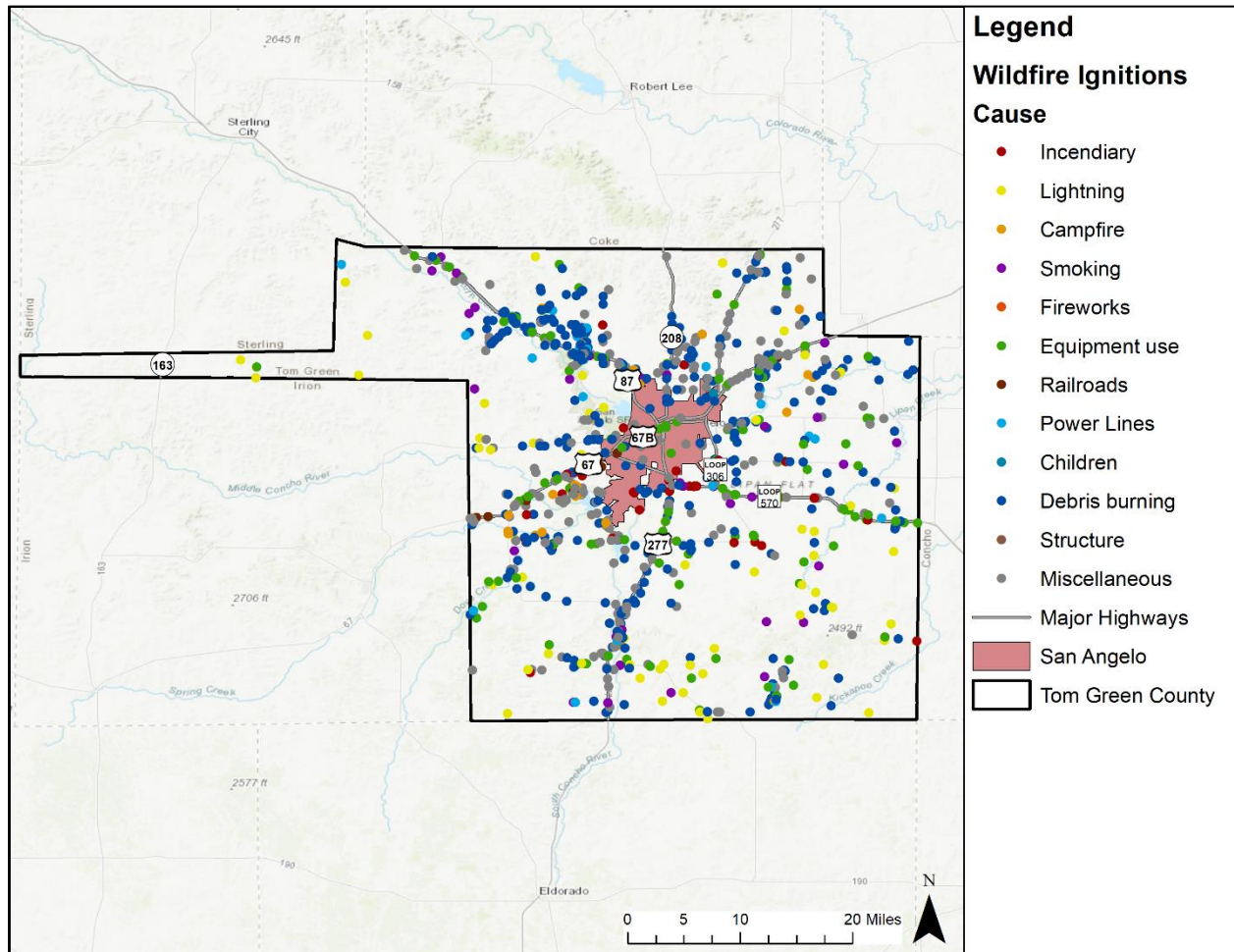


Table 10-1. Historical Wildfire Events Summary

JURISDICTION	NUMBER OF EVENTS	ACRES BURNED
Tom Green County	1,098	55,743
City of San Angelo	45	789

Table 10-2. Acreage of Suppressed Wildfire by Year

JURISDICTION	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Tom Green County	1,337	6,440	652	5,391	4,024	3,714	26,912	212	180	37	6,844
City of San Angelo	190	0	0	0	5	348	227	2	4	7	6

Probability of Future Events

Wildfires can occur at any time of the year. As the jurisdictions within the county move into wildland, the potential area of occurrence of wildfire increases. With 1,143 events in an 11-year period, an event within the City of San Angelo and Tom Green County, is highly likely, meaning an event is probable within the next year.

Vulnerability and Impact

Periods of drought, dry conditions, high temperatures, and low humidity are factors that contribute to the occurrence of a wildfire event. Areas along railroads and people whose homes are in woodland settings have an increased risk of being affected by wildfire.

The heavily populated, urban areas of Tom Green County and the City of San Angelo are not likely to experience large, sweeping fires. Areas in the unincorporated areas of Tom Green County are vulnerable, including rural areas along Interstate 277 north of San Angelo and south of the Pecan River, Highway 87 northwest of Carlsbad and along the county panhandle approaching the Middle Concho River. Unoccupied buildings and open spaces that have not been maintained have the greatest vulnerability to wildfire. The overall level of concern for wildfires is located mostly along the perimeter of the study area where wildland and urban areas interface. Figures 10-1 through 10-2 illustrate the areas that are the most vulnerable to wildfire throughout the planning area.

The following critical facilities are located in the WUI and are more susceptible to wildfire in each participating jurisdiction:

Table 10-3. Critical Facilities Located in WUI by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Tom Green County	None ³
City of San Angelo	9 Medical Facilities, 1 Government Facility (COG), 13 Fire Stations, 12 Education Facilities/Schools, 31 Lift Stations, 2 Water Storage Facilities, 2 Water/Wastewater Treatment Plant

Within Tom Green County and the City of San Angelo, a total of 1,143 fire events were reported from 2005 to 2015. All of these events were suspected wildfires. Historic loss and annualized estimates due to wildfires are presented in Table 10-4 below. The frequency is approximately 104 events every year.

³ County facility locations in the WUI are located within the City of San Angelo.

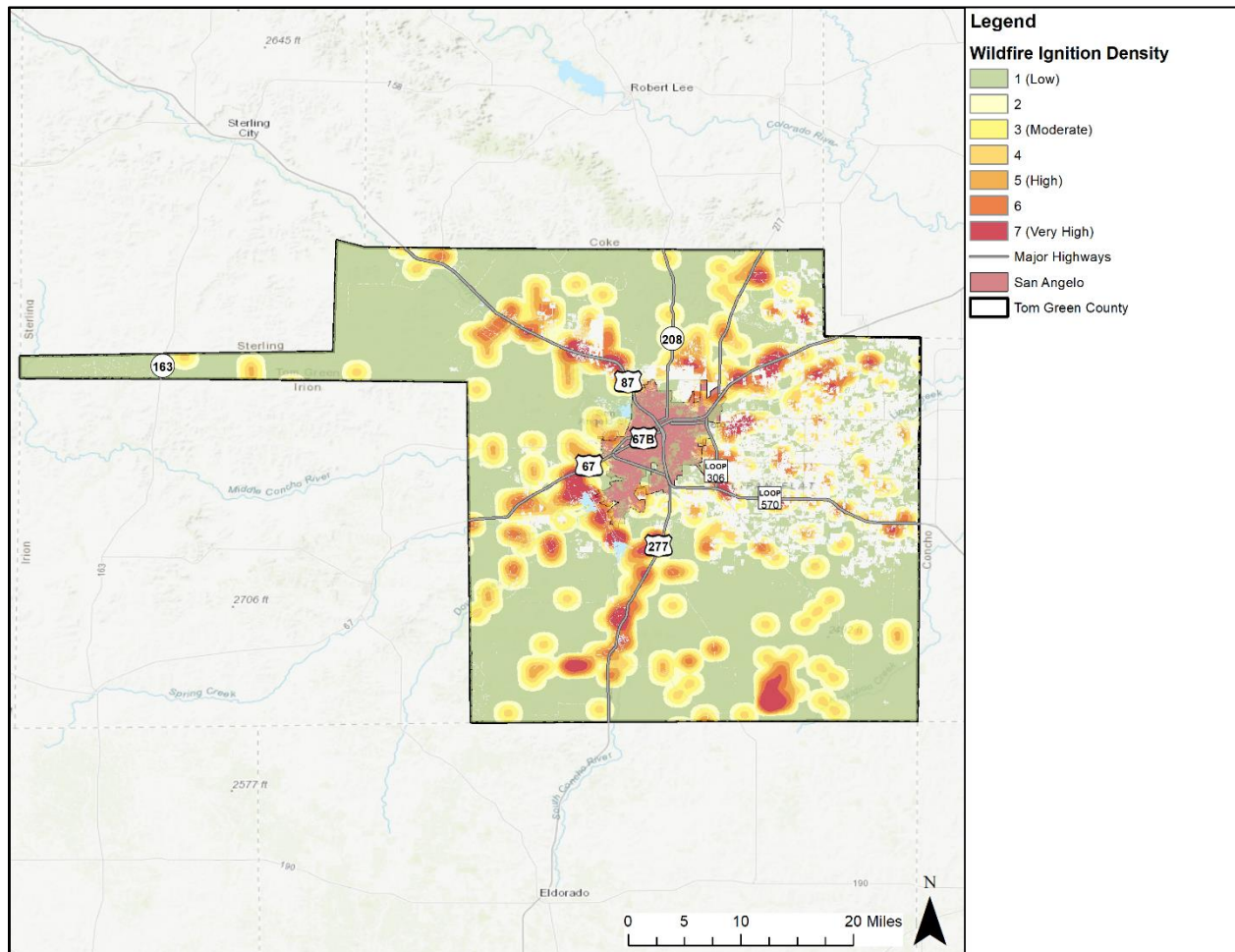
Section 10: Wildfire

Table 10-4. Potential Annualized Losses by Jurisdiction⁴

JURISDICTION	ACRES BURNED	ANNUAL ACRE LOSSES
Tom Green County	55,743	5,068
City of San Angelo	789	72
Planning Area	56,532	5,139

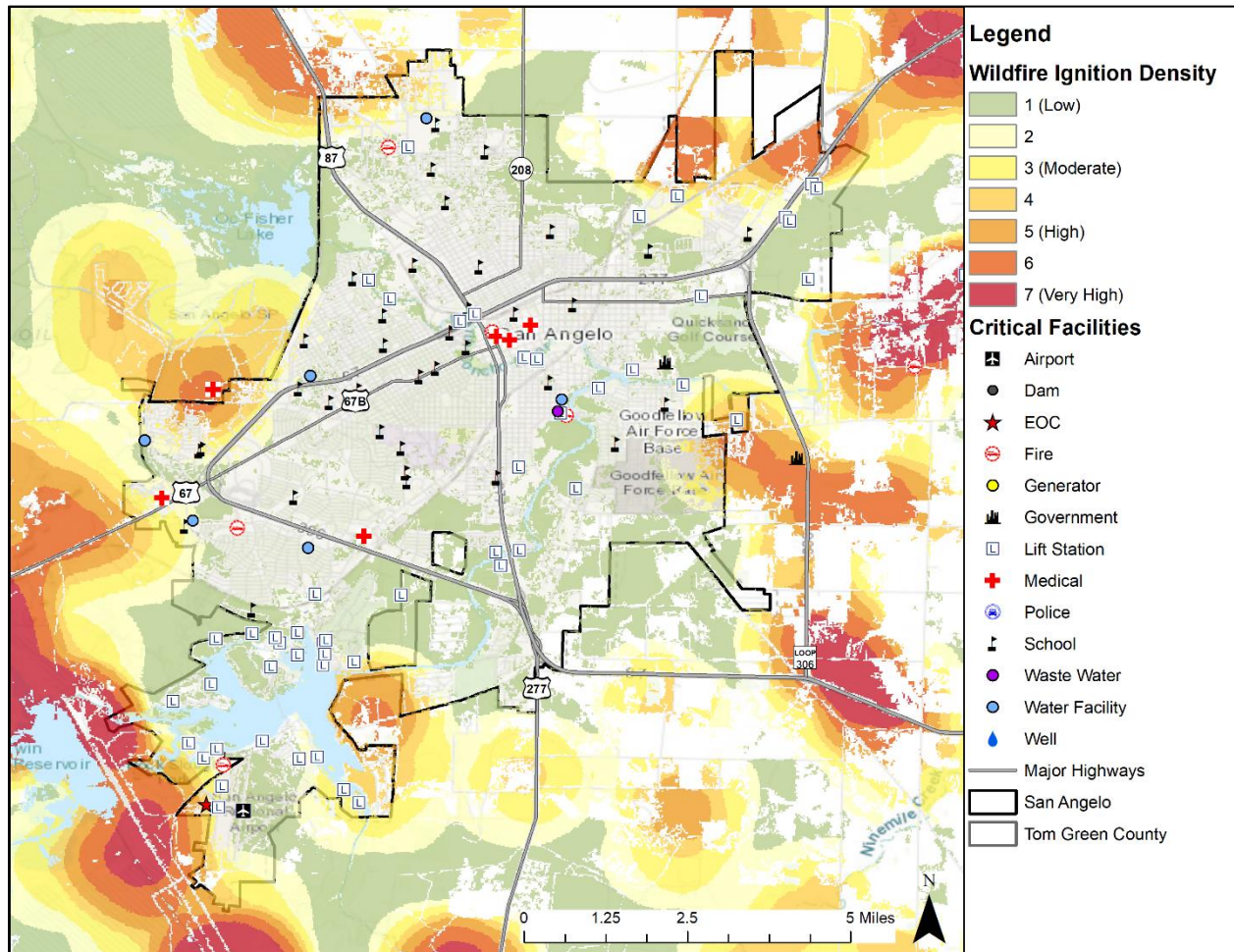
Figures 10-7 through 10-8 show Tom Green County and the City of San Angelo and the threat of wildfire to the planning area.

Figure 10-7. Wildfire Ignition Density – Tom Green County



⁴ Events divided by 11 years of data.

Figure 10-8. Wildfire Ignition Density – City of San Angelo



Diminished air quality is an environmental impact that can result from a wildfire event and pose a potential health risk. The smoke plumes from wildfires can contain potentially inhalable carcinogenic matter. Fine particles of invisible soot and ash that are too small for the respiratory system to filter can cause immediate and possibly long term health effects. The elderly or those individuals with compromised respiratory systems may be more vulnerable to the effects of diminished air quality after a wildfire event.

Climatic conditions such as severe freezes and drought can significantly increase the intensity of wildfires since these conditions kill vegetation, creating a prime fuel source for wildfires. The intensity and rate at which wildfires spread are directly related to wind speed, temperature, and relative humidity.

The severity of impact from major wildfire events can be substantial. Such events can cause multiple deaths, shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. Severity of impact is gauged by acreage burned, homes and structures lost, and the number of resulting injuries and fatalities.

For the City of San Angelo and Tom Green County, the impact from a wildfire event can be considered "Limited," meaning injuries and/or illnesses are treatable with first aid, shutdown of facilities and services for 24 hours or less, and less than 10 percent of property is destroyed or with major damage. Severity of impact

Section 10: Wildfire

is gauged by acreage burned, homes and structures lost, injuries and fatalities. Based on this, impact for each participating jurisdiction is listed below in Table 10-5.

Table 10-5. Impact by Jurisdiction

JURISDICTION	IMPACT	DESCRIPTION
Tom Green County	Limited	Tom Green County has an estimated 40,883 people or 37.7 percent of the total population that live within the Wildland Urban Interface (WUI). Tom Green County, including citizens in unincorporated areas, may suffer minor injuries treatable with first aid. Critical facilities could be shut down for 24 hours or less, and less than 10 percent of total property could be damaged.
City of San Angelo	Limited	The largest population in the City of San Angelo live in an area that is semi-dense to dense (1-3 houses per 1 acre) in the WUI, and the City has a low wildfire threat. Citizens may suffer minor injuries treatable with first aid. Critical facilities could be shut down for 24 hours or less, and less than 10 percent of total property could be damaged.

Assessment of Impacts

A Wildfire event poses a potentially significant risk to public health and safety, particularly if the wildfire is initially unnoticed and spreads quickly. The impacts associated with a wildfire are not limited to the direct damages. Potential impacts for the planning area include:

- Persons in the area at the time of the fire are at risk for injury or death from burns and/or smoke inhalation.
- First responders are at greater risk of physical injury since they are in close proximity to the hazard while extinguishing flames, protecting property or evacuating residents in the area.
- First responders can experience heart disease, respiratory problems, and other long term related illnesses from prolonged exposure to smoke, chemicals, and heat.
- Emergency services may be disrupted during a wildfire if facilities are impacted, roadways are inaccessible, or personnel are unable to report for duty.
- Critical city and/or county departments may not be able to function and provide necessary services depending on the location of the fire and the structures or personnel impacted.
- Non-critical businesses may be directly damaged, suffer loss of utility services, or be otherwise inaccessible, delaying normal operations and slowing the recovery process.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Roadways in or near the WUI could be damaged or closed due to smoke and limited visibility.
- Older homes are generally exempt from modern building code requirements, which may require fire suppression equipment in the structure.
- Some high density neighborhoods feature small lots with structures close together, increasing the potential for fire to spread rapidly.
- Air pollution from smoke may exacerbate respiratory problems of vulnerable residents.

Section 10: Wildfire

- Charred ground after a wildfire cannot easily absorb rainwater, increasing the risk of flooding and potential mudflows.
- Wildlife may be displaced or destroyed.
- Historical or cultural resources may be damaged or destroyed.
- Tourism can be significantly disrupted, further delaying economic recovery for the area.
- Vegetated dunes can be stripped, significantly damaging the function of the dunes to protect inland areas from the destructive forces of wind and waves.
- Economic disruption negatively impacts the programs and services provided by the community due to short and long term loss in revenue.
- Fire suppression costs can be substantial, exhausting the financial resources of the community.
- Residential structures lost in a wildfire may not be rebuilt for years, reducing the tax base for the community.
- At locations like the San Angelo State Park and area lakes such as the OC Fisher Lake and the Twin Buttes Reservoir, recreation and tourism can be unappealing for years following a large wildfire, devastating directly related businesses.
- Direct impacts to municipal water supply may occur through contamination of ash and debris during the fire, destruction of aboveground delivery lines, and soil erosion or debris deposits into waterways after the fire.

The economic and financial impacts of a wildfire event on local government will depend on the scale of the event, what is damaged, costs of repair or replacement, lost business days in impacted areas, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a wildfire event.

Section 11: Winter Storm

Hazard Description.....	1
Location	3
Extent.....	3
Historical Occurrences.....	4
Significant Events.....	6
Probability of Future Events	6
Vulnerability and Impact.....	6
Assessment of Impacts	8

Hazard Description



A severe winter storm event is identified as a storm with snow, ice, or freezing rain. This type of storm can cause significant problems for area residents. Winter storms are associated with freezing or frozen precipitation such as freezing rain, sleet, snow, and the combined effects of winter precipitation and strong winds. Wind chill is a function of temperature and wind. Low wind chill is a product of high winds and freezing temperatures.

Winter storms that threaten City of San Angelo and Tom Green County usually begin as powerful cold fronts that push south from central Canada. Although the planning area is at risk to ice hazards, extremely cold temperatures, and snow, the effects and frequencies of winter storm events are generally mild and short-lived. As indicated in Figure 11-1, on average, the planning area typically do not experience extreme cold days every year. However, historical events indicate occasional winter storms that do intermittently bring extreme cold days that are at or around freezing temperatures. During times of ice and snow accumulation, response times will increase until public works road crews are able to make major roads passable. Table 11-1 describes the types of winter storms possible to occur in the City of San Angelo and Tom Green County.

Figure 11-1. Extreme Cold Days, 1960-2003¹

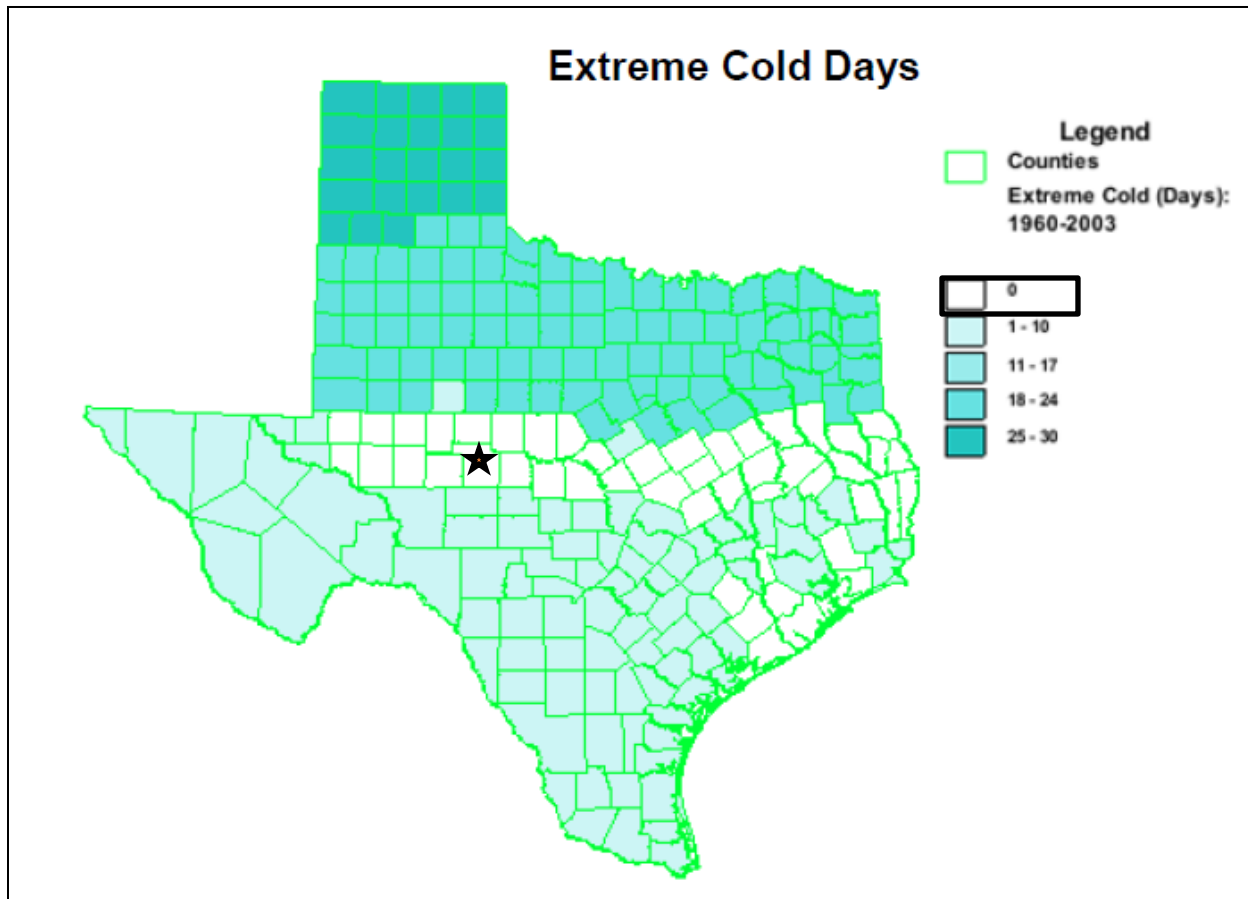


Table 11-1. Types of Winter Storms

TYPE OF WINTER STORM	DESCRIPTION
Winter Weather Advisory	This alert may be issued for a variety of severe conditions. Weather advisories may be announced for snow, blowing or drifting snow, freezing drizzle, freezing rain, or a combination of weather events.
Winter Storm Watch	Severe winter weather conditions may affect your area (freezing rain, sleet, or heavy snow may occur separately or in combination).
Winter Storm Warning	Severe winter weather conditions are imminent.
Freezing Rain or Freezing Drizzle	Rain or drizzle is likely to freeze upon impact, resulting in a coating of ice glaze on roads and all other exposed objects.
Sleet	Small particles of ice usually mixed with rain. If enough sleet accumulates on the ground, it makes travel hazardous.

¹ Source: National Weather Service. Tom Green County and the City of San Angelo indicated by star.

Section 11: Winter Storm

TYPE OF WINTER STORM	DESCRIPTION
Blizzard Warning	Sustained wind speeds of at least 35 mph are accompanied by considerable falling or blowing snow. This alert is the most perilous winter storm with visibility dangerously restricted.
Frost/Freeze Warning	Below freezing temperatures are expected and may cause significant damage to plants, crops, and fruit trees.
Wind Chill	A strong wind combined with a temperature slightly below freezing can have the same chilling effect as a temperature nearly 50 degrees lower in a calm atmosphere. The combined cooling power of the wind and temperature on exposed flesh is called the wind-chill factor.

Location

Winter storm events are not confined to specific geographic boundaries. Therefore, all existing and future buildings, facilities, and populations in the City of San Angelo and Tom Green County are considered to be exposed to a winter storm hazard and could potentially be impacted.

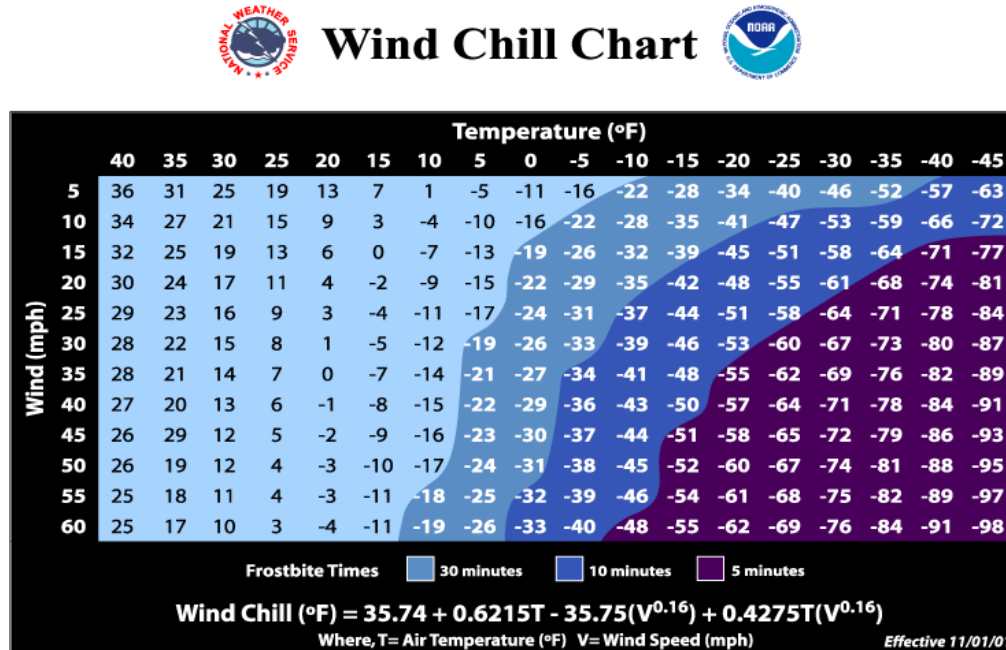
Extent

The extent or magnitude of a severe winter storm is measured in intensity based on the temperature and level of accumulations as shown in Table 11-2. Table 11-2 should be read in conjunction with the wind-chill factor described in Figure 11-2 to determine the intensity of a winter storm. The chart is not applicable when temperatures are over 50°F or winds are calm. This is an index developed by the National Weather Service.

Table 11-2. Magnitude of Severe Winter Storms

INTENSITY	TEMPERATURE RANGE (Fahrenheit)	EXTENT DESCRIPTION
Mild	40° – 50°	Winds less than 10 mph and freezing rain or light snow falling for short durations with little or no accumulations
Moderate	30° – 40°	Winds 10 – 15 mph and sleet and/or snow up to 4 inches
Significant	25° – 30°	Intense snow showers accompanied with strong gusty winds between 15 and 20 mph with significant accumulation
Extreme	20° – 25°	Wind driven snow that reduces visibility, heavy winds (between 20 to 30 mph), and sleet or ice up to 5 millimeters in diameter
Severe	Below 20°	Winds of 35 mph or more and snow and sleet greater than 4 inches

Figure 11-2. Wind Chill Chart



Wind chill temperature is a measure of how cold the wind makes real air temperature feel to the human body. Since wind can dramatically accelerate heat loss from the body, a blustery 30°F day would feel just as cold as a calm day with 0°F temperatures. The City of San Angelo and Tom Green County has never experienced a blizzard but based on 23 previous occurrences recorded from 1996 through 2018, it has been subject to winter storm watches, warnings, freezing rain, sleet, snow, and wind chill.

The average number of cold days is similar for the entire planning area, including both participating jurisdictions. Therefore, the intensity or extent of a winter storm event to be mitigated for the area ranges from mild to moderate according to the definitions at Table 11-2. City of San Angelo and Tom Green County can expect anywhere between 0.1 to 4.0 inches of ice and snow during a winter storm event and temperatures between 20 and 50 degrees with winds ranging from 0 to 20 mph. This is the worst that can be anticipated to mitigate against in the future for all participating jurisdictions.

Historical Occurrences

Table 11-3 shows historical occurrences for Tom Green County and the City of San Angelo from 1996 through 2018 provided by the NCEI database. There have been 23 recorded winter storm events in Tom Green County and the City of San Angelo. Historical winter storm information, as provided by the NCEI, identifies winter storm activity across a multi-county forecast area for each event. The appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event. Historical winter storm data for the county and the City of San Angelo are provided on a County-wide basis per the NCEI database. Table 11-3 shows historical incident information for the planning area.

Section 11: Winter Storm

Table 11-3. Historical Winter Storm Events, 1996-2018²

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	12/22/2004	0	0	\$0	\$0
Tom Green County	11/30/2006	0	0	\$0	\$0
Tom Green County	1/16/2007	0	0	\$10,095	\$0
Tom Green County	4/7/2007	0	0	\$74,145	\$37,073
Tom Green County	1/23/2008	0	0	\$0	\$0
Tom Green County	2/1/2011	0	0	\$0	\$0
Tom Green County	2/12/2012	0	0	\$0	\$0
Tom Green County	2/12/2012	0	0	\$0	\$0
Tom Green County	12/5/2013	0	0	\$0	\$0
Tom Green County	12/5/2013	0	0	\$0	\$0
Tom Green County	12/5/2013	0	0	\$0	\$0
Tom Green County	12/5/2013	0	0	\$0	\$0
Tom Green County	2/11/2014	0	0	\$0	\$0
Tom Green County	2/11/2014	0	0	\$0	\$0
Tom Green County	12/30/2014	0	0	\$0	\$0
Tom Green County	1/1/2015	0	0	\$0	\$0
Tom Green County	1/23/2015	0	0	\$0	\$0
Tom Green County	2/28/2015	0	0	\$0	\$0
Tom Green County	3/4/2015	0	0	\$0	\$0
Tom Green County	12/27/2015	0	0	\$0	\$0
Tom Green County	12/26/2017	1	0	\$31,082	\$0
Tom Green County	12/30/2017	0	0	\$0	\$0
Tom Green County	2/21/2018	0	0	\$0	\$0
TOTALS		0	0	\$152,395	

² Values are in 2019 dollars.

Significant Events

April 7, 2007 – Tom Green County

Unseasonably cold weather created a winter storm event in Tom Green County with San Angelo accumulating approximately 1 inch. Despite the warm ground, the precipitation fell heavy enough to cause significant accumulations, especially on elevated surfaces such as bridges and overpasses. This created Easter weekend travel problems with several weather-related accidents reported. About 50 traffic accidents were reported throughout the area Saturday and into Saturday night. There were even a few road closures. The Houston Harte Expressway in San Angelo was closed Saturday evening through Sunday morning. The icy conditions kept road crews busy throughout Saturday into early Sunday. In addition, many Easter-related activities were either moved indoors or had to be postponed, due to the weather. At the time of this event report, area farmers were still trying to determine how much their crops, such as Pecans and Wheat, were damaged by the prolonged freezing temperatures. Several sheep were lost to the cold and damp conditions as well. The following is a Record Event Report about the unseasonably cold temperatures: For San Angelo, the temperature of 38 degrees on the 7th was a record low maximum temperature for that date. The previous record was 56 degrees set in 1983. It also established a new record for the coldest maximum temperature ever recorded in April. The previous record was 39 degrees set on April 13th, 1957. In San Angelo the temperature was 32 degrees or below from 5:30 AM Saturday through 10:30 AM Sunday. This was a total of 29 hours at or below freezing. Prior to this weekend, the longest period of time with temperatures at or below freezing in April was 10 hours, from 1 AM to 11 AM on April 13, 1957. The low temperature of 29 degrees on the 7th tied the record low temperature for that date, which was previously set in 1971. Also, on the 8th (Easter Sunday), the high temperature of 42 degrees in San Angelo was a record low maximum temperature for that date. The previous record for the 8th was 50 degrees in 1983.

December 26, 2017 – Tom Green County

A motorist was killed when his vehicle hit a patch of ice and rolled multiple times in the 1300 block of N. Loop 306 Ramp, just north of Pulliam Street. The patchy ice resulted in multiple crashes especially on Loop 306 in San Angelo.

Probability of Future Events

According to historical records, the planning area experiences approximately one winter storm event each year. Hence, the probability of a future winter storm event affecting the City of San Angelo and Tom Green County is highly likely, with a winter storm likely to occur within the next year.

Vulnerability and Impact

During periods of extreme cold and freezing temperatures, water pipes can freeze and crack, and ice can build up on power lines, causing them to break under the weight or causing tree limbs to fall on the lines. These events can disrupt electric service for long periods.

An economic impact may occur due to increased consumption of heating fuel, which can lead to energy shortages and higher prices. House fires and resulting deaths tend to occur more frequently from increased

Section 11: Winter Storm

and improper use of alternate heating sources. Fires during winter storms also present a greater danger because water supplies may freeze and impede firefighting efforts.

All populations, buildings, critical facilities, and infrastructure in the City of San Angelo and Tom Green County are vulnerable to severe winter events.

The following critical facilities would be vulnerable to Winter Storm events in each participating jurisdiction:

Table 11-4. Critical Facilities by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Tom Green County	2 Medical Facilities, 1 Law Enforcement Facility, 1 Emergency Operations Facility, 10 Fire Stations, 7 Schools
City of San Angelo	14 Medical Facilities, 1 Government Facility (COG), 9 Fire Stations, 1 Police Station, 1 Sheriff's Department, 1 EOC, 1 Airport, 2 Higher Education Facilities, 42 Education Facilities/Schools, 10 Fire Stations, 58 Lift Stations, 6 Water Storage Facilities, 15 Wells, 5 Dams, 6 Critical Generators, 1 Pump Station, 2 WWTP Facilities, 1 Communications Tower, 1 Water Treatment Plant, 2 Critical Operations Facilities

People and animals are subject to health risks from extended exposure to cold air. Elderly people are at greater risk of death from hypothermia during these events, especially in the rural areas of the county where populations are sparse, icy roads may impede travel, and there are fewer neighbors to check in on the elderly. According to the U.S. Center for Disease Control, every year hypothermia kills about 600 Americans, half of whom are 65 years of age or older. In addition, populations living below the poverty level may not be able to afford to run heaters on a regular basis

The population over 65 in the City of San Angelo and Tom Green County is estimated at 14.6% of the total population, or an estimated total of 17,079 potentially vulnerable residents in the planning area based on age. In addition, an estimated 12.9% of the planning area population live below the poverty level (Table 11-5).

Table 11-5. Population at Greater Risk by Jurisdiction

JURISDICTION	POPULATION 65 AND OLDER	POPULATION BELOW POVERTY LEVEL
Tom Green County ³	17,079	15,081
City of San Angelo	14,438	13,978

Historic loss, in 2019 dollars, is estimated at \$152,395 in damages over the 23-year recording period giving an approximate loss of \$6,626 in damages annually (Table 11-6). The potential severity of impact for the City of San Angelo and Tom Green County based on damage are "Limited" meaning a potential shutdown of facilities and services for 24 hours or less, and less than 10% of property destroyed or with major damage. However, with one fatality recorded due to a winter storm event, the potential severity of impact for the entire planning area is considered "Substantial", meaning multiple fatalities are possible.

³ County totals includes all incorporated jurisdictions and unincorporated areas.

Section 11: Winter Storm

Table 11-6. Potential Annualized Losses for Tom Green County and the City of San Angelo

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Tom Green County	\$152,395	\$6,626

Assessment of Impacts

The greatest risk from a winter storm hazard is to public health and safety. Potential impacts for the planning area may include:

- Vulnerable populations, particularly the elderly, and those living in poverty, can face serious or life-threatening health problems from exposure to extreme cold including hypothermia and frostbite.
- Loss of electric power or other heat source can result in increased potential for fire injuries or hazardous gas inhalation because residents burn candles for light or use fires or generators to stay warm.
- Response personnel, including utility workers, public works personnel, debris removal staff, tow truck operators, and other first responders, are subject to injury or illness resulting from exposure to extreme cold temperatures.
- Response personnel would be required to travel in potentially hazardous conditions, elevating the life safety risk due to accidents and potential contact with downed power lines.
- Operations or service delivery may experience impacts from electricity blackouts due to winter storms.
- Power outages are possible throughout the planning area due to downed trees and power lines and/or rolling blackouts.
- Critical facilities without emergency backup power may not be operational during power outages.
- Emergency response and service operations may be impacted by limitations on access and mobility if roadways are closed, unsafe, or obstructed.
- Hazardous road conditions will likely lead to increases in automobile accidents, further straining emergency response capabilities.
- Depending on the severity and scale of damage caused by ice and snow events, damage to power transmission and distribution infrastructure can require days or weeks to repair.
- A winter storm event could lead to tree, shrub, and plant damage or death.
- Severe cold and ice could significantly damage agricultural crops.
- Schools may be forced to shut early due to treacherous driving conditions.
- Exposed water pipes may be damaged by severe or late season winter storms at both residential and commercial structures, causing significant damages.

The economic and financial impacts of winter weather on the community will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by businesses and citizens will also contribute to the overall economic and financial conditions in the aftermath of a winter storm event.

Section 12: Lightning

Hazard Description.....	1
Location	1
Extent.....	1
Historical Occurrences	3
Significant Events	4
Probability of Future Events	4
Vulnerability and Impact.....	4
Assessment of Impacts	5

Hazard Description

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a “bolt” when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes the thunder which often accompanies lightning strikes. While most often affiliated with severe thunderstorms, lightning often strikes outside of heavy rain and might occur as far as 10 miles away from any rainfall.

According to FEMA, an average of 300 people are injured and 80 people are killed in the United States each year by lightning. Direct lightning strikes also have the ability to cause significant damage to buildings, critical facilities, and infrastructure. Lightning is also responsible for igniting wildfires that can result in widespread damages to property before firefighters have the ability to contain and suppress the resultant fire.

Location

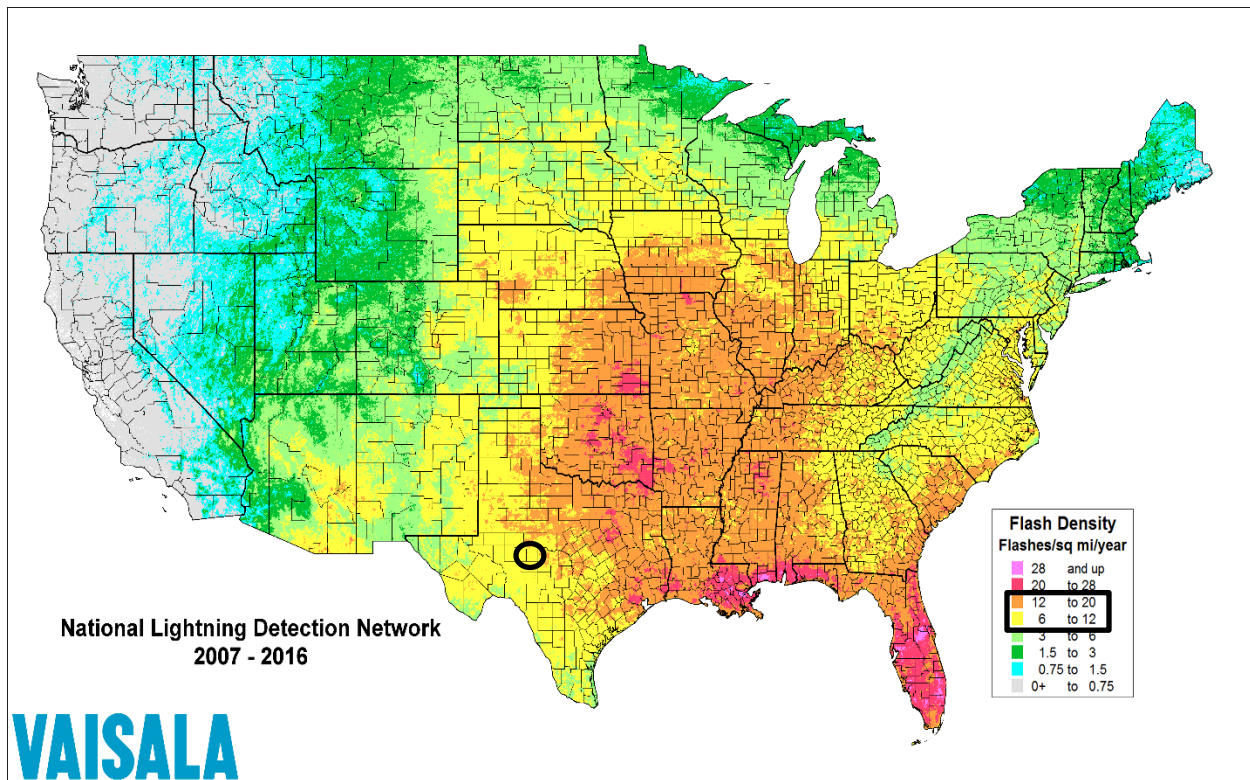
Lightning can strike in any geographic location and is considered a common occurrence in Texas. The City of San Angelo and Tom Green County are located in a region of the country that is moderately susceptible to a lightning strike. Therefore, lightning could occur at any location within the entire planning area. It is assumed that the City of San Angelo and Tom Green County is uniformly exposed to the threat of lightning.

Extent

According to the NOAA, the average number of cloud-to-ground flashes for the State of Texas between 2007 and 2016 was 11.3 flashes per square mile. Vaisala’s U.S. National Lightning Detection Network lightning flash density map (Figure 12-1) shows a range of six to twenty cloud-to-ground lightning flashes per square mile per year for the entire planning area. This rate equates to approximately 9,246 to 30,820 flashes per year for the City of San Angelo and Tom Green County.

Section 12: Lightning

Figure 12-1. Lightning Flash Density, 2007-2016



The extent for lightning can be expressed in terms of the number of strikes in an interval. NOAA utilizes lightning activity levels (LALs) on a scale from 1-6. LAL rankings reflect the frequency of cloud-to-ground lightning either forecast or observed (Table 12-1).

Table 12-1. NOAA Lightning Activity Levels (LAL)

LAL	CLOUD & STORM DEVELOPMENT	LIGHTNING STRIKES/ 15 MIN
1	No thunderstorms.	-
2	Cumulus clouds are common but only a few reach the towering cumulus stage. A single thunderstorm must be confirmed in the observation area. The clouds produce mainly virga, but light rain will occasionally reach the ground. Lightning is very infrequent.	1-8
3	Towering cumulus covers less than two-tenths of the sky. Thunderstorms are few, but two to three must occur within the observation area. Light to moderate rain will reach the ground, and lightning is infrequent.	9-15
4	Towering cumulus covers two to three-tenths of the sky. Thunderstorms are scattered and more than three must occur within the observation area. Moderate rain is common and lightning is frequent.	16-25

Section 12: Lightning

LAL	CLOUD & STORM DEVELOPMENT	LIGHTNING STRIKES/ 15 MIN
5	Towering cumulus and thunderstorms are numerous. They cover more than three-tenths and occasionally obscure the sky. Rain is moderate to heavy and lightning is frequent and intense.	>25
6	Similar to LAL 3 except thunderstorms are dry.	

The NCEI does not include the LAL for historical lightning events, therefore in order to determine the extent of lightning strikes, the yearly average range of estimated number of lightning strikes within the City of San Angelo and Tom Green County (9,246 to 30,820 flashes) and a cloud-to-ground flash density of six to twenty per square mile were divided by the number¹ of thunderstorm events that occur annually in the planning area. Tom Green County and the City of San Angelo should expect an average range of five to fifteen lightning strikes within 15 minutes at any given time during a lightning or combined lightning and thunderstorm event, indicating lightning strikes have an average LAL range of 2 to 3. The highest being a 3 on the LAL for the City of San Angelo and Tom Green County in the future.

Historical Occurrences

Table 12-2 depicts historical occurrences of lightning for the City of San Angelo and Tom Green County with associated damages according to the National Centers for Environmental Information (NCEI) data. Since January 1996, only three recorded lightning events were reported as having impacted the planning area, based upon NCEI records. It is highly likely additional lightning occurrences have gone unreported before and during the recording period. The NCEI is a national data source organized under the National Oceanic and Atmospheric Administration. The NCEI is the largest archive available for climate data; however, it is important to note that the only incidents factored into this risk assessment are those that are reported to the NCEI for the City of San Angelo and Tom Green County. Damage estimates provided in a table for losses have been modified to reflect the damage in 2019 dollars.

Table 12-2. Historical Lightning Events with Reported Damages, 1996-2018²

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
San Angelo	6/3/2003	0	0	\$278,077	\$0
San Angelo	8/26/2006	0	0	\$0	\$0
Tom Green County	3/30/2007	0	0	\$9,950	\$0
TOTALS		0	0	\$288,027	\$0

¹ Analysis includes the highest number of events recorded in a given year during the reporting period in order to account for typical under reporting of thunderstorm and lightning events.

² Damage values are in 2019 dollars.

Section 12: Lightning

Significant Events

June 3, 2003 - City of San Angelo:

Intense lightning from a severe thunderstorm produced a house fire, which was a total loss. Numerous appliances and televisions across the city were knocked out. The National Weather Service office in San Angelo also received a lightning strike that knocked out computer systems and an amateur radio transceiver.

March 30, 2007 - Tom Green County:

Lightning struck a house off of Loop 306 near San Angelo and started a fire.

Probability of Future Events

Based on historical records and input from the planning team the probability of occurrence for future lightning events in the City of San Angelo and Tom Green County is considered highly likely, or an event probable in the next year. The planning team stated that lightning occurs regularly in the area. According to NOAA, the City of San Angelo and Tom Green County is located in an area of the country that experiences six to twenty lightning flashes per square mile per year (approximately 9,246 to 30,820 flashes per year). Given this estimated probability of events, it can be expected that future lightning events will continue to threaten life and cause minor property damages throughout the entire planning area.

Vulnerability and Impact

Vulnerability is difficult to evaluate since lightning events can occur at different strength levels, in random locations, and can create a broad range of damages depending on the strike location. Due to the randomness of these events, all existing and future structures and facilities in the City of San Angelo and Tom Green County could potentially be impacted and remain vulnerable to possible injury and property loss from lightning strikes. The planning area has had only three reported lightning events, however the entire planning area is vulnerable and could be impacted by lightning.

The direct and indirect losses associated with these events include injury and loss of life, damage to structures and infrastructure, agricultural losses, utility failure (power outages), and stress on community resources. The entire population of the City of San Angelo and Tom Green County is considered exposed to the lightning hazard. The peak lightning season in the State of Texas is from June to August; however, the most fatalities occur in July. Fatalities occur most often when people are outdoors and/or participating in some form of recreation. Population located outdoors is considered at risk and more vulnerable to a lightning strike compared to being inside a structure. Moving to a lower risk location will decrease a person's vulnerability.

The entire general building stock and all infrastructure of the City of San Angelo and Tom Green County are considered exposed to the lightning hazard. Lightning can be responsible for damages to buildings, cause electrical, forest and/or wildfires, and damage infrastructure such as power transmission lines and communication towers. Agricultural losses can be extensive due to lightning and resulting fires.

The following critical facilities would be vulnerable to lightning events in each participating jurisdiction:

Section 12: Lightning

Table 12-2. Critical Facilities at Risk by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Tom Green County	2 Medical Facilities, 1 Law Enforcement Facility, 1 Emergency Operations Facility, 10 Fire Stations, 7 Schools
City of San Angelo	14 Medical Facilities, 1 Government Facility (COG), 9 Fire Stations, 1 Police Station, 1 Sheriff's Department, 1 EOC, 1 Airport, 2 Higher Education Facilities, 42 Education Facilities/Schools, 10 Fire Stations, 58 Lift Stations, 6 Water Storage Facilities, 15 Wells, 5 Dams, 6 Critical Generators, 1 Pump Station, 2 WWTP Facilities, 1 Communications Tower, 1 Water Treatment Plant, 2 Critical Operations Facilities

Impact of lightning experienced in the City of San Angelo and Tom Green County has resulted in no injuries or fatalities. Impact of lightning events experienced in the planning area would be "Limited," and injuries and illnesses would be treatable with first aid. The quality of life lost would be minor, and facilities would be shut down for 24 hours or less. Overall, the average loss estimate for the City of San Angelo and Tom Green County is \$12,523.

Table 12-3. Potential Annualized Losses by Jurisdiction³

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Tom Green County	\$9,950	\$433
City of San Angelo	\$278,077	\$12,090

Assessment of Impacts

Lightning events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. Impacts to the planning area can include:

- Individuals exposed to the storm can be directly struck, posing significant health risks and potential death.
- Structures can be damaged or crushed by falling trees damaged by lightning, which can result in physical harm to the occupants.
- Lightning strikes can result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- Lightning strikes can be associated with structure fires and wildfires, creating additional risk to residents and first responders.

³ Damage values are in 2019 dollars.

Section 12: Lightning

- Emergency operations and services may be significantly impacted due to power outages and/or loss of communications.
- City or county departments may be damaged, delaying response and recovery efforts for the entire community.
- Economic disruption due to power outages and fires negatively impacts the programs and services provided by the community due to short and long term loss in revenue.
- Some businesses not directly damaged by lightning events may be negatively impacted while utilities are being restored, further slowing economic recovery.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damages without a backup power source.

The economic and financial impacts of lightning on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the county, communities, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any lightning event.

Section 13: Flood

Hazard Description.....	1
Location	1
Extent.....	3
Historical Occurrences.....	6
Significant Events.....	7
Probability of Future Events	7
Vulnerability and Impact.....	7
Assessment of Impacts	8
National Flood Insurance Program (NFIP) Participation.....	10
NFIP Compliance and Maintenance.....	11
Repetitive Loss	12

Hazard Description

Floods generally result from excessive precipitation. The severity of a flood event is determined by a combination of several major factors, including: stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and the degree of vegetative clearing and impervious surface. Typically, floods are long-term events that may last for several days.

The primary types of general flooding are inland and coastal flooding. Inland or riverine flooding is a result of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Inland or riverine flooding is overbank flooding of rivers and streams, typically resulting from large-scale weather systems that generate prolonged rainfall over a wide geographic area, thus it is a naturally occurring and inevitable event. Some river floods occur seasonally when winter or spring rainfalls fill river basins with too much water, too quickly. Torrential rains from decaying hurricanes or tropical systems can also produce river flooding.

Location

The Flood Insurance Rate Map (FIRM) data provided by FEMA for the City of San Angelo and Tom Green County shows the following flood hazard areas:

- Zone A: Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance requirements and floodplain management standards apply.
- Zone AE: Areas subject to inundation by the 1-percent-annual-chance flood event that are determined in the FIS by detailed methods. In most instances, whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Section 13: Flood

- Zone X: Moderate risk areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by a levee. No BFEs or base flood depths are shown within these zones.

Locations of flood zones in Tom Green County based on the digital Flood Insurance Rate Map (DFIRM) from FEMA are illustrated in Figures 13-1 to 13-2.

Figure 13-1. Estimated Flood Zones in Tom Green County

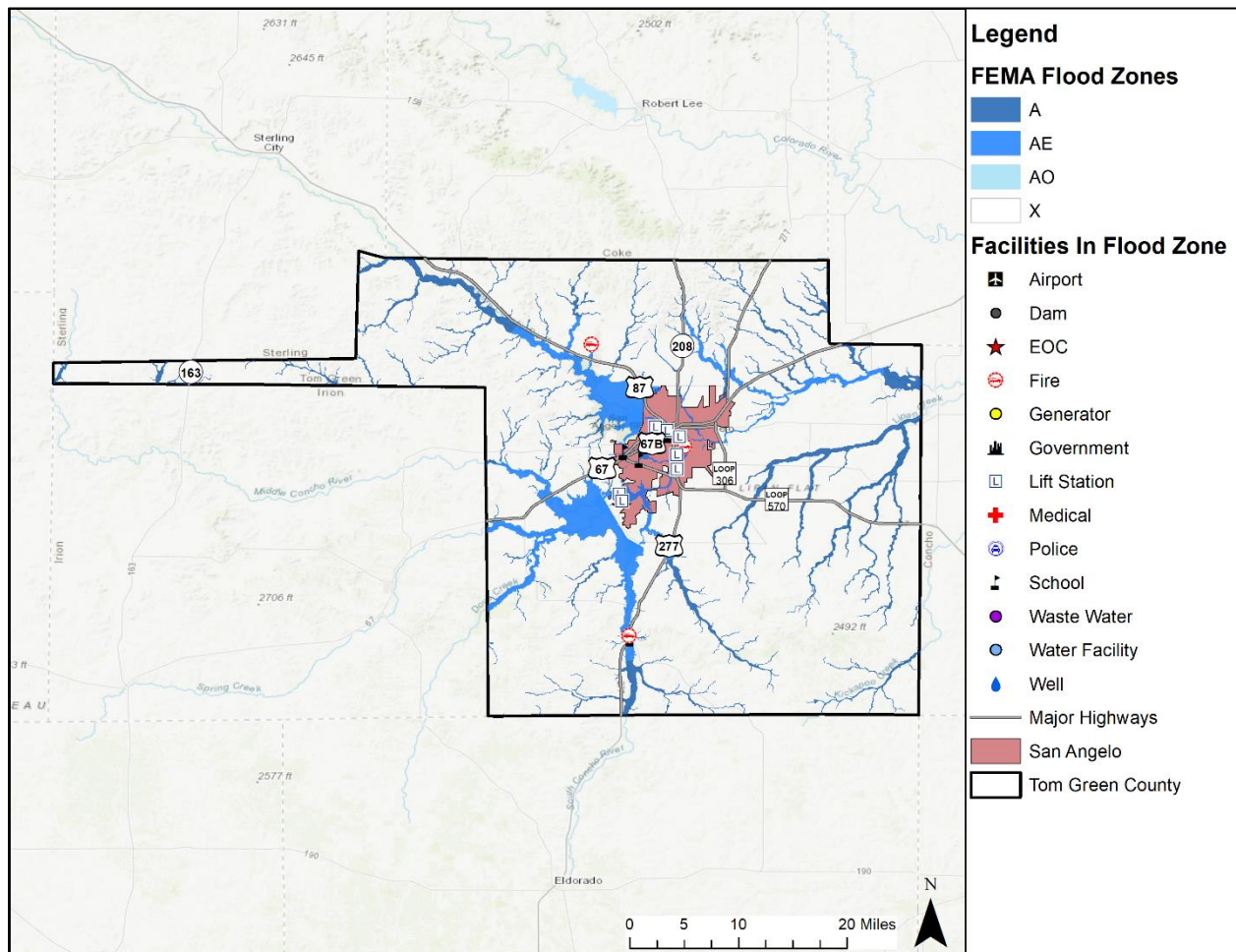
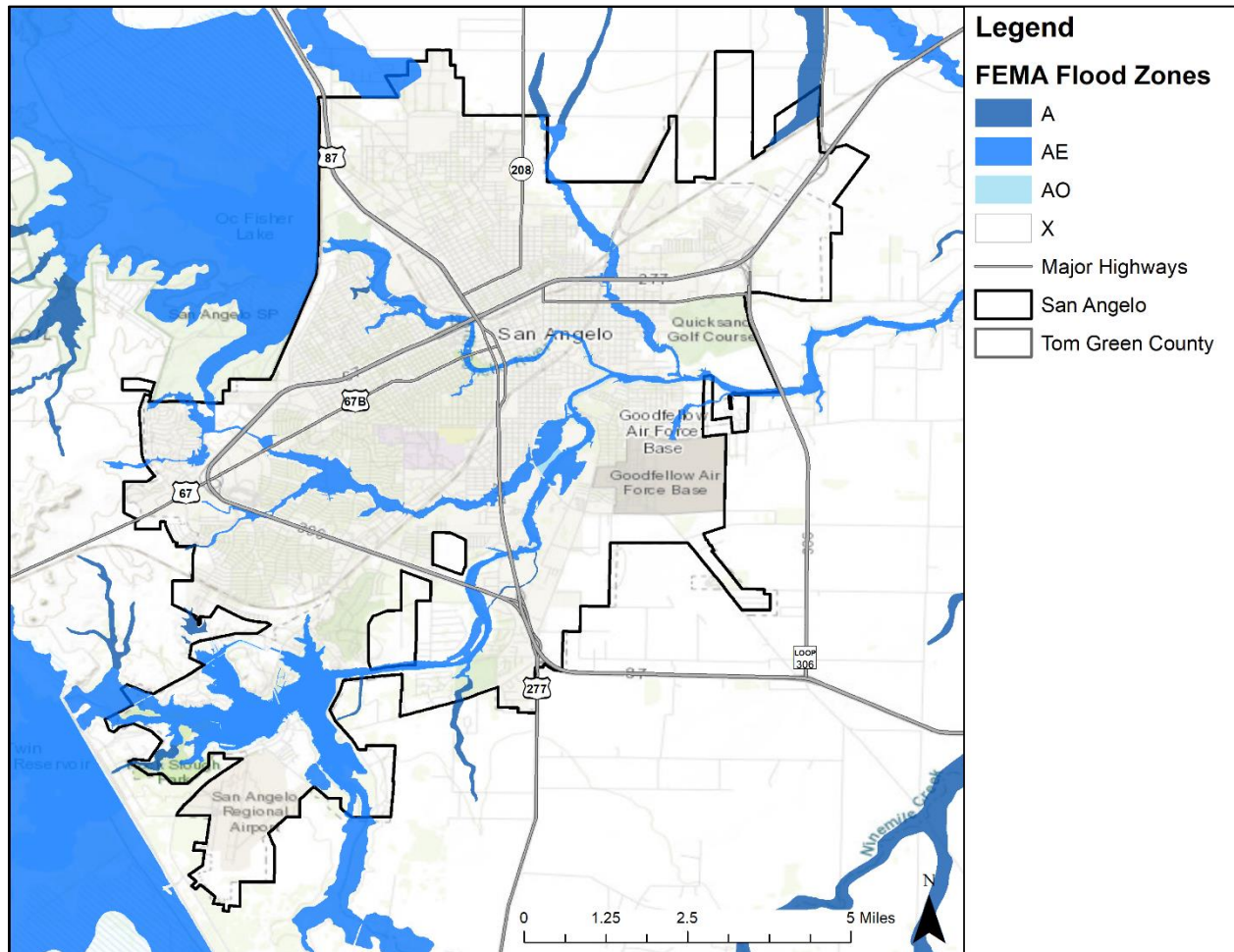


Figure 13-2. Estimated Flood Zones in the City of San Angelo



Extent

The severity of a flood event is determined by a combination of several factors including: stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and degree of vegetative clearing and impervious surface. Typically, floods are long-term events that may last for several days.

Determining the intensity and magnitude of a flood event is dependent upon the flood zone and location of the flood hazard area in addition to depths of flood waters. Extent of flood damages can be expected to be more damaging in the areas that will convey a base flood. FEMA categorizes areas on the terrain according to how the area will convey flood water. Flood zones are the categories that are mapped on Flood Insurance Rate Maps. Table 13-1 provides a description of FEMA flood zones and the flood impact in terms of severity or potential harm. Flood Zones A, AE and X are the only hazard areas mapped in the region. Figures 13-1 and 13-2 should be read in conjunction with the extent for flooding in Tables 13-1 and 13-2 to determine the intensity of a potential flood event.

Section 13: Flood

Table 13-1. Flood Zones

INTENSITY	ZONE	DESCRIPTION
HIGH	ZONE A	Areas with a one percent annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
	ZONE A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a Base Flood Elevation (BFE) (old format).
	ZONE AE	The base floodplain where base flood elevations are provided. AE Zones are now used on the new format FIRMs instead of A1-A30 Zones.
	ZONE AO	River or stream flood hazard areas and areas with a one percent or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from one to three feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
	ZONE AH	Areas with a one percent annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from one to three feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
	ZONE A99	Areas with a one percent annual chance of flooding that will be protected by a federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
	ZONE AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
HIGH COASTAL	ZONE VE, V1-30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
MODERATE to LOW	ZONE X 500	An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than one foot or with drainage areas less than one square mile; or an area protected by levees from 100-year flooding.

Zone A is interchangeably referred to as the 100-year flood, the one-percent-annual chance flood, the Special Flood Hazard Area (SFHA), or more commonly, the base flood. This is the area that will convey the base flood

Section 13: Flood

and constitutes a threat to the planning area. The impact from a flood event can be more damaging in areas that will convey a base flood.

Structures built in the SFHA are subject to damage by rising waters and floating debris. Moving flood water exerts pressure on everything in its path and causes erosion of soil and solid objects. Utility systems, such as heating, ventilation, air conditioning, fuel, electrical systems, sewage maintenance systems and water systems, if not elevated above base flood elevation, may also be damaged.

The intensity and magnitude of a flood event is also determined by the depth of flood waters. Table 13-2 describes the stream gauge data provided by the United States Geological Survey (USGS).

Table 13-2. Extent for Tom Green County and the City of San Angelo¹

JURISDICTION ²	PEAK FLOOD EVENT
Tom Green County	South Concho River at Christoval, Texas reached an overflow elevation of 23 feet in August of 1906, and an elevation of 20.8 feet in May of 1957. The average peak flow for the South Concho River is 6.7 feet at this site.
San Angelo	Concho River at San Angelo, Texas reached an overflow elevation of 47.5 feet in August of 1906, and an elevation of 40.7 feet in October of 1959. The average peak flow for the Concho River is 13.3 feet at this site.
Tom Green County	Dove Creek at Knickerbocker, Texas reached an overflow elevation of 20.7 feet in August of 1971. The average peak flow for Dove Creek is 8.9 feet at this site.
Tom Green County	Pecan Creek near San Angelo, Texas reached an overflow elevation of 11.15 feet in September of 1964. The average peak flow for Pecan Creek is 2.97 feet at this site.
Tom Green County	Spring Creek above Tankersley, Texas reached an overflow elevation of 18.4 feet in October of 1959. The average peak flow for Spring Creek is 6.4 feet at this site.
Tom Green County	Middle Concho River above Tankersley, Texas reached an overflow elevation of 25 feet in September of 1974. The average peak flow for the Middle Concho River is 12.5 feet at this site.
Tom Green County	North Concho River near Grape Creek, Texas reached an overflow elevation of 29.5 feet in May of 2015. The average peak flow for the North Concho River is 15 feet at this site.
Tom Green County	North Concho River near Carlsbad, Texas reached an overflow elevation of 29.1 feet in September of 1936 and an elevation of 21.5 feet in May of 2015. The average peak flow for the North Concho River is 10.2 feet at this site.

¹ Severity estimated by averaging floods at certain stage level over the history of flood events. Severity and peak events are based on U.S. Geological Survey data.

² Severity is provided for jurisdictions where peak data was provided.

Section 13: Flood

The range of flood intensity that the County can experience is high, or Zone A/AE. Based on historical occurrences, the planning area could expect to experience up to 5.2 inches of rainfall within a 6-hour period, resulting in flash flooding.

The data described in Tables 13-1 and 13-2, together with Figures 13-1 and 13-2, and historical occurrences for the area, provides an estimated potential magnitude and severity for the Tom Green and City of San Angelo Planning Area. For example the City of San Angelo, as shown in Figure 13-2, has areas designated as Zone AE. Reading this figure in conjunction with Table 13-1 means the area is of high risk for flood.

Historical Occurrences

Historical evidence indicates that areas within the planning area, including both participating jurisdictions, are susceptible to flooding, especially in the form of flash flooding. It is important to note that only flood events that have been reported have been factored into this risk assessment, therefore it is likely that additional flood occurrences have gone unreported before and during the recording period. Table 13-3 identifies historical flood events that resulted in damages, injuries, or fatalities within the City of San Angelo and Tom Green County. Table 13-4 provides the historical flood event summary by jurisdiction. Historical data is provided by the Storm Prediction Center (NOAA), NCEI database for the City of San Angelo and Tom Green County.

Table 13-3. Historical Flood Events, 1996-2018³

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	8/28/1996	0	0	\$81,187	\$0
Tom Green County	8/29/1996	0	0	\$324,747	\$0
San Angelo	6/8/1997	0	0	\$15,933	\$0
San Angelo	6/14/1997	0	0	\$39,834	\$0
San Angelo	5/26/1998	0	0	\$235,332	\$0
San Angelo	5/26/1998	0	0	\$156,888	\$0
San Angelo	9/18/2001	0	1	\$0	\$0
San Angelo	3/19/2002	0	0	\$14,285	\$0
San Angelo	5/4/2002	0	0	\$14,205	\$0
San Angelo	5/15/2002	0	0	\$18,467	\$0
Tom Green County	7/6/2002	0	2	\$141,818	\$0
San Angelo	6/3/2003	0	0	\$208,558	\$0

³ Only recorded events with fatalities, injuries, and/or damages are listed, values are in 2019 dollars.

Section 13: Flood

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	6/21/2004	0	0	\$18,850	\$0
Tom Green County	5/8/2007	0	0	\$6,141	\$0
San Angelo	6/3/2007	0	0	\$12,259	\$0
San Angelo	6/24/2007	0	0	\$2,452	\$0
Tom Green County	5/18/2015	0	0	\$537,024	\$0
Tom Green County	5/19/2015	0	0	\$537,024	\$0

Table 13-4. Summary of Historical Flood Events, January 1996-2018

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Tom Green County	31	0	2	\$1,646,791	\$0
City of San Angelo	61	0	1	\$718,213	\$0
TOTAL LOSSES	92	0	3	\$2,365,004	

Significant Events

September 9, 2001- City of San Angelo

A man caught in his vehicle in high water suffered minor injuries before he could be rescued. The man hung onto a guide wire for 20 minutes before police and fire personnel could finally wade out to reach him.

June 6, 2002 Tom Green County

Thunderstorms developed over Tom Green County on the evening of the 6th. These thunderstorms dropped around 4 inches of rain in a short amount of time. Several low water crossings throughout the county became flooded. A couple and their son were swept into Live Oak Creek as they tried to navigate a flooded roadway. They were trapped for about one and half hours until help finally arrived. The couple received minor injuries and lost most of their belongings. In San Angelo many water rescues were performed as streets became flooded.

Probability of Future Events

Based on recorded historical occurrences and extent within the City of San Angelo and Tom Green County flooding is highly likely and an event will likely occur within the next year.

Vulnerability and Impact

A property's vulnerability to a flood depends on its location and proximity to the floodplain. Structures that lie along banks of a waterway are the most vulnerable and are often repetitive loss structures. The City of San

Section 13: Flood

Angelo and Tom Green County encourage development outside of the floodplain, and the impact for flood for the entire planning area is limited as facilities and services would be shut down for 24 hours or less, depending on the scale of the storm.

Table 13-5 includes the critical facilities identified in Appendix C that were determined to be located within the SFHA by DFIRM mapping.

Table 13-5. Critical Facilities in the Floodplain by Jurisdiction

JURISDICTION	CRITICAL FACILITIES
Tom Green County	None ⁴
City of San Angelo	3 Fire Stations, 6 Education Facilities/Schools, 8 Lift Stations

Historic loss estimates due to flood are presented in Table 13-6 below. Considering 20 flood events over a 23-year period, frequency is approximately one event every year.

Table 13-6. Potential Annualized Losses by Jurisdiction

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Tom Green County	\$1,646,791	\$71,600
City of San Angelo	\$718,213	\$31,227
Planning Area	\$2,365,004	\$102,827

The severity of a flooding event varies depending on the relative risk to citizens and structures located within each city. Table 13-7 depicts the level of impact for The City of San Angelo and Tom Green County.

Table 13-7. Impact by Jurisdiction

JURISDICTION	IMPACT	DESCRIPTION
Tom Green County	Limited	It is anticipated that Tom Green County could anticipate an impact of “limited” with minor quality of life lost, critical facilities would be shut down for 24 hours or less and less than 10 percent of property would be destroyed or damaged.
City of San Angelo	Limited	It is anticipated that Tom Green County could anticipate an impact of “limited” with minor quality of life lost, critical facilities would be shut down for 24 hours or less and less than 10 percent of property would be destroyed or damaged.

Assessment of Impacts

Flooding is the deadliest natural disaster that occurs in the U.S. each year, and it poses a constant and significant threat to the health and safety of the people in the City of San Angelo and Tom Green County. Impacts to the planning area can include:

⁴ County facility locations in the WUI are located within the City of San Angelo.

Section 13: Flood

- Flood-related rescues may be necessary at swift and low water crossings or in flooded neighborhoods where roads have become impassable, placing first responders in harm's way.
- Evacuations may be required for entire neighborhoods because of rising floodwaters, further taxing limited response capabilities and increasing sheltering needs for displaced residents.
- Health risks and threats to residents are elevated after the flood waters have receded due to contaminated flood waters (untreated sewage and hazardous chemicals) and mold growth typical in flooded buildings and homes.
- Significant flood events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage can result in an increase in structure fires and/or carbon monoxide poisoning as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- Floods can destroy or make residential structures uninhabitable, requiring shelter or relocation of residents in the aftermath of the event.
- First responders are exposed to downed power lines, contaminated and potentially unstable debris, hazardous materials, and generally unsafe conditions, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Emergency operations and services may be significantly impacted due to damaged facilities.
- Significant flooding can result in the inability of emergency response vehicles to access areas of the community.
- Critical staff may suffer personal losses or otherwise impacted by a flood event and unable to report for duty, limiting response capabilities.
- City or county departments may be flooded, delaying response and recovery efforts for the entire community.
- Private sector entities that the jurisdiction and its residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Damage to infrastructure may slow economic recovery since repairs may be extensive and lengthy.
- Some businesses not directly damaged by the flood may be negatively impacted while utilities are being restored or water recedes, further slowing economic recovery.
- When the community is affected by significant property damage it is anticipated that funding would be required for infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Residential structures substantially damaged by a flood may not be rebuilt for years and uninsured or underinsured residential structures may never be rebuilt, reducing the tax base for the community.
- Large floods may result in a dramatic population fluctuation, as people are unable to return to their homes or jobs and must seek shelter and/or work outside of the affected area.
- Businesses that are uninsured or underinsured may have difficulty reopening, which results in a net loss of jobs for the community and a potential increase in the unemployment rate.

Section 13: Flood

- Recreation activities such as fishing, boating, and camping activities at San Angelo State Park, OC Fisher Lake, or Twin Buttes Reservoir, may be unavailable and tourism can be unappealing for years following a large flood event, devastating directly related local businesses and negatively impacting economic recovery.
- Flooding may cause significant disruptions of clean water and sewer services, elevating health risks and delaying recovery efforts.
- The psycho-social effects on flood victims and their families can traumatize them for long periods of time, creating long term increases in medical treatment and services.
- Extensive or repetitive flooding can lead to decreases in property value for the affected community.
- Flood poses a potential catastrophic risk to annual and perennial crop production and overall crop quality leading to higher food costs.
- Flood related declines in production may lead to an increase in unemployment.
- Large floods may result in loss of livestock, potential increased livestock mortality due to stress and water borne disease, and increased cost for feed.

The overall extent of damages caused by floods is dependent on the extent, depth and duration of flooding, and the velocities of flows in the flooded areas. The level of preparedness and pre-event planning done by government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a flood event.

National Flood Insurance Program (NFIP) Participation

Flood insurance offered through the National Flood Insurance Program (NFIP) is the best way for home and business owners to protect themselves financially against the flood hazard. The City of San Angelo and Tom Green County are currently participating in the NFIP and are in good standing.

Both participating jurisdictions currently have in place minimum NFIP standards for new construction and substantial improvements of structures. These jurisdictions are considering adopting additional higher regulatory NFIP standards to limit floodplain development. The flood hazard areas throughout the planning area 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, of which adversely affect public safety.

These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in 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, flood-proofed or otherwise protected from flood damage. Mitigation actions are included to address flood maintenance issues as well, including routinely clearing debris from drainage systems and bridges and expanding drainage culverts and storm water structures to more adequately convey flood waters.

It is the purpose of The City of San Angelo and Tom Green County to continue to promote the public health, safety and general welfare by minimizing public and private losses due to flood conditions in specific areas. Both of the NFIP participating jurisdictions in the Plan are guided by their local Flood Damage Prevention Ordinance. These communities will continue to comply with NFIP requirements through their local permitting, inspection, and record-keeping requirements for new and substantially developed construction. Further, the

Section 13: Flood

NFIP program for both of the participating jurisdictions promote sound development in floodplain areas and includes provisions designed to:

- Protect human life and health;
- Minimize expenditure of public money for costly flood control projects;
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in floodplains;
- Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and
- Ensure that potential buyers are notified that property is in a flood area.

In order to accomplish these tasks, The City of San Angelo and Tom Green County seek to follow these guidelines to achieve flood mitigation by:

- Restrict or prohibit uses that are dangerous to health, safety, or property in times of flood, such as filling or dumping, that may cause excessive increases in flood heights and/or velocities;
- Require that uses vulnerable to floods, including facilities, which serve such uses, be protected against flood damage at the time of initial construction as a method of reducing flood losses;
- Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;
- Control filling, grading, dredging, and other development, which may increase flood damage; and
- Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

NFIP Compliance and Maintenance

As mentioned, The City of San Angelo and Tom Green County have developed mitigation actions that relate to either NFIP maintenance or compliance. Compliance and maintenance actions can be found in Section 16.

Flooding was identified by the City of San Angelo as a high risk hazard during hazard ranking activities at the Risk Assessment Workshop. Tom Green County identified flood as a low risk hazard. As such, many of the mitigation actions were developed with flood mitigation in mind. A majority of these flood actions address compliance with the NFIP and implementing flood awareness programs. Both jurisdictions recognize the need and are working towards adopting higher NFIP regulatory standards to further minimize flood risk in their community. In addition, each jurisdiction is focusing on NFIP public awareness activities. This includes promoting the availability of flood insurance by placing NFIP brochures and flyers in public libraries or public meeting places.

Both participating jurisdictions in the NFIP have a designated floodplain administrator. All floodplain administrators in the planning area will continue to maintain compliance with the NFIP including continued floodplain administration, zoning ordinances, and development regulation. The floodplain ordinance adopted by each participating jurisdiction outlines the minimum requirements for development in special flood hazard areas.

Repetitive Loss

The Severe Repetitive Loss (SRL) Grant Program under FEMA provides federal funding to assist states and communities in implementing mitigation measures to reduce or eliminate the long-term risk of flood damage to severe repetitive loss residential structures insured under the NFIP. The Texas Water Development Board (TWDB) administers the SRL grant program for the State of Texas. One of the goals of the FMA program is to reduce the burden of repetitive loss and severe repetitive loss properties on the NFIP through mitigation activities that significantly reduce or eliminate the threat of future flood damages.

Repetitive Loss properties are defined as structures that are:

- Any insurable building for which 2 or more claims of more than \$1,000 each, paid by the National Flood Insurance Program (NFIP) within any 10-year period, since 1978;
- May or may not be currently insured under the NFIP.

Severe Repetitive Loss properties are defined as residential properties that are:

- Covered under the NFIP and have at least four flood related damage claim payments (building and contents) over \$5,000.00 each, and the cumulative amount of such claims payments exceed \$20,000; or
- At least two separate claim payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

In either scenario, at least two of the referenced claims must have occurred within any ten-year period and must be greater than 10 days apart.⁵ Table 13-8 shows repetitive loss and severe repetitive loss properties for each participating jurisdiction in the planning area. It is noted that Tom Green County currently has no repetitive loss properties.

Table 13-8. Repetitive Loss and Severe Repetitive Loss Properties

JURISDICTION	BUILDING TYPE	NUMBER OF STRUCTURES	NUMBER OF LOSSES
San Angelo	Single Family	3	6

⁵ Source: Texas Water Development Board

Section 14: Dam Failure

Hazard Description.....	1
Location	2
Extent.....	4
Historical Occurrences.....	7
Probability of Future Events	7
Vulnerability and Impact.....	7
Assessment of Impacts	8

Hazard Description

Dams are water storage, control, or diversion structures that impound water upstream in reservoirs. Dam failure can take several forms, including a collapse of or breach in the structure. While most dams have storage volumes small enough that failures have few or no repercussions, dams storing large amounts can cause significant flooding downstream. Dam failures can result from any one or a combination of the following causes:

- Prolonged periods of rainfall and flooding, which cause most failures;
- Inadequate spillway capacity, resulting in excess overtopping of the embankment;
- Internal erosion caused by embankment or foundation leakage or piping;
- Improper maintenance, including failure to remove trees, repair internal seepage problems, or maintain gates, valves, and other operational components;
- Improper design or use of improper construction materials;
- Failure of upstream dams in the same drainage basin;
- High winds, which can cause significant wave action and result in substantial erosion;
- Destructive acts of terrorism; and,
- Earthquakes, which typically cause longitudinal cracks at the tops of the embankments, leading to structural failure.

Benefits provided by dams include water supplies for drinking; irrigation and industrial uses; flood control; hydroelectric power; recreation; and navigation. At the same time, dams also represent a risk to public safety. Dams require ongoing maintenance, monitoring, safety inspections, and sometimes even rehabilitation to continue safe service.

In the event of a dam failure, the energy of the water stored behind the dam is capable of causing rapid and unexpected flooding downstream, resulting in loss of life and substantial property damage. A devastating effect on water supply and power generation could be expected as well. The terrorist attacks of September 11, 2001 generated increased focus on protecting the country's infrastructure, including ensuring the safety of dams.

One major issue with the safety of dams is their age. The average age of America's 84,000 dams is 52 years. According to statistics released in 2009 by the Association of State Dam Safety Officials¹, more than 2,000 dams

¹ Association of State Dam Safety Officials, Journal of Dam Safety

Section 14: Dam Failure

near population centers are in need of repair. In addition to the continual aging of dams, there have not been significant increases in the number of safety inspectors resulting in haphazard maintenance and inspection.

The Association of State Dam Safety Officials estimate that \$16 billion will be needed to repair all high-hazard dams, but the total for all state dam-safety budgets is less than \$60 million². The current maintenance budget does not match the scale of America's long-term modifications of its watersheds. Worse still, more people are moving into risky areas. As the American population grows, dams that once could have failed without major repercussions are now upstream of cities and development.



Location

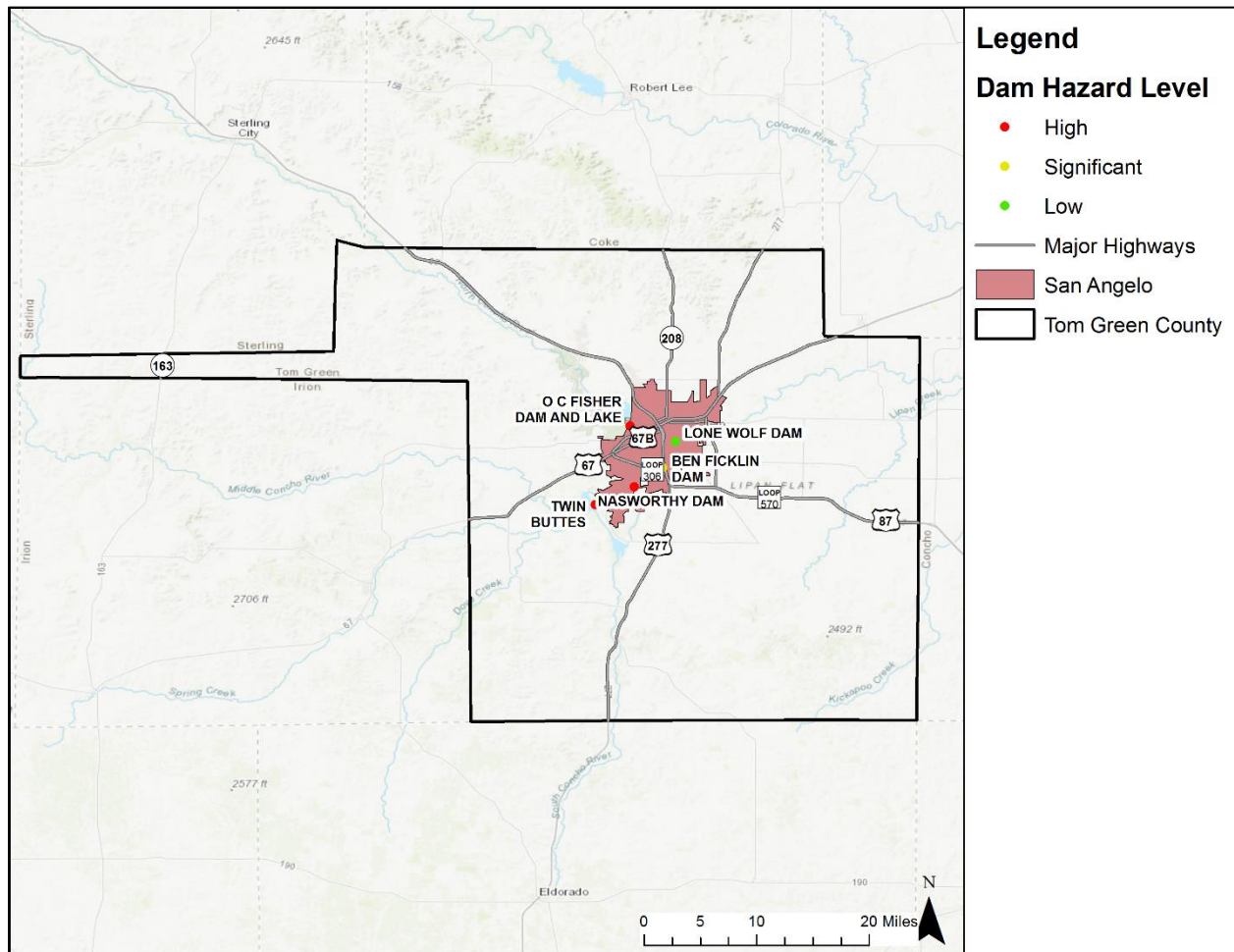
The State of Texas has 7,413 dams, all regulated by the Texas Commission on Environmental Quality (TCEQ). The National Dam Safety Review Board (in coordination with FEMA) and the National Inventory of Dams (NID) lists a total of twenty-seven dams in or near the City of San Angelo and Tom Green County (complete list located in Appendix D). Each of these dams were analyzed individually by location, volume, elevation, and condition (where available) when determining the risk, if any, for each dam. Each dam site was further analyzed for potential risks utilizing FEMA's National Flood Hazard Layer to map locations and fully understand development near the dam and topographical variations that may increase risk. Most of the dams listed were embankments for typically dry detention drainage areas or shored up stream embankments. These types of structures are utilized for flood control and do not pose a dam failure risk. Other dams in the planning area feature such limited storage capacity that they pose no risk to structures, infrastructure, or citizens. Dams that were deemed to pose no past, current, or future risk to the planning area are not profiled in the plan as no loss of life or impact to critical facilities or infrastructure is expected in the event of a breach. Based on this detailed analysis,

² Source: www.damsafety.org

Section 14: Dam Failure

the planning team was able to determine that only five of the twenty-seven dams pose a risk to the planning area. These dams, listed in Table 14-1, are profiled in detail in the Extent section of this hazard profile. Figure 14-1 illustrates the general location for the critical dams in the planning area. While inundation maps are not available for the profiled dams, an estimated inundation radius has been included on the location map for each profiled dam (indicated by the red circle). For dams with a maximum storage capacity of 100,000 acre-feet or more, all structures within five miles are considered to be at risk to potential dam failure hazards. For dams with a maximum storage capacity between 10,000 and 100,000 acre-feet, all structures within three miles are considered to be at risk to potential dam failure hazards. For dams with a maximum storage capacity of less than 10,000 acre-feet, all structures within one mile are considered to be at risk to potential dam failure hazards.

Figure 14-1. Tom Green County and the City of San Angelo Critical Dam Locations



Section 14: Dam Failure

Table 14-1. Tom Green County and the City of San Angelo Dam Survey

JURISDICTION	DAM NAME	HEIGHT (Ft.)	STORAGE (Acre Ft.)	CONDITION	PROFILED
San Angelo	Lone Wolf Dam	14	448	Not Rated	Yes
San Angelo	Ben Ficklin Dam	24	515	Not Rated	Yes
San Angelo	Nasworthy Dam	47	32,981	Not Rated	Yes
San Angelo	O.C. Fisher Dam and Lake	130	766,000	Not Rated	Yes
San Angelo	Twin Buttes Dam	134	1,087,530	Not Rated	Yes

Extent

The extent or magnitude of a dam failure event is described in terms of the classification of damages that could result from a dam's failure, not the probability of failure. For dams with a maximum storage capacity of 100,000 acre-feet or more, all census blocks within five miles are considered to be at risk to potential dam failure hazards. For dams with a maximum storage capacity between 10,000 and 100,000 acre-feet, all census blocks within three miles are considered to be at risk to potential dam failure hazards. For dams with a maximum storage capacity of less than 10,000 acre-feet, all census blocks within one mile are considered to be at risk to potential dam failure hazards.

Lone Wolf Dam:

Lone Wolf Dam is located in the City of San Angelo on the South Concho River. The dam was constructed in 1902 and is used for flood control purposes. It is owned by the City of San Angelo. The area located near the dam is semi-densely populated with limited development within a one-mile radius. A breach should follow the path of the river but it is anticipated that the water released by the breach could temporarily exceed the capacity and overflow the banks of the river for approximately one mile. Approximately 40 structures and two dams could be impacted by a breach. A dam failure could cause limited infrastructure damages, power outages, and utility systems disruptions. In the event of a breach, it is estimated the average breach width would be 84.5 feet with a maximum breach flow of 5,026 cubic feet per second according to the National Weather Service (NWS) Dam Break Equation. A dam breach could result in an estimated depth up to 10 feet with the highest depth in the immediate area of the dam breach.

Ben Ficklin Dam:

Ben Ficklin Dam is located in the City of San Angelo on the South Concho River. The dam was constructed in 1918 and is used for flood control purposes. It is owned by the City of San Angelo. The area located near the dam is semi-densely populated with limited development within a one-mile radius. A breach should follow the path of the river but it is anticipated that the water released by the breach could temporarily exceed the capacity and overflow the banks of the river for approximately one mile. Three thoroughfares and a manufactured home park could be impacted by a breach. A dam failure could cause limited infrastructure damages, power outages, and utility systems disruptions. In the event of a breach, it is estimated the average breach width would be 100.2 feet with a maximum breach flow of 14,556 cubic feet per second according to the National Weather Service (NWS) Dam Break Equation. A dam breach could result in an estimated depth up to 10 feet with the highest depth in the immediate area of the dam breach.

Section 14: Dam Failure

Nasworthy Dam:

Nasworthy Dam is located in the City of San Angelo on the South Concho River. The dam was constructed in 1930 and is used primarily for flood control purposes. It is owned by the City of San Angelo. The area located near the dam is densely populated with significant development within a three-mile radius. A breach should follow the path of the South Concho River but it is anticipated that the water released by the breach could temporarily exceed the capacity and overflow the banks of the river for approximately three miles. Approximately 750-1,000 structures, including multiple commercial structures could be impacted by a breach. A dam failure could cause significant infrastructure damages, power outages, and utility systems disruptions. In the event of a breach, it is estimated the average breach width would be 335.2 feet with a maximum breach flow of 210,178 cubic feet per second according to the National Weather Service (NWS) Dam Break Equation. A dam breach could result in an estimated depth up to 20 feet with the highest depth in the immediate area of the dam breach.

O.C. Fisher Dam and Lake:

O.C. Fisher Dam and Lake is located in the City of San Angelo on the Concho River. The dam was constructed in 1952 and is used for flood control purposes. It is owned by the Corps of Engineers Fort Worth District. The area located near the dam is densely populated with significant development within a five-mile radius. A breach should follow the path of the Concho River but it is anticipated that the water released by the breach could temporarily exceed the capacity and overflow the banks of the river for approximately five miles. Located along the northwest border of the city, the area near the dam is densely populated. Several thousand homes, including multiple critical facilities and commercial structures could be impacted and there is the high probability of injuries and/or fatalities. A dam failure could cause significant infrastructure damages, power outages, and utility systems disruptions. In the event of a breach, it is estimated the average breach width would be 949.0 feet with a maximum breach flow of 1,768,156 cubic feet per second according to the National Weather Service (NWS) Dam Break Equation. A dam breach could result in an estimated depth up to 25 feet with the highest depth in the immediate area of the dam breach.

Twin Buttes Dam:

Twin Buttes Dam is located in the City of San Angelo on the Middle and Couth Concho River as well as Spring Creek. The dam was constructed in 1962 and is used primarily for flood control purposes. The area located near the dam is densely populated with significant development within a five-mile radius. A breach should follow the path of the Concho River but it is anticipated that the water released by the breach could temporarily exceed the capacity and overflow the banks of the river for approximately five miles. Located southwest border of the city, the primary impact would be to the San Angelo Nature Center and support facilities, the San Angelo Regional Airport, and several semi-densely populated developments. Several thousand homes, including multiple critical facilities and commercial structures could also be impacted and there is the high probability of injuries and/or fatalities. A dam failure could cause significant infrastructure damages, power outages, and utility systems disruptions. In the event of a breach, it is estimated the average breach width would be 1,043.8 feet with a maximum breach flow of 4,047,615 cubic feet per second according to the National Weather Service (NWS) Dam Break Equation. A dam breach could result in an estimated depth up to 25 feet with the highest depth in the immediate area of the dam breach.

Table 14-2 represents the extent or magnitude of a dam failure event that could be expected for the City of San Angelo and Tom Green County for each profiled dam.

Section 14: Dam Failure

Table 14-2. Extent by Jurisdiction

JURISDICTION	PROFILED DAM	EXTENT (FLOW DEPTH)	LEVEL OF INTENSITY TO MITIGATE
San Angelo	Lone Wolf Dam	0-10 Feet	Dam failure presents a low threat for the City. Loss of life is not expected. While several residential structures and two bridges could be impacted, the greatest threat in the event of a breach would be localized flooding. Critical facilities would not be impacted. Some infrastructure and utilities could be minimally impacted. Economic loss would be minimal.
San Angelo	Ben Ficklin Dam	0-10 Feet	Dam failure presents a low threat for the City. Loss of life is not expected. While several residential structures and three thoroughfares could be impacted, the greatest threat in the event of a breach would be localized flooding. Critical facilities would not be impacted. Some infrastructure and utilities could be minimally impacted. Economic loss would be minimal.
San Angelo/Tom Green County	Nasworthy Dam	0-20 Feet	Dam failure presents a substantial threat for the City and County. Loss of life can be expected. Significant numbers of residential and commercial structures could be impacted, and associated flooding could be substantial. Critical facilities, infrastructure and utilities could also be impacted. Economic loss would be substantial.
San Angelo/Tom Green County	O.C. Fisher Dam and Lake	0-25 Feet	Dam failure presents a substantial threat for the City and County. Loss of life can be expected. Significant numbers of residential and commercial structures could be impacted, and associated flooding could be substantial. Critical facilities, infrastructure and utilities could also be impacted. Economic loss would be substantial.
San Angelo/Tom Green County	Twin Buttes Dam	0-25 Feet	Dam failure presents a substantial threat for the City and County. Loss of life can be expected. Significant numbers of residential and commercial structures could be impacted, and associated flooding could be substantial. Critical facilities, infrastructure and utilities could also be impacted. Economic loss would be substantial.

Historical Occurrences

There are approximately 84,000 dams in the United States today.³ Catastrophic dam failures have occurred frequently throughout the past century. Between 1918 and 1958, 33 major U.S. dam failures caused 1,680 deaths. From 1959 to 1965, nine major dams failed worldwide. Some of the largest disasters in the U.S. have resulted from dam failures. More than 90 dam incidents, including 23 dam failures, were reported in the past ten years to the National Performance of Dams Program, which collects and archives information on dam performance from state and federal regulatory agencies and dam owners.

The State of Texas has not experienced loss of life or extensive economic damage due to a dam failure since the first half of the twentieth century. However, there may be many incidents that are not reported and, therefore, the actual number of incidents is likely to be greater.

There has not been a recorded dam failure event for either the City of San Angelo and Tom Green County.

Probability of Future Events

No historical events of dam failure have been recorded in the City of San Angelo and Tom Green County, though the risk of dam failure is monitored closely. Due to the lack of historical occurrences, the probability of a future event is unlikely for those jurisdictions profiling dam failure as a hazard, meaning an event is possible in the next ten years.

Vulnerability and Impact

There are twenty-seven dams in or near the City of San Angelo and Tom Green County. All dams were evaluated in-depth to determine the risk, if any, associated with each dam. This analysis indicated five dams in the planning area that presents a risk to structures or infrastructure in the planning area.

Flooding is the most prominent effect of dam failure. If the dam failure is extensive, a large amount of water would enter the downstream waterways forcing them out of their banks. There may be significant environmental effects, resulting in flooding that could disperse debris and hazardous materials downstream that can damage local ecosystems. If the event is severe, debris carried downstream can block traffic flow, cause power outages, and disrupt local utilities, such as water and wastewater, which could result in school closures. For specific vulnerability, please refer to the narrative for each dam under the Extent section of this profile.

Annualized loss-estimates for dam failure are not available; neither is there a breakdown of potential dollar losses for critical facilities, infrastructure and lifelines, or hazardous-materials facilities. If a major dam should fail, however, the severity of impact could be substantial.

The severity of impact from a dam breach would be “Substantial,” meaning it could result in multiple deaths with facilities being shut down for 30 days or more and more than 50% of the property in the estimated breach inundation area destroyed or with major damage. For these reasons, creating mitigation actions to remove or

³ Federal Emergency Management Agency, Dam Safety Program, available at: <http://www.fema.gov/hazards/damsafety/>

Section 14: Dam Failure

protect people and structures from the path of destruction is necessary in order to minimize impact from dam failure.

Assessment of Impacts

Any individual dam has a very specific area that will be impacted by a catastrophic failure. Dams identified as high or significant hazard can directly threaten the lives of individuals living or working in the inundation zone below the dam. The impact from any catastrophic failure would be similar to that of a flash flood. Potential impacts for the planning area include:

- Lives could be lost.
- There could be injuries from impacts with debris carried by the flood.
- Swift-water rescue of individuals trapped by the water puts the immediate responders at risk for their own lives.
- Individuals involved in the cleanup may be at risk from the debris left behind.
- Continuity of operations for any jurisdiction outside the direct impact area could be very limited.
- Roads and bridges could be destroyed.
- Homes and businesses could be damaged or destroyed.
- Emergency services may be temporarily unavailable.
- Disruption of operations and the delivery of services in the impacted area.
- A large dam with a high head of water could effectively scour the terrain below it for miles, taking out all buildings and other infrastructure.
- Scouring force could erode soil and any buried pipelines.
- Scouring action of a large dam will destroy all vegetation in its path.
- Wildlife and wildlife habitat caught in the flow will likely be destroyed.
- Fish habitat will likely be destroyed.
- Topsoil will erode, slowing the return of natural vegetation.
- The destructive high velocity water flow may include substantial debris and hazardous materials, significantly increasing the risks to life and property in its path.
- Debris and hazardous material deposited downstream may cause further pollution of areas far greater than the inundation zone.
- Destroyed businesses and homes may not be rebuilt, reducing the tax base and impacting long term economic recovery.
- Historical or cultural resources may be damaged or destroyed.
- Recreational activities and tourism may be temporarily unavailable or unappealing, slowing economic recovery.

The economic and financial impacts of dam failure on the area will depend entirely on the location of the dam, scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any dam failure event.

Section 15: Mitigation Strategy

Mitigation Goals.....	1
Goal 1.....	1
Goal 2.....	1
Goal 3.....	2
Goal 4.....	2
Goal 5.....	2

Mitigation Goals

Based on the results of the risk and capability assessments, the Planning Team developed and prioritized the mitigation strategy. At the Risk Assessment Workshop held December 11, 2018, and the Mitigation Action Strategy Workshop held March 19, 2019, Planning Team members refined the Plan’s mitigation strategy. The following goals and objectives were identified.

Goal 1

Protect public health and safety.

Objective 1.1

Advise the public about health and safety precautions to guard against injury and loss of life from hazards.

Objective 1.2

Maximize utilization of the latest technology to provide adequate warning, communication, and mitigation of hazard events.

Objective 1.3

Reduce the danger to, and enhance protection of, high risk areas during hazard events.

Objective 1.4

Protect critical facilities and services.

Goal 2

Build and support local capacity and commitment to continuously become less vulnerable to hazards.

Objective 2.1

Build and support local partnerships to continuously become less vulnerable to hazards.

Objective 2.2

Build a cadre of committed volunteers to safeguard the community before, during, and after a disaster.

Objective 2.3

Build hazard mitigation concerns into county planning and budgeting processes.

Section 15: Mitigation Strategy

Goal 3

Increase public understanding, support, and demand for hazard mitigation.

Objective 3.1

Heighten public awareness regarding the full range of natural and man-made hazards the public may face.

Objective 3.2

Educate the public on actions they can take to prevent or reduce the loss of life or property from all hazards and increase individual efforts to respond to potential hazards.

Objective 3.3

Publicize and encourage the adoption of appropriate hazard mitigation measures.

Goal 4

Protect new and existing properties.

Objective 4.1

Reduce repetitive losses to the National Flood Insurance Program (NFIP).

Objective 4.2

Use the most cost-effective approach to protect existing buildings and public infrastructure from hazards.

Objective 4.3

Enact and enforce regulatory measures to ensure that future development will not put people in harm's way or increase threats to existing properties.

Goal 5

Maximize the resources for investment in hazard mitigation.

Objective 5.1

Maximize the use of outside sources of funding.

Objective 5.2

Maximize participation of property owners in protecting their properties.

Objective 5.3

Maximize insurance coverage to provide financial protection against hazard events.

Objective 5.4

Prioritize mitigation projects, based on cost-effectiveness and sites facing the greatest threat to life, health, and property.



Section 16: Mitigation Actions

Summary	1
City of San Angelo	2
Tom Green County – County-Wide.....	14
Tom Green County.....	19

Summary

As discussed in Section 2, at the mitigation workshop the planning team and stakeholders met to develop mitigation actions for each of the natural hazards included in the Plan. Each of the actions in this section were prioritized based on FEMA’s Social, Technical, Administrative, Political, Legal, Economic, and Environmental (STAPLEE) criteria necessary for the implementation of each action.

As part of the economic evaluation of the STAPLEE analysis, jurisdictions analyzed each action in terms of the overall costs, measuring whether the potential benefit to be gained from the action outweighed costs associated with it. As a result of this exercise, priority was assigned to each mitigation action by marking them as High (H), Moderate (M), or Low (L). An action that is ranked as “High” indicates that the action will be implemented as soon as funding is received. A “Moderate” action is one that may not be implemented right away depending on the cost and number of citizens served by the action. Actions ranked as “Low” indicate that they will not be implemented without first seeking grant funding and after “High” and “Moderate” actions have been completed.

All mitigation actions created by Planning Team members are presented in this section in the form of Mitigation Action Worksheets. More than one hazard is sometimes listed for an action, if appropriate. Actions presented in this section represent a comprehensive range of mitigation actions per current State and FEMA Guidelines, including two actions, per hazard, and of two different types for each participating jurisdiction. The term county-wide refers to Tom Green County and the City of San Angelo.

Table 16-1. Tom Green County and City of San Angelo Mitigation Action Matrix

TYPE OF ACTION	
Action #1 – Plans/Regulations (Blue)	Action #4 – Structural (Orange)
Action #2 – Education/Awareness (Red)	Action #5 – Preparedness/Response (Black)
Action #3 – Natural Resources (Green)	

Jurisdiction	Drought	Extreme Heat	Hail	Thunderstorm Wind	Tornado	Wildfire	Winter Storm	Lightning	Flood	Dam Failure
City of San Angelo	XX	XX	XX	XX	XX	XXXXX	XX	XX	XXX	XX
Tom Green County	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX

Section 16: Mitigation Actions

City of San Angelo

City of San Angelo – Action #1	
Proposed Action:	Property acquisition / demolition of flood prone structures and construction of detention or retention ponds for collection of stormwater runoff.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City of San Angelo and ETJ
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Eliminate risk of flood damages to high risk structures and prevent future losses in high risk flood hazard areas; Reduce downstream impacts associated with development in the floodplain; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce risk to existing structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$2,000,000+
Potential Funding Sources:	Federal Grants, Revenues, In-kind
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Master Drainage Plan, Development Plans

COMMENTS

Section 16: Mitigation Actions

City of San Angelo – Action #2	
Proposed Action:	Remove structures through acquisition and demolition or relocation from flood prone areas to minimize future flood losses.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City of San Angelo and ETJ
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Eliminate risk of flood damages to high risk structures and prevent future losses in high risk flood hazard areas; Reduce downstream impacts associated with development in the floodplain; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$1,000,000+
Potential Funding Sources:	State and Federal Grants, Revenues, In-Kind
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Master Drainage Plan, Development Plans

COMMENTS
Addresses localized flooding issues due to increased surface runoff associated with residential and commercial development.

Section 16: Mitigation Actions

City of San Angelo – Action #3	
Proposed Action:	Develop a drainage study with development strategies and mitigation activities.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City of San Angelo and ETJ
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk of flood damages and prevent future losses in high risk flood hazard areas; Reduce downstream impacts associated with development; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$100,000+
Potential Funding Sources:	State and Federal Grants, Revenues, In-Kind
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Master Drainage Plan, Development Plans

COMMENTS
Addresses localized flooding issues due to increased surface runoff associated with residential and commercial development.

Section 16: Mitigation Actions

City of San Angelo – Action #4	
Proposed Action:	Provide access to Butler Farms subdivision through construction of a bridge structure on Foster Road as well as construction of a secondary access to the subdivision.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Foster Road, City of San Angelo
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Improve accessibility to residential subdivision during rain events; Protect lives.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$2,000,000
Potential Funding Sources:	State and Federal Grants, Bonds, Revenues
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Master Drainage Plan

COMMENTS
Addresses the inability of emergency vehicles and residents to access Butler Farms Subdivision during rain events.

Section 16: Mitigation Actions

City of San Angelo – Action #5	
Proposed Action:	Implement wildfire protection measures through construction of firebreaks between urban and undeveloped areas to reduce the risk of property loss from wildfires as well as clearing of underbrush to reduce the risk of damage or loss from wildfires.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City of San Angelo and ETJ
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk of wildfires and the spread of wildfire through targeted firebreaks and fuels reduction program.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Natural Systems Protection

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on New/Existing Buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$250,000+
Potential Funding Sources:	State and Federal Grants, Revenues, In-Kind
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Ordinance, Engineering & Development Plans

COMMENTS
Protects developed and undeveloped areas from the risk of wildfires.

Section 16: Mitigation Actions

City of San Angelo – Action #6	
Proposed Action:	Develop ordinances for new development and existing development to provide for fire buffers and on-going maintenance requirements of fire buffers.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City of San Angelo and ETJ
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk of wildfires and the spread of wildfire through regulated development and maintenance.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on New/Existing Buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$5,000
Potential Funding Sources:	Revenues, In-Kind
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Local Ordinance, Engineering & Development Plans

COMMENTS
Protects developed and undeveloped areas from the risk of wildfires.

Section 16: Mitigation Actions

City of San Angelo – Action #7	
Proposed Action:	Purchase equipment to mitigate damage from wildfires.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City of San Angelo and ETJ
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk of wildfires and the spread of wildfires.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Preparedness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on New/Existing Buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$1,000,000+
Potential Funding Sources:	State and Federal Grants, Revenues
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Operations Plan

COMMENTS

Section 16: Mitigation Actions

City of San Angelo – Action #8	
Proposed Action:	Upgrade, improve, and expand drainage systems throughout the city. Implementation of sediment and scour control measures.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City of San Angelo and ETJ
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$2,000,000+
Potential Funding Sources:	State and Federal Grants, Revenues, In-Kind
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Floodplain Management Plan, Drainage Plan

COMMENTS
Protects developed and undeveloped areas from the risk of damage from stormwater runoff.

Section 16: Mitigation Actions

City of San Angelo – Action #9	
Proposed Action:	Develop and adopt criteria regarding development or activities to reduce the risk of damage from flooding or flow restriction. Implement inspections and ordinances restricting construction within flood prone areas or in areas that significantly contribute to flooding.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City of San Angelo and ETJ
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Protection of environmental, property, and personal damage from flooding.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Local Plans and Regulations

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$5,000+
Potential Funding Sources:	State and Federal Grants, Revenues
Lead Agency/Department Responsible:	City of San Angelo Operations
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Development Plans / Manuals, Master Drainage Plan, Ordinances

COMMENTS
Reduces the risk of damage from stormwater runoff.

Section 16: Mitigation Actions

City of San Angelo – Action #10	
Proposed Action:	Purchase and install ups and surge protection for SCADA lift stations.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City-wide lift stations
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk of power outages and equipment damage during severe weather; Reduce risk of sanitary system overflows and associated damages.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Lightning, Thunderstorm Wind, Winter Storm
Effect on New/Existing Buildings:	Reduce risk to existing infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$1,500 x 50 stations = \$75,000+
Potential Funding Sources:	Water Capital, State and Federal Grants, Revenue
Lead Agency/Department Responsible:	City of San Angelo Water Utility
Implementation Schedule:	Within 24-36 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS

Section 16: Mitigation Actions

City of San Angelo – Action #11	
Proposed Action:	Expand Hickory Well Field to maximum capacity.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Ford Ranch
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Allows city additional 4mgd of fresh water supply, bringing total production levels up to 12mgd; Improve wildfire fighting capabilities; Improve water quality.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Wildfire
Effect on New/Existing Buildings:	Reduce risk to existing structures and infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	\$40,000,000
Potential Funding Sources:	Water Capital, Texas Water Development loan, State and Federal loans
Lead Agency/Department Responsible:	City of San Angelo Water Utility
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS

Section 16: Mitigation Actions

City of San Angelo – Action #12	
Proposed Action:	Implement Concho River Augmentation indirect potable reuse project.
BACKGROUND INFORMATION	
Jurisdiction/Location:	City farm property
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Allows city additional 7mgd of fresh water supply; Improve wildfire fighting capabilities; Improve water quality.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought, Flood, Wildfire
Effect on New/Existing Buildings:	Reduce risk to existing structures and infrastructure
Priority (High, Moderate, Low):	High
Estimated Cost:	\$110,000,000
Potential Funding Sources:	Water Capital, Texas Water Development loan, State and Federal Grants
Lead Agency/Department Responsible:	City of San Angelo Water Utility
Implementation Schedule:	Within 12-60 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS

Tom Green County – County-Wide

Tom Green County and the City of San Angelo – Action #1	
Proposed Action:	Conduct public education program on fire risks and wildland fire mitigation. Include information on defensible space and reduction of wildland urban interface fuels.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Tom Green County and the City of San Angelo
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk and spread of wildfires through education and awareness programs; Reduce risk of damages and injuries.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Wildfire
Effect on New/Existing Buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	\$2,500
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Local and County Emergency Management
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS

Section 16: Mitigation Actions

Tom Green County and the City of San Angelo – Action #2	
Proposed Action:	Acquire and distribute NOAA weather radios for early warning and post-event information.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Distribute radios to critical facilities, area businesses, and vulnerable populations
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk to citizens through improved communications and early warning.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Effect on New/Existing Buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	1,125 x \$45 = \$50,625
Potential Funding Sources:	Local Funds, State and Federal Grants, In-Kind
Lead Agency/Department Responsible:	Local and County Emergency Management
Implementation Schedule:	Within 24 months of plan adoption
Incorporation into Existing Plans:	Emergency Operations Plan

COMMENTS

Section 16: Mitigation Actions

Tom Green County and City of San Angelo – Action #3	
Proposed Action:	Implement education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Tom Green County and the City of San Angelo
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Promote hazard awareness and protect citizens from potential injuries and damages.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Education and Awareness

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Drought, Extreme Heat, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Effect on New/Existing Buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	\$5,000
Potential Funding Sources:	Local Funds (staff time), State and Federal Grants
Lead Agency/Department Responsible:	Local and County Emergency Management
Implementation Schedule:	Within 12 months of plan adoption
Incorporation into Existing Plans:	N/A

COMMENTS

Section 16: Mitigation Actions

Tom Green County and City of San Angelo – Action #4	
Proposed Action:	Acquire and install generators with hard wired quick connections at all critical facilities.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Community critical facilities
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Provide power for critical facilities during power outages and ensure continuity of critical services.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Dam Failure, Extreme Heat, Flood, Hail, Lightning, Thunderstorm Wind, Tornado, Wildfire, Winter Storm
Effect on New/Existing Buildings:	N/A
Priority (High, Moderate, Low):	High
Estimated Cost:	\$1,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Local and County Public Works
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan

COMMENTS

Section 16: Mitigation Actions

Tom Green County and City of San Angelo – Action #5	
Proposed Action:	Upgrade critical facilities to include drought mitigation measures such as greywater reuse systems, drought tolerant landscaping, and installation of a sprinkler system with regular watering schedule.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Community critical facilities
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce damages at critical facilities due to drought.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Drought
Effect on New/Existing Buildings:	Reduce risk to existing and future structures
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$100,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Local and County Public Works
Implementation Schedule:	Within 12-24 months of plan adoption
Incorporation into Existing Plans:	Capital Improvement Plan (only Tom Green Co)

COMMENTS

Section 16: Mitigation Actions

Tom Green County

Tom Green County – Action #1	
Proposed Action:	Build safe room shelters at manufactured home parks, schools, and communities, so that residents can reach shelter in less than five minutes.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Various locations throughout Tom Green County
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk to citizens by providing shelter in high risk areas during extreme weather events.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Tornado, Thunderstorm Wind
Effect on New/Existing Buildings:	N/A
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$500,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Tom Green County Emergency Management
Implementation Schedule:	Within 48 months of plan adoption
Incorporation into Existing Plans:	Emergency Management Plan, Capital Improvement Plan

COMMENTS
In coordination with Grape Creek ISD.

Section 16: Mitigation Actions

Tom Green County – Action #2	
Proposed Action:	Increase drainage capacity through the addition of storm water detention and/or retention basins as deemed necessary to reduce flood risks.
BACKGROUND INFORMATION	
Jurisdiction/Location:	Tom Green County
Risk Reduction Benefit (<i>Current Cost/Losses Avoided</i>):	Reduce risk of flood damages through improved drainage capacity / stormwater diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.
Type of Action (<i>Local Plans and Regulations, Structure and Infrastructure projects, Natural Systems Protection, or Education and Awareness</i>)	Structure and Infrastructure Project

MITIGATION ACTION DETAILS	
Hazard(s) Addressed:	Flood
Effect on New/Existing Buildings:	Reduce risk to new and existing structures and infrastructure
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	\$3,000,000
Potential Funding Sources:	Local Funds, State and Federal Grants
Lead Agency/Department Responsible:	Tom Green County Public Works
Implementation Schedule:	Within 36 months of plan adoption
Incorporation into Existing Plans:	Drainage Plan

COMMENTS

Section 17: Plan Maintenance

Plan Maintenance Procedures.....	1
Incorporation	1
Process of Incorporation.....	1
Monitoring and Evaluation	4
Monitoring	4
Evaluation	4
Updating	5
Plan Amendments.....	5
Five (5) Year Review	5
Continued Public Involvement.....	6

Plan Maintenance Procedures

The following is an explanation of how the City of San Angelo, Tom Green County, and the general public will be involved in implementing, evaluating, and enhancing the Plan over time. When the plan is discussed in all maintenance procedures it includes mitigation actions and hazard assessments. The sustained hazard mitigation planning process consists of four main parts:

- Incorporation
- Monitoring and Evaluation
- Updating
- Continued Public Involvement

Incorporation

The City of San Angelo and Tom Green County will be responsible for further development and implementation of mitigation actions. Each action has been assigned to a specific department within the City or County. The following describes the process by which the City of San Angelo and Tom Green County will incorporate elements of the mitigation plan into other planning mechanisms.

Process of Incorporation

Once the Plan is adopted, the City of San Angelo and Tom Green County will implement actions based on priority and the availability of funding. The City and County currently implements policies and programs to reduce loss to life and property from hazards. The mitigation actions developed for this Plan enhance this ongoing effort and will be implemented through other program mechanisms where possible.

The potential funding sources listed for each identified action may be used when the jurisdiction seeks funds to implement actions. An implementation time period or a specific implementation date has been assigned to each action as an incentive for completing each task and gauging whether actions are implemented in a timely manner.

Section 17: Plan Maintenance

The City of San Angelo and Tom Green County will integrate implementation of their mitigation actions with other plans and policies such as construction standards and emergency management plans, and ensure that these actions, or proposed projects, are reflected in other planning efforts. Coordinating and integrating components of other plans and policies into goals and objectives of the Plan will further maximize funding and provide possible cost-sharing of key projects, thereby reducing loss of lives and property and mitigating hazards affecting the area.

Upon formal adoption of the Plan, planning team members from each participating jurisdiction will work to integrate the hazard mitigation strategies into other plans and codes as they are developed. Participating team members will conduct periodic reviews of plans and policies, once per year at a minimum, and analyze the need for amendments in light of the approved Plan. The planning team will review all comprehensive land use plans, capital improvement plans, annual budget reviews, emergency operations or management plans, transportation plans, and any building codes to guide and control development. Participating jurisdictions will ensure that capital improvement planning in the future will also contribute to the goals of this hazard mitigation Plan to reduce the long-term risk to life and property from all hazards. Within one year of formal adoption of the hazard mitigation Plan, existing planning mechanisms will be reviewed by each jurisdiction.

The City of San Angelo and Tom Green County are committed to supporting their departments as they implement their mitigation actions. Planning team members will review and revise, as necessary, the long-range goals and objectives in strategic plan and budgets to ensure that they are consistent with this mitigation action plan. Additionally, the City of San Angelo and Tom Green County will work to advance the goals of this hazard mitigation plan through its routine, ongoing, long-range planning, budgeting, and work processes.

Table 17-1 identifies types of planning mechanisms and examples of methods for incorporating the Plan into other planning efforts. The team members, listed in Table 17-2 below, will be responsible for the review of these planning mechanisms and their incorporation of the plan, with the exception of the Floodplain Management Plans; the jurisdictions who have a Floodplain Administrator on staff will be responsible for incorporating the plan when floodplain management plans are updated or new plans are developed.

Table 17-1. Methods of Incorporation of the Plan

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
Annual Budget Review	City of San Angelo / Tom Green County: Emergency Management Coordinator City of San Angelo: Assistant Fire Chief	Various departments and key personnel that participated in the planning process will review the Plan and mitigation actions therein when conducting their annual budget review. Allowances will be made in accordance with grant applications sought, and mitigation actions that will be undertaken, according to the implementation schedule of the specific action.
Capital Improvement Plans	Tom Green County: Emergency Management Coordinator	Tom Green County has a Capital Improvement Plan (CIP) in place. Prior to any revisions to the CIP, County departments will review the risk assessment

Section 17: Plan Maintenance

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
		and mitigation strategy sections of the HMAP, as limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.
Comprehensive Plans	City of San Angelo: Emergency Management Coordinator	The City of San Angelo has a Long-term Comprehensive Development Plan in place. Since comprehensive plans involve developing a unified vision for a community, the mitigation vision and goals of the Plan will be reviewed in the development or revision of a Comprehensive Plan.
Floodplain Management Plans	City of San Angelo: Floodplain Manager Tom Green County: Floodplain Manager	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding, and information found in Section 13 of this Plan discussing the people and property at risk to flood, will be reviewed and revised when the City of San Angelo and Tom Green County update their management plans or develop new plans.
Grant Applications	City of San Angelo / Tom Green County: Emergency Management Coordinator City of San Angelo: Assistant Fire Chief	The Plan will be evaluated by the City of San Angelo and Tom Green County when grant funding is sought for mitigation projects. If a project is not in the Plan, an amendment may be necessary to include the action in the Plan.
Regulatory Plans	City of San Angelo / Tom Green County: Emergency Management Coordinator City of San Angelo: Assistant Fire Chief	Currently, the City of San Angelo and Tom Green County have regulatory plans in place, such as Emergency Management Plans, Continuity of Operations Plans, Economic Development, and Evacuation Plans. The Plan will be consulted when County and City departments review or revise their current regulatory planning mechanisms, or in the development of regulatory plans that are not currently in place.

Monitoring and Evaluation

Periodic revisions of the Plan are required to ensure that goals, objectives, and mitigation actions are kept current. When the plan is discussed in these sections it includes the risk assessment and mitigation actions as a part of the monitoring, evaluating, updating and review process. Revisions may be required to ensure the Plan is in compliance with federal and state statutes and regulations. This section outlines the procedures for completing Plan revisions, updates, and review. Table 17-2 indicates the department and title of the party responsible for Plan monitoring, updating, and review of the Plan.

Table 17-2. Team Members Responsible for Plan Monitoring, Evaluating, Updating, and Review of the Plan

JURISDICTION	TITLE
City of San Angelo	Emergency Management Coordinator
City of San Angelo	Assistant Fire Chief
Tom Green County	Emergency Management Coordinator

Monitoring

Designated Planning Team members are responsible for monitoring, evaluating, updating, and reviewing the Plan, as shown in Table 17-2. Individuals holding the title listed in Table 17-2 will be responsible for monitoring the Plan on an annual basis. Plan monitoring includes reviewing and incorporating into the Plan other existing planning mechanisms that relate or support goals and objectives of the Plan; monitoring the incorporation of the Plan into future updates of other existing planning mechanisms as appropriate; reviewing mitigation actions submitted and coordinating with various City and County departments to determine if mitigation actions need to be re-evaluated and updated; evaluating and updating the Plan as necessary; and monitoring plan maintenance to ensure that the process described is being followed, on an annual basis, throughout the planning process. The Planning Team will develop a brief report that identifies policies and actions in the plan that have been successfully implemented and any changes in the implementation process needed for continued success. A summary of meeting notes will report the particulars involved in developing an action into a project. In addition to the annual monitoring, the Plan will be similarly reviewed immediately after extreme weather events include but not limited to state and federally declared disasters.

Evaluation

As part of the evaluation process, the Planning Team will assess changes in risk; determine whether the implementation of mitigation actions is on schedule; determine whether there are any implementation problems, such as technical, political, legal, or coordination issues; and identify changes in land development or programs that affect mitigation priorities for each respective department or organization.

The Planning Team will meet on an annual basis to evaluate the Plan and identify any needed changes, and assess the effectiveness of the plan achieving its stated purpose and goals. The team will evaluate the number of mitigation actions implemented along with the loss-reduction associated with each action. Actions that have not been implemented will be evaluated to determine if any social, political or financial barriers are impeding implementation and if any changes are necessary to improve the viability of an action. The team will evaluate changes in land development and/or programs that affect mitigation priorities in their respective jurisdictions. The annual evaluation process will help to determine if any changes are necessary. In addition, the Plan will be

Section 17: Plan Maintenance

similarly evaluated immediately after extreme weather events including but not limited to state and federally declared disasters.

Updating

Plan Amendments

At any time, minor technical changes may be made to update the Tom Green County / City of San Angelo Hazard Mitigation Action Plan 2019. Material changes to mitigation actions or major changes in the overall direction of the Plan or the policies contained within it, must be subject to formal adoption by the participating jurisdictions.

The City of San Angelo and Tom Green County will review proposed amendments and vote to accept, reject, or amend the proposed change. Upon ratification, the amendment will be transmitted to TDEM.

In determining whether to recommend approval or denial of a Plan amendment request, participating jurisdictions will consider the following factors:

- Errors or omissions made in the identification of issues or needs during the preparation of the Plan;
- New issues or needs that were not adequately addressed in the Plan; and
- Changes in information, data, or assumptions from those on which the Plan was based.

Five (5) Year Review

The Plan will be thoroughly reviewed by the Planning Team at the end of three years from the approval date, to determine whether there have been significant changes in the planning area that necessitate changes in the types of mitigation actions proposed. Factors that may affect the content of the Plan include new development in identified hazard areas, increased exposure to hazards, disaster declarations, increase or decrease in capability to address hazards, and changes to federal or state legislation.

The Plan review process provides the City of San Angelo and Tom Green County an opportunity to evaluate mitigation actions that have been successful, identify losses avoided due to the implementation of specific mitigation measures, and address mitigation actions that may not have been successfully implemented as assigned.

It is recommended that the full Planning Team (Section 2, Table 2-1) meet to review the Plan at the end of three years because grant funds may be necessary for the development of a five-year update. Reviewing planning grant options in advance of the five-year Plan update deadline is recommended considering the timelines for grant and planning cycles can be in excess of a year.

Following the Plan review, any revisions deemed necessary will be summarized and implemented according to the reporting procedures and Plan amendment process outlined herein. Upon completion of the review, update, and amendment process the revised Plan will be submitted to TDEM for final review and approval in coordination with FEMA.

Continued Public Involvement

Public input was an integral part of the preparation of this Plan and will continue to be essential for Plan updates. The Public will be directly involved in the annual evaluation, monitoring and cyclical updates. Changes or suggestions to improve or update the Plan will provide opportunities for additional public input.

The public can review the Plan on the City of San Angelo's and Tom Green County's website, where officials and the public are invited to provide ongoing feedback, via email.

The Planning Team may also designate voluntary citizens from the planning area or willing stakeholder members from the private sector businesses that were involved in the Plan's development to provide feedback on an annual basis. It is important that stakeholders and the immediate community maintain a vested interest in preserving the functionality of the planning area as it pertains to the overall goals of the mitigation plan. The Planning team is responsible for notifying stakeholders and community members on an annual basis and maintaining the Plan.

Media, including local newspaper and radio stations, will be used to notify the public of any maintenance or periodic review activities during the implementation, monitoring, and evaluation phases. Additionally, local news media will be contacted to cover information regarding Plan updates, status of grant applications, and project implementation. Local and social media outlets, such as Facebook and Twitter, will keep the public and stakeholders apprised of potential opportunities to fund and implement mitigation projects identified in the Plan.

Appendix A: Planning Team

Planning Team Members	1
Stakeholders	2

Planning Team Members

The Tom Green County / City of San Angelo Hazard Mitigation Action Plan 2019 was organized using a direct representative model. A Planning Team from City of San Angelo and Tom Green County, shown in Table A-1, was formed to coordinate planning efforts and request input and participation in the planning process. Table A-2 is comprised of stakeholders who were invited to provide Plan input. Public outreach efforts and meeting documentation is provided in Appendix E.

Table A-1. Planning Team

ORGANIZATION / DEPARTMENT	TITLE
City of San Angelo/Tom Green County	Emergency Management Coordinator
City of San Angelo	EM Assistant
City of San Angelo Engineering Services	City Engineer
City of San Angelo Finance	Finance Director
City of San Angelo Fire Department	Fire Chief
City of San Angelo Fire Department	Assistant Fire Chief
City of San Angelo Fire Department	Executive Office Coordinator
City of San Angelo Legal	City Attorney
City of San Angelo Operations	Operations Director
City of San Angelo Operations	Operations Assistant Director
City of San Angelo Stormwater	Program Manager
City of San Angelo Water Utility	Water Utility Director
City of San Angelo Water Utility	Water Utility Assistant Director
Tom Green County	Commission (Precinct 3)
Tom Green County Environmental Health	Senior Environmental Specialist

Stakeholders

The following groups listed in Table A-2 represent a list of organizations invited to stakeholder meetings, public meetings, and workshops throughout the planning process and include: non-profit organizations, private businesses, universities, and legislators. The public were also invited to participate via e-mail throughout the planning process. Many of the invited organizations and stakeholders participated and were integral to providing comments and data for the Plan. For a list of attendees at meetings, please see Appendix E¹.

Table A-2. Stakeholders

AGENCY	TITLE
Angelo State University	President
Angelo State University	Executive Assistant to the President
Angelo State University	Director of Risk and Emergency Management
Christoval ISD	Superintendent of Schools
Christoval ISD	Superintendent's Administrative Assistant
East Concho Volunteer Fire Department	Volunteer Firefighter
Grape Creek ISD	District Superintendent
Grape Creek ISD	Assistant to District Superintendent
Grape Creek ISD	Executive Director of School Operations
Howard College San Angelo	Workforce & Community Development Officer
San Angelo	Resident
San Angelo	Resident
San Angelo	Resident
San Angelo	Resident
San Angelo	Resident
San Angelo ISD	Superintendent
San Angelo ISD	Deputy Superintendent of Administrative Services
San Angelo REACT	Participant
Shannon Medical Center	President / CEO
Shannon Medical Center	COO

¹ Information contained in Appendix E is exempt from public release under the Freedom of Information Act (FOIA).

Appendix A: Planning Team

AGENCY	TITLE
Texas House District 72	Texas State Representative
Texas Senate District 28	Texas State Senator
Tom Green County	Judge
Tom Green County	Risk Manager
Veribest ISD	School Board President
Veribest ISD	School Board Vice President
Wall ISD	Superintendent
Wall ISD	Administrative Assistant
Walter Valley ISD	Superintendent
Walter Valley ISD	Administrative Assistant

Appendix B: Public Survey Results

Overview	1
Public Survey Results	2

Overview

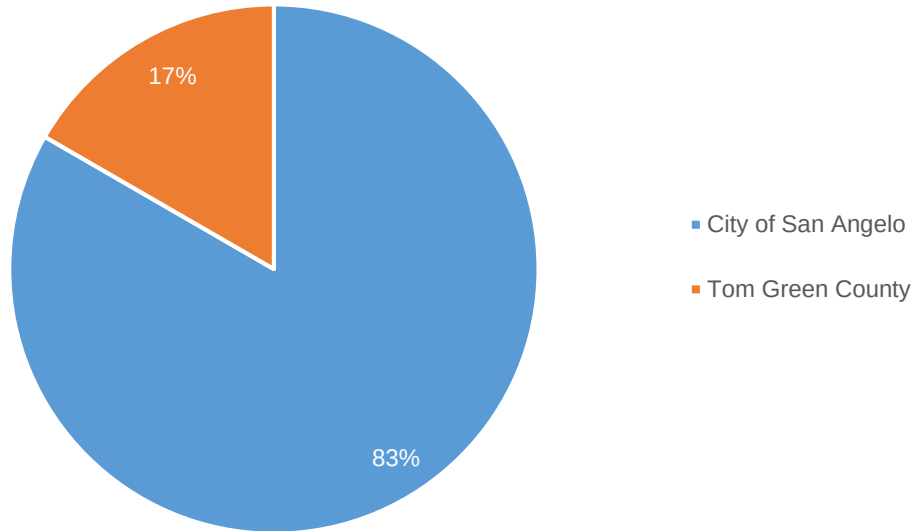
The City of San Angelo and Tom Green County prepared a public survey that requested public opinion on a wide range of questions relating to natural hazards. The survey was made available via their websites. This survey link was also distributed at public meetings and stakeholder events throughout the planning process.

A total of 30 surveys were collected, the results of which are analyzed in Appendix B. The purpose of the survey was twofold: 1) to solicit public input during the planning process, and 2) to help the jurisdictions identify any potential actions or problem areas.

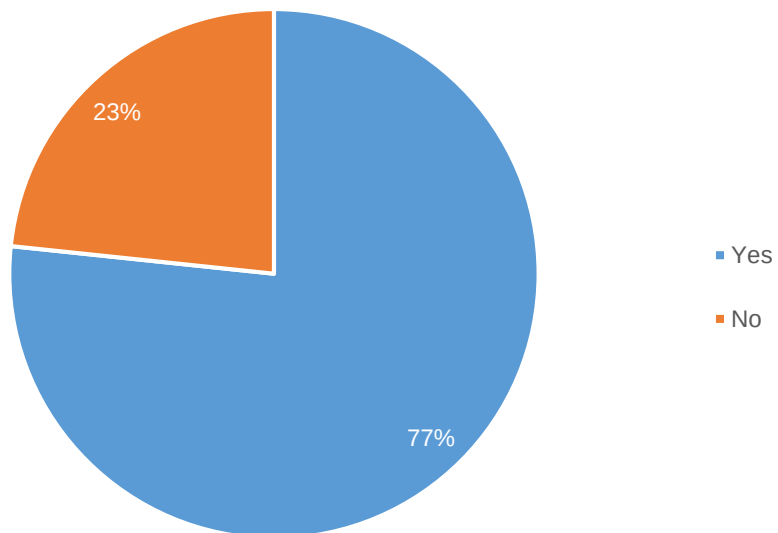
The following survey results depict the percentage of responses for each answer. Similar responses have been summarized for questions that did not provide a multiple-choice answer or that required an explanation.

Public Survey Results

1. Please state the jurisdiction (city and community) where you reside.

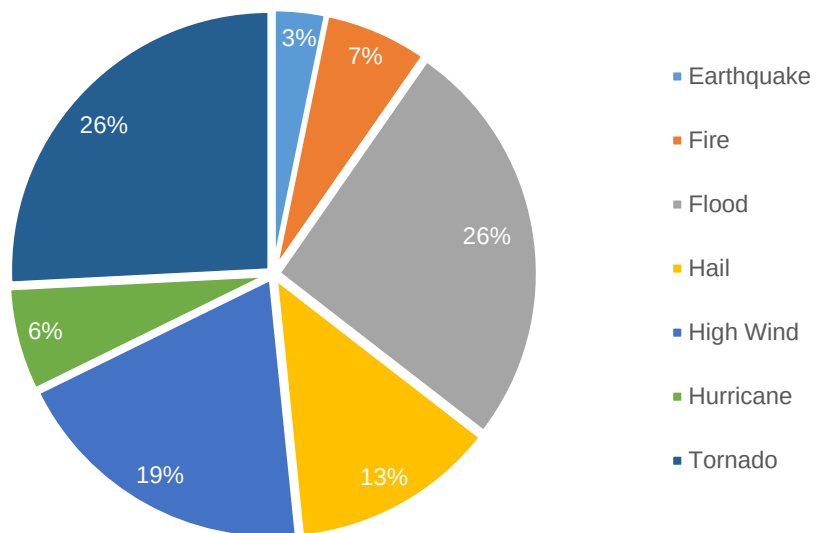


2. A. Have you ever experienced or been impacted by a disaster?

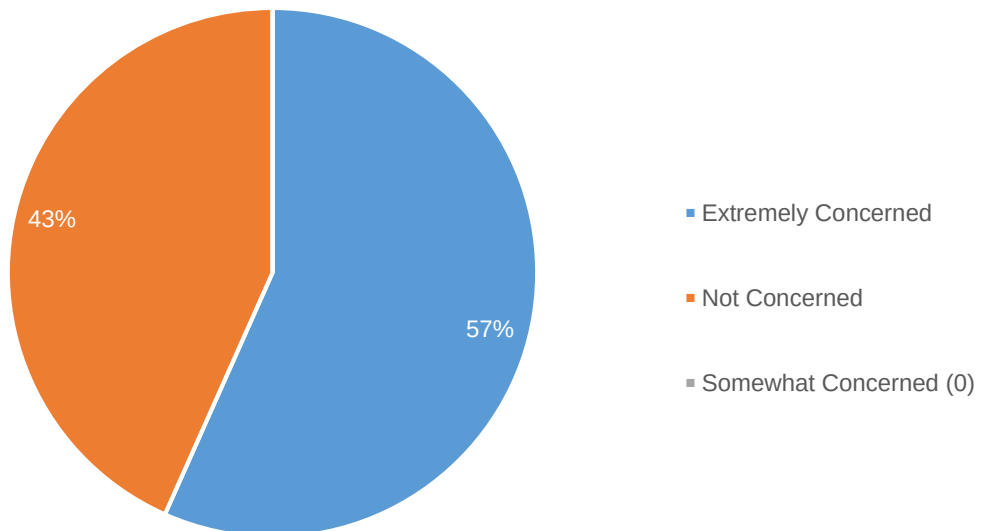


Appendix B: Public Survey Results

2. B. If “Yes”, please explain:

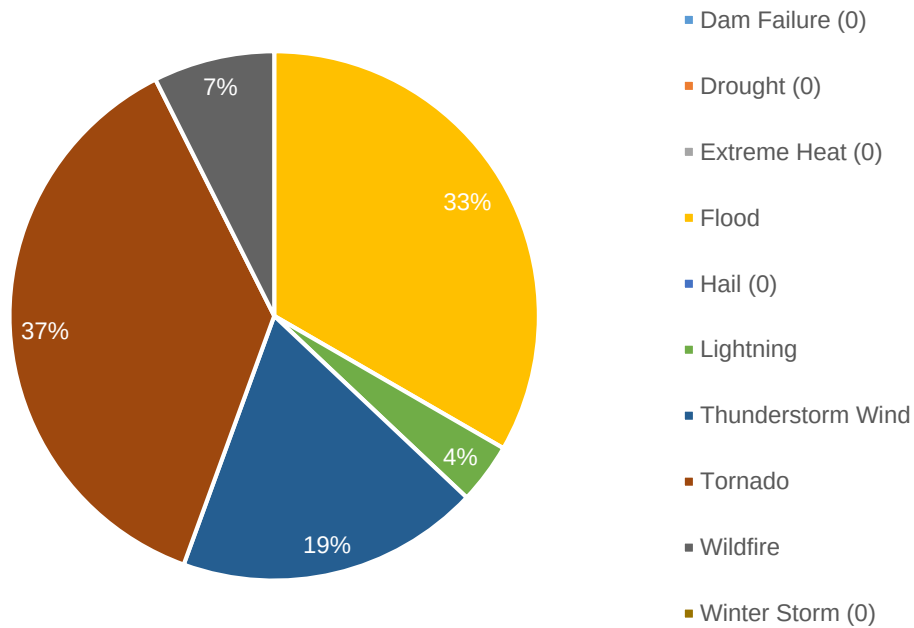


3. How concerned are you about the possibility of your community being impacted by a disaster?

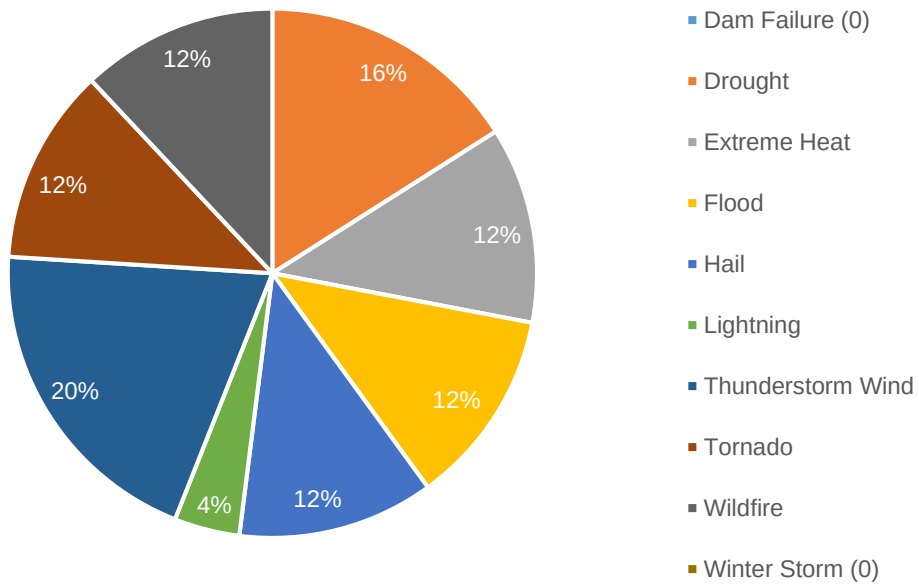


Appendix B: Public Survey Results

4. Please select the one hazard you think is the highest threat to your neighborhood:

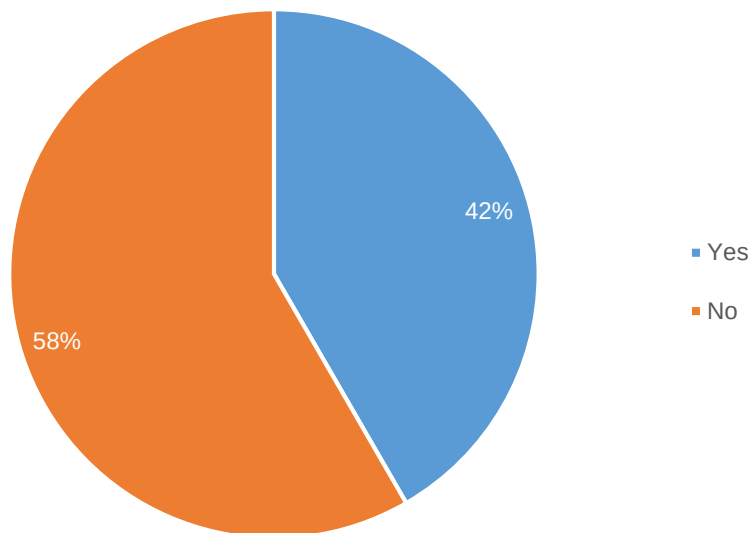


5. Please select the one hazard you think is the second highest threat to your neighborhood:

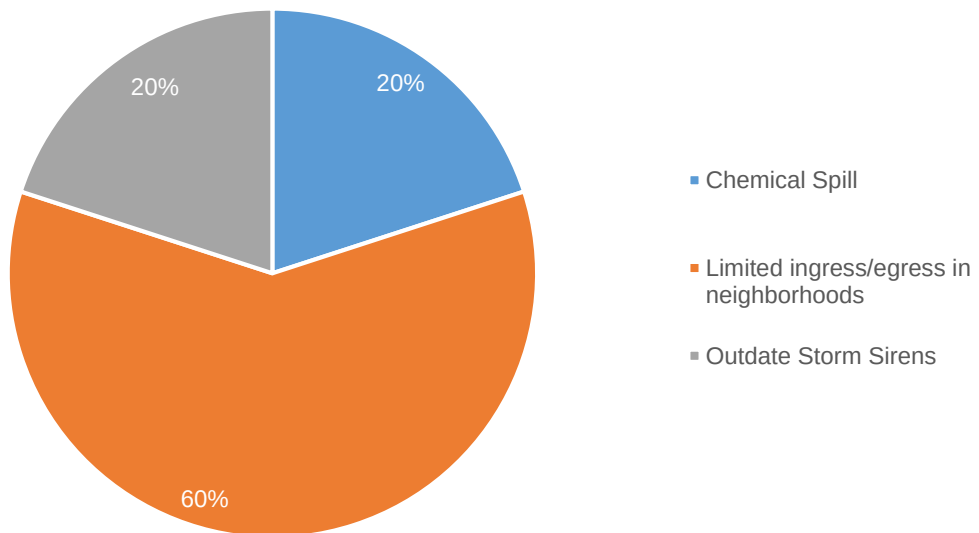


Appendix B: Public Survey Results

6. A. Are there hazards not listed above that you think are a wild-scale threat to your neighborhood?

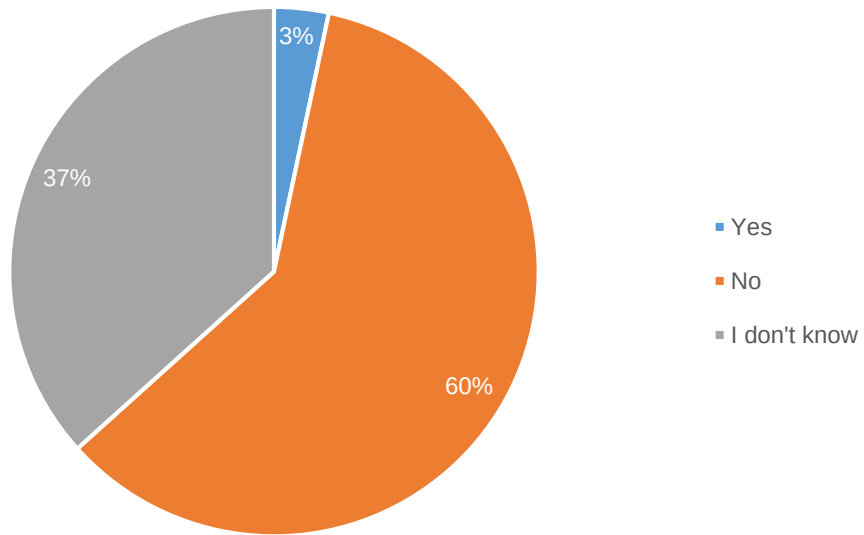


6. B. If "Yes", please explain:

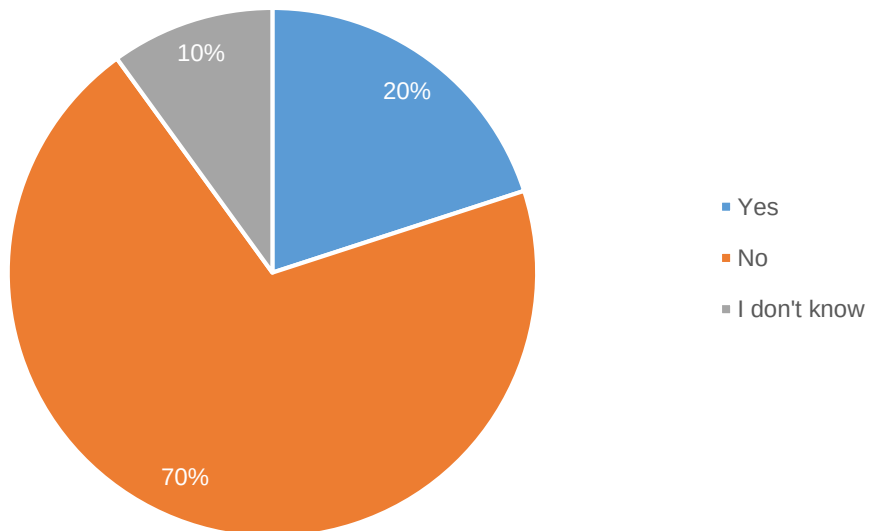


Appendix B: Public Survey Results

7. Is your home located in a floodplain?

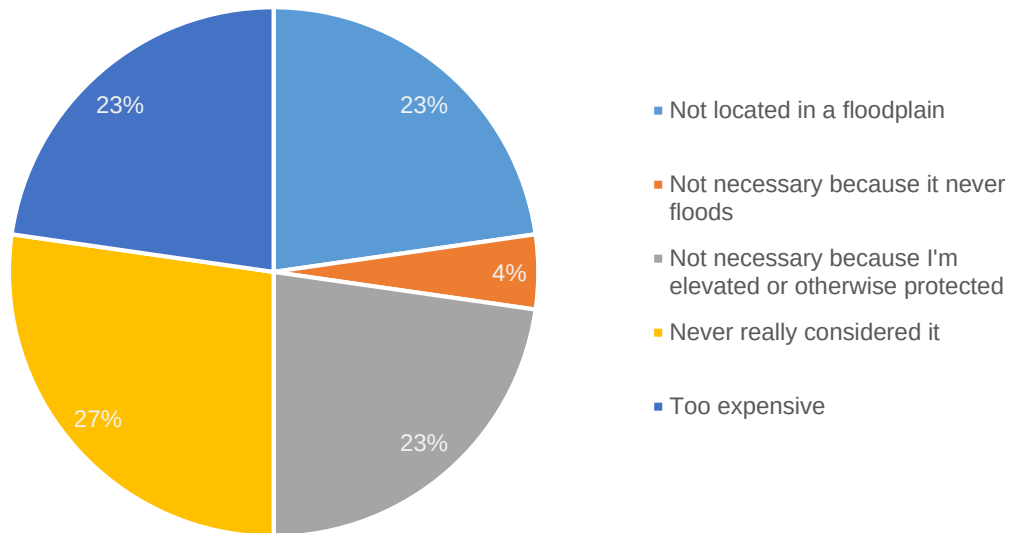


8. Do you have flood insurance?

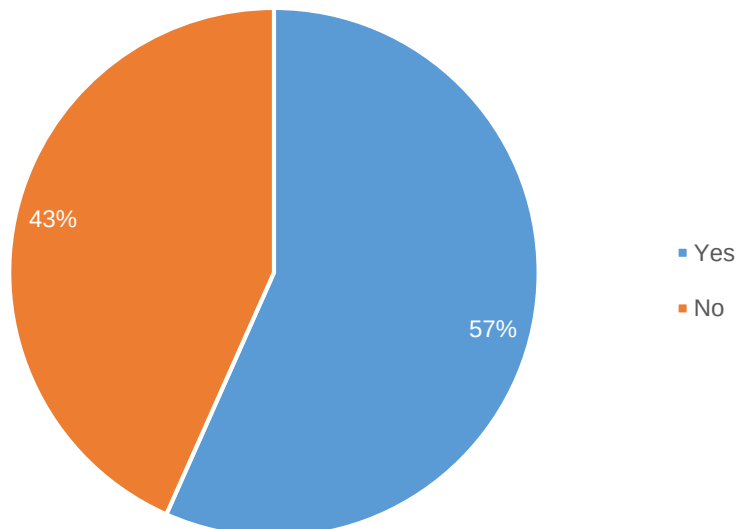


Appendix B: Public Survey Results

9. If you do not have flood insurance, why not?

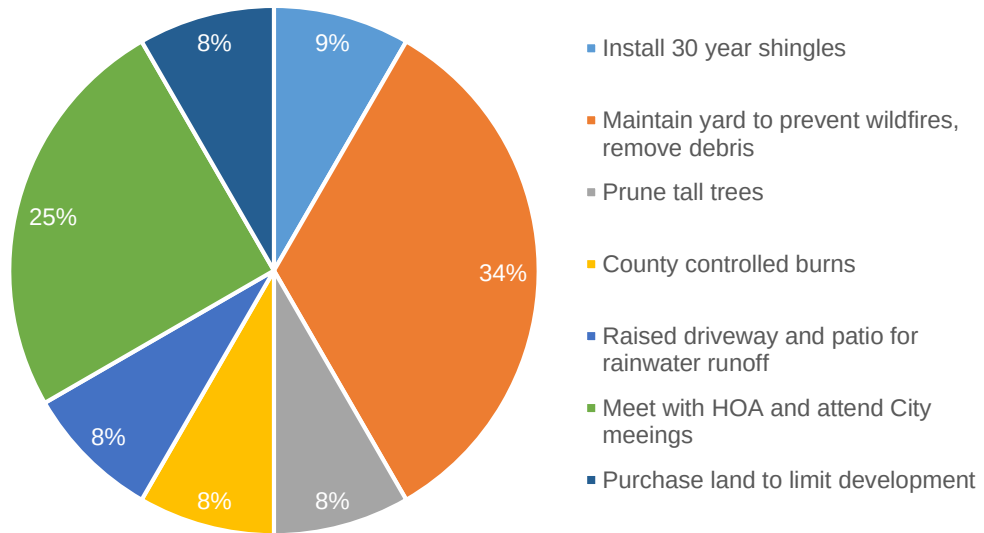


10. A. Have you taken any actions to make sure your home or neighborhood is more resistant to hazards?

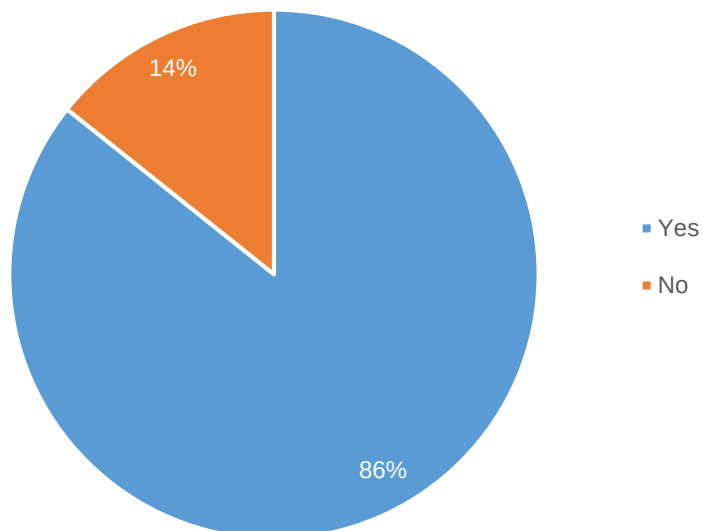


Appendix B: Public Survey Results

10. B. What have you done?

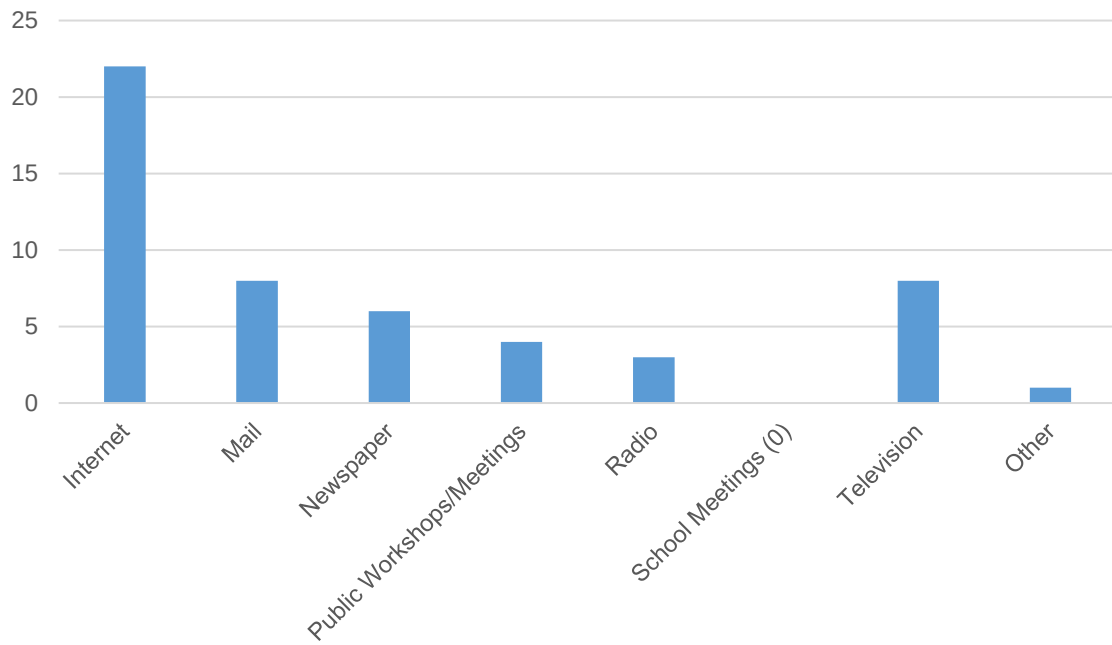


11. Are you interested in making your home or neighborhood more resistant to hazards?

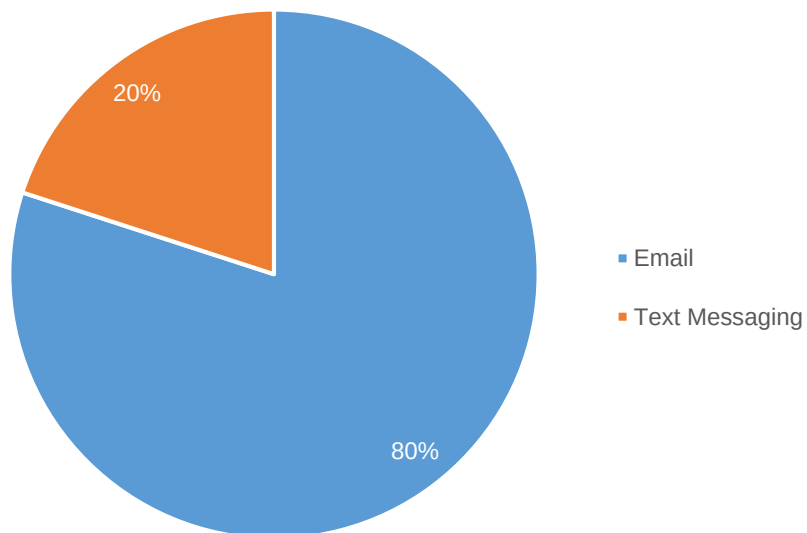


Appendix B: Public Survey Results

12. A. What is the most effective way for you to receive information about how to make your home or neighborhood more resistant to hazards?

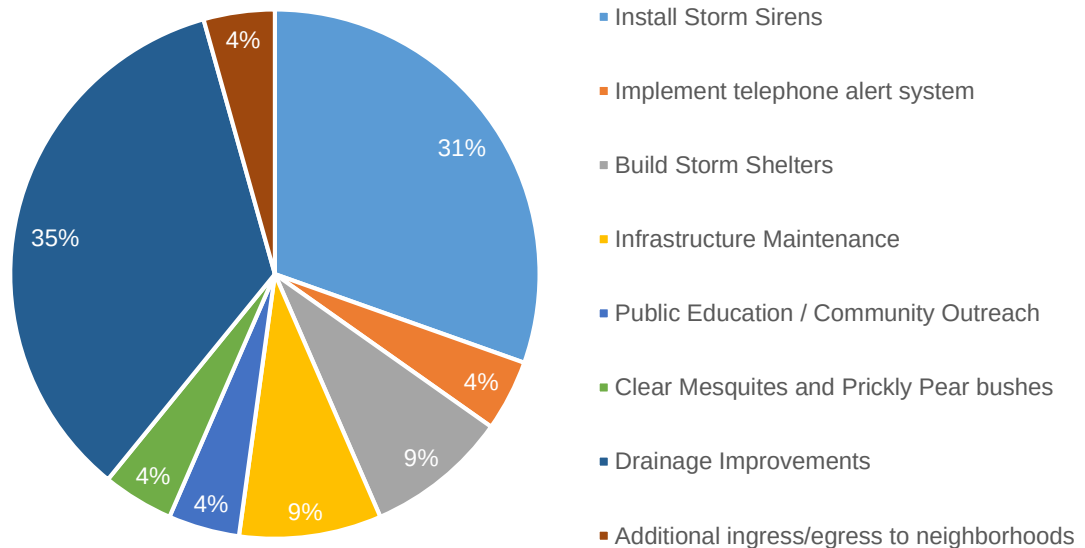


12. B. If "Other", please specify.

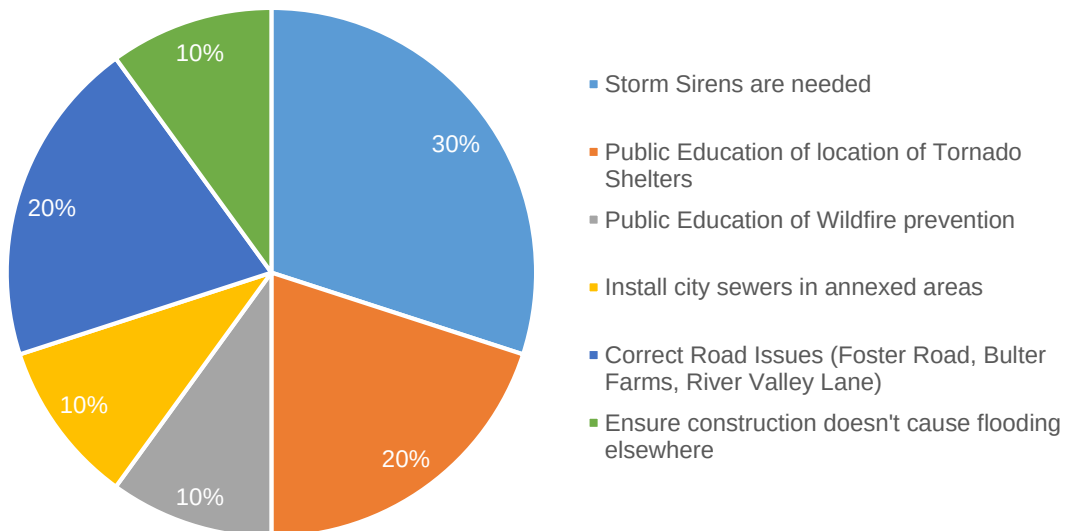


Appendix B: Public Survey Results

13. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood:

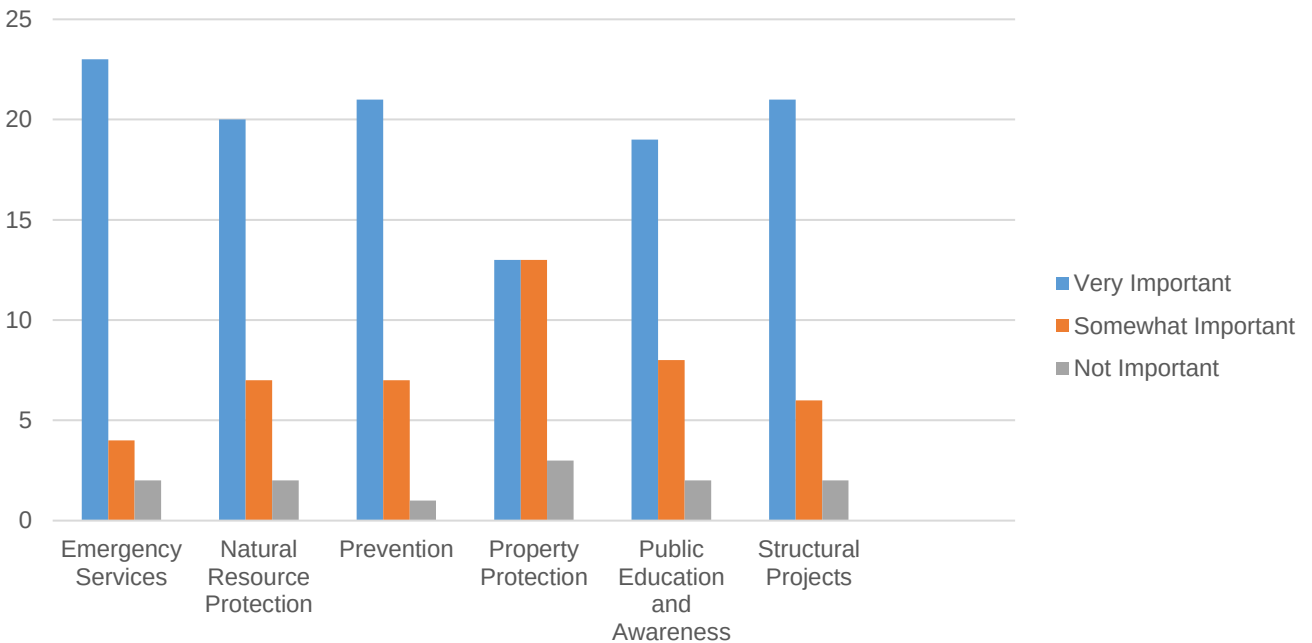


14. Are there any other issues regarding the reduction of risk and loss associated with hazards or disasters in the community that you think are important?



Appendix B: Public Survey Results

15. A number of community-wide activities can reduce the risk from hazards. In general, these activities fall into one of the following six broad categories. Please tell us how important you think each one is for your community to consider pursuing.



Emergency Services - Actions that protect people and property during and immediately after a hazard event. Examples include warning systems, evacuation planning, emergency response training, and protection of critical facilities or systems.

Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. Examples include floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.

Prevention / Local Plans & Regulations - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

Property Protection - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area. Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.

Public Education and Awareness - Actions to inform citizens about hazards and techniques they can use to protect themselves and their property. Examples include outreach projects, school education programs, library materials, and demonstration events.

Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard. Examples include dams, levees, seawalls detention / retention basins, channel modification, retaining walls, and storm sewers.

Appendix C: Critical Facilities

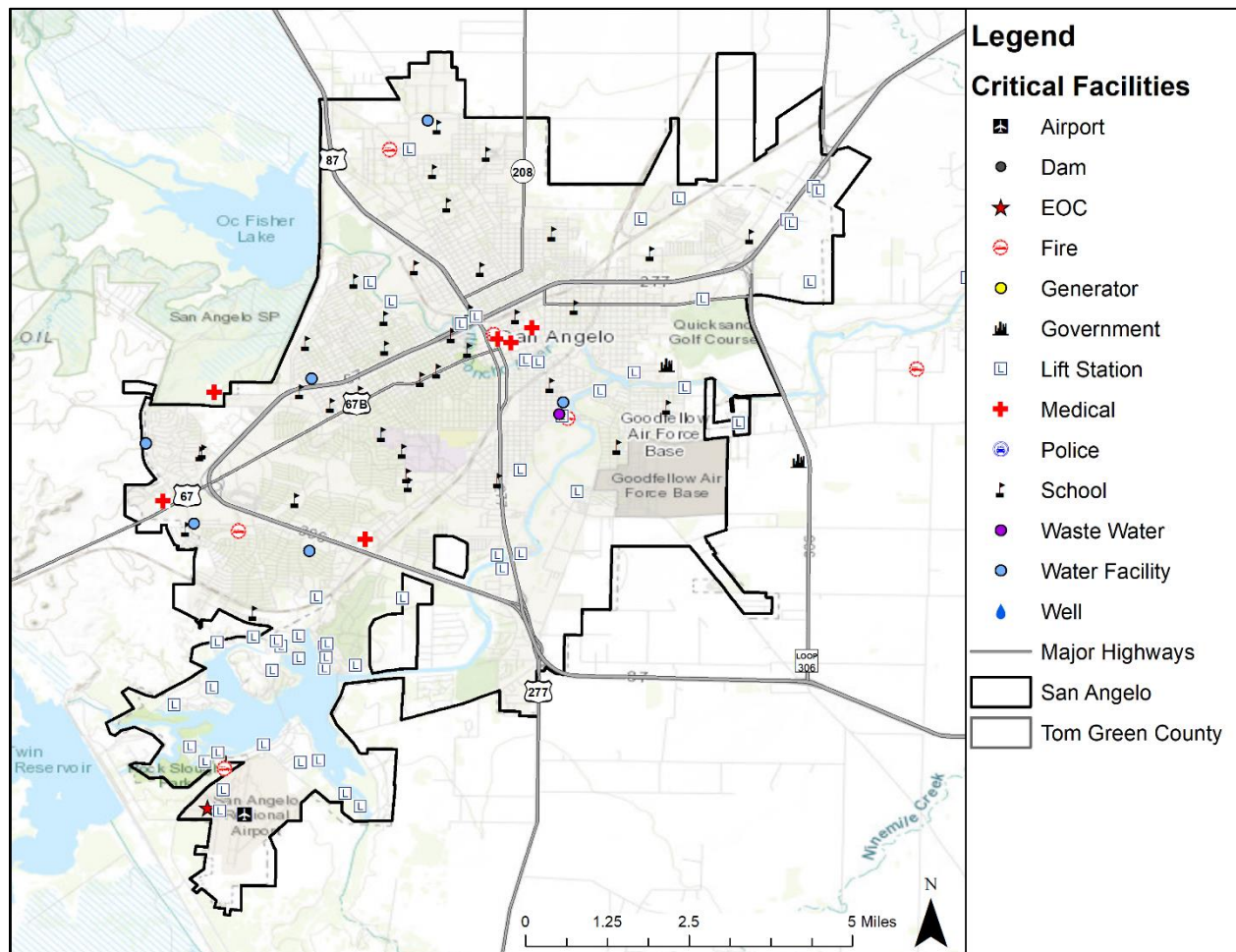
Overview	1
Critical Facilities	1

Overview

This Appendix is **For Official Use Only (FOUO)** and may be exempt from public release under FOIA. Figures C-1 through C-2 locate all critical facilities that were included in the risk assessment. Mapped facilities were provided by Planning Team members. Tables C-1 through C-2 note the critical facilities by type.

Critical Facilities

Figure C-1. Critical Facilities in City of San Angelo



Appendix C: Critical Facilities

Table C-1. Critical Facilities by Type in City of San Angelo

TYPE	NUMBER
Airport	1
Concho Valley COG	1
Emergency Operation Center	1
Fire Department Admin	1
Fire Department Stations	7
Fire Department Training Center	1
Hospital / Clinic / Urgent Care	14
Police Department	1
School – Private School	7
School – High School	2
School – Middle School	6
School – Elementary School	15
School – Student Adjustment Center	1
School – Alternative School	1
School – Headstart	3
University / College	2

Appendix C: Critical Facilities

Figure C-2. Critical Facilities in Tom Green County

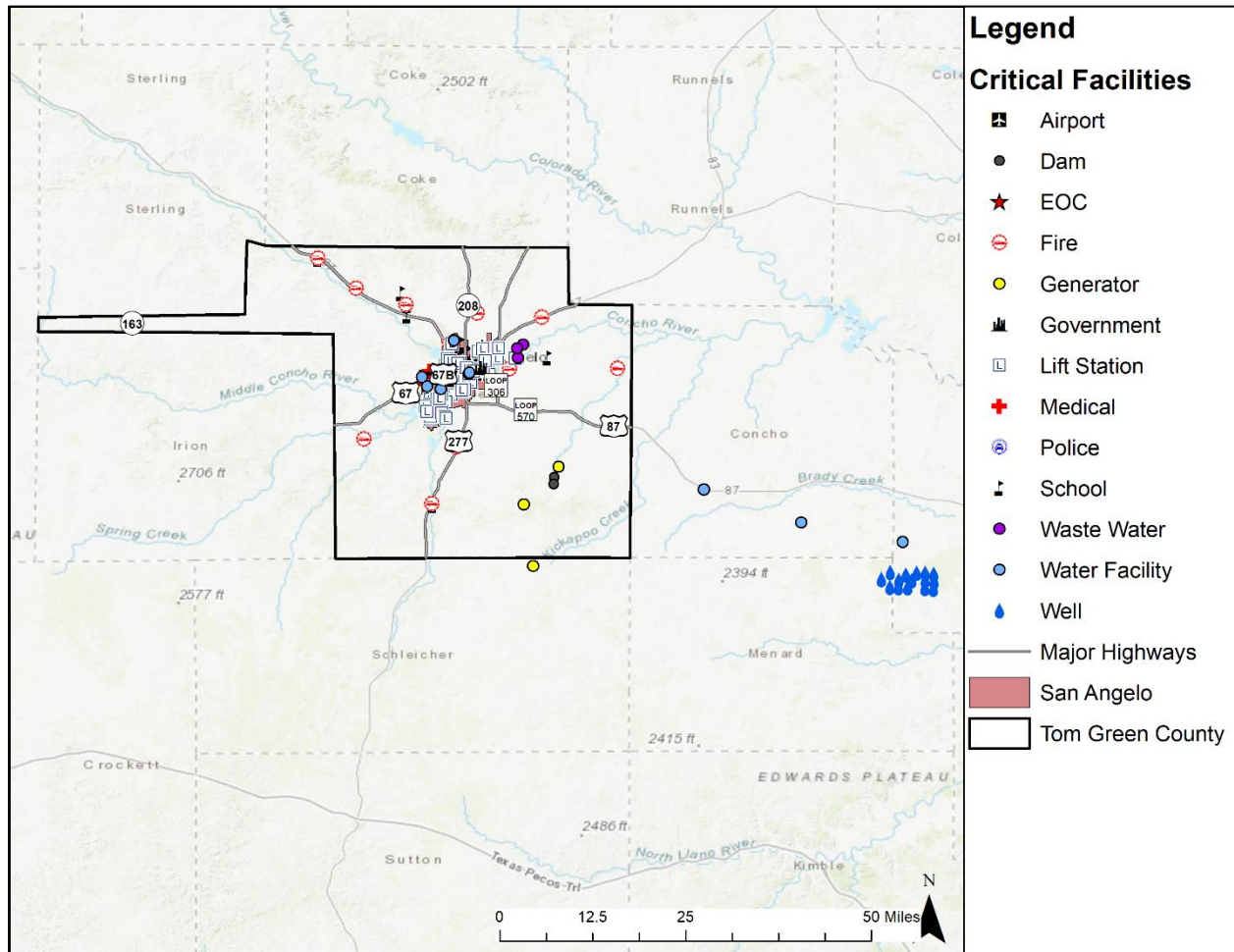


Table C-2. Critical Facilities by Type in Tom Green County

TYPE	NUMBER
Emergency Operations Center	1
Medical	2
School	7
Sheriff Department	1
Volunteer Fire Department	10

Appendix D: Dam Locations

Overview	1
Dam Locations	1

Overview

Appendix D is **For Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).

Dam Locations

Table D-1 below reflects all dams that are located in the City of San Angelo and Tom Green County. This list includes High, Significant, and Low Hazard Dams. Section 14 of the Plan doesn't profile dams that were deemed to pose no past, current, or future risk to the planning area as no loss of life or impact to critical facilities or infrastructure is expected in the event of a breach. The asterisk denotes those that were profiled in the hazard assessment.

Table D-1. List of Dam Locations and Storage Capacities

JURISDICTION	LATITUDE	LONGITUDE	HEIGHT (Feet)	STORAGE (Acre Feet)
Tom Green County	31.46556	-100.35028	10	110
Tom Green County	31.548332	-100.126667	20	151
Tom Green County	31.00004	-100.44333	12	250
Tom Green County	31.186111	-100.495	8	50
Tom Green County	31.63641	-100.243554	38	1,784
Tom Green County	31.62167	-100.24667	36	1,562
Tom Green County	31.58	-100.186667	20	55
Tom Green County	31.328332	-100.615	8	89
Tom Green County	31.313688	-100.560243	20	240
Tom Green County	31.463332	-100.366667	9.4	241.1
Tom Green County	31.252843	-100.252406	18	158
Tom Green County	31.533332	-100.136667	9	70
Tom Green County	31.52	-100.263332	9	210
Tom Green County	31.565	-100.255	10	50

Appendix D: Dam Locations

JURISDICTION	LATITUDE	LONGITUDE	HEIGHT (Feet)	STORAGE (Acre Feet)
City of San Angelo*	31.446667	-100.425	14	448
City of San Angelo	31.458332	-100.431667	20	150
City of San Angelo	31	-100.44333	8	250
City of San Angelo*	31.38833	-100.47833	47	32,981
City of San Angelo	31.453332	-100.413332	14	291
City of San Angelo	31.54349	-100.616062	22	78
City of San Angelo*	31.414078	-100.44235	24	515
City of San Angelo	31.533332	-100.673332	20	102
City of San Angelo	31.450437	-100.381987	27	375
City of San Angelo	31.485	-100.318332	7	75
City of San Angelo	31.495	-100.33	8	348
City of San Angelo*	31.466669	-100.4833	130	766,000
City of San Angelo*	31.3656	-100.5284	134	1,087,530

Appendix E: Meeting Documentation

Workshop Documentation	1
Public Meeting Documentation	4
Public Notices	6

Workshop Documentation

Appendix E is **For Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).

The City of San Angelo and Tom Green County held a series of Planning Team workshops: a Kickoff Workshop on August 8, 2018, a Risk Assessment Workshop on December 11, 2018, and a Mitigation Action Strategy Workshop on March 19, 2019. At each of these workshops members of the Planning Team were informed of the planning process, expressed opinions, and volunteered information. Public Meetings followed each of the workshops. The sign-in sheets for each workshop and public meeting are included below. For more details on the workshops and planning process, see Section 2.

Figure E-1. Kickoff Workshop, 8/8/18



CITY OF SAN ANGELO / TOM GREEN COUNTY
Hazard Mitigation Plan Kickoff Workshop
San Angelo City Hall
72 W. College Avenue, San Angelo, TX 76903
August 8, 2018

Name	Title	Department	Phone	Email
Rachel Andrews	Mitigation Specialist	H2O Partners	512-983-0092	rachel@h2opartnersusa.com
Pamela Weishuhn	SR Environmental Specialist	Environmental Health - Tom Green Co	325-658-0038	pam.weishuhn@co.tom-green.tx.us
Rick Bacon	Commissioner Pet 3	Tom Green County	(325) 234-4261	rick.bacon@co.tom-green.tx.us
Leigh Ann Stephens	Exec. Dir. of School Operations	Grape Creek ISD	325-658-7823	leighann.stephens@grapecreekisd.net
Allison Strube	Director of Water Utilities	City of San Angelo	325-657-4209	allison.strube@cosatx.us
Patrick Frerich	Asst. Director of Operations	City of San Angelo	325-657-4206	patrick.frerich@cosatx.us
Todd Sanford	Assistant Fire Chief	San Angelo Fire	325-657-4355	todd.sanford@safiredept.com
Stephanie Collins	Executive Office Coord.	San Angelo Fire	325-657-4355	Stephanie.Collins@safiredept.com
Angie Simelena	Superintendent	Grape Creek ISD	325-658-7823	Angie.Simelena@grapecreekisd.net

1

Figure E-2. Risk Assessment Workshop, 12/11/18



CITY OF SAN ANGELO / TOM GREEN COUNTY
Hazard Mitigation Plan Risk Assessment Workshop
San Angelo City Hall
72 W. College Avenue, San Angelo, TX 76903
December 11, 2018

Name	Title	Department	Phone	Email
Allison Strube	Utility Director	City of San Angelo	(325) 657-4209	allison.strube@cosatx.us
Tina Dierschke	Finance Director	PO SA	657-4270	tina.dierschke@cosatx.us
Todd Sanford	Assistant Fire Chief	City of San Angelo	657-4355	todd.sanford@safiredept.com
Nora Terry	EM Assist.	COSA	657-4289	nora.terry@cosatx.us
Rick Bacon	Tom Green Co. Commissioner, Pet 3		325-657-6573	rick.bacon@co.tom-green.tx.us
BRAN DUNN	FIRE CHIEF	SAFD	325-657-4355	firechief@safiredept.com
Rhonda Murphy	Mitigation Planner	H2O	512-571-2088	Rmurphy@H2OPartnersUSA.com
Patrick Frerich	Asst Dir of Operations	Operations	325-657-4206	patrick.frerich@cosatx.us
Shannon McMillan	Stormwater Program Mgr.	Engineering	325-657-4434	shannon.mcmillan@cosatx.us
Theresa James	City Attorney	Legal	325-657-4407	theresa.james@cosatx.us

CITY OF SAN ANGELO / TOM GREEN COUNTY

1

Figure E-3. Mitigation Action Strategy Workshop, 3/19/19



CITY OF SAN ANGELO / TOM GREEN COUNTY
Hazard Mitigation Plan Mitigation Strategy Workshop
San Angelo City Hall
72 W. College Avenue, San Angelo, TX 76903
March 19, 2019

Name	Title	Department	Phone	Email
LeighAnn Stephens	Ex Dir of School Ops	Grape Creek ISD	325 895 1505	leighannstephens@grapecreekisd.net
BRIAN DUNK	FIRE CHIEF	SAFD	325-657-4355	firechief@safiredpt.com
LANCE OVERSTREET	Asst. Dir. WU	Nat'l. Util.	325 262 0217	lance.overstreet@cosatx.us
Todd Sanford	Asst. Fire Chief	SAFD	325-657-4355	todd.sanford@safiredpt.com
Shannon McMillan	Stormwater Program	COSA	325-657-4434	shannon.mcmillan@cosatx.us
Rick Bacon	Commissioner	TGC	325-234-4261	rick.bacon@cosatx.us
Theresa Jarner	City Attorney	COSA	325-657-4407	theresa.jarner@cosatx.us
Jim EVANS	EMC	Emergency Management	325-657-4230	jim.evans@cosatx.us
Tina Dierschke	Finance Director		325-657-4268	tina.dierschke@cosatx.us
Shane Kiehl	Director of Operations		325-657-4204	shane.kiehl@cosatx.us
Patrick Frerich	Asst. Dir. Ops	COSA	325-657-4206	patrick.frerich@cosatx.us
Rachel Andrews	Mitigation Specialist	H2O Partners	512-983-0092	rachel@h2opartnersusa.com
Heidi Watson	Mitigation Specialist	H2O Partners	512-568-2259	heidi@h2opartnersusa.com

1

Appendix E: Meeting Documentation

Public Meeting Documentation

As discussed in Section 2, a series of public meetings were held in conjunction with each of the workshops. Documentation in the form of sign-in sheets for each of the meetings follows.

Figure E-4. Kickoff Public Meeting, 8/8/18



CITY OF SAN ANGELO / TOM GREEN COUNTY
Hazard Mitigation Plan Kickoff Public Meeting
San Angelo Council Chambers
501 Rio Concho Dr., San Angelo, TX 76903
August 8, 2018

Name	Title	Department	Phone	Email
Rachel Andrews	Mitigation Specialist	H2O Partners	512-983-0090	rachelah2opartnersusa.com
Sam Spencer	Director, EHSRM	ASU	325-486-6725	sspencer@angelu.edu
Tommy Brown		SELF	325-224-8510	tommybrown43@hotmail.com
King Walker (San Angelo Sheriff)		Agcs, REACT, RACES	325-947-0296	king22walkere@hotmail.com
Marion McMinis	Risk Mgr		325-659-6407	marion.mcminis@co.tom-green.tx.us
Patrick Frerich	Asst. Dir. Ops	Operations	325-657-4206	patrick.frerich@co.san-angelo.tx.us
Todd Sanford	Asst. Fire Chief	San Angelo FD	325-657-4355	todd.sanford@safiredpt.com
Ten Tate		SELF	325-212-4217	
Shelly Salinas		SELF	212-4218	
Raymond Giles		SELF	261-422-7565	
Austin Juhl		SELF	210-542-8222	
Stephanie Collins	Executive Off. Coord	SAFD Fire Dept	325-657-4355 325-657-4355	Stephanie.Collins@safiredpt.com

1



CITY OF SAN ANGELO / TOM GREEN COUNTY
Hazard Mitigation Plan Kickoff Public Meeting
San Angelo Council Chambers
501 Rio Concho Dr., San Angelo, TX 76903
August 8, 2018

Name	Title	Department	Phone	Email
Michael Looney		ECVFD	325-234-3376	michael@sanangelo.org

2

Appendix E: Meeting Documentation

Figure E-5. Risk Assessment Public Meeting, 12/11/18



CITY OF SAN ANGELO / TOM GREEN COUNTY
Hazard Mitigation Plan Risk Assessment Public Meeting
San Angelo Council Chambers
501 Rio Concho Dr., San Angelo, TX 76903
December 11, 2018

Name	Title	Department	Phone	Email
Sam Spooner	Director, EHSRM	ASU	486-6725	sspooner@angelo.edu
Patrick Frerich	Director	Operations	325-257-4206	patrick.frerich@cosactx.us
BRIAN DRAIN	FIRE CHIEF	SAPD	325-657-4355	firechief@sanfiredept.com
Rick Larson	T&E Commissioner	Pt 3	325-655-6573	rick.larson@cityofsanangelo.tx.us
RHONDA MURPHY	Mitigation Planner	H2OPartners	512-571-2088	Rmurphy@H2OPartnersUSA.com

CITY OF SAN ANGELO / TOM GREEN COUNTY

1

Figure E-6. Mitigation Action Strategy Public Meeting, 3/19/19



CITY OF SAN ANGELO / TOM GREEN COUNTY
Hazard Mitigation Plan Mitigation Strategy Public Meeting
Emergency Operations Center
8485 Hanger Road, San Angelo, TX 76904
March 19, 2019

Name	Title	Department	Phone	Email
Rachel Andrews	Mitigation Specialist	H2OPartners	512-983-0092	rachel@h2opartnersusa.com
Jim EVANS	EMR	SAN Angelo/Tom Green	325-657-4230	jim.evans@cosactx.us
Steve Floyd	Tom Green County Judge	T&E	325-653-3318	
Sam Spooner	Director, EHSRM	ASU (Angelo)	325-486-6725	sspooner@angelo.edu
Tammy Brown	Resident	Environment Health Safety Risk Management	325-374-8512	tammybrown63@hotmail.com

1

Public Notices

Public notices to announce the City of San Angelo's and Tom Green County's participation in the Plan development process were posted on their website, on social media sources including Facebook and Twitter, through the local media, and/or posting the information on bulletin boards in public facilities.

Figure E-7. Public Notice, GoSanAngelo webpage

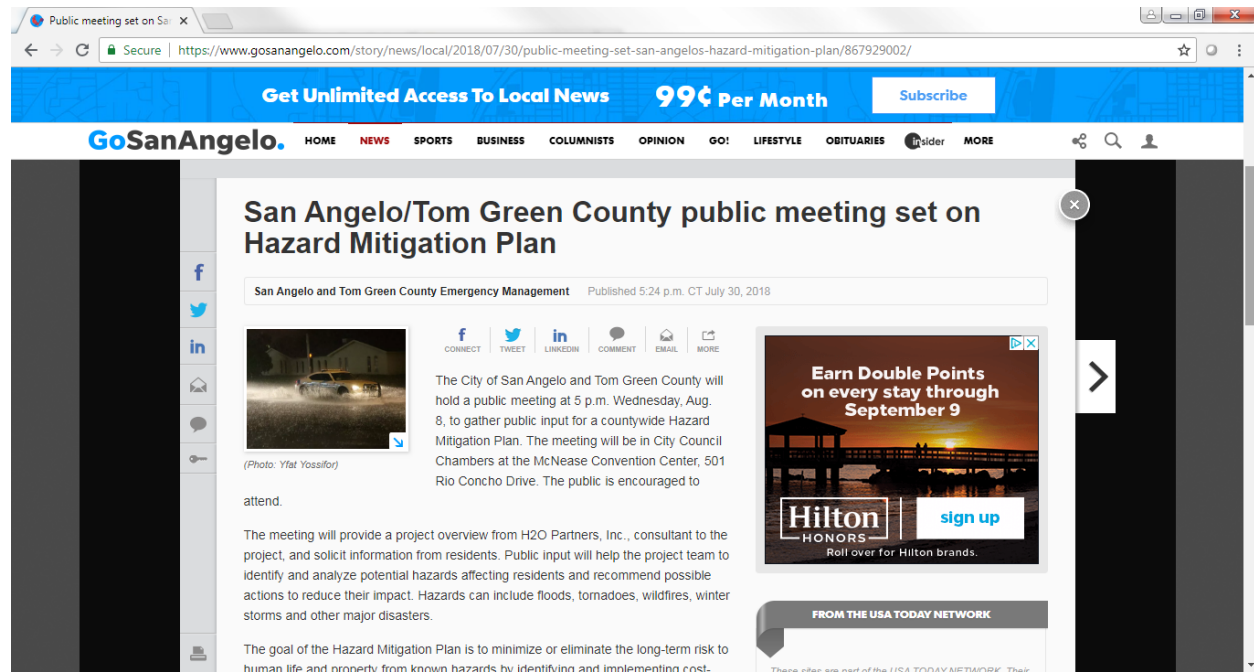
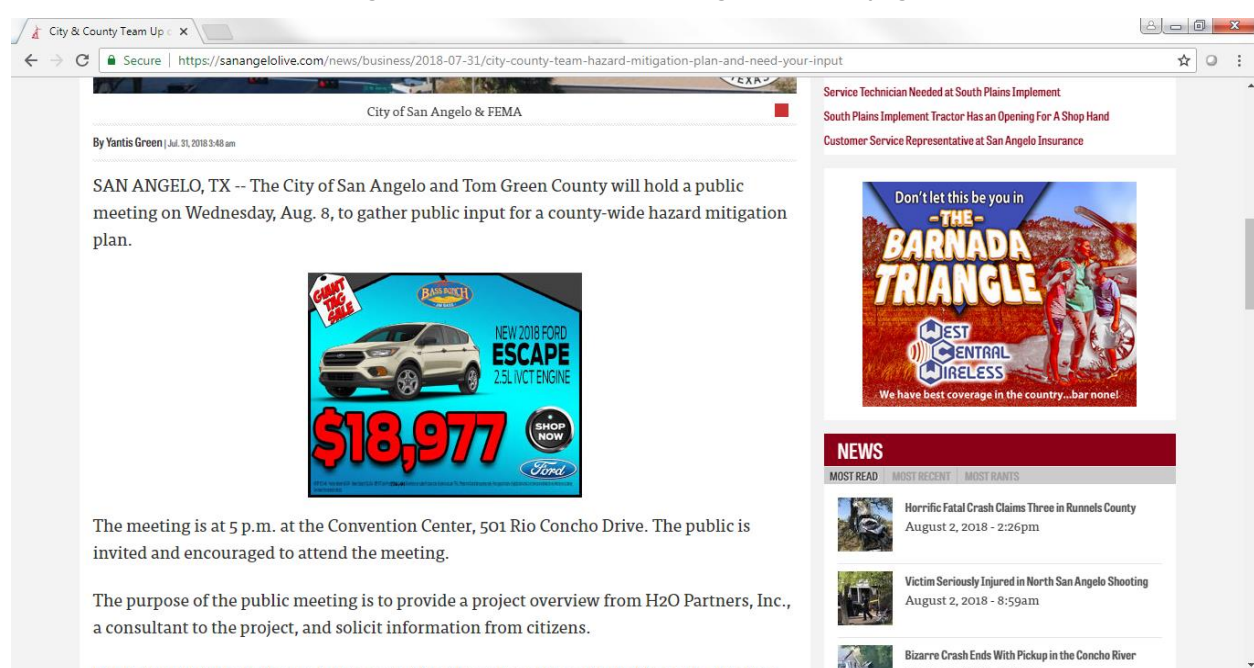


Figure E-8. Public Notice, SanAngeloLive webpage



Appendix E: Meeting Documentation

Figure E-9. Public Notice, City of San Angelo Facebook page

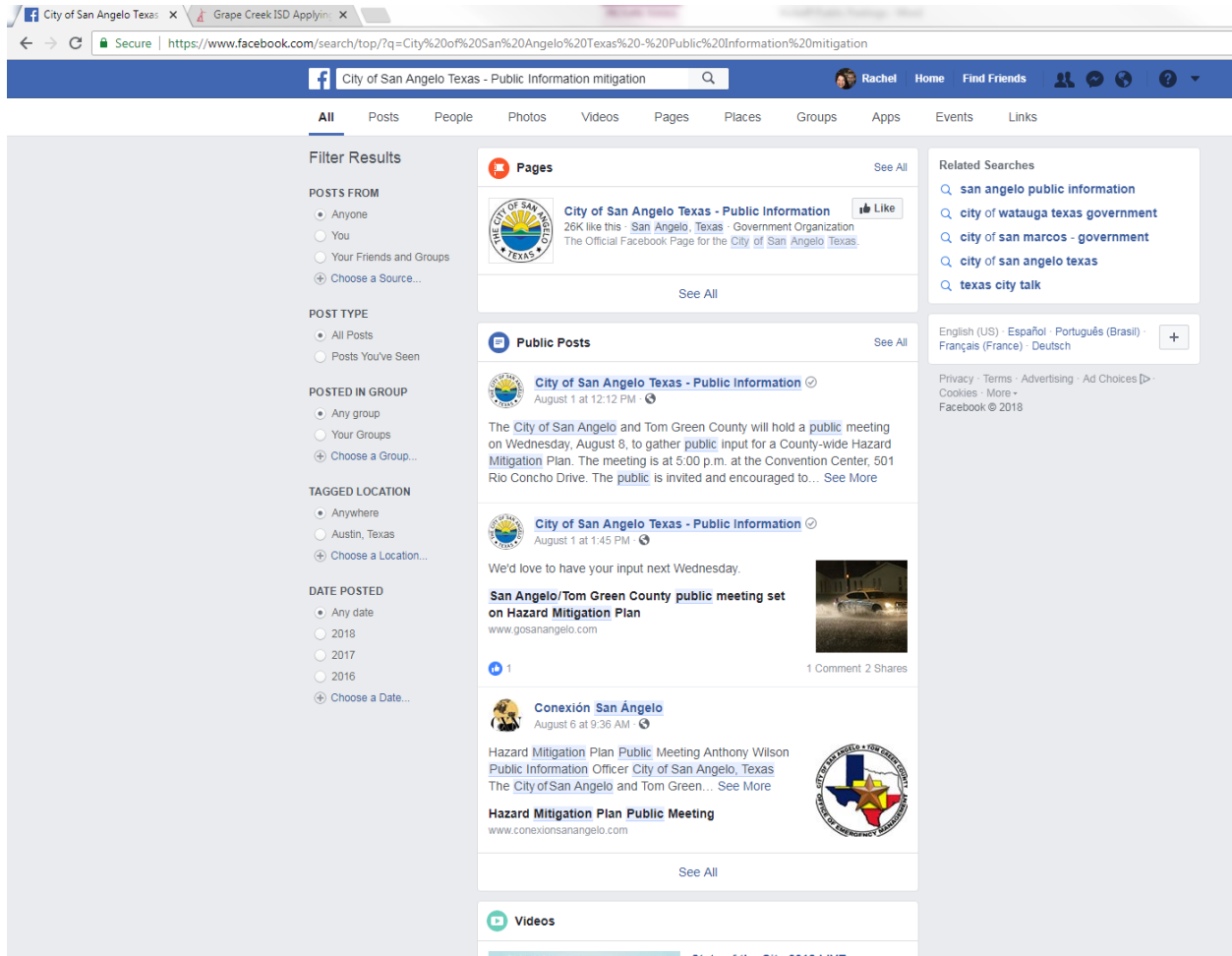


Figure E-10. Public Notice, Conexión San Angelo webpage



Appendix E: Meeting Documentation

Figure E-11. Public Notice, KKSA webpage

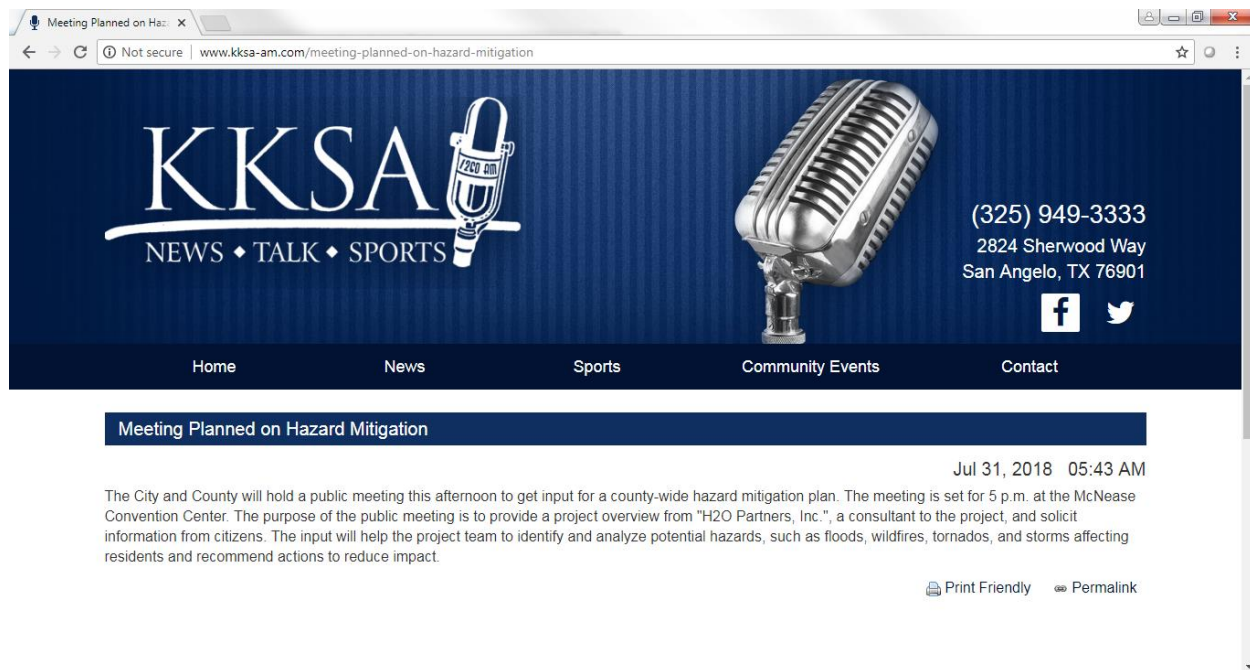


Figure E-12. Public Notice, San Angelo Central Fire Station Administration Offices

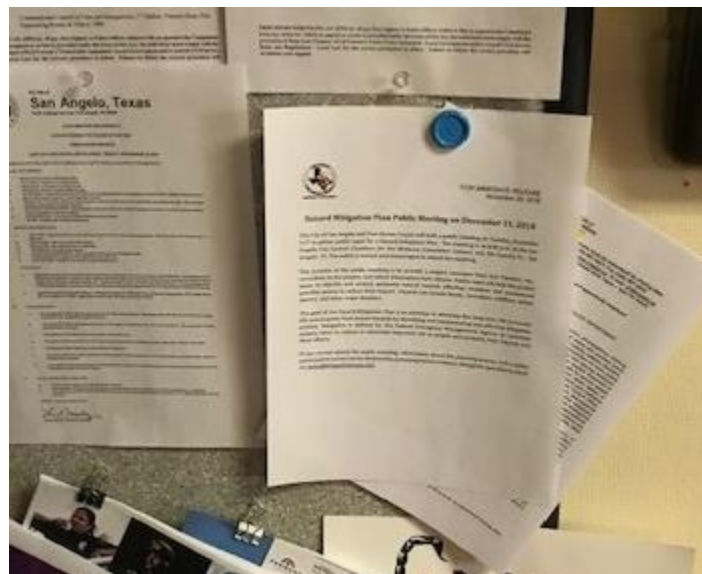


Figure E-13. Public Notice, Grape Creek ISD home page

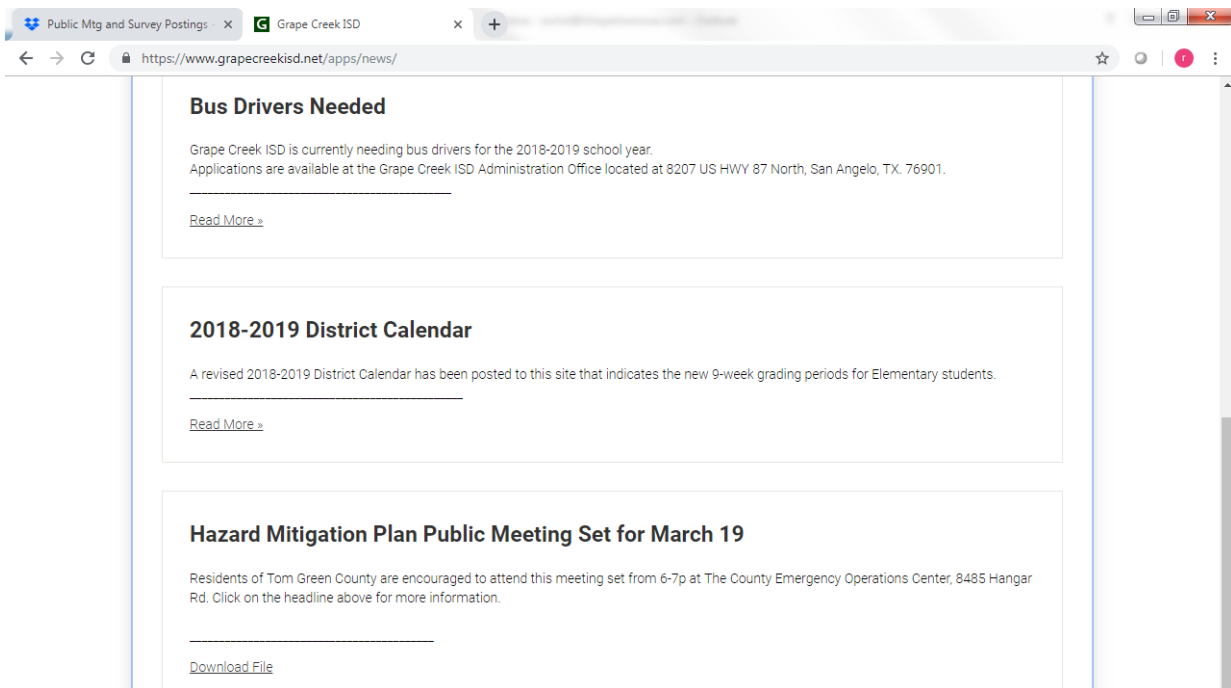
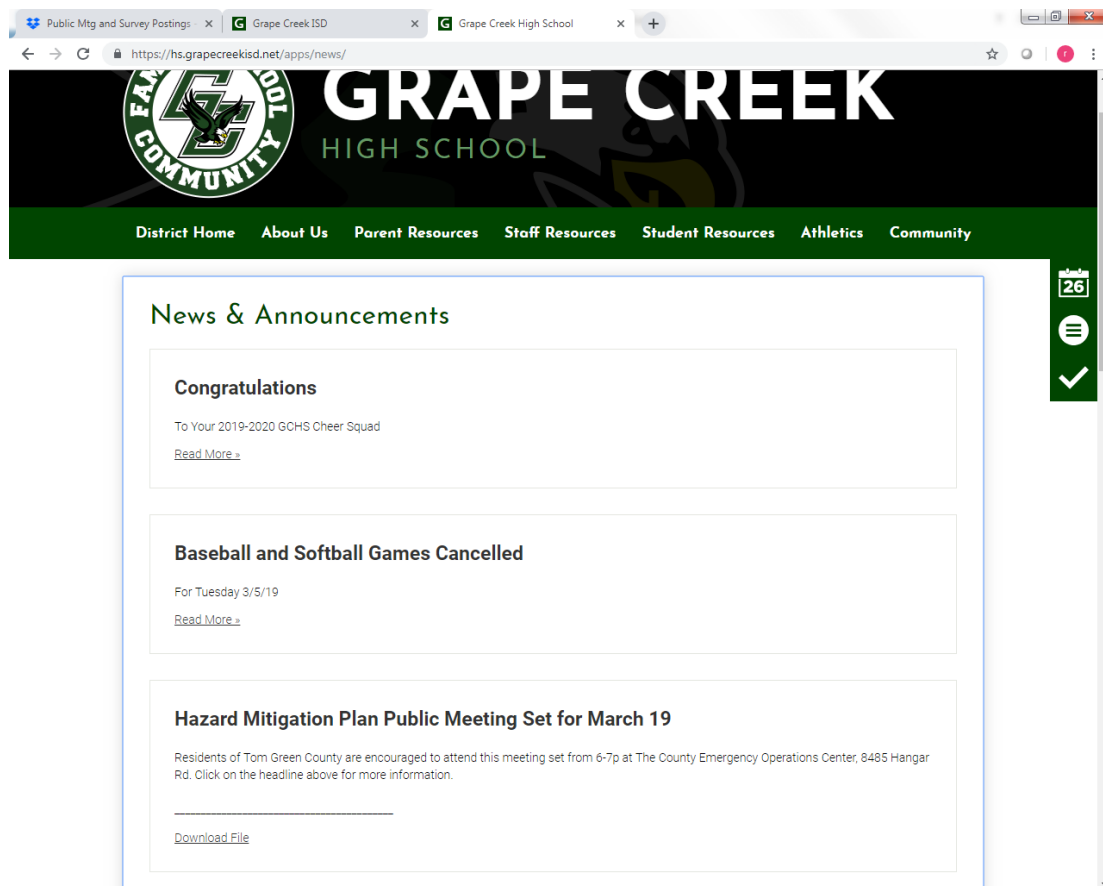


Figure E-14. Public Notice, Grape Creek High School home page



Appendix E: Meeting Documentation

Figure E-15. Public Notice, Grape Creek ISD Administrative Offices

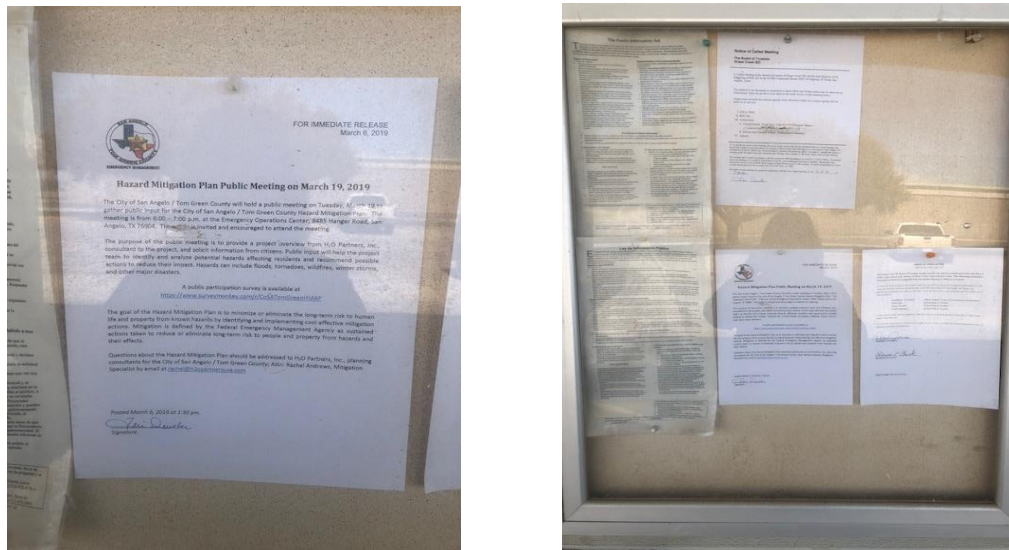
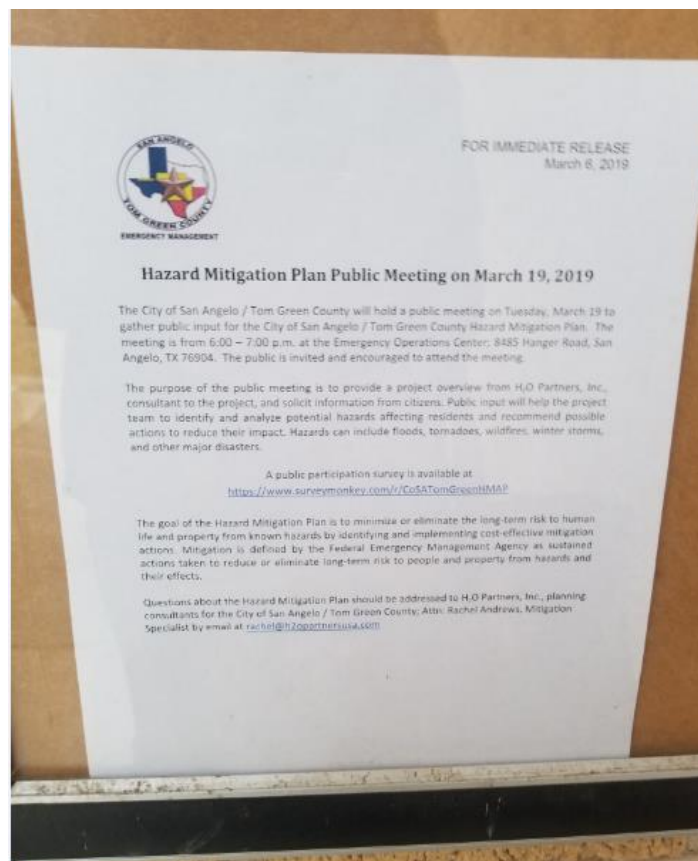


Figure E-16. Public Notice, Water Valley ISD Administrative Office



Appendix F: Capability Assessment

Overview	1
Community Capability Assessments	1

Overview

A Community Capability Assessment is an integral component of the Hazard Mitigation Planning Process. It is an invaluable tool in assessing a community's existing planning and regulatory capabilities to support implementation of mitigation strategy objectives.

Beginning on Page 1, a completed Capability Assessment Checklist provides information on existing policies, plans, and regulations in place for Planning Team members at the local level or that may be provided by the County on an as-needed basis. ***Participation is denoted with an "x" on the Checklist.***

Community Capability Assessments

COMMUNITY CAPABILITY CHECKLIST	Tom Green County	City of San Angelo
Plans		
Capital Improvements Plan	X	
Community Wildfire Protection Plan		
Continuity of Operations	X	X
Economic Development Plan	X	X
Emergency Operations Plan	X	X
Evacuation Plan	X	X
Hazard Mitigation Plan	X	X
Historic Preservation Plan	X	X
Land Use Plan	X	X
Master or Comprehensive Plan		X
Open Space Plan		

Appendix F: Capability Assessment

COMMUNITY CAPABILITY CHECKLIST	<i>Tom Green County</i>	<i>City of San Angelo</i>
Redevelopment Plan		
Stormwater Management Plan	X	X
Transportation Plan	X	X
Watershed Protection Plan		
Policies/Ordinances		
Building Codes		X
Floodplain Ordinance	X	X
Property Set-Back Ordinance		
Real Estate Disclosure Requirements		
Site Plan Review Requirements		X
Stormwater Ordinance		X
Subdivision Regulations	X	X
Zoning Ordinance/Land Use Restrictions		X
Programs		
Fire Code		X
Enrolled as Firewise Community		
Floodplain Maps/Flood Insurance Studies	X	X
Hydrologic/Hydraulic Studies		
Mutual Aid Agreement	X	X
National Flood Insurance Program Participant	X	X
NFIP Community Rating System Participant		

Appendix F: Capability Assessment

COMMUNITY CAPABILITY CHECKLIST	<i>Tom Green County</i>	<i>City of San Angelo</i>
Enrolled as a Storm Ready Community	X	X
Property Acquisition Program		
Public Education/Awareness Programs	X	X
Storm Drainage Systems Maintenance Program	X	X
Stream Maintenance Program		
Staff/Departments		
Building Code Official		X
Emergency Manager	X	X
Engineer/Public Works Official		X
Environmental Conservation Specialist		
Floodplain Administrator	X	X
GIS Specialist		X
Planner		X
Public Information Official	X	X
Resource Development/Grant Writer		

#12

**RESOLUTION FOR COUNTY OF TOM GREEN
APPROVAL OF HAZARD MITIGATION PLAN**

WHEREAS, natural hazards in Tom Green County, Texas, historically have caused significant disasters with losses of life and property and natural resources damage; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 and Federal Emergency Management Agency (FEMA) require communities to adopt a hazard mitigation action plan to be eligible for the full range of pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, FEMA requires that communities update Hazard Mitigation Action Plans every five years in order to be eligible for the full range of pre-disaster and post-disaster federal funding for mitigation purposes; and

WHEREAS, the County of Tom Green has assessed the community's potential risks and hazards and is committed to planning for a sustainable community and reducing the long-term consequences of natural and man-caused hazards; and

WHEREAS, the City of San Angelo/Tom Green County Hazard Mitigation Plan outlines a mitigation vision, goals and objectives; assesses risk from a range of hazards; and identifies risk reduction strategies and actions for hazards that threaten the community.

NOW THEREFORE BE IT RESOLVED THAT:

1. The City of San Angelo/Tom Green County Hazard Mitigation Plan is approved in its entirety;
2. The County of Tom Green will pursue available funding opportunities for implementation of the proposals designated therein, and will, upon receipt of such funding or other necessary resources, seek to implement the actions contained in the mitigation strategies;
3. The County of Tom Green vests with the County Judge the responsibility, authority, and means to inform all parties of this action; assure that the Hazard Mitigation Plan will be reviewed at least annually; and that any needed adjustments will be presented to the County Commissioners for consideration; and
4. The County of Tom Green agrees to take such other action as may be reasonably necessary to carry out the objectives of the Plan and report on progress as required by FEMA and the Texas Division of Emergency Management (TDEM).

ADOPTED this 14th day of JAN, 2020.

Ralph Hoelscher
Commissioner Ralph Hoelscher, Pct. 1

Absent
Judge Stephen C. Floyd

Sammy Farmer
Commissioner Sammy Farmer, Pct. 2

Rick Bacon
Commissioner Rick Bacon, Pct. 3

Co. Judge
Pct. 4

Bill Ford
Commissioner Bill Ford, Pct. 4

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Charles Michalewicz, Engineer, Engineering Services, 325-657-4201

Meeting Date: March 3, 2020

Item type: Regular Item

Caption:

Consider authorizing a cooperative purchase of High-Density Mineral Bond Surface Treatment (HA5) through an interlocal agreement with the City of Hurst, Texas in the amount of \$513,761.14 and authorizing the City Manager to negotiate and execute all related documents (Presentation made by Operations Assistant Director Patrick Frerich)

Summary/History:

In May 2019, the City of San Angelo issued a Request for Bids for High-Density Mineral Bond Surface Treatment (RFB: ES-05-19). City received one qualified submission from Andale Construction, Inc. on June 20, 2019. City Council awarded RFB ES-05-19 in the amount of \$218,083.48 to Andale Construction, Inc. on July 2, 2019.

Chapter 791 of the Texas Government Code ("Interlocal Cooperation Act") provides municipalities the ability to procure goods and/or services through contracts awarded by other governmental entities. The purpose of this chapter is to increase the efficiency and effectiveness of local governments by authorizing them to contract with one another.

The City of Hurst, Texas issued a Request for Bids (19-007) for their High-Density Mineral Bond Seal program and awarded the RFB to Andale Construction, Inc. during their May 14, 2019 meeting. Andale Construction, Inc. consented to "piggy-back" procurements as part of their response to the City of Hurst's solicitation.

Therefore, the City of San Angelo wishes to enter an interlocal agreement with the City of Hurst, Texas to procure High-Density Mineral Bond Surface Treatment (HA5) from Andale Construction, Inc. in the amount of \$513,761.14. and authorization for the City Manager to negotiate and execute all related documents.

Financial Impact:

Other Information/Recommendation:

Staff recommends authorization to enter an interlocal agreement with the City of Hurst, Texas to procure High-Density Mineral Bond Surface Treatment (HA5) from Andale Construction, Inc. in the amount of \$513,761.14. and authorization for the City Manager to negotiate and execute all related documents.

Attachments:

- | | |
|---|--|
| 1. INTERLOCAL DRAFT - COSA HURST | INTERLOCAL DRAFT - COSA HURST.docx |
| 2. Pricing HA5 2020 | Pricing HA5 2020.pdf |
| 3. High Density Mineral Bond - 2020-HDMB SEC1 | High Density Mineral Bond - 2020-HDMB SEC1.pdf |
| 4. High Density Mineral Bond - 2020-HDMB SEC2 | High Density Mineral Bond - 2020-HDMB SEC2.pdf |

5. High Density Mineral Bond - 2020-HDMB SEC3
6. High Density Mineral Bond - 2020-HDMB ALT1

High Density Mineral Bond - 2020-HDMB SEC3.pdf
High Density Mineral Bond - 2020-HDMB ALT1.pdf

Presentation:

Approvals/Reviews:

Charles Michalewicz
Lance Overstreet
Theresa James
Nolan Sosa
Tina Dierschke
Theresa James
Julia Antilley

Created/Initiated
Approved
Approved
Approved
Approved
Approved
Final Approval

INTERLOCAL AGREEMENT

This Interlocal Agreement ("Agreement") is made and entered into this 3rd day of MARCH, 2020, by and between the CITY OF HURST, Texas (hereinafter called "CITY OF HURST"), and the CITY OF SAN ANGELO, Texas (hereinafter called "CITY OF SAN ANGELO"), each acting by and through its duly authorized officials:

WHEREAS, CITY OF HURST and CITY OF SAN ANGELO are both governmental entities engaged in the purchase of goods and services, which is a recognized governmental function;

WHEREAS, CITY OF HURST and CITY OF SAN ANGELO wish to enter into this Agreement pursuant to Chapter 791 of the Texas Government Code (hereinafter "Interlocal Cooperation Act") to set forth the terms and conditions upon which CITY OF HURST and CITY OF SAN ANGELO may purchase various goods and services commonly utilized by each party;

WHEREAS, participation in an interlocal agreement will be highly beneficial to the taxpayers of CITY OF HURST and CITY OF SAN ANGELO through the anticipated savings to be realized and is of mutual concern to the contracting parties;

WHEREAS, CITY OF HURST and CITY OF SAN ANGELO have current funds available to satisfy any fees owed pursuant to this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the mutual promises, covenants and obligations as set forth herein; CITY OF HURST and CITY OF SAN ANGELO agree as follows:

1. CITY OF HURST and CITY OF SAN ANGELO may cooperate in the purchase of various goods and services commonly utilized by the participants, where available and applicable, and may purchase goods and services from vendors under present and future contracts.
2. CITY OF HURST and CITY OF SAN ANGELO shall each be individually responsible for payments directly to the vendor and for the vendor's compliance with all conditions of delivery and quality of purchased items under such contracts. CITY OF HURST and CITY OF SAN ANGELO shall each make their respective payments from current revenues available to the paying party.
3. Notwithstanding anything herein to the contrary, participation in this Agreement may be terminated by any party upon thirty (30) days written notice to the other participating party(ies).
4. The undersigned officer and/or agents of the party(ies) hereto are duly authorized officials and possess the requisite authority to execute this Agreement on behalf of the parties hereto.

5. This Agreement may be executed separately by the participating entities, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

6. This Agreement shall become effective on the day and year first written above (the "Effective Date"). The primary term of this Agreement shall be for one (1) year, commencing on the Effective Date, and shall thereafter automatically renew for successive one-year terms, unless terminated according to the terms set forth in Paragraph 3.

7. To the extent allowed by law, each party agrees to release, defend, indemnify, and hold harmless the other (and its officers, agents, and employees) from and against all claims or causes of action for injuries (including death), property damages (including loss of use), and any other losses, demands, suits, judgments and costs, including reasonable attorneys' fees and expenses, in any way arising out of, related to, or resulting from its performance under this agreement, or caused by its negligent acts or omissions (or those of its respective officers, agents, employees, or any other third parties for whom it is legally responsible) in connection with performing this agreement.

8 The laws of the State of Texas shall govern the interpretation, validity, performance and enforcement of this Agreement.

9. The provisions of this Agreement are severable. If any paragraph, section, subdivision, sentence, clause, or phrase of this Agreement is for any reason held by a court of competent jurisdiction to be contrary to law or contrary to any rule or regulation having the force and effect of the law, the remaining portions of the Agreement shall be enforced as if the invalid provision had never been included.

10. This Agreement embodies the entire agreement between the parties and may only be modified in writing executed by both parties.

11. This Agreement shall be binding upon the parties hereto, their successors, heirs, personal representatives and assigns. Neither party will assign or transfer an interest in this Agreement without the written consent of the other party.

12. It is expressly understood and agreed that, in the execution of this Agreement, neither party waives, nor shall be deemed hereby to have waived any immunity or defense that would otherwise be available to it against claims arising in the exercise of governmental powers and functions. By entering into this Agreement, the parties do not create any obligations, express or implied other than those set forth herein, and this Agreement shall not create any rights in parties not signatories hereto.

13. The declarations, determinations and findings declared, made and found in the preamble to this Agreement are hereby adopted, restated and made part of the operative provisions hereof.

EXECUTED hereto on the day and year first above written.

CITY OF HURST, TEXAS

CITY OF SAN ANGELO, TEXAS

By: Clay Caruthers,
City Manager

By: Daniel Valenzuela,
City Manager

STATE OF TEXAS §

COUNTY OF TARRANT §

This instrument was acknowledged before me on the ____ day of _____, 2020, by Clay Caruthers, City Manager of the **CITY OF HURST, TEXAS**, a home-rule municipal corporation, on behalf of such corporation.

Notary Public in and for the
State of Texas

STATE OF TEXAS §

COUNTY OF TOM GREEN §

This instrument was acknowledged before me on the ____ day of _____, 2020, by Daniel Valenzuela, City Manager of the **CITY OF SAN ANGELO, TEXAS**, a home-rule municipal corporation, on behalf of such corporation.

Notary Public in and for the
State of Texas



Project:	HIGH DENSITY MINERAL BOND SURFACE TREATMENT			Addendum #1	
Project Number	2019			11	628
Location:	Sections 1, 2, and 3				
Description:	HDMB Surface Treatment OPCC				
Date:	1-Jan-20				
Estimate By:	M. Gatlin				

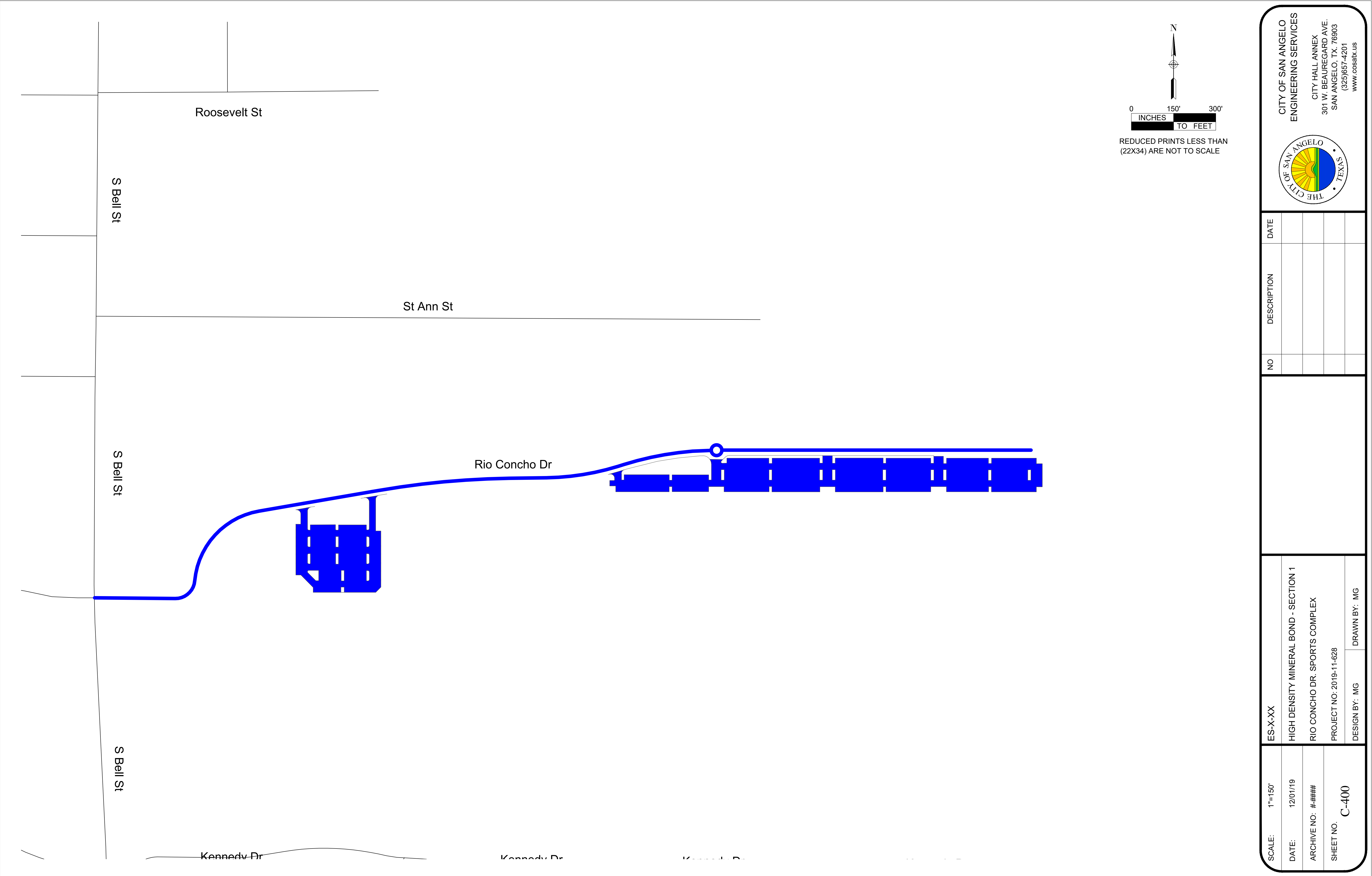
Pavement Improvements

ITEM	CODE	DESCRIPTION	UNITS	EST. QTY.	UNIT COST	AMOUNT
1	500	Mobilization, Job Site Safety, Erosion Protection, and Traffic Control	LS	1	\$ 33,513.00	\$ 33,513.00
2	SPECIAL	Clean, prepare and place surface seal in accordance with attached Bid Item Notes and Specifications	SY	134,777	\$ 3.02	\$ 407,026.54
		CONTINGENCY (10%)		1	\$ 44,053.95	\$ 44,054.00
SUBTOTAL:						\$ 440,539.54
SUBTOTAL w/ CONTINGENCY:						\$ 484,593.54
TOTAL:						\$ 484,593.54

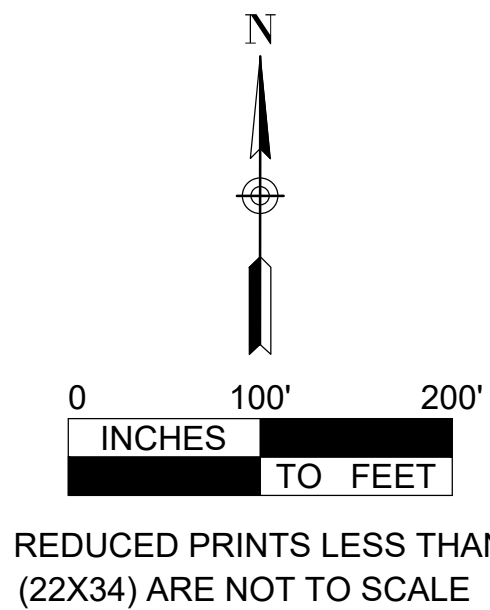
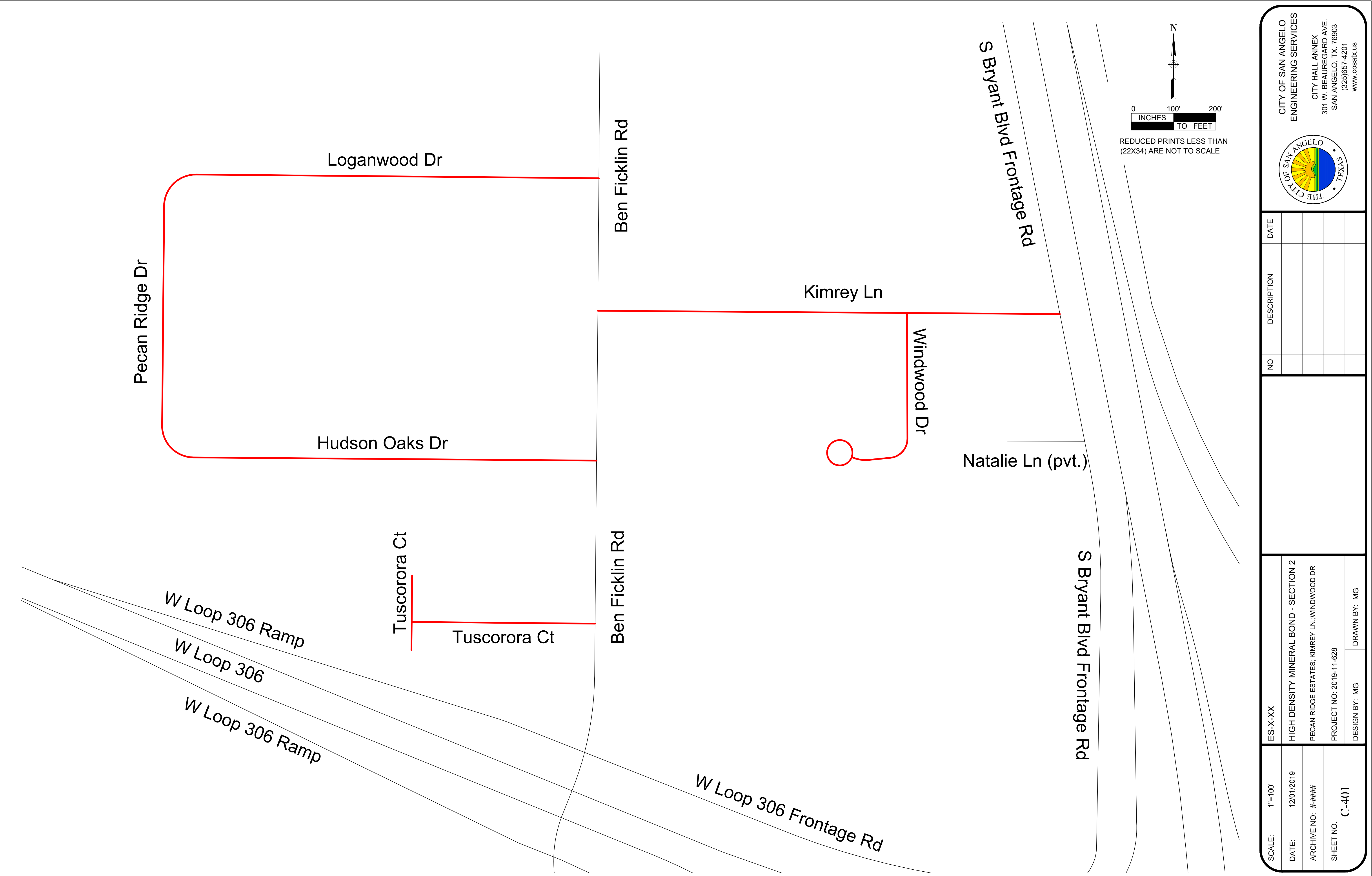
Project:	HIGH DENSITY MINERAL BOND SURFACE TREATMENT - ALTERNATE 1		
Project Number	2019	11	628
Location:	Rio Concho Sports Complex Northern Parking Lot		
Description:	OPCC for High Density Mineral Bond		
Date:	1-Jan-20		
Estimate By:	M. Gatlin		



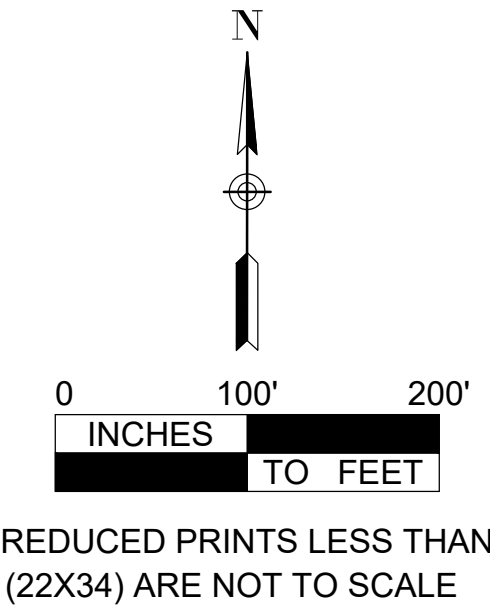
Pavement Improvements						
ITEM	CODE	DESCRIPTION	UNITS	EST. QTY.	UNIT COST	AMOUNT
2	SPECIAL	Clean, prepare and place surface seal in accordance with attached Bid Item Notes and Specifications	SY	8,780.00	\$ 3.02	\$ 26,515.60
		CONTINGENCY (25% FOR ESTIMATE ONLY)		1.00	\$ 2,652.00	\$ 2,652.00
SUBTOTAL:						\$ 26,515.60
SUBTOTAL w/ CONTINGENCY:						\$ 29,167.60
TOTAL:						\$ 29,167.60

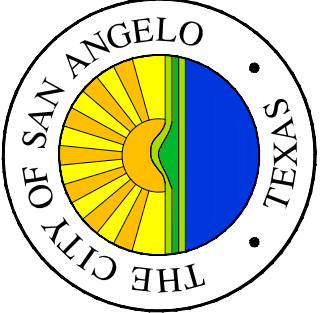


SCALE: 1"=150'		ES-X-XX		CITY OF SAN ANGELO ENGINEERING SERVICES	
DATE: 12/01/19	ARCHIVE NO: #####	HIGH DENSITY MINERAL BOND - SECTION 1 RIO CONCHO DR. SPORTS COMPLEX PROJECT NO: 2019-11-628		CITY HALL ANNEX 301 W. BEAUREGARD AVE. SAN ANGELO, TX. 76903 (325)657-4201 www.cosatx.us	
SHEET NO. C-400		DESIGN BY: MG	DRAWN BY: MG	THE CITY OF SAN ANGELO TEXAS	
				NO	DESCRIPTION
				DATE	



SCALE: 1"=100'		ES-X-XX		CITY OF SAN ANGELO ENGINEERING SERVICES CITY HALL ANNEX 301 W. BEAUREGARD AVE. SAN ANGELO, TX. 76903 (325)657-4201 www.cosatx.us	
DATE: 12/01/2019	ARCHIVE NO: #####	HIGH DENSITY MINERAL BOND - SECTION 2 PECAN RIDGE ESTATES: KIMREY LN, WINDWOOD DR PROJECT NO: 2019-11-628		THE CITY OF SAN ANGELO TEXAS	
SHEET NO. C-401		DESIGN BY: MG	DRAWN BY: MG		NO.
				DESCRIPTION	DATE





CITY OF SAN ANGELO
ENGINEERING SERVICES

CITY HALL ANNEX
301 W. BEAUREGARD AVE.
SAN ANGELO, TX 76903
(325)657-4201
www.cosatx.us

NO	DESCRIPTION	DATE

ES-X-XX

HIGH DENSITY MINERAL BOND - ALT. 1

BELL ST. SPORTS COMPLEX NORTHERN PARKING LOT

PROJECT NO: 2016-11-628

DESIGN BY: MG

DRAWN BY: MG

SCALE: 1"=100'

DATE: 12/01/2019

ARCHIVE NO: #####

SHEET NO. C-403

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Carl White, Parks and Recreation Director, Parks and Recreation, 325-657-4450

Meeting Date: March 3, 2020

Item type: Regular Item

Caption:

Consider allocating up to \$476,100 for equipment replacement, safety improvements, and visitor enhancement projects from the Texas Bank Sports Complex fund balance for facility improvements (Presentation made by Parks and Recreation Director Carl White)

Summary/History:

We are seeking City Council's approval for funding a series of improvements to the Texas Bank Sports Complex to address several needs. These include maintenance equipment replacements, addressing safety needs, protecting property and equipment, and providing improvements to improve visitor and tournament experiences.

More specifically, they are (including estimated costs and justifications):

Maintenance and operations needs:

- * Toro 4700 mower (replacement) -- \$82,200
- * 75 hp tractor, John Deere 5075E (replacement) -- \$45,000
- * field line paint sprayer (replacement) -- \$2,500
- * storage building at City maintenance yard (to protect equip.) -- \$25,000
- * drainage erosion control (improve safety, protect property) -- \$64,000
- * dugout canopies (replacements) -- \$15,000
- * gate repairs (maintenance, security) -- \$5,000

Tournament and rental support needs:

- * weather warning systems (2), onsite (safety) -- \$34,800
- * restroom trailer (tournament support) -- \$49,800
- * double batting cages, w/ pitching machines, at 3 quads (tournament support, rentals) -- \$39,800
- * golf carts (2) (replacements, tournament support) -- \$17,200
- * scoreboards (4) (replacements) -- \$17,000
- * pitching mounds (4) (replacements, tournament support) -- \$12,800
- * pavilion at playground (tournament support, rentals) -- \$66,000

Financial Impact:

Total estimated costs are \$476,100 and are proposed to come from the Texas Bank Sports Complex Fund 203 balance. The balance of this fund at the end of December 2019 was \$680,693. Making these expenses will leave more than a 75-day operating balance of \$195,179.

See the attached spreadsheet for details.

Other Information/Recommendation:

Attachments:

- | | | |
|----|---|--|
| 1. | TBSC request for use of fund balance January 28, 2020 | TBSC request for use of fund balance January 28, 2020.pptx |
| 2. | Texas Bank Sports Complex possible purchases | Texas Bank Sports Complex possible purchases.pdf |

Presentation:

Approvals/Reviews:

Carl White	Created/Initiated
Theresa James	Approved
Tina Dierschke	Approved
Theresa James	Approved
Julia Antilley	Final Approval



City Council

February 18, 2020





Texas Bank Sports Complex

Fund 203, December 31, 2019 balance	\$680,693
75-day fund balance reserve	\$195,179
Amount available, less reserve	\$485,514



Texas Bank Sports Complex

Maintenance and operations needs	
Toro 4700 mower (replacement)	-\$82,200
75 hp tractor, John Deere 5075E (replacement)	-\$45,000
Field line paint sprayer (replacement)	-\$2,500
Equipment storage structure (protection)	-\$25,000
Drainage erosion control	-\$64,000
Dugout canopies (replacements)	-\$15,000
Gate repairs (security, maintenance)	-\$5,000
Total maintenance and operations needs	-\$238,700



Texas Bank Sports Complex

Tournament and rental support	
Weather warning systems (2)	-\$34,800
Restroom trailer	-\$49,800
Double batting cages (3)	-\$39,800
Golf carts (2)	-\$17,200
Scoreboards (4)	-\$17,000
Pitching mounds (4)	-\$12,800
Pavilion at playground	-\$66,000
Total tournament and rental support needs	-\$237,400



Texas Bank Sports Complex

Total maintenance and operations needs	-\$238,700
Total tournament and rental support needs	-\$237,400
Overall total	-\$476,100
Amount available, less reserve	\$485,514



Texas Bank Sports Complex

- Justifications:
 - Replace existing equipment (improve efficiencies)
 - Protect equipment and property
 - Public safety
 - Rental income
 - Tournaments and indirect economic impact





City Council

February 18, 2020



Texas Bank Sports Complex possible purchases for FY19-20 (January 28, 2020)

Fund 203, December 31, 2019 balance	\$680,693
75-day fund balance reserve	-\$195,179
amount available to spend, less reserve	\$485,514

Park maintenance and operations needs

Recreation tournament and rental support needs

<u>Equipment and/or improvements</u>	<u>Estimated Costs</u>	<u>Item requested</u>	<u>Estimated Costs</u>	<u>Notes on Recreation items</u>
Toro 4700 mower (replacement)	-\$82,200	weather warning systems (2)	-\$34,800	one system each at quads 1 and 3 to improve safety
75 HP tractor, John Deere 5075E (replacement)	-\$45,000	restroom trailer	-\$49,800	for tournament support
Field line paint sprayer (replacement)	-\$2,500	double batting cages (3)	-\$39,800	located @ quads 2, 3 & 4 for tournaments, practices, rentals (w/ pitching machines)
Workshop and storage building (to protect outdoor main. equip.)	-\$25,000	golf carts (2)	-\$17,200	replacements for tournament support
Drainage erosion control	-\$64,000	scoreboards (4)	-\$17,000	replacement of 4 older scoreboards moved originally from 29th St. SC
Dugout canopies (replacements)	-\$15,000	pitching mounds (4)	-\$12,800	replacements for tournament and rental support
Gate repairs (maintenance, security)	-\$5,000	pavilion at playground	-\$66,000	rental facility to be used during tournaments, private events, as well as public use
Total Parks items:	-\$238,700	Total Recreation items:	-\$237,400	
Overall total:			-\$476,100	
		Funds available:	\$485,514	

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Jeremy Valgardson, Airport Director, Airport, 325-659-6409

Meeting Date: March 3, 2020

Item type: Regular Item

Caption:

Consider authorizing the City Manager to negotiate and execute a Task Order with KSA Engineers, Inc. under RFQ AP-02-15, for professional services in the amount of \$169,541, for reconstruction of the entrance road to the San Angelo Regional Airport—Mathis Field; providing for amendment of FAA PFC Funding Application #11; and executing all related documents (Presentation made by Airport Director Jeremy Valgardson)

Summary/History:

This item is to use Passenger Facility Charges (PFCs) to pay for the engineering services and PFC amendment needed to reconstruct the airport entrance road from Knickerbocker to the terminal in both directions. This project has been in our CIP since 2017, and we are required to start construction this summer to utilize the available funding.

Financial Impact:

The money needed will come from the airport PFC fund balance containing over \$1M. These funds will be released and available for use following the next budget revision.

Other Information/Recommendation:

Attachments:

Presentation:

Jeremy Valgardson

Approvals/Reviews:

Jeremy Valgardson	Created/Initiated
Jeremy Valgardson	Approved
Theresa James	Approved
Nolan Sosa	Approved
Tina Dierschke	Approved
Theresa James	Approved
Julia Antilley	Final Approval

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Tina Dierschke, Finance Director, Finance, 325-657-4268

Meeting Date: March 3, 2020

Item type: Regular Item

Caption:

Consider a resolution directing publication of notice of intention to issue combination tax and revenue certificates of obligation to provide funds for street improvement projects; and resolving other matters relating to the subject (Presentation made by Finance Director Tina Dierschke)

Summary/History:

For Council's consideration today is an opportunity for continuing the process of funding the reconstruction and improvement of City streets. This opportunity is in line with the planned issuance of debt in the amount of \$17,500,000 every other year for ten years and beginning in fiscal year 2016. This is the third such debt issue.

Issuing certificates of obligation or general obligation debt takes anywhere from 75 to 90 days from initiation to close.

The notice states the principal amount of the certificates of obligation, the approved projects, the proposed repayment method of the property tax levy for debt service, and the regular Council meetings at which the ordinance authorizing the issuance and sale of certificates of obligation will be considered.

Approval of this publication yields compliance with the issuance of certificates of obligation process as set forth under the Texas Government Code, Chapter 551 regarding open meetings.

Financial Impact:

A total of \$17,500,000 General Fund expenditure to be financed by issuance of certificates of obligation.

Other Information/Recommendation:

Staff recommends approval.

Attachments:

- | | |
|--|---|
| 1. Timeline San Angelo GO Ref CO Series 2020 (004) | Timeline San Angelo GO Ref CO Series 2020 (004).pdf |
| 2. San Angelo CO Resolution Notice DRAFT v3 | San Angelo CO Resolution Notice DRAFT v3.pdf |

Presentation:

Tina Dierschke

Approvals/Reviews:

Tina Dierschke	Created/Initiated
Theresa James	Approved
Tina Dierschke	Approved
Theresa James	Approved

Julia Antilley

Final Approval

CITY OF SAN ANGELO, TEXAS
\$* GENERAL OBLIGATION REFUNDING BONDS, SERIES 2020 (THE “BONDS”)
\$* CERTIFICATES OF OBLIGATION, SERIES 2020 (THE “CERTIFICATES”)

FINANCING SCHEDULE*

AS OF FEBRUARY 11, 2020

March							April							May						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30
														31						

Date	Task
Tuesday, March 3, 2020	<u>City Council Meeting</u> - Financing update from SPFI for the issuance of Bonds and Certificates. The City Council will consider an Ordinance authorizing the publication of the notice of intent to issue the Certificates. (8:30 AM)
Week of: Monday, March 9, 2020	SPFI distributes the Preliminary Official Statement (“POS”) for comments and requests rating from S&P Global Ratings (“S&P”) & Fitch Ratings (“Fitch”).
Tuesday, March 10, 2020	First publication of notice of intent to issue Certificates in the newspaper of general circulation.
Tuesday, March 17, 2020	Second publication of notice of intent to issue Certificates in the newspaper of general circulation.
Week of: Monday, March 23, 2020	Conference call with S&P and Fitch.
Wednesday, April 8, 2020	Receive rating from S&P and Fitch.
Friday, April 24, 2020	SPFI to post the POS.
Monday, May 4, 2020	<u>Competitive Sale</u> - Receive bids on the Bonds and Certificates from broker/dealers. The bids are tabulated and verified by SPFI. (1:00 PM)
Tuesday, May 5, 2020	<u>City Council Meeting - Award</u> - The City Council will consider the Ordinance authorizing the issuance of the Bonds and Certificates and awarding to the winning bidders. (8:30 AM)
Wednesday May 27, 2020	<u>Closing Date</u> – Proceeds from the Bonds are delivered to the escrow fund. Proceeds from the Certificates are delivered into the construction fund.

*Preliminary, subject to change.

Denotes City Council Meeting Date
 Denotes Closing Date

RESOLUTION

RESOLUTION DIRECTING PUBLICATION OF NOTICE OF INTENTION TO ISSUE COMBINATION TAX AND REVENUE CERTIFICATES OF OBLIGATION TO PROVIDE FUNDS FOR STREET IMPROVEMENT PROJECTS; AND RESOLVING OTHER MATTERS RELATING TO THE SUBJECT

WHEREAS, this City Council deems it advisable to authorize publication of notice of intent to issue certificates of obligation for the purposes hereinafter set forth; and

WHEREAS, the City of San Angelo (the "City") expects to pay expenditures in connection with the projects described in "Exhibit A" to this Resolution prior to the issuance of the certificates of obligation hereinafter described;

WHEREAS, this City Council hereby finds, considers and declares that the reimbursement of the payment by the City of such expenditures will be appropriate and consistent with the lawful objectives of the City and, as such, chooses to declare its intention, in accordance with the provisions of Section 1.150-2 of the U.S. Treasury Regulations, to reimburse itself for such payments at such time as it issues the hereinafter described certificates of obligation;

WHEREAS, it is hereby officially found and determined that the meeting at which this Resolution was considered was open to the public, and public notice of the time, place and purpose of said meeting was given, all as required by Chapter 551, Texas Government Code.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SAN ANGELO, TEXAS:

Section 1. Attached hereto and marked "Exhibit A" is a form of notice, the form and substance of which are hereby passed and approved.

Section 2. The City Clerk shall cause said notice to be published in substantially the form attached hereto, in a newspaper, as defined by Subchapter C, Chapter 2051, Texas Government Code, of general circulation in the area of said City, once a week for two consecutive weeks, with the date of the first publication to be before the 45th day before the date tentatively set for the passage of the ordinance authorizing the issuance of the certificates, and, if the City maintains an Internet website, continuously on the City's website for at least 45 days before the date tentatively set for the passage of the ordinance authorizing the issuance of the certificates.

Section 3. All costs to be reimbursed pursuant hereto will be capital expenditures; the proposed certificates of obligation shall be issued within 18 months of the later of (i) the date the expenditures are paid or (ii) the date on which the property, with respect to which such expenditures were made, is placed in service; and the foregoing notwithstanding, the certificates of obligation will not be issued pursuant to this Resolution on a date that is more than three years after the date any expenditure which is to be reimbursed is paid.

Section 4. This Resolution shall be effective immediately upon adoption.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF SAN ANGELO,
TEXAS, this 3rd day of March, 2020.

Brenda Gunter, Mayor

ATTEST:

Julia Antilley, City Clerk

[CITY SEAL]

Approved As to Form:

Approved As to Content:

Rodolfo Segura Jr
McCall, Parkhurst & Horton L.L.P.

Tina Dierschke, Director of Finance
City of San Angelo, Texas

EXHIBIT A

CITY OF SAN ANGELO, TEXAS NOTICE OF INTENTION TO ISSUE COMBINATION TAX AND REVENUE CERTIFICATES OF OBLIGATION TO PROVIDE FUNDS FOR STREET IMPROVEMENT PROJECTS

NOTICE IS HEREBY GIVEN that the City Council of the City of San Angelo, Texas, at its meeting to commence at 9:00 A.M. on May 5, 2020, at the McNease Convention Center, 500 Rio Concho Drive, City Council Chambers, San Angelo, Texas, tentatively proposes to adopt an ordinance authorizing the issuance of interest bearing certificates of obligation, in one or more series, in an amount not to exceed \$20,000,000 for paying all or a portion of the City's contractual obligations incurred in connection with (i) constructing and improving streets, roads, alleys, bridges and sidewalks including related utility relocation, drainage, signalization, landscaping, screening walls, lighting and signage; and (ii) legal, fiscal and engineering fees in connection with such projects. The ordinance may authorize an authorized officer of the City to effect the sale and delivery of the certificates of obligation on a date subsequent to the adoption of the ordinance. The estimated interest rate for the certificates is 2.65% per annum, the maximum maturity date for the certificates is February 15, 2040, and the estimated combined principal and interest required to pay the certificates to be authorized on time and in full is \$27,474,707. The current principal of all outstanding debt obligations of the City is \$158,610,000.00. The current combined principal and interest required to pay all outstanding debt obligations of the City on time and in full is \$188,672,569.88. The City proposes to provide for the payment of such certificates of obligation from the levy and collection of ad valorem taxes in the City as provided by law and from a limited pledge of surplus revenues of the City's waterworks and sewer system, remaining after payment of all operation and maintenance expenses thereof, and all debt service, reserve, and other requirements in connection with all of the City's revenue bonds or other obligations (now or hereafter outstanding), which are payable from all or any part of the net revenues of the City's waterworks and sewer system. The certificates of obligation are to be issued, and this notice is given, under and pursuant to the provisions of V.T.C.A., Local Government Code, Subchapter C of Chapter 271.

CITY OF SAN ANGELO, TEXAS

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Tina Dierschke, Finance Director, Finance, 325-657-4268

Meeting Date: March 3, 2020

Item type: Regular Item

Caption:

Consider adopting the following ordinances:

1. Consider adopting an ordinance authorizing the issuance of City of San Angelo, Texas, General Obligation Refunding Bonds, Series 2020; establishing procedures and delegating authority for the sale and delivery of the bonds; levying an ad valorem tax; providing for the security and payment of said bonds; providing an effective date; and enacting other provisions relating to the subject
2. Consider adopting an ordinance authorizing the issuance and sale of City of San Angelo, Texas Waterworks and Sewer System Revenue Refunding Bonds, Taxable Series 2020; establishing procedures for the sale and delivery of the Bonds; providing for the security for and payment of such Bonds; and authorizing and enacting other matters and provisions relating to the subject (Presentation made by Finance Director Tina Dierschke)

Summary/History:

1. Discussion regarding the possibility of refinancing Series 2011A Certificates and 2011 G.O. bonds for general and water capital improvement projects. Refinancing will allow the negotiation of a lower interest rate and will create savings for the City.

The parameters ordinance would set the following parameters:

- > The refunding would yield a net present value savings of 3% or greater.

2. Discussion regarding the possibility of refinancing Series 2017 bonds for water capital improvement projects. Refinancing will allow the negotiation of a lower interest rate and will create savings for the City.

The parameters ordinance would set the following parameters:

- > The Refunding Bonds will maintain the 2022 Optional Redemption Feature.
- > Matches the final maturity of the existing 2017 Revenue Bonds (2046).

Financial Impact:

1. The general debt service fund and the water utility could realize a combined annual savings of approximately \$40,000 per year and a total savings of approximately \$190,000.
2. The water utility could realize an annual savings in excess of \$150,000 per year and a total savings of approximately \$4 million.

Other Information/Recommendation:

Attachments:

- | | | |
|----|---|---|
| 1. | Ordinance (Parameters) v1 | Ordinance (Parameters) v1.pdf |
| 2. | 2.24.20 - San Angelo - Refunding Update | 2.24.20 - San Angelo - Refunding Update.pdf |
| 3. | Ordinance (Parameters) v1 | Ordinance (Parameters) v1.pdf |

Presentation:**Approvals/Reviews:**

Tina Dierschke	Created/Initiated
Tina Dierschke	Approved
Theresa James	Approved
Tina Dierschke	Approved
Theresa James	Approved
Julia Antilley	Final Approval

ORDINANCE NO. 2020-____

AUTHORIZING THE ISSUANCE AND SALE OF CITY OF SAN ANGELO, TEXAS WATERWORKS AND SEWER SYSTEM REVENUE REFUNDING BONDS, TAXABLE SERIES 2020; ESTABLISHING PROCEDURES FOR THE SALE AND DELIVERY OF THE BONDS; PROVIDING FOR THE SECURITY FOR AND PAYMENT OF SUCH BONDS; AND AUTHORIZING AND ENACTING OTHER MATTERS AND PROVISIONS RELATING TO THE SUBJECT

THE STATE OF TEXAS	§
COUNTY OF TOM GREEN	§
CITY OF SAN ANGELO	§

WHEREAS, Chapter 1502, Texas Government Code, as amended (“Chapter 1502”), provides that the governing body of a municipality may issue public securities for the purposes hereinafter provided, and the City Council (the “City Council”) of the City of San Angelo, Texas (the “Issuer”) finds and determines that it is necessary, useful and appropriate for the Issuer’s public purposes to authorize and provide for the issuance and sale of revenue bonds of the Issuer for such purposes, as hereinafter provided;

WHEREAS, there are presently outstanding the Issuer’s Waterworks and Sewer System Improvement Revenue Bonds, Taxable Series 2017, dated May 15, 2017 and scheduled to mature on February 15 in each of the years 2021 through 2032, inclusive, 2037, and 2046, currently outstanding in the aggregate principal amount of \$45,020,000 (the “Eligible Refunded Obligations”);

WHEREAS, the Issuer now desires to refund all or part of the Eligible Refunded Obligations, and those Eligible Refunded Obligations designated by the Designated Financial Officer in the Pricing Certificate, each as defined below, to be refunded are herein referred to as the “Refunded Obligations”;

WHEREAS, Chapter 1207, Texas Government Code, authorizes the Issuer to issue refunding bonds and to deposit the proceeds from the sale thereof, together with any other available funds or resources, directly with a paying agent for any of the Refunded Obligations or a trust company or commercial bank that does not act as a depository for the Issuer and is named in these proceedings, and such deposit, if made before the payment dates of the Refunded Obligations, shall constitute the making of firm banking and financial arrangements for the discharge and final payment of the Refunded Obligations;

WHEREAS, Chapter 1207, Texas Government Code, further authorizes the Issuer to enter into an escrow agreement with such paying agent for the Refunded Obligations or trust company or commercial bank with respect to the safekeeping, investment, reinvestment, administration and disposition of any such deposit, upon such terms and conditions as the Issuer and such paying agent or trust company or commercial bank may agree;

WHEREAS, this City Council hereby finds and determines that it is a public purpose and in the best interests of the Issuer to refund the Refunded Obligations in order to achieve a present value debt service savings of at least 5.00%, with such savings, among other information and terms to be included in a pricing certificate (the “Pricing Certificate”) to be executed by the Designated Financial Officer (hereinafter designated), all in accordance with the provisions of Section 1207.007, Texas Government Code;

WHEREAS, all the Refunded Obligations mature or are subject to redemption prior to maturity within 20 years of the date of the bonds hereinafter authorized;

WHEREAS, the revenue bonds hereinafter authorized to be issued and are to be issued, sold and delivered pursuant to the general laws of the State of Texas, including Texas Government Code, Chapters 1207 and 1502, as amended, and the Issuer's Home Rule Charter; and

WHEREAS, it is officially found, determined, and declared that the meeting at which this Ordinance has been adopted was open to the public and public notice of the time, place and subject matter of the public business to be considered and acted upon at said meeting, including this Ordinance, was given, all as required by the applicable provisions of Texas Government Code, Chapter 551; Now, Therefore

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANGELO, TEXAS:

Section 1. DEFINITIONS.

"*2020 Reserve Fund*" means the special fund to be created, established and maintained by the provisions of Sections 7 and 11 of this Ordinance, if directed by the Designated Financial Officer in the Pricing Certificate pursuant to Section 3 hereof.

"*Accountant*" means an independent certified public accountant or accountants or a firm of independent certified public accountants, in either case, with demonstrated expertise and competence in public accountancy.

"*Additional First Lien Obligations*" means bonds, notes, warrants, certificates of obligation, contractual obligations or other Debt which the Issuer reserves the right to issue or enter into, as the case may be, in the future under the terms and conditions provided in Section 16 of this Ordinance and which obligations are equally and ratably secured solely by a first lien on and pledge of the Pledged Revenues on a parity with the Bonds and other First Lien Obligations.

"*Annual Debt Service Requirements*" means, as of the date of calculation, the principal of and interest on all First Lien Obligations coming due at Maturity or Stated Maturity (or that could come due on demand of the owner thereof or other demand conditioned upon default by the Issuer on such Debt, or be payable in respect of any required purchase of such Debt by the Issuer) in such Year, and, for such purposes, any one or more of the following rules shall apply at the election of the Issuer:

(1) Balloon Debt. If the principal (including the accretion of interest resulting from original issue discount or compounding of interest) of any series or issue of Funded Debt due (or payable in respect of any required purchase of such Funded Debt by the Issuer) in any Year either is equal to at least 25% of the total principal (including the accretion of interest resulting from original issue discount or compounding of interest) of such Funded Debt or exceeds by more than 50% the greatest amount of principal of such series or issue of Funded Debt due in any preceding or succeeding Year (such principal due in such Year for such series or issue of Funded Debt being referred to herein and throughout this Ordinance as "Balloon Debt"), the amount of principal of such Balloon Debt taken into account during any Year shall be equal to the debt service calculated using the original principal amount of such Balloon Debt amortized over the Term of Issue on a level debt service basis at an assumed interest rate equal to the rate borne by such Balloon Debt on the date of calculation;

(2) Consent Sinking Fund. In the case of Balloon Debt, if a Designated Financial Officer shall deliver to the Issuer a certificate providing for the retirement of (and the instrument creating such Balloon Debt shall permit the retirement of), or for the accumulation of a sinking fund for (and the instrument creating such Balloon Debt shall permit the accumulation of a sinking fund for), such Balloon Debt according to a fixed schedule stated in such certificate ending on or before the Year in which such principal (and premium, if any) is due, then the principal of (and, in the case of retirement, or to the extent provided for by the sinking fund accumulation, the premium, if any, and interest and

other debt service charges on) such Balloon Debt shall be computed as if the same were due in accordance with such schedule, provided that this clause (2) shall apply only to Balloon Debt for which the installments previously scheduled have been paid or deposited to the sinking fund established with respect to such Debt on or before the times required by such schedule; and provided further that this clause (2) shall not apply where the Issuer has elected to apply the rule set forth in clause (1) above;

(3) Prepaid Debt. Principal of and interest on Bonds and Additional First Lien Obligations, or portions thereof, shall not be included in the computation of the Annual Debt Service Requirements for any Year for which such principal or interest are payable from funds on deposit or set aside in trust for the payment thereof at the time of such calculations (including without limitation capitalized interest and accrued interest so deposited or set aside in trust) with a financial institution acting as fiduciary with respect to the payment of such Debt; and

(4) Variable Rate. As to any First Lien Obligations that bear interest at a variable interest rate which cannot be ascertained at the time of calculation of the Annual Debt Service Requirement then, at the option of the Issuer, either (A) an interest rate equal to the average rate borne by such First Lien Obligations (or by comparable debt in the event that such First Lien Obligations has not been outstanding during the preceding 24 months) for any 24 month period ending within 30 days prior to the date of calculation, or (B) an interest rate equal to the 30-year Revenue Bond Index (as most recently published in The Bond Buyer), shall be presumed to apply for all future dates, unless such index is no longer published in The Bond Buyer, in which case an index of revenue bonds with maturities of at least 20 years which is published in a financial newspaper or journal with national circulation may be used for this purpose (if two Series of First Lien Obligations which bear interest at variable interest rate, or one or more maturities within a Series, of equal par amounts, are issued simultaneously with inverse floating interest rates providing a composite fixed interest rate for such First Lien Obligations taken as a whole, such composite fixed rate shall be used in determining the Annual Debt Service Requirement with respect to such First Lien Obligations);

With respect to any calculation of historic data, only those payments actually made in the subject period shall be taken into account in making such calculation and, with respect to prospective calculations, only those payments reasonably expected to be made in the subject period shall be taken into account in making the calculation.

“Average Annual Debt Service Requirements” means that average amount which, at the time of computation, will be required to pay the Annual Debt Service Requirements when due (either at Stated Maturity or mandatory redemption) and derived by dividing the total of such Annual Debt Service Requirements by the number of Years then remaining before Stated Maturity of such First Lien Obligations. For the purposes of this definition, a fractional period of a Year shall be treated as an entire Year. Capitalized interest payments provided from bond proceeds, accrued interest on any Debt, and interest earnings thereon shall be excluded in making such computation.

“Bonds” means, the City of San Angelo, Texas Waterworks and Sewer System Revenue Refunding Bonds, Taxable Series 2020 authorized by this Ordinance and in the amounts and containing the terms set forth herein.

“Capital Addition” means a reservoir or an interest therein, a water treatment plant or an interest therein, a wastewater treatment plant or an interest therein, the acquisition of rights or improvements that will increase the capacity and/or water supply of the System or an interest therein, and associated transmission facilities with respect to each and any combination thereof, and which shall become a part of the System.

“City Council” means the governing body of the Issuer.

“*Code*” means the Internal Revenue Code of 1986, as amended, and the applicable regulations and rules promulgated in connection therewith.

“*Debt*” means:

(1) all indebtedness payable from Pledged Revenues incurred or assumed by the Issuer for borrowed money and all other financing obligations of the System payable from Pledged Revenues that, in accordance with generally accepted accounting principles, are shown on the liability side of a balance sheet; and

(2) all other indebtedness payable from Pledged Revenues for borrowed money or for the acquisition, construction or improvement of property or capitalized lease obligations pertaining to the System that is guaranteed, directly or indirectly, in any manner by the Issuer, or that is in effect guaranteed, directly or indirectly, by the Issuer through an agreement, contingent or otherwise, to purchase any such indebtedness or to advance or supply funds for the payment or purchase of any such indebtedness or to purchase property or services primarily for the purpose of enabling the debtor or seller to make payment of such indebtedness, or to assure the owner of the indebtedness against loss, or to supply funds to or in any other manner invest in the debtor (including any agreement to pay for property or services irrespective of whether or not such property is delivered or such services are rendered), or otherwise.

For the purpose of determining Debt, there shall be excluded any particular Debt if, upon or prior to the Maturity thereof, there shall have been deposited with the proper depository (a) in trust the necessary funds (or investments that will provide sufficient funds, if permitted by the instrument creating such Debt) for the payment, redemption, or satisfaction of such Debt or (b) evidence of such Debt deposited for cancellation; and thereafter it shall not be considered Debt. No item shall be considered Debt unless such item constitutes indebtedness under generally accepted accounting principles applied on a basis consistent with the financial statements of the System in prior Years.

“*Defeasance Securities*” means a security described in Section 20 of this Ordinance.

“*Depository*” means one or more official depository banks of the Issuer.

“*DTC*” means The Depository Trust Company, New York, New York.

“*DTC Participant*” means securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations on whose behalf DTC was created to hold securities to facilitate the clearance and settlement of securities transactions among DTC Participants.

“*Designated Financial Officer*” means the City Manager, Assistant City Manager, or the Finance Director of the Issuer, or such other financial or accounting official of the Issuer so designated by the Issuer.

“*Event of Default*” means an event as described in Section 26 of this Ordinance.

“*First Lien Obligations*” means the Series 2017 Bonds, the Series 2019 Bonds, the Bonds and any Additional First Lien Obligations hereafter issued by the Issuer or obligations issued to refund any of the foregoing (as determined within the sole discretion of the City Council in accordance with applicable law) if issued in a manner that provides that the refunding bonds are payable from and equally and ratably secured by a first lien on and pledge of the Pledged Revenues.

“First Lien Obligation Reserve Requirement” means the amount or a manner of calculating the amount established by each ordinance authorizing the issuance of First Lien Obligations that are to be secured by a debt service reserve fund to be held and maintained on deposit therein. With respect to the Bonds, such amount is the Required Reserve Amount established in Section 11(a) hereof.

“Funded Debt” means all First Lien Obligations created or assumed by the Issuer that mature by their terms (in the absence of the exercise of any earlier right of demand), or that are renewable at the option of the Issuer to a date, more than one year after the original creation or assumption of such Debt by the Issuer.

“Gross Revenues” mean all revenues, income and receipts of every nature derived or received by the Issuer from the operation and ownership of the System (other than grant monies, customer deposits, and other similar funds that cannot lawfully be used to pay debt service), including the interest income from investment or deposit of money in any fund created by this Ordinance or maintained by the Issuer in connection with the System.

“Holder” or *“Holders”* means the registered owner, whose name appears in the Registration Books, for any First Lien Obligation.

“Interest and Sinking Fund” means the special fund maintained by the provisions of Sections 7 and 10 of the Series 2017 Ordinance and reconfirmed in the Series 2019 Ordinance and in this Ordinance.

“Issuer” means the City of San Angelo, Texas, in Tom Green County, Texas.

“Maturity” means, when used with respect to any Debt, the date on which the principal of such Debt or any installment thereof becomes due and payable as therein provided, whether at the Stated Maturity thereof, or call for redemption, or otherwise.

“Maximum Annual Debt Service Requirements” means the greatest requirement of Annual Debt Service Requirements (taking into account all mandatory principal redemption requirements) scheduled to occur in any future Year or in the then current Year for the particular obligations for which such calculation is made. Capitalized interest payments provided from Debt proceeds, accrued interest on any Debt, and interest earnings thereon shall be excluded in making such computation.

“Net Earnings” means the Gross Revenues of the System after deducting the Operating Expenses of the System but not depreciation or other expenditures which, under standard accounting practice, should be charged to capital expenditures.

“Net Revenues” mean all Gross Revenues remaining after deducting Operating Expenses.

“Operating Expenses” means the reasonable and necessary expenses of operation and maintenance of the System, including all salaries, labor, materials, repairs and extensions necessary to render efficient service (but only such repairs and extensions as, in the judgment of the Issuer, are necessary to keep the System in operation and render adequate service or such as might be necessary to meet some physical accident or conditions which would otherwise impair the First Lien Obligations), and all payments under contracts for materials and services (including water supply contracts) provided to the Issuer that are required to enable the Issuer to render efficient service. Depreciation shall never be considered as an Operating Expense.

“Ordinance” means this ordinance finally adopted by the City Council on March 3, 2020.

“Outstanding” means, when used with respect to First Lien Obligations, as of the date of determination, all First Lien Obligations theretofore delivered under this Ordinance and any ordinance authorizing Additional First Lien Obligations, except:

(1) First Lien Obligations theretofore cancelled and delivered to the Issuer or delivered to the Paying Agent/Registrar for cancellation;

(2) First Lien Obligations deemed paid pursuant to the provisions of Section 20 of this Ordinance or any comparable section of any ordinance authorizing Additional First Lien Obligations;

(3) First Lien Obligations upon transfer of or in exchange for and in lieu of which other First Lien Obligations have been authenticated and delivered pursuant to this Ordinance and any ordinance authorizing Additional First Lien Obligations; and

(4) First Lien Obligations under which the obligations of the Issuer have been released, discharged or extinguished in accordance with the terms thereof.

“Paying Agent/Registrar” means the bank initially selected by the Issuer to serve as paying agent and registrar for the Bonds, being BOKF, N.A. in Dallas, Texas, or any successor thereto as provided in this Ordinance.

“Permitted Investments” means any security or obligation or combination thereof permitted under the Public Funds Investments Act, Chapter 2256, Texas Government Code, as amended or other applicable law.

“Pledged Revenues” means

(1) the Net Revenues, plus

(2) any additional revenues, income, receipts, or other resources, including, without limitation, any grants, donations or income received or to be received from the United States Government, or any other public or private source, whether pursuant to an agreement or otherwise, which hereafter are pledged by the Issuer to the payment of the First Lien Obligations, and excluding those revenues excluded from Gross Revenues or excluded from Net Revenues.

“Rating Agency” means any nationally recognized securities rating agency which has assigned, at the request of the Issuer, a rating to the First Lien Obligations.

“Record Date” means Record Date as defined in the Form of Bonds in Section 5 of this Ordinance.

“Registration Books” means the books or records for the registration of the transfer, conversion and exchange of the Bonds kept by the Paying Agent/Registrar.

“Required Reserve Amount” means an amount equal to the Average Annual Debt Service Requirements on the Bonds outstanding as of the Required Reserve Amount Computation Date.

“Required Reserve Amount Computation Date” means the Delivery Date of the Bonds, and each date Bonds are redeemed pursuant to Section 5 hereof or the earlier date such Bonds are defeased pursuant to Section 20 hereof.

“Required Reserve Fund Deposits” means the deposits and credits, if any, required to be made to the 2020 Reserve Fund pursuant to the provisions of Section 11 of this Ordinance.

“Reserve Fund Obligation” means, to the extent permitted by law, (i) a policy of insurance or a surety bond, issued by an issuer of policies of insurance insuring the timely payment of debt service on governmental obligations, provided that a Rating Agency having an outstanding rating on First Lien Obligations would rate the First Lien Obligations fully insured by a standard policy issued by the issuer of such Reserve Fund Obligation in its two highest generic rating categories for such obligations; and (ii) a letter or line of credit issued by any financial institution, provided that a Rating Agency having an outstanding rating on the First Lien Obligations would rate the First Lien Obligations in any one of its two highest generic rating categories for such obligations if the letter or line of credit proposed to be issued by such financial institution secured the timely payment of the entire principal amount of the First Lien Obligations and the interest thereon.

“Reserve Fund Obligation Payment” means any subrogation payment the Issuer is obligated to make from Pledged Revenues deposited in the 2020 Reserve Fund with respect to a Reserve Fund Obligation.

“Series” or *“Series of Bonds”* means any designated series of Bonds issued pursuant to this Ordinance.

“Series 2017 Bonds” means the “City of San Angelo, Texas Waterworks and Sewer System Improvement Revenue Bonds, Taxable Series 2017,” dated as of May 15, 2017.

“Series 2017 Ordinance” means the ordinance adopted by the City Council on December 6, 2016, authorizing the issuance and sale of the Series 2017 Bonds.

“Series 2019 Bonds” means the “City of San Angelo, Texas Waterworks and Sewer System Improvement Revenue Bonds, Series 2019,” dated as of October 15, 2019.

“Series 2019 Ordinance” means the ordinance adopted by the City Council on October 15, 2019, authorizing the issuance and sale of the Series 2019 Bonds.

“Special Project” means any water, sewer, wastewater reuse system property, improvement or facility or other public improvement declared by the Issuer not to be part of the System, for which the costs of acquisition, construction and installation are paid from proceeds of Special Project Bonds and for which all maintenance and operation expenses are payable from sources other than Pledged Revenues, but only to the extent that and for so long as all or any part of the revenues or proceeds of which are or will be pledged to secure the payment or repayment of such costs of acquisition, construction and installation under such financing transaction.

“Special Project Bonds” means special revenue obligations of the Issuer which are not secured by the Pledged Revenues, but which are secured by and payable solely from special contract revenues or payments received from the System, any other legal entity, or any combination thereof, in connection with a Special Project; and such revenues or payments shall not be considered as or constitute Gross Revenues of the System, unless and to the extent otherwise provided in the ordinance or ordinances authorizing the issuance of such Special Project Bonds.

“Stated Maturity” means the annual principal payments of the First Lien Obligations payable on the respective dates set forth in the ordinances which authorized the issuance of such First Lien Obligations.

“Subordinate Lien Obligations” means any bonds, notes, warrants, certificates of obligation, contractual obligations or other Debt issued by the Issuer that are payable from or reasonably expected to be payable in whole from, and equally and ratably secured by a lien on and pledge of the Pledged Revenues,

such pledge being subordinate and inferior to the lien on and pledge of the Pledged Revenues that are or will be pledged to the payment of any First Lien Obligations issued by the Issuer.

“*System*” means the Issuer’s existing combined water and sewer system, together with all future extensions, improvements, enlargements, and additions thereto, and all replacements thereof; provided that, notwithstanding the foregoing, and to the extent now or hereafter authorized or permitted by law, the term System shall not include any Special Projects which are hereafter acquired or constructed by the Issuer with the proceeds of Special Project Bonds.

“*System Fund*” means the special fund created by the provisions of Sections 7 and 8 of the Series 2017 Ordinance and confirmed in the Series 2019 Ordinance and in this Ordinance.

“*Term of Issue*” means with respect to any Balloon Debt, a period of time equal to the greater of (i) the period of time commencing on the date of issuance of such Balloon Debt and ending on the final maturity date of such Balloon Debt or (ii) twenty-five years.

“*Year*” means the regular fiscal year used by the Issuer in connection with the operation of the System, currently September 30 of each year, which may be any twelve consecutive month period established by the Issuer.

Section 2. RECITALS, AMOUNT, DESIGNATION, DATE, AND PURPOSE OF THE BONDS.

(a) The recitals set forth in the preamble hereof are incorporated herein and shall have the same force and effect as if set forth in this Section.

(b) The bonds of the City of San Angelo, Texas (the “Issuer”) are hereby authorized to be issued and delivered in one or more Series in the maximum aggregate principal amount of \$49,500,000 (determined without regard to premium or discount affecting the sale price) for the public purposes of (i) constructing, installing, acquiring and equipping additions, extensions and improvements to the Issuer’s System, to wit: improvements to the Issuer’s wellfield in the Hickory Aquifer, raw water collection lines, transmission lines, and water treatment plant (ii), to fund the 2020 Reserve Fund, and (iii) to pay the costs incurred in connection with the issuance of the Bonds (the “Project”).

(c) Each bond issued pursuant to this Ordinance shall be designated: “CITY OF SAN ANGELO, TEXAS, WATERWORKS AND SEWER SYSTEM REVENUE REFUNDING BOND, TAXABLE SERIES 2020” with each Series of Bonds having a letter designation following the year, starting with “A”, and with such changes as designated by the Designated Financial Officer pursuant to Section 3. Initially there shall be issued, sold and delivered hereunder fully registered bonds, without interest coupons, payable to the respective Registered Owners thereof (with the Initial Bond being made payable to the Purchaser as described in Section 25 hereof). The terms “Bonds” as used herein shall mean and include collectively all bonds initially issued hereunder (the “Initial Bonds”) and all substitute bonds exchanged therefor, as well as all other substitute bonds and replacement bonds issued pursuant hereto, and the term “Bond” shall mean any of the Bonds. The Bonds shall be in the respective principal amounts, shall be numbered, shall mature and be payable on the date or dates in each of the years and in the principal amounts, and shall bear interest to their respective dates of maturity or redemption prior to maturity at the rates per annum, as set forth in the Pricing Certificate s.

Section 3. DELEGATION TO DESIGNATED FINANCIAL OFFICER. (a) As authorized by Section 1207.007, Texas Government Code, as amended, each Designated Financial Officer is hereby authorized to act on behalf of the Issuer in selling and delivering each Series of the Bonds, and carrying out the other procedures specified in this Ordinance, including, determining the date of sale of the Bonds, the date of the Bonds, any additional or different designation or title by which the Bonds shall be known, the price at

which the Bonds will be sold, the years in which the Bonds will mature, the principal amount to mature in each of such years, the rate of interest to be borne by each such maturity, the interest payment and record dates, the use of capitalized interest, the price and terms upon and at which the Bonds shall be subject to redemption prior to maturity at the option of the Issuer, as well as any mandatory sinking fund redemption provisions, whether a Series will be issued as Tax-Exempt Bonds or Taxable Bonds, the authorized denominations of and the method for the calculation of interest for any Taxable Bonds, whether a reserve fund shall be established for a Series of Bonds pursuant to Sections 7 and 10 hereof, and all other matters relating to the issuance, sale, and delivery of the Bonds and the refunding of the Refunded Obligations, including without limitation establishing the redemption dates for and effecting the redemption of the Refunded Obligations, approving modifications to this Ordinance and executing such instruments, documents and agreements as may be necessary with respect to the issuance of the Bonds, and obtaining municipal bond insurance for all or any portion of the Bonds (including in connection therewith the execution of any commitment agreements, membership agreements in mutual insurance companies, and other similar agreements) and providing for the terms and provisions thereof applicable to the Bonds, all of which shall be specified in the Pricing Certificate; provided that:

- (i) the aggregate original principal amount of the Bonds shall not exceed \$49,500,000;
- (ii) the maximum stated maturity of the Bonds shall not exceed February 15, 2046;
- (iii) the interest rate (True Interest Cost) on the Bonds shall not exceed 4.00% per annum;
- (iv) the refunding must produce a present value debt service savings of at least 5.00%, net of any Issuer contribution to the refunding; and
- (iv) the delegation made hereby shall expire if not exercised by the Designated Financial Officer through execution of the Pricing Certificate on or prior to September 3, 2020.

(b) In establishing the aggregate principal amount of the Bonds, the Pricing Officer shall establish an amount not exceeding the amount authorized in subsection (a)(i) hereof, which shall be sufficient in amount to provide for the purposes for which the Bonds are authorized and to pay costs of issuing the Bonds. The Bonds shall be sold with and subject to such terms as set forth in the Pricing Certificate.

(c) It is hereby found and determined that the refunding of the Refunded Obligations is advisable and necessary in order to restructure the debt service requirements of the Issuer, and that the debt service requirements on the Bonds will be less than those on the Refunded Obligations, resulting in a reduction in the amount of principal and interest which otherwise would be payable. The Refunded Obligations are subject to redemption, at the option of the Issuer, and the Designated Financial Officer is hereby authorized to cause all of the Refunded Obligations to be called for redemption on the respective date or dates consistent with requirements set forth in subsection (a) of this Section, and the proper notices of such redemption to be given, and in each case at a redemption price of par, plus accrued interest to the date fixed for redemption. In furtherance of authority granted by Section 1207.007(b), Texas Government Code, the Designated Financial Officer is further authorized to enter into and execute on behalf of the Issuer with the escrow agent or deposit agent named therein (the "Escrow Agent"), an escrow agreement or deposit agreement, in the form and substance as shall be approved by the Designated Financial Officer, which escrow agreement or deposit agreement will provide for the payment in full of the Refunded Obligations (the "Escrow Agreement").

In addition, the Pricing Officer is authorized to purchase such securities with proceeds of the Bonds, to execute such subscriptions for the purchase of United States Treasury Securities, and to transfer and deposit such cash from available funds, as may be necessary or appropriate for the escrow fund (the "Escrow Fund") described in the Escrow Agreement.

(d) In satisfaction of Section 1201.022(a)(3)(B), Texas Government Code, the City Council hereby determines that the delegation of the authority to the Designated Financial Officer to approve the final terms of the Bonds set forth in this Ordinance is, and the decisions made by the Designated Financial Officer pursuant to such delegated authority and incorporated into the respective Pricing Certificate will be, in the Issuer's best interests, and the Designated Financial Officer is hereby authorized to make and include in each Pricing Certificate a finding to that effect.

Section 4. CHARACTERISTICS OF THE BONDS.

(a) Registration, Transfer, Conversion and Exchange. The Issuer shall keep or cause to be kept at the principal corporate trust office of the Paying Agent/Registrar, books or records for the registration of the transfer, conversion and exchange of the Bonds (the "Registration Books"), and the Issuer hereby appoints the Paying Agent/Registrar as its registrar and transfer agent to keep such books or records and make such registrations of transfers, conversions and exchanges under such reasonable regulations as the Issuer and Paying Agent/Registrar may prescribe; and the Paying Agent/Registrar shall make such registrations, transfers, conversions and exchanges as herein provided within three days of presentation in due and proper form. The Paying Agent/Registrar shall obtain and record in the Registration Books the address of the registered owner of each Bond to which payments with respect to the Bonds shall be mailed, as herein provided; but it shall be the duty of each registered owner to notify the Paying Agent/Registrar in writing of the address to which payments shall be mailed, and such interest payments shall not be mailed unless such notice has been given. The Issuer shall have the right to inspect the Registration Books during regular business hours of the Paying Agent/Registrar, but otherwise the Paying Agent/Registrar shall keep the Registration Books confidential and, unless otherwise required by law, shall not permit their inspection by any other entity. The Issuer shall pay the Paying Agent/Registrar's standard or customary fees and charges for making such registration, transfer, conversion, exchange and delivery of a substitute Bond or Bonds. Registration of assignments, transfers, conversions and exchanges of Bonds shall be made in the manner provided and with the effect stated in the FORM OF BOND set forth in this Ordinance. Each substitute Bond shall bear a letter and/or number to distinguish it from each other Bond.

(b) Authentication. Except as provided in subsection (m) of this Section, an authorized representative of the Paying Agent/Registrar shall, before the delivery of any such Bond, date and manually sign said Bond, and no such Bond shall be deemed to be issued or outstanding unless such Bond is so executed. The Paying Agent/Registrar promptly shall cancel all paid Bonds and Bonds surrendered for conversion and exchange. No additional ordinances, orders or resolutions need be passed or adopted by the governing body of the Issuer or any other body or person so as to accomplish the foregoing conversion and exchange of any Bond or portion thereof, and the Paying Agent/Registrar shall provide for the printing, execution and delivery of the substitute Bonds in the manner prescribed herein. Pursuant to Subchapter D, Chapter 1201, Texas Government Code, the duty of conversion and exchange of Bonds as aforesaid is hereby imposed upon the Paying Agent/Registrar, and, upon the execution of said Bond, the converted and exchanged Bond shall be valid, incontestable, and enforceable in the same manner and with the same effect as the Bonds which initially were issued and delivered pursuant to this Ordinance, approved by the Office of the Attorney General of the State of Texas (the "Attorney General"), and registered by the Office of the Comptroller of Public Accounts of the State of Texas (the "Comptroller").

(c) Payment of Principal and Interest. The Issuer hereby further appoints the Paying Agent/Registrar to act as the paying agent for paying the principal of and interest on the Bonds, all as provided in this Ordinance. The Paying Agent/Registrar shall keep proper records of all payments made by the Issuer and the Paying Agent/Registrar with respect to the Bonds, and of all conversions and exchanges of Bonds, and all replacements of Bonds, as provided in this Ordinance. However, in the event of a nonpayment of interest on a scheduled payment date, and for thirty (30) days thereafter, a new record date for such interest payment (a "Special Record Date") will be established by the Paying Agent/Registrar, if and when funds for the payment

of such interest have been received from the Issuer. Notice of the Special Record Date and of the scheduled payment date of the past due interest (which shall be 15 days after the Special Record Date) shall be sent at least five (5) business days prior to the Special Record Date by United States mail, first class postage prepaid, to the address of each registered owner appearing on the Registration Books at the close of business on the last business day next preceding the date of mailing of such notice.

(d) Payment to Registered Owner. Notwithstanding any other provision of this Ordinance to the contrary, the Issuer and the Paying Agent/Registrar shall be entitled to treat and consider the person in whose name each Bond is registered in the Registration Books as the absolute owner of such Bond for the purpose of payment of principal and interest with respect to such Bond, for the purpose of registering transfers with respect to such Bond, and for all other purposes whatsoever. The Paying Agent/Registrar shall pay all principal of and interest on the Bonds only to or upon the order of the registered owners, as shown in the Registration Books as provided in this Ordinance, or their respective attorneys duly authorized in writing, and all such payments shall be valid and effective to fully satisfy and discharge the Issuer's obligations with respect to payment of principal of and interest on the Bonds to the extent of the sum or sums so paid. No person other than a registered owner, as shown in the Registration Books, shall receive a Bond certificate evidencing the obligation of the Issuer to make payments of principal and interest pursuant to this Ordinance.

(e) Paying Agent/Registrar. The Issuer covenants with the registered owners of the Bonds that at all times while the Bonds are outstanding the Issuer will provide a competent and legally qualified bank, trust company, financial institution or other agency to act as and perform the services of Paying Agent/Registrar for the Bonds under this Ordinance, and that the Paying Agent/Registrar will be one entity. By accepting the position and performing as such, each Paying Agent/Registrar shall be deemed to have agreed to the provisions of this Ordinance, and a certified copy of this Ordinance shall be delivered to each Paying Agent/Registrar.

(f) Substitute Paying Agent/Registrar. The Issuer reserves the right to, and may, at its option, change the Paying Agent/Registrar upon not less than 120 days written notice to the Paying Agent/Registrar, to be effective not later than 60 days prior to the next principal or interest payment date after such notice. In the event that the entity at any time acting as Paying Agent/Registrar (or its successor by merger, acquisition, or other method) should resign or otherwise cease to act as such, the Issuer covenants that promptly it will appoint a competent and legally qualified bank, trust company, financial institution, or other agency to act as Paying Agent/Registrar under this Ordinance. Upon any change in the Paying Agent/Registrar, the previous Paying Agent/Registrar promptly shall transfer and deliver the Registration Books (or a copy thereof), along with all other pertinent books and records relating to the Bonds, to the new Paying Agent/Registrar designated and appointed by the Issuer. Upon any change in the Paying Agent/Registrar, the Issuer promptly will cause a written notice thereof to be sent by the new Paying Agent/Registrar to each registered owner of the Bonds, by United States mail, first-class postage prepaid, which notice also shall give the address of the new Paying Agent/Registrar.

(g) Book-Entry Only System. The Bonds issued in exchange for the Bonds initially issued to the purchaser or purchasers specified herein shall be initially issued in the form of a separate single fully registered Bond for each of the maturities thereof and the ownership of each such Bond shall be registered in the name of Cede & Co., as nominee of DTC, and except as provided in subsections (i) and (j) of this Section, all of the outstanding Bonds shall be registered in the name of Cede & Co., as nominee of DTC.

(h) Blanket Letter of Representations. The previous execution and delivery of the Blanket Issuer Letter of Representations with respect to obligations of the Issuer is hereby ratified and confirmed; and the provisions thereof shall be fully applicable to the Bonds. Notwithstanding anything to the contrary contained herein, while the Bonds are subject to DTC's Book-Entry Only System and to the extent permitted by law, the Blanket Issuer Letter of Representations is hereby incorporated herein and its provisions shall prevail over any other provisions of this Ordinance in the event of conflict.

(i) Bonds Registered in the Name of Cede & Co. With respect to Bonds registered in the name of Cede & Co., as nominee of DTC, the Issuer and the Paying Agent/Registrar shall have no responsibility or obligation to any DTC Participant to hold securities to facilitate the clearance and settlement of securities transactions among DTC Participants or to any person on behalf of whom such a DTC Participant holds an interest in the Bonds. Without limiting the immediately preceding sentence, the Issuer and the Paying Agent/Registrar shall have no responsibility or obligation with respect to (i) the accuracy of the records of DTC, Cede & Co. or any DTC Participant with respect to any ownership interest in the Bonds, (ii) the delivery to any DTC Participant or any other person, other than a registered owner of Bonds, as shown on the Registration Books, of any notice with respect to the Bonds, or (iii) the payment to any DTC Participant or any other person, other than a registered owner of Bonds, as shown in the Registration Books of any amount with respect to principal of or interest on the Bonds. Upon delivery by DTC to the Paying Agent/Registrar of written notice to the effect that DTC has determined to substitute a new nominee in place of Cede & Co., and subject to the provisions in this Ordinance with respect to interest checks being mailed to the registered owner at the close of business on the Record date, the words "Cede & Co." in this Ordinance shall refer to such new nominee of DTC.

(j) Successor Securities Depository; Transfers Outside Book-Entry Only System. In the event that the Issuer determines that DTC is incapable of discharging its responsibilities described herein and in the representation letter of the Issuer to DTC or that it is in the best interest of the beneficial owners of the Bonds that they be able to obtain certificated Bonds, the Issuer shall (i) appoint a successor securities depository, qualified to act as such under Section 17A of the Securities and Exchange Act of 1934, as amended, notify DTC and DTC Participants of the appointment of such successor securities depository and transfer one or more separate Bonds to such successor securities depository or (ii) notify DTC and DTC Participants of the availability through DTC of Bonds and transfer one or more separate Bonds to DTC Participants having Bonds credited to their DTC accounts. In such event, the Bonds shall no longer be restricted to being registered in the Registration Books in the name of Cede & Co., as nominee of DTC, but may be registered in the name of the successor securities depository, or its nominee, or in whatever name or names registered owners transferring or exchanging Bonds shall designate, in accordance with the provisions of this Ordinance.

(k) Payments to Cede & Co. Notwithstanding any other provision of this Ordinance to the contrary, so long as any Bond is registered in the name of Cede & Co., as nominee of DTC, all payments with respect to principal of and interest on such Bond and all notices with respect to such Bond shall be made and given, respectively, in the manner provided in the Blanket Issuer Letter of Representations of the Issuer to DTC.

(l) General Characteristics of the Bonds. The Bonds (i) shall be issued in fully registered form, without interest coupons, with the principal of and interest on such Bonds to be payable only to the Registered Owners thereof, (ii) may and shall be redeemed prior to their scheduled maturities, (iii) may be transferred and assigned, (iv) may be converted and exchanged for other Bonds, (v) shall have the characteristics, (vi) shall be signed, sealed, executed and authenticated, (vii) the principal of and interest on the Bonds shall be payable, and (viii) shall be administered and the Paying Agent/Registrar and the Issuer shall have certain duties and responsibilities with respect to the Bonds, all as provided, and in the manner and to the effect as required or indicated, in the FORM OF BOND set forth in this Ordinance. The Bonds initially issued and delivered pursuant to this Ordinance is not required to be, and shall not be, authenticated by the Paying Agent/Registrar, but on each substitute Bond issued in conversion of and exchange for any Bond or Bonds issued under this Ordinance the Paying Agent/Registrar shall execute the Paying Agent/Registrar's Authentication Bond, in the FORM OF BOND set forth in this Ordinance.

(m) Cancellation of Initial Bonds. On the closing date, one initial Bond (the "Initial Bond") representing the entire principal amount of a Series of the Bonds, payable in stated installments to the Texas Water Development Board, executed by manual or facsimile signature of the Mayor and City Clerk of the Issuer, approved by the Attorney General, and registered and manually signed by the Comptroller, will be delivered to such purchaser or its designee. Upon payment for such Initial Bond, the Paying Agent/Registrar

shall cancel such Initial Bond and deliver to DTC on behalf of such purchaser one registered definitive Bond for each year of maturity of such Bonds, in the aggregate principal amount of all of the Bonds for such maturity, registered in the name of Cede & Co., as nominee of DTC. To the extent that the Paying Agent/Registrar is eligible to participate in DTC's FAST System, pursuant to an agreement between the Paying Agent/Registrar and DTC, the Paying Agent/Registrar shall hold the definitive Bonds in safekeeping for DTC.

Section 5. FORM OF BONDS. The form of the Bonds, including the form of Paying Agent/Registrar's Authentication Certificate, the form of Assignment and the form of the Comptroller's Registration Certificate to be attached to the Initial Bond, shall be, respectively, substantially as follows, with such appropriate variations, omissions or insertions as are permitted or required by this Ordinance.

(a) Form of Bond.

NO. R-	UNITED STATES OF AMERICA STATE OF TEXAS CITY OF SAN ANGELO, TEXAS WATERWORKS AND SEWER SYSTEM REVENUE REFUNDING BOND TAXABLE SERIES 2020	PRINCIPAL AMOUNT \$_____
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Interest Rate	Delivery Date	Maturity Date	CUSIP No.
_____	_____	February 15, 20__	_____

REGISTERED OWNER:

PRINCIPAL AMOUNT: _____ DOLLARS

ON THE MATURITY DATE specified above, the City of San Angelo, in Tom Green County, Texas (the "Issuer"), being a political subdivision and municipal corporation of the State of Texas, hereby promises to pay to the Registered Owner specified above, or registered assigns (hereinafter called the "Registered Owner"), on the Maturity Date specified above, the Principal Amount specified above. The Issuer promises to pay interest on the unpaid principal amount hereof (calculated on the basis of a 360-day year of twelve 30-day months) from the _____ set forth above at the Interest Rate per annum specified above. Interest is payable on _____ and semiannually on each _____ and _____ thereafter to the Maturity Date specified above, or the date of redemption prior to maturity; except, if this Bond is required to be authenticated and the date of its authentication is later than the first Record Date (hereinafter defined), such principal amount shall bear interest from the interest payment date next preceding the date of authentication, unless such date of authentication is after any Record Date but on or before the next following interest payment date, in which case such principal amount shall bear interest from such next following interest payment date; provided, however, that if on the date of authentication hereof the interest on the Bond or Bonds, if any, for which this Bond is being exchanged is due but has not been paid, then this Bond shall bear interest from the date to which such interest has been paid in full.

THE PRINCIPAL OF AND INTEREST ON this Bond are payable in lawful money of the United States of America, without exchange or collection charges. The principal of this Bond shall be paid to the Registered Owner hereof upon presentation and surrender of this Bond at maturity, or upon the date fixed for its redemption prior to maturity, at the principal corporate trust office of BOKF, N.A. in Dallas, Texas, which is the "Paying Agent/Registrar" for this Bond. The payment of interest on this Bond shall be made by the Paying Agent/Registrar to the Registered Owner hereof on each interest payment date by check or draft, dated

as of such interest payment date, drawn by the Paying Agent/Registrar on, and payable solely from, funds of the Issuer required by the ordinance authorizing the issuance of this Bond (the "Bond Ordinance") to be on deposit with the Paying Agent/Registrar for such purpose as hereinafter provided; and such check or draft shall be sent by the Paying Agent/Registrar by United States mail, first-class postage prepaid, on each such interest payment date, to the Registered Owner hereof, at its address as it appeared at the close of business on the _____ day of the month preceding each such date (the "Record Date") on the Registration Books kept by the Paying Agent/Registrar, as hereinafter described. In addition, interest may be paid by such other method, acceptable to the Paying Agent/Registrar, requested by, and at the risk and expense of, the Registered Owner.

IN THE EVENT OF A NON-PAYMENT OF INTEREST on a scheduled payment date, and for 30 days thereafter, a new record date for such interest payment (a "Special Record Date") will be established by the Paying Agent/Registrar, if and when funds for the payment of such interest have been received from the Issuer. Notice of the Special Record Date and of the scheduled payment date of the past due interest (which shall be 15 days after the Special Record Date) shall be sent at least five business days prior to the Special Record Date by United States mail, first-class postage prepaid, to the address of each owner of a Bond appearing on the Registration Books at the close of business on the last business day next preceding the date of mailing of such notice.

ANY ACCRUED INTEREST due at maturity or upon the redemption of this Bond prior to maturity as provided herein shall be paid to the Registered Owner upon presentation and surrender of this Bond for payment or redemption at the principal corporate trust office of the Paying Agent/Registrar. The Issuer covenants with the Registered Owner of this Bond that on or before each principal payment date and interest payment date for this Bond it will make available to the Paying Agent/Registrar, from the "Interest and Sinking Fund" created by the Bond Ordinance, the amounts required to provide for the payment, in immediately available funds, of all principal of and interest on the Bonds, when due.

IF THE DATE for any payment of the principal of or interest on this Bond shall be a Saturday, Sunday, a legal holiday or a day on which banking institutions in the city where the principal corporate trust office of the Paying Agent/Registrar is located are authorized by law or executive order to close, then the date for such payment shall be the next succeeding day that is not such a Saturday, Sunday, legal holiday or day on which banking institutions are authorized to close; and payment on such date shall have the same force and effect as if made on the original date payment was due.

THIS BOND is one of a series of Bonds dated _____, 2020, authorized in accordance with the Constitution and laws of the State of Texas in the principal amount of \$_____ for the public purpose of providing funds to refund a portion of the Issuer's outstanding indebtedness payable from the Pledged Revenues of the Issuer's Waterworks and Sewer System, [to fund the Series 2020 Reserve Fund,] and to pay the costs incurred in connection with the issuance of the Bonds.

ON _____, or on any date thereafter, the Bonds of this series may be redeemed prior to their scheduled maturities, at the option of the Issuer, with funds derived from any available and lawful source, as a whole, or in part, and, if in part, the particular Bonds, or portions thereof, to be redeemed shall be selected and designated by the Issuer (provided that a portion of a Bond may be redeemed only in an integral multiple of \$5,000), at a redemption price equal to the principal amount to be redeemed plus accrued interest to the date fixed for redemption.

AT LEAST 30 days prior to the date fixed for any redemption of Bonds or portions thereof prior to maturity a written notice of such redemption shall be sent by the Paying Agent/Registrar by United States mail, first-class postage prepaid, at least 30 days prior to the date fixed for any such redemption, to the Registered Owner of each Bond to be redeemed at its address as it appeared on the 45th day prior to such redemption date; provided, however, that the failure of the Registered Owner to receive such notice, or any

defect therein or in the sending or mailing thereof, shall not affect the validity or effectiveness of the proceedings for the redemption of any Bond. By the date fixed for any such redemption due provision shall be made with the Paying Agent/Registrar for the payment of the required redemption price for the Bonds or portions thereof that are to be so redeemed. If such written notice of redemption is sent and if due provision for such payment is made, all as provided above, the Bonds or portions thereof that are to be so redeemed thereby automatically shall be treated as redeemed prior to their scheduled maturities, and they shall not bear interest after the date fixed for redemption, and they shall not be regarded as being outstanding except for the right of the Registered Owner to receive the redemption price from the Paying Agent/Registrar out of the funds provided for such payment. If a portion of any Bond shall be redeemed, a substitute Bond or Bonds having the same maturity date, bearing interest at the same rate, in any denomination or denominations in any integral multiple of \$5,000, at the written request of the Registered Owner, and in aggregate principal amount equal to the unredeemed portion thereof, will be issued to the Registered Owner upon the surrender thereof for cancellation, at the expense of the Issuer, all as provided in the Bond Ordinance.

IF AT THE TIME OF MAILING of notice of optional redemption there shall not have either been deposited with the Paying Agent/Registrar or legally authorized escrow agent immediately available funds sufficient to redeem all the Bonds called for redemption, such notice may state that it is conditional, and is subject to the deposit of the redemption moneys with the Paying Agent/Registrar or legally authorized escrow agent at or prior to the redemption date, and such notice shall be of no effect unless such moneys are so deposited on or prior to the redemption date. If such redemption is not effectuated, the Paying Agent/Registrar shall, within five days thereafter, give notice in the manner in which the notice of redemption was given that such moneys were not so received and shall rescind the redemption.

ALL BONDS OF THIS SERIES are issuable solely as fully registered bonds, without interest coupons, in the denomination of any integral multiple of \$5,000. As provided in the Bond Ordinance, this Bond may, at the request of the Registered Owner or the assignee or assignees hereof, be assigned, transferred, converted into and exchanged for a like aggregate principal amount of fully registered Bonds, without interest coupons, payable to the appropriate Registered Owner, assignee or assignees, as the case may be, having the same denomination or denominations in any integral multiple of \$5,000 as requested in writing by the appropriate Registered Owner, assignee or assignees, as the case may be, upon surrender of this Bond to the Paying Agent/Registrar for cancellation, all in accordance with the form and procedures set forth in the Bond Ordinance. Among other requirements for such assignment and transfer, this Bond must be presented and surrendered to the Paying Agent/Registrar, together with proper instruments of assignment, in form and with guarantee of signatures satisfactory to the Paying Agent/Registrar, evidencing assignment of this Bond or any portion or portions hereof in any integral multiple of \$5,000 to the assignee or assignees in whose name or names this Bond or any such portion or portions hereof is or are to be registered. The form of Assignment printed or endorsed on this Bond may be executed by the Registered Owner to evidence the assignment hereof, but such method is not exclusive, and other instruments of assignment satisfactory to the Paying Agent/Registrar may be used to evidence the assignment of this Bond or any portion or portions hereof from time to time by the Registered Owner. The Paying Agent/Registrar's reasonable standard or customary fees and charges for assigning, transferring, converting and exchanging any Bond or portion thereof will be paid by the Issuer. In any circumstance, any taxes or governmental charges required to be paid with respect thereto shall be paid by the one requesting such assignment, transfer, conversion or exchange, as a condition precedent to the exercise of such privilege. The Paying Agent/Registrar shall not be required to make any such transfer, conversion, or exchange (i) during the period commencing with the close of business on any Record Date and ending with the opening of business on the next following principal or interest payment date, or (ii) with respect to any Bond or any portion thereof called for redemption prior to maturity, within 45 days prior to its redemption date.

IN THE EVENT any Paying Agent/Registrar for the Bonds is changed by the Issuer, resigns, or otherwise ceases to act as such, the Issuer has covenanted in the Bond Ordinance that it promptly will appoint

a competent and legally qualified substitute therefor, and cause written notice thereof to be mailed to the Registered Owners of the Bonds.

THE BONDS are special obligations of the Issuer payable solely from and equally secured by a first lien on and pledge of the Pledged Revenues of the Issuer's Waterworks and Sewer System. Reference is hereby made to the Bond Ordinance for a more complete statement of the covenants and provisions securing the payment of this Bond and the series of which it is one.

THE ISSUER EXPRESSLY RESERVES the right to issue further and additional special revenue obligations equally secured by a lien on and pledge of the Pledged Revenues of the Issuer's Waterworks and Sewer System on a parity with the Bonds of this issue; provided, however, that any and all such additional First Lien Obligations may be issued only in accordance with and subject to the covenants, conditions, limitations and restrictions relating thereto which are set out and contained in the Bond Ordinance, to which reference is hereby made for more complete and full particulars. The Issuer has further reserved the right in the Bond Ordinance to issue Subordinate Lien Obligations and to finance Special Projects that are not part of the System and not payable from Pledged Revenues and for which all maintenance and operation expenses are payable from sources other than Pledged Revenues.

THE HOLDER HEREOF shall never have the right to demand payment of this obligation out of any funds raised or to be raised by taxation or from any sources whatsoever other than those described in the Bond Ordinance.

IT IS HEREBY certified, recited and covenanted that this Bond has been duly and validly authorized, issued and delivered; that all acts, conditions and things required or proper to be performed, exist and be done precedent to or in the authorization, issuance and delivery of this Bond have been performed, existed and been done in accordance with law.

THE ISSUER HAS RESERVED THE RIGHT to amend the Bond Ordinance as provided therein, and under some (but not all) circumstances amendments thereto must be approved by the Registered Owners of a majority in aggregate principal amount of the outstanding Bonds.

BY BECOMING the Registered Owner of this Bond, the Registered Owner thereby acknowledges all of the terms and provisions of the Bond Ordinance, agrees to be bound by such terms and provisions, acknowledges that the Bond Ordinance is duly recorded and available for inspection in the official minutes and records of the governing body of the Issuer, and agrees that the terms and provisions of this Bond and the Bond Ordinance constitute a contract between each Registered Owner hereof and the Issuer.

IN WITNESS WHEREOF, the Issuer has caused this Bond to be signed with the manual or facsimile signature of the Mayor of the Issuer (or in the Mayor's absence, the Mayor Pro Tem of the Issuer) and countersigned with the manual or facsimile signature of the City Clerk of said Issuer, and has caused the official seal of the Issuer to be duly impressed, or placed in facsimile, on this Bond.

(signature)
City Clerk

(signature)
Mayor

(SEAL)

(b) Form of Paying Agent/Registrar's Authentication Certificate.

PAYING AGENT/REGISTRAR'S AUTHENTICATION CERTIFICATE
(To be executed if this Bond is not accompanied by an executed Registration Certificate
of the Comptroller of Public Accounts of the State of Texas)

It is hereby certified that this Bond has been issued under the provisions of the Bond Ordinance described in the text of this Bond; and that this Bond has been issued in conversion or replacement of, or in exchange for, a bond, bonds, or a portion of a bond or bonds of a series that originally was approved by the Attorney General of the State of Texas and registered by the Comptroller of Public Accounts of the State of Texas.

Dated: _____.

BOKF, N.A.
Dallas, Texas
Paying Agent/Registrar

By: _____
Authorized Representative

(c) Form of Assignment.

ASSIGNMENT
(Please print or type clearly)

For value received, the undersigned hereby sells, assigns and transfers unto: _____

Transferee's Social Security or Taxpayer Identification Number: _____

Transferee's name and address, including zip code: _____

the within Bond and all rights thereunder, and hereby irrevocably constitutes and appoints _____, attorney, to register the transfer of the within Bond on the books kept for registration thereof, with full power of substitution in the premises.

Dated: _____.

Signature Guaranteed:

NOTICE: Signature(s) must be guaranteed by an eligible guarantor institution participating in a securities transfer association recognized signature guarantee program.

NOTICE: The signature above must correspond with the name of the Registered Owner as it appears upon the front of this Bond in every particular, without alteration or enlargement or any change whatsoever.

(d) Form of Registration Certificate of the Comptroller of Public Accounts.

COMPTROLLER'S REGISTRATION CERTIFICATE: REGISTER NO. _____

I hereby certify that there is on file and of record in my office a true and correct copy of the opinion of the Attorney General of the State of Texas approving this Bond and that this Bond has been registered this day by me.

Witness my signature and seal this _____.

Comptroller of Public Accounts of the State of Texas

(COMPTROLLER'S SEAL)

(e) Initial Bond Insertions.

(i) The initial Bond shall be in the form set forth in paragraph (a) of this section, except that:

A. immediately under the name of the Bond, the headings "Interest Rate" and "Maturity Date" shall both be completed with the words "As shown below" and "CUSIP No. _____" shall be deleted.

B. the first paragraph shall be deleted and the following will be inserted:

"THE CITY OF SAN ANGELO, TEXAS, in Tom Green County, Texas (the "Issuer"), being a political subdivision and municipal corporation of the State of Texas, hereby promises to pay to the Registered Owner specified above, or registered assigns (hereinafter called the "Registered Owner"), on February 15 in each of the years, in the principal installments and bearing interest at the per annum rates set forth in the following schedule:

Maturity Date	Principal Amount	Interest Rate
<u>(Feb. 15)</u>	<u></u>	<u></u>
(Information from Section 3 to be inserted)		

The Issuer promises to pay interest on the unpaid principal amount hereof (calculated on the basis of a 360-day year of twelve 30-day months) from the _____ set forth above at the respective Interest Rate per annum specified above. Interest is payable on _____, and semiannually on each _____ and _____ thereafter to the date of payment of the principal installment specified above, or the date of redemption prior to maturity; except, that if this Bond is required to be authenticated and the date of its authentication is later than the first Record Date (hereinafter defined), such Principal Amount shall bear interest from the interest payment date next preceding the date of authentication, unless such date of authentication is after any Record Date but on or before the next following interest payment date, in which case such principal amount shall bear interest from such next following interest payment date; provided, however, that if on the date of authentication hereof the interest on the Bond or Bonds, if any, for which this Bond is being exchanged is due but has not been paid, then this Bond shall bear interest from the date to which such interest has been paid in full."

C. The Initial Bond shall be numbered "T-1."

Section 6. PLEDGE OF PLEDGED REVENUES.

(a) The Issuer hereby covenants and agrees that the Pledged Revenues are hereby irrevocably pledged to the payment and security of the First Lien Obligations, including the establishment and maintenance of the special funds created, established and maintained for the payment and security thereof, all as hereinafter provided; and it is hereby ordered that the First Lien Obligations, and the interest thereon, shall constitute a lien on and pledge of the Pledged Revenues and be valid and binding without any physical delivery thereof or further act by the Issuer, and the lien created hereby on the Pledged Revenues for the payment and security of the First Lien Obligations, including the establishment and maintenance of the special funds created, established and maintained for the payment and security thereof, shall be superior to the lien on and pledge of the Pledged Revenues securing payment of any Subordinate Lien Obligations heretofore or hereafter issued by the Issuer.

(b) Chapter 1208, Government Code, applies to the issuance of the Bonds and the pledge of the Pledged Revenues granted by the Issuer under this Section, and is therefore valid, effective, and perfected. Should Texas law be amended at any time while the Bonds are outstanding and unpaid, the result of such amendment being that the pledge of the Pledged Revenues granted by the Issuer under this Section is to be subject to the filing requirements of Chapter 9, Business & Commerce Code, in order to preserve to the Holders of the Bonds a security interest in said pledge, the Issuer agrees to take such measures as it determines are reasonable and necessary under Texas law to comply with the applicable provisions of Chapter 9, Business & Commerce Code and enable a filing of a security interest in said pledge to occur.

Section 7. SPECIAL FUNDS. To provide for the payment of the Series 2017 Bonds, the Series 2019 Bonds, the Bonds and any Additional First Lien Obligations, the following limited special funds have been ordered to be established and maintained by the adoption of the Series 2017 Ordinance and are reconfirmed hereby and shall be maintained so long as First Lien Obligations are outstanding:

(a) San Angelo Waterworks and Sewer System Fund, hereinafter called the "System Fund."

(b) San Angelo Waterworks and Sewer System Revenue Bonds Interest and Sinking Fund, hereinafter called the "Interest and Sinking Fund."

(c) San Angelo Waterworks and Sewer System Revenue Bonds 2020 Reserve Fund, hereinafter called the "2020 Reserve Fund", subject to confirmation by the Designated Financial Officer in the respective Pricing Certificate.

Each such Fund shall be accounted for separate and apart from all other funds of the Issuer, and shall be maintained in a Depository of the Issuer.

Section 8. SYSTEM FUND. The Issuer hereby covenants, agrees and establishes that the Gross Revenues shall be deposited and credited to the System Fund immediately as collected and received. All Operating Expenses are and shall be paid from such Gross Revenues as a first charge against same.

Section 9. FLOW OF FUNDS.

(a) All Gross Revenues deposited and credited to the System Fund shall be pledged and appropriated to the extent required for the following uses and in the order of priority shown:

First: to the payment of all necessary and reasonable Operating Expenses as defined herein, and the payment of such Operating Expenses shall be a first charge on and claim against the Gross Revenues.

Second: to the payment of the amounts required to be deposited and credited to the Interest and Sinking Fund created and established for the payment of the First Lien Obligations and any Additional First Lien Obligations issued by the Issuer as the same become due and payable.

Third: pro rata to the payment of the amounts required to be deposited and credited (i) to the 2020 Reserve Fund created and established in accordance with the provisions of this Ordinance to maintain the Required Reserve Amount therein, and (ii) to each other reserve fund created and established to maintain a reserve in accordance with the provisions of the Series 2017 Ordinance and ordinances relating to the issuance of any Additional First Lien Obligations hereafter issued by the Issuer.

Fourth: to make payment, including payment of amounts required for reserve fund requirements, of Subordinate Lien Obligations.

(b) Any Pledged Revenues remaining in the System Fund after satisfying the foregoing payments, or making adequate and sufficient provision for the payment thereof, may be appropriated and used for any other Issuer purpose now or hereafter permitted by law.

Section 10. INTEREST AND SINKING FUND.

(a) For purposes of providing funds to pay the principal of, premium, if any, and interest on the First Lien Obligations as the same become due and payable, including any mandatory sinking fund redemption payments, the Issuer agrees that it shall maintain the Interest and Sinking Fund. The Issuer covenants to deposit and credit to the Interest and Sinking Fund prior to each principal, interest payment or redemption date from the available Pledged Revenues an amount equal to one hundred percent (100%) of the amount required to fully pay the interest on and the principal of the First Lien Obligations then coming due and payable.

(b) The required deposits and credits to the Interest and Sinking Fund shall continue to be made as hereinabove provided until such time as (i) the total amount on deposit in and credited to the Interest and Sinking Fund and the 2020 Reserve Fund (and in any reserve fund created pursuant to Section 11(g) hereof, taking into account any Reserve Fund Obligation held in or for the benefit of any such reserve fund) is equal to the amount required to fully pay and discharge all outstanding First Lien Obligations (principal, premium, if any, and interest) or (ii) the First Lien Obligations are no longer outstanding.

(c) Accrued interest and capitalized interest, if any, received from the purchaser of any First Lien Obligation shall be taken into consideration and reduce the amount of the deposits and credits hereinabove required into the Interest and Sinking Fund.

Section 11. 2020 RESERVE FUND.

(a) If directed by the Designated Financial Officer in the applicable Pricing Certificate, there is hereby created and ordered held at a Depository of the Issuer, for the benefit of the Bonds, the 2020 Reserve Fund. As provided in Section 9, from a combination of proceeds of the sale of the Bonds and transfers from the 2017 Reserve Fund, if applicable, on the Delivery Date, the Issuer shall deposit and credit to the Series 2020 Reserve Fund the amount required to fund the 2020 Reserve Fund in an amount equal to Required Reserve Amount as of such Required Reserve Amount Computation Date. The Required Reserve Amount shall be maintained in the 2020 Reserve Fund at all times after the delivery of the Bonds, and the Required Reserve Amount shall be computed on each Required Reserve Amount Computation Date. There shall be deposited into the 2020 Reserve Fund any Reserve Fund Obligations so designated by the Issuer. All funds, investments and Reserve Fund Obligations on deposit and credited to the 2020 Reserve Fund shall be used solely for (i) the payment of the principal of and interest on the Bonds, when and to the extent other funds available for such purposes are insufficient, (ii) to make Reserve Fund Obligation Payments, and (iii) to retire the last Stated Maturity or Stated Maturities of or interest on the Bonds.

(b) When and for so long as the cash, investments and Reserve Fund Obligations in the 2020 Reserve Fund equal the Required Reserve Amount or the portion then required to be on deposit therein, no deposits need be made to the credit of the 2020 Reserve Fund; but, if and when the 2020 Reserve Fund at any time contains less than the Required Reserve Amount then required to be on deposit therein, the Issuer covenants and agrees that the Issuer shall cure the deficiency in the 2020 Reserve Fund by making Required Reserve Fund Deposits to such fund from the Pledged Revenues in accordance with Section 9 by monthly deposits in amounts equal to not less than 1/60th of the Required Reserve Amount, with any such deficiency payments being made on or before the last day of each month until the Required Reserve Amount has been fully funded or restored. In addition, in the event that a portion of the Required Reserve Amount is represented by a Reserve Fund Obligation, the Required Reserve Amount shall be restored as soon as possible from monthly

deposits of Pledged Revenues on deposit in the System Fund in accordance with Section 9, but subject to making the full deposits and credits to the Interest and Sinking Fund required to be made by Section 10. The Issuer further covenants and agrees that, subject only to the prior deposits to be made to the Interest and Sinking Fund, the Pledged Revenues shall be applied and appropriated and used to establish and maintain the Required Reserve Amount, including by paying Reserve Fund Obligation Payments when due, and any reserve established for the benefit of any issue or series of Additional First Lien Obligations and to cure any deficiency in such amounts as required by the terms of this Ordinance and any other ordinance pertaining to the issuance of Additional First Lien Obligations. Reimbursements to the provider, if any, of a Reserve Fund Obligation shall constitute the making up of a deficiency in the 2020 Reserve Fund to the extent that such reimbursements result in the reinstatement, in whole or in part, as the case may be, of the amount of the Reserve Fund Obligation.

(c) Earnings and income derived from the investment of amounts held for the credit of the 2020 Reserve Fund shall be retained in the 2020 Reserve Fund until the 2020 Reserve Fund contains the Required Reserve Amount. During such time as the 2020 Reserve Fund contains the Required Reserve Amount or any cash or Permitted Investment is replaced with a Reserve Fund Obligation pursuant to subsection (d) below, the Issuer may, at its option, withdraw all surplus funds in the 2020 Reserve Fund and deposit such surplus in the System Fund; provided that the face amount of any Reserve Fund Obligation may be reduced at the option of the Issuer in lieu of such transfer. Notwithstanding the foregoing, any surplus funds in the 2020 Reserve Fund that consist of proceeds of the Bonds or interest thereon shall be used for purposes for which the Bonds were issued or deposited to the Interest and Sinking Fund.

(d) The Issuer may at any time deposit, supplement, replace or substitute a Reserve Fund Obligation for cash or Permitted Investments on deposit in the 2020 Reserve Fund or in substitution for or replacement of any existing Reserve Fund Obligation, provided, that the deposit, supplement, replacement or substitution of the Reserve Fund Obligation will not, in and of itself, cause any ratings then assigned to the Bonds by any Rating Agency to be lowered and the ordinance authorizing the substitution of the Reserve Fund Obligation for all or part of the Required Reserve Amount contains a finding that such substitution is cost effective. Notwithstanding any other provision of this Ordinance, if a Reserve Fund Obligation is utilized in connection with the Bonds after the issuance date of the Bonds, the Issuer must specifically approve any such Reserve Fund Obligation and any such Reserve Fund Obligation must be submitted to the Attorney General of Texas (if submission is then required by law) for approval.

(e) If the Issuer is required to make a withdrawal from the 2020 Reserve Fund for any of the purposes described in this Section, the Issuer shall promptly notify the issuer of such Reserve Fund Obligation of the necessity for a withdrawal from the 2020 Reserve Fund for any such purposes, and shall make such withdrawal FIRST from available moneys or Permitted Investments then on deposit in the 2020 Reserve Fund, and NEXT from a drawing under any Reserve Fund Obligation to the extent of such deficiency.

(f) In the event there is a draw upon the Reserve Fund Obligation, the Issuer shall reimburse the issuer of such Reserve Fund Obligation for such draw, in accordance with the terms of any agreement pursuant to which the Reserve Fund Obligation is used, from Pledged Revenues, however, such reimbursement from Pledged Revenues shall be in accordance with the provisions of Section 11(b) hereof and shall be subordinate and junior in right of payment to the payment of principal of and premium, if any, and interest on the then outstanding First Lien Obligations.

(g) The Issuer may create and establish a debt service reserve fund pursuant to the provisions of any ordinance or other instrument authorizing the issuance of First Lien Obligations for the purpose of securing that particular issue or series of First Lien Obligations or any specific group of issues or series of First Lien Obligations (including the combining of debt service reserve funds for First Lien Obligations so long as the

requirements of each ordinance authorizing such First Lien Obligations are satisfied), and the amounts once deposited or credited to said debt service reserve funds shall no longer constitute Pledged Revenues and shall be held solely for the benefit of the owners of the particular First Lien Obligations for which such debt service reserve fund was established. Each debt service reserve fund shall receive a pro rata amount of the Pledged Revenues after the requirements of the Interest and Sinking Fund, which secures all First Lien Obligations, have first been met. Each such debt service reserve fund shall be designated in such manner as is necessary to identify the First Lien Obligations it secures and to distinguish such debt service reserve fund from the debt service reserve funds created for the benefit of other First Lien Obligations. Each ordinance authorizing the issuance of First Lien Obligations that are to be secured by a debt service reserve fund shall specify the amount or a manner of calculating the amount to be held and maintained on deposit therein.

Section 12. DEFICIENCIES; EXCESS PLEDGED REVENUES.

(a) Deficiencies. If on any occasion there shall not be sufficient Pledged Revenues (after making all payments pertaining to all First Lien Obligations) to make the required deposits and credits to the Interest and Sinking Fund and the 2020 Reserve Fund, then such deficiency shall be cured as soon as possible from the next available unallocated Pledged Revenues, or from any other sources available for such purpose, and such deposits and credits shall be in addition to the amounts otherwise required to be deposited and credited to such funds.

(b) Excess Pledged Revenues. Subject to making the deposits and credits required by this Ordinance or any ordinances authorizing the issuance of Additional First Lien Obligations, or the payments and credits required by the provisions of the ordinances authorizing the issuance of Subordinate Lien Obligations heretofore or hereafter issued by the Issuer, the excess Pledged Revenues may be used for any lawful purpose.

Section 13. INVESTMENT OF FUNDS; VALUATION; FUNDS SECURED; TRANSFER OF INVESTMENT INCOME.

(a) Moneys in any fund established pursuant to this Ordinance may, at the option of the Issuer, be invested in Permitted Investments, provided that all such deposits and investments shall have a market value exclusive of accrued interest at all times at least equal to the amount of money credited to such funds, and shall be made in such manner that the money required to be expended from any Fund will be available at the proper time or times. Moneys in the 2020 Reserve Fund shall not be invested in securities maturing later than the final maturity of the Bonds. Such investments shall be valued in terms of current market value as of the last day of each Year, except that direct obligations of the United States in book-entry form shall be continuously valued at their par or face principal amount. Such investments shall be sold promptly when necessary to prevent any default in connection with the Bonds or any Additional First Lien Obligations issued. To the extent not invested, moneys in any fund established pursuant to this Ordinance shall be secured in the manner prescribed by law for securing funds of the Issuer.

(b) All interest and income derived from such investments (other than interest and income derived from amounts credited to the 2020 Reserve Fund or any other reserve fund created in accordance with Section 11(g) hereof, if the 2020 Reserve Fund or such other reserve fund, as the case may be, does not contain the Required Reserve Amount or the First Lien Obligation Reserve Requirement, as the case may be) shall be credited to the System Fund semi-annually and shall constitute Gross Revenues.

Section 14. PAYMENT OF FIRST LIEN OBLIGATIONS. While any of the First Lien Obligations are outstanding, the Issuer shall transfer to the respective paying agent/registrar therefor, from funds on deposit in and credited to the Interest and Sinking Fund, and, if necessary, in the 2020 Reserve Fund with respect to the Bonds, amounts sufficient to fully pay and discharge promptly the interest on and principal of the First Lien Obligations as shall become due on each interest or principal payment date, or date of

redemption of the First Lien Obligations; such transfer of funds must be made in such manner as will cause immediately available funds to be deposited with each respective paying agent/registrar for the First Lien Obligations not later than the business day next preceding the date such payment is due on the First Lien Obligations. The Paying Agent/Registrar shall destroy all paid First Lien Obligations and furnish the Issuer with an appropriate certificate of cancellation or destruction.

Section 15. ISSUER COVENANTS. The Issuer further covenants and agrees that in accordance with and to the extent required or permitted by law:

(a) Performance. It will faithfully perform at all times any and all covenants, undertakings, stipulations and provisions contained in any ordinance authorizing the issuance of First Lien Obligations, including this Ordinance, and in each and every First Lien Obligation; it will promptly pay or cause to be paid the principal of and interest on every First Lien Obligation on the dates and in the places and manner prescribed in such ordinances and obligations; and it will, at the times and in the manner prescribed, deposit and credit or cause to be deposited and credited the amounts required to be deposited and credited to the Interest and Sinking Fund and the 2020 Reserve Fund.

(b) Issuer's Legal Authority. It is a duly created and existing home rule city of the State of Texas, and is duly authorized under the laws of the State of Texas to issue the Bonds; that all action on its part for the issuance of the Bonds has been duly and effectively taken, and that the Bonds in the hands of the Holders thereof are and will be valid and enforceable special obligations of the Issuer in accordance with their terms.

(c) Title. It has or will obtain lawful title to the lands, buildings, structures and facilities constituting the System, that it warrants that it will defend the title to all the aforesaid lands, buildings, structures and facilities, and every part thereof, for the benefit of the Holders of the First Lien Obligations, against the claims and demands of all persons whomsoever, that it is lawfully qualified to pledge the Pledged Revenues to the payment of the First Lien Obligations in the manner prescribed herein, and has lawfully exercised such rights.

(d) Liens. It will from time to time and before the same become delinquent pay and discharge all taxes, assessments and governmental charges, if any, which shall be lawfully imposed upon it, or the System; it will pay all lawful claims for rents, royalties, labor, materials and supplies which if unpaid might by law become a lien or charge thereon, the lien of which would be prior to or interfere with the liens hereof, so that the priority of the liens granted hereunder shall be fully preserved in the manner provided herein, and it will not create or suffer to be created any mechanic's, laborer's, materialman's or other lien or charge which might or could be prior to the liens hereof, or do or suffer any matter or thing whereby the liens hereof might or could be impaired; provided, however, that no such tax, assessment or charge, and that no such claims which might be used as the basis of a mechanic's, laborer's, materialman's or other lien or charge, shall be required to be paid so long as the validity of the same shall be contested in good faith by the Issuer.

(e) Operation of System; No Free Service. It will, while any First Lien Obligations are outstanding, continuously and efficiently operate the System, and shall maintain the System in good condition, repair and working order, all at reasonable cost. No free service of the System shall be allowed, and should the Issuer or any of its agencies or instrumentalities make use of the services and facilities of the System, payment of the reasonable value shall be made by the Issuer out of funds from sources other than the Gross Revenues of the System, unless made from surplus or excess Pledged Revenues as permitted in Section 12.

(f) Further Encumbrance. While any First Lien Obligations are outstanding, it will not additionally encumber the Pledged Revenues in any manner, except as permitted in this Ordinance in connection with Additional First Lien Obligations, unless said encumbrance is made junior and subordinate in all respects to the liens, pledges, covenants and agreements of this Ordinance; but the right of the Issuer to issue or incur obligations payable from a subordinate lien on the Pledged Revenues is specifically recognized and retained.

(g) Sale or Disposal of Property. While any First Lien Obligations are outstanding, it will not sell, convey, mortgage, encumber, lease or in any manner transfer title to, or release without due consideration in whole or in part contractual rights constituting part of the System, or any significant or substantial part thereof; provided that whenever the Issuer deems it necessary to dispose of any other property, machinery, fixtures or equipment, it may sell or otherwise dispose of such property, machinery, fixtures or equipment when it has made arrangements to replace the same or provide substitutes therefor, unless it is determined that no such replacement or substitute is necessary. Proceeds from any sale hereunder not used to replace or provide for substitution of such property sold, shall be used for improvements to the System or to purchase or redeem First Lien Obligations.

(h) Insurance. (1) The Issuer shall insure such parts of the System as would usually be insured by corporations operating like properties, with responsible insurance companies, against loss to the extent insurance is usually carried by corporations operating like properties. To the extent reasonably obtainable, it shall include insurance against the perils of fire, extended coverage and flooding and use and occupancy insurance. Public liability and property damage insurance shall also be carried unless the Issuer's attorney gives a written opinion to the effect that the Issuer is not liable for claims which would be protected by such insurance. At any time while any contractor engaged in construction work shall be fully responsible therefor, the Issuer shall not be required to carry insurance on the work being constructed if the contractor is required to carry appropriate insurance. All such policies shall be open to the inspection of the bondholders and their agents and representatives at all reasonable times. Upon the happening of any loss or damage covered by insurance from one or more of said causes, the Issuer shall make due proof of loss and shall do all things necessary or desirable to cause the insuring companies to make payment in full directly to the Issuer. The proceeds of insurance covering such property, together with any other funds necessary and available for such purpose, shall be used forthwith by the Issuer for repairing the property damaged or replacing the property destroyed; provided, however, that if said insurance proceeds and other funds are insufficient for such purpose, then said insurance proceeds pertaining to the System shall be used promptly as follows:

(i) for the redemption prior to maturity of the First Lien Obligations, ratably in the proportion that the outstanding principal of each series of First Lien Obligations bears to the total outstanding principal of all First Lien Obligations, provided that, if on any such occasion the principal of any such series is not subject to redemption, it shall not be regarded as outstanding in making the foregoing computation; or

(ii) if none of the outstanding First Lien Obligations is subject to redemption, then for the purchase on the open market and retirement of said First Lien Obligations in the same proportion as prescribed in the foregoing clause (i), to the extent practicable; provided, however, that the purchase price for any First Lien Obligation shall not exceed the redemption price of such First Lien Obligation on the first date upon which it becomes subject to redemption; or

(iii) to the extent that the foregoing clauses (i) and (ii) cannot be complied with at the time, the insurance proceeds, or the remainder thereof, shall be deposited in a special and separate trust fund, at a Depository, to be designated the Insurance Account. The Insurance Account shall be held until such time as the foregoing clauses (i) and/or (ii) can be complied with, or until other funds become available which, together with the Insurance Account, will be sufficient to make the repairs or replacements originally required, whichever of said events occurs first.

(2) The foregoing provisions of (1) above notwithstanding, the Issuer shall have authority to enter into coinsurance or similar plans where risk of loss is shared in whole or in part by the Issuer.

(3) The annual audit hereinafter required shall contain a section commenting on whether or not the Issuer has complied with the requirements of this Section with respect to the maintenance of insurance, and listing all policies carried, and whether or not all insurance premiums upon the insurance policies to which reference is hereinbefore made have been paid.

(i) Governmental Agencies. It will comply with all of the terms and conditions of any and all franchises, permits and authorizations applicable to or necessary with respect to the System, and which have been obtained from any governmental agency; and the Issuer has or will obtain and keep in full force and effect all franchises, permits, authorization and other requirements applicable to or necessary with respect to the acquisition, construction, equipment, operation and maintenance of the System.

(j) No Competition. That so far as it legally may, it will not grant any franchise or permit for the acquisition, construction or operation of any competing facilities which might be used as a substitute for the System's facilities and, to the extent that it legally may, the Issuer will prohibit any such competing facilities.

(k) Records. It will keep proper books of record and account in which full, true and correct entries will be made of all dealings, activities and transactions relating to the System, the Pledged Revenues, and the funds created pursuant to this Ordinance, and all books, documents and vouchers relating thereto shall at all reasonable times be made available for inspection upon request of a Holder of First Lien Obligations.

(l) Audits. After the close of each Year while any First Lien Obligation is outstanding, it will cause an audit to be made of the books and accounts relating to the Authority, including the System and the Pledged Revenues by an Accountant. As soon as practicable after the close of each such Year, and when said audit has been completed and made available to the Issuer, a copy of such audit for the preceding Year shall be mailed to the Municipal Advisory Council of Texas. Such annual audit reports shall be open to the inspection of the Holders of First Lien Obligations and their agents and representatives at all reasonable times.

(m) Rate Covenant. It will fix, establish, maintain and collect such rates, charges and fees for the use and availability of the System at all times as are necessary to produce Gross Revenues equal to the greater of amounts sufficient:

- (a) (1) to pay all current Operating Expenses, and (2) to produce Net Revenues for each Year at least equal to 1.15 times the Average Annual Debt Service Requirements of all then outstanding First Lien Obligations, or
- (b) to pay the sum of: (i) all current Operating Expenses, (ii) the Average Annual Debt Service Requirements of all then outstanding First Lien Obligations and Subordinate Lien Obligations, (iii) required deposits to a reserve fund for any First Lien Obligations and Subordinate Lien Obligations then outstanding, and (iv) amounts required to pay all other obligations of the System reasonably anticipated to be paid from Gross Revenues during the current Year.

Section 16. ISSUANCE OF ADDITIONAL FIRST LIEN OBLIGATIONS.

(a) The Issuer shall have the right and power at any time and from time to time and in one or more series or issues, to authorize, issue and deliver Additional First Lien Obligations, in accordance with law, in any amounts, for purposes of extending, improving or repairing the System or for the purpose of refunding of any First Lien Obligations, Subordinate Lien Obligations or other obligations of the Issuer incurred in connection with the ownership or operation of the System. Such Additional First Lien Obligations, if and when authorized, issued and delivered in accordance with this Ordinance, shall be secured by and made payable equally and ratably on a parity with all other First Lien Obligations at the time outstanding and unpaid, from a first lien on and pledge of the Pledged Revenues herein granted.

(b) The Interest and Sinking Fund shall secure and be used to pay all First Lien Obligations. Each ordinance under which Additional First Lien Obligations are issued shall provide and require that, in addition to the amounts required by the provisions of this Ordinance and the provisions of any other ordinance or ordinances authorizing Additional First Lien Obligations to be deposited to the credit of the Interest and Sinking Fund, the Issuer shall deposit to the credit of the Interest and Sinking Fund at least such amounts as are required for the payment of all principal of and interest on said Additional First Lien Obligations then being issued, as the same come due.

(c) Additional First Lien Obligations shall be issued only in accordance with this Ordinance, but notwithstanding any provisions of this Ordinance to the contrary, no installment, series or issue of Additional First Lien Obligations shall be issued or delivered unless:

(i) The Designated Financial Officer shall have executed a certificate stating (A) (i) that, to the best of such person's knowledge and belief, the Issuer is not then in default as to any covenant or requirement contained in any ordinance authorizing the issuance of outstanding First Lien Obligations, and (ii) payments into all special funds or accounts created and established for the payment and security of all outstanding First Lien Obligations have been made and that the amounts on deposit in such special funds or accounts are the amounts then required to be on deposit therein or (B) the application of the proceeds of sale of such obligations then being issued will cure any such default or deficiency; and

(ii) The Designated Financial Officer shall have executed a certificate stating that based on the books and records of the Issuer, during either the preceding Year, or any twelve (12) consecutive months out of the fifteen (15) months immediately preceding the date of the then proposed Additional First Lien Obligations, the Net Earnings are at least equal to 1.15 times the Average Annual Debt Service Requirements (computed on a fiscal year basis) of the First Lien Obligations to be outstanding **after the** issuance of the then proposed Additional First Lien Obligations.

(d) If the proceeds of the Additional First Lien Obligations are to be used to construct or acquire a Capital Addition, the following two certificates may be provided in lieu of the certificate required by (c)(ii) above:

(i) The Designated Financial Officer shall have executed a certificate stating that based on the books and records of the Issuer, during either the preceding Year, or any twelve (12) consecutive months out of the fifteen (15) months immediately preceding the date of the then proposed Additional First Lien Obligations, the Net Earnings are at least equal to 1.15 times the Average Annual Debt Service Requirements (computed on a fiscal year basis) of the First Lien Obligations to be outstanding **at the time** of issuance of the Additional First Lien Obligations then being issued; and

(ii) a certificate of an Accountant to the effect that the projected Net Earnings will be, in his or its opinion, for each of the five (5) Years subsequent to the date the Capital Addition becomes commercially operative (as estimated in the engineering report pertaining thereto) equal to at least 1.15 times the Average Annual Debt Service Requirements for First Lien Obligations then outstanding and all Additional First Lien Obligations estimated to be issued, if any, for all improvements to the System and for all Capital Additions then in progress or then being initiated during the period from the date the first series of obligations for the Capital Addition is to be delivered through the fifth Year subsequent to the date the Capital Addition is estimated to become commercially operative.

(e) In making a determination of Net Earnings for any of the purposes described in this Section, the Designated Financial Officer may take into consideration a change in the rates and charges for services and facilities afforded by the System that became effective at least sixty (60) days prior to the date the ordinance authorizing the issuance of the Additional First Lien Obligations is adopted and, for purposes of satisfying the Net Earnings tests described above, make a pro forma determination of the Net Earnings of the System for the period of time covered by said Designated Financial Officer's certification or opinion based on such change in rates and charges being in effect for the entire period covered by said Designated Financial Officer's certificate or opinion.

(f) First Lien Obligations may be refunded (pursuant to any law then available) upon such terms and conditions as the Issuer may deem to be in the best interest of the Issuer and its inhabitants, and if less than all such outstanding First Lien Obligations are refunded, the proposed refunding bonds shall be considered as "Additional First Lien Obligations" under the provisions of this Section and the certificate required in subsection (c)(ii) shall give effect to the issuance of the proposed refunding bonds (and shall not give effect to the bonds being refunded following their cancellation or provision being made for their payment).

(g) All calculations of Average Annual Debt Service Requirements made pursuant to this Section shall be made as of and from the date of the Additional First Lien Obligations then proposed to be issued.

Section 17. NO ISSUANCE OF OBLIGATIONS SENIOR TO THE FIRST LIEN OBLIGATIONS. That the Issuer covenants and agrees that it will not issue any obligations payable from and secured, in whole or in part, by a lien on and pledge of the Pledged Revenues, senior in rank and dignity to the lien on and pledge of such Pledged Revenues securing the payment of the First Lien Obligations, it being the intent of the Issuer that upon the issuance of the Bonds, the Issuer will finance improvements and extensions of the System and refinance obligations issued for the purpose of improving and extending the System with First Lien Obligations.

Section 18. ISSUANCE OF SUBORDINATE OBLIGATIONS. The Issuer hereby reserves the right to issue, at any time, obligations including, but not limited to, Subordinate Lien Obligations, payable from and equally and ratably secured, in whole or in part, by a lien on and pledge of the Pledged Revenues, subordinate and inferior in rank and dignity to the lien on and pledge of such Pledged Revenues securing the payment of the First Lien Obligations, as may be authorized by the laws of the State of Texas.

Section 19. ISSUANCE OF SPECIAL PROJECT BONDS. Nothing in this Ordinance shall be construed to deny the Issuer the right and it shall retain, and hereby reserves unto itself, the right to issue Special Project Bonds secured by liens on and pledges of revenues and proceeds derived from Special Projects.

Section 20. DEFEASANCE OF BONDS.

(a) Any Bond and the interest thereon shall be deemed to be paid, retired and no longer outstanding (a "Defeased Bond") within the meaning of this Ordinance, except to the extent provided in subsection (d) of this Section, when payment of the principal of such Bond, plus interest thereon to the due date (whether such due date be by reason of maturity or otherwise) either (i) shall have been made or caused to be made in accordance with the terms thereof, or (ii) shall have been provided for on or before such due date by irrevocably depositing with or making available to the Paying Agent/Registrar in accordance with an escrow agreement or other instrument (the "Future Escrow Agreement") for such payment (1) lawful money of the United States of America sufficient to make such payment or (2) Defeasance Securities that mature as to principal and interest in such amounts and at such times as will insure the availability, without reinvestment, of sufficient money to provide for such payment, and when proper arrangements have been made by the Issuer with the Paying Agent/Registrar for the payment of its services until all Defeased Bonds shall have become due and payable. At such time as a Bond shall be deemed to be a Defeased Bond hereunder, as aforesaid, such Bond and the interest thereon shall no longer be secured by, payable from, or entitled to the benefits of, the funds created and the revenues herein pledged as provided in this Ordinance, and such principal and interest shall be payable solely from such money or Defeasance Securities. Notwithstanding any other provision of this Ordinance to the contrary, it is hereby provided that any determination not to redeem Defeased Bonds that is made in conjunction with the payment arrangements specified in subsections (a)(i) or (ii) of this Section shall not be irrevocable, provided that: (1) in the proceedings providing for such payment arrangements, the Issuer expressly reserves the right to call the Defeased Bonds for redemption; (2) gives notice of the reservation of that right to the owners of the Defeased Bonds immediately following the making of the payment arrangements; and (3) directs that notice of the reservation be included in any redemption notices that it authorizes.

(b) Any moneys so deposited with the Paying Agent/Registrar may at the written direction of the Issuer be invested in Defeasance Securities, maturing in the amounts and times as hereinbefore set forth, and all income from such Defeasance Securities received by the Paying Agent/Registrar that is not required for the payment of the Bonds and interest thereon, with respect to which such money has been so deposited, shall be turned over to the Issuer, or deposited as directed in writing by the Issuer. Any Future Escrow Agreement pursuant to which the money and/or Defeasance Securities are held for the payment of Defeased Bonds may contain provisions permitting the investment or reinvestment of such moneys in Defeasance Securities or the substitution of other Defeasance Securities upon the satisfaction of the requirements specified in subsection (a)(i) or (ii) of this Section. All income from such Defeasance Securities received by the Paying Agent/Registrar which is not required for the payment of the Defeased Bonds, with respect to which such money has been so deposited, shall be remitted to the Issuer or deposited as directed in writing by the Issuer.

(c) The term "Defeasance Securities" means any securities and obligations now or hereafter authorized by the laws of the State of Texas that are eligible to refund, retire or otherwise discharge obligations such as the Bonds.

(d) Until all Defeased Bonds shall have become due and payable, the Paying Agent/Registrar shall perform the services of Paying Agent/Registrar for such Defeased Bonds the same as if they had not been defeased, and the Issuer shall make proper arrangements to provide and pay for such services as required by this Ordinance.

(e) In the event that the Issuer elects to defease less than all of the principal amount of Bonds of a maturity, the Paying Agent/Registrar shall select, or cause to be selected, such amount of Bonds by such random method as it deems fair and appropriate.

Section 21. DAMAGED, MUTILATED, LOST, STOLEN, OR DESTROYED BONDS.

(a) Replacement Bonds. In the event any outstanding Bond is damaged, mutilated, lost, stolen or destroyed, the Paying Agent/Registrar shall cause to be printed, executed and delivered, a new Bond of the same principal amount, maturity and interest rate, as the damaged, mutilated, lost, stolen or destroyed Bond, in replacement for such Bond in the manner hereinafter provided.

(b) Application for Replacement Bonds. Application for replacement of damaged, mutilated, lost, stolen or destroyed Bonds shall be made by the registered owner thereof to the Paying Agent/Registrar. In every case of loss, theft or destruction of a Bond, the registered owner applying for a replacement Bond shall furnish to the Issuer and to the Paying Agent/Registrar such security or indemnity as may be required by them to save each of them harmless from any loss or damage with respect thereto. Also, in every case of loss, theft or destruction of a Bond, the registered owner shall furnish to the Issuer and to the Paying Agent/Registrar evidence to their satisfaction of the loss, theft or destruction of such Bond, as the case may be. In every case of damage or mutilation of a Bond, the registered owner shall surrender to the Paying Agent/Registrar for cancellation the Bond so damaged or mutilated.

(c) No Default Occurred. Notwithstanding the foregoing provisions of this Section, in the event any such Bond shall have matured, and no default has occurred that is then continuing in the payment of the principal of, redemption premium, if any, or interest on the Bond, the Issuer may authorize the payment of the same (without surrender thereof except in the case of a damaged or mutilated Bond) instead of issuing a replacement Bond, provided security or indemnity is furnished as above provided in this Section.

(d) Charge for Issuing Replacement Bonds. Prior to the issuance of any replacement Bond, the Paying Agent/Registrar shall charge the registered owner of such Bond with all legal, printing, and other expenses in connection therewith. Every replacement Bond issued pursuant to the provisions of this Section by virtue of the fact that any Bond is lost, stolen or destroyed shall constitute a contractual obligation of the Issuer whether or not the lost, stolen or destroyed Bond shall be found at any time, or be enforceable by anyone, and shall be entitled to all the benefits of this Ordinance equally and proportionately with any and all other Bonds duly issued under this Ordinance.

(e) Authority for Issuing Replacement Bonds. In accordance with Section 1206.022, Texas Government Code, this Section 21 of this Ordinance shall constitute authority for the issuance of any such replacement Bond without necessity of further action by the governing body of the Issuer or any other body or person, and the duty of the replacement of such Bonds is hereby authorized and imposed upon the Paying Agent/Registrar, and the Paying Agent/Registrar shall authenticate and deliver such Bonds in the form and manner and with the effect, as provided in Section 4(a) of this Ordinance for Bonds issued in conversion and exchange for other Bonds.

Section 22. CUSTODY, APPROVAL, AND REGISTRATION OF BONDS; BOND COUNSEL'S OPINION; CUSIP NUMBERS AND CONTINGENT INSURANCE PROVISION, IF OBTAINED; ENGAGEMENT OF BOND COUNSEL.

(a) The Mayor and Finance Director of the Issuer are hereby authorized to have control of the Initial Bond and all necessary records and proceedings pertaining to the Initial Bond pending its delivery and its investigation, examination, and approval by the Attorney General and registration by the Comptroller. Upon registration of the Initial Bonds said Comptroller (or a deputy designated in writing to act for said Comptroller) shall manually sign the Comptroller's Registration Certificate attached to the Initial Bond, and the seal of said Comptroller shall be impressed, or placed in facsimile, on such Initial Bond. The approving legal opinion of the Issuer's Bond Counsel and the assigned CUSIP numbers may, at the option of the Issuer, be printed on the Bonds issued and delivered under this Ordinance, but neither shall have any legal effect, and

shall be solely for the convenience and information of the registered owners of the Bonds. In addition, if bond insurance is obtained, the Bonds may bear an appropriate legend as provided by the insurer.

(b) The obligation of the initial purchaser to accept delivery of the Bonds is subject to the initial purchaser being furnished with the final, approving opinion of McCall, Parkhurst & Horton L.L.P., bond counsel to the Issuer, which opinion shall be dated as of and delivered on the date of initial delivery of the Bonds to the initial purchaser. The engagement of such firm as bond counsel to the Issuer in connection with issuance, sale and delivery of the Bonds is hereby approved and confirmed. The execution and delivery of an engagement letter between the Issuer and such firm, with respect to such services as bond counsel, is hereby authorized in such form as may be approved by the Mayor or the City Manager, and the Mayor or the City Manager is hereby authorized to execute such engagement letter.

Section 23. COVENANTS REGARDING TAX EXEMPTION OF INTEREST ON THE BONDS.

(a) Covenants. The Issuer covenants to take any action necessary to assure, or refrain from any action that would adversely affect, the treatment of the Bonds as obligations described in section 103 of the Code, the interest on which is not includable in the “gross income” of the holder for purposes of federal income taxation. In furtherance thereof, the Issuer covenants as follows:

(1) to take any action to assure that no more than 10 percent of the proceeds of the Bonds (less amounts deposited to a reserve fund, if any) are used for any “private business use,” as defined in section 141(b)(6) of the Code or, if more than 10 percent of the proceeds or the projects financed or refinanced by the Bonds or the Refunded Bonds (the “Project”) are so used, such amounts, whether or not received by the Issuer, with respect to such private business use, do not, under the terms of this Ordinance or any underlying arrangement, directly or indirectly, secure or provide for the payment of more than 10 percent of the debt service on the Bonds, in contravention of section 141(b)(2) of the Code;

(2) to take any action to assure that in the event that the “private business use” described in subsection (1) hereof exceeds 5 percent of the proceeds of the Bonds or the projects financed therewith (less amounts deposited into a reserve fund, if any) then the amount in excess of 5 percent is used for a “private business use” that is “related” and not “disproportionate,” within the meaning of section 141(b)(3) of the Code, to the governmental use;

(3) to take any action to assure that no amount that is greater than the lesser of \$5,000,000, or 5 percent of the proceeds of the Bonds (less amounts deposited into a reserve fund, if any) is directly or indirectly used to finance loans to persons, other than state or local governmental units, in contravention of section 141(c) of the Code;

(4) to refrain from taking any action that would otherwise result in the Bonds being treated as “private activity bonds” within the meaning of section 141(b) of the Code;

(5) to refrain from taking any action that would result in the Bonds being “federally guaranteed” within the meaning of section 149(b) of the Code;

(6) to refrain from using any portion of the proceeds of the Bonds, directly or indirectly, to acquire or to replace funds that were used, directly or indirectly, to acquire investment property (as defined in section 148(b)(2) of the Code) that produces a materially higher yield over the term of the Bonds, other than investment property acquired with -

(A) proceeds of the Bonds invested for a reasonable temporary period of 3 years or less or, in the case of a refunding bond, for a period of 90 days or less until such proceeds are needed for the purpose for which the Bonds or refunding bonds are issued,

(B) amounts invested in a bona fide debt service fund, within the meaning of section 1.148-1(b) of the rules and regulations of the United States Department of the Treasury (the “Treasury Regulations”), and

(C) amounts deposited in any reasonably required reserve or replacement fund to the extent such amounts do not exceed 10 percent of the proceeds of the Bonds;

(7) to otherwise restrict the use of the proceeds of the Bonds or amounts treated as proceeds of the Bonds, as may be necessary, so that the Bonds do not otherwise contravene the requirements of section 148 of the Code (relating to arbitrage); and

(8) to refrain from using the proceeds of the Bonds or proceeds of any prior bonds to pay debt service on another issue more than 90 days after the date of issue of the Bonds in contravention of the requirements of section 149(d) of the Code (relating to advance refundings); and

(9) to pay to the United States of America at least once during each five-year period (beginning on the date of delivery of the Bonds) an amount that is at least equal to 90 percent of the “Excess Earnings,” within the meaning of section 148(f) of the Code and to pay to the United States of America, not later than 60 days after the Bonds have been paid in full, 100 percent of the amount then required to be paid as a result of Excess Earnings under section 148(f) of the Code.

(10) to file or cause to be filed with the Secretary of the Treasury, not later than the 15th day of the second calendar month after the close of the calendar quarter in which the Bonds are issued, an information statement concerning the Bonds, all under and in accordance with section 149(e) of the Code and the applicable Treasury Regulations promulgated thereunder;

(b) Rebate Fund. In order to facilitate compliance with the above covenant (a)(9), a “Rebate Fund” is hereby established by the Issuer for the sole benefit of the United States of America, and such Fund shall not be subject to the claim of any other person, including without limitation the Bondholders. The Rebate Fund is established for the additional purpose of compliance with section 148 of the Code.

(c) Use of Proceeds. For purposes of the foregoing covenants (a)(1) and (a)(2), the Issuer understands that the term “proceeds” includes “disposition proceeds” as defined in the Treasury Regulations and, in the case of the Bonds, transferred proceeds (if any) and proceeds of the Refunded Bonds expended prior to the date of issuance of the Bonds. It is the understanding of the Issuer that the covenants contained herein are intended to assure compliance with the Code and any regulations or rulings promulgated by the U.S. Department of the Treasury pursuant thereto. In the event that regulations or rulings are hereafter promulgated that modify or expand provisions of the Code, as applicable to the Bonds, the Issuer will not be required to comply with any covenant contained herein to the extent that such failure to comply, in the opinion of nationally recognized bond counsel, will not adversely affect the exemption from federal income taxation of interest on the Bonds under section 103 of the Code. In the event that regulations or rulings are hereafter promulgated that impose additional requirements applicable to the Bonds, the Issuer agrees to comply with the additional requirements to the extent necessary, in the opinion of nationally recognized bond counsel, to preserve the exemption from federal income taxation of interest on the Bonds under section 103 of the Code. In furtherance of such intention, the Issuer hereby authorizes and directs the Mayor, City Manager, or Finance Director to execute any documents, certificates or reports required by the Code and to make such elections, on behalf of the Issuer, that may be permitted by the Code as are consistent with the purpose for the issuance of the Bonds.

(d) Disposition of Projects. The Issuer covenants that the property constituting the Projects will not be sold or otherwise disposed in a transaction resulting in the receipt by the Issuer of cash or other compensation, unless any action taken in connection with such disposition will not adversely affect the tax-

exempt status of the Bonds. For purpose of the foregoing, the Issuer may rely on an opinion of nationally-recognized bond counsel that the action taken in connection with such sale or other disposition will not adversely affect the tax-exempt status of the Bonds. For purposes of the foregoing, the portion of the property comprising personal property and disposed in the ordinary course shall not be treated as a transaction resulting in the receipt of cash or other compensation. For purposes hereof, the Issuer shall not be obligated to comply with this covenant if it obtains a legal opinion that such failure to comply will not adversely affect the excludability for federal income tax purposes from gross income of the interest.

Section 24. INVESTMENT EARNINGS; SECURITY FOR DEPOSITS. (a) The Issuer may place proceeds of the Bonds (including investment earnings thereon) and amounts deposited into the Interest and Sinking Fund in investments authorized by the Public Funds Investment Act, Chapter 2256, Texas Government Code, as amended; provided, however, that the Issuer hereby covenants that the proceeds of the sale of the Bonds will be used as soon as practicable for the purposes for which the Bonds are issued. Interest earnings derived from the investment of proceeds from the sale of the Bonds shall be used along with other Bond proceeds for the Project; provided that after completion of such purpose, if any of such interest earnings remain on hand, such interest earnings shall be deposited in the Interest and Sinking Fund. It is provided, however, that any interest earnings on Bond proceeds that are required to be rebated to the United States of America pursuant to Section 23 hereof in order to prevent the Bonds from being arbitrage bonds shall be so rebated and not considered as interest earnings for the purposes of this Section.

(b) All deposits authorized or required by this Ordinance shall be secured to the fullest extent required by law for the security of public funds as provided in Chapters 2256 and 2257, Texas Government Code, as amended.

Section 25. SALE OF BONDS; FURTHER PROCEDURES.

(a) The Bonds shall be sold and delivered subject to the provisions of Section 2 and Section 3 and pursuant to the terms and provisions of a bond purchase agreement, an investment letter, or a notice of sale and bidding instructions (the "Purchase Agreement") which the Designated Financial Officer is hereby authorized to execute and deliver and in which the initial purchaser or purchasers (the "Purchaser") of the Bonds shall be designated. It is hereby officially found, determined, and declared that the terms of this sale are the most advantageous reasonably obtainable. The Initial Bond shall be registered in the name set forth in the Pricing Certificate.

(b) The Designated Financial Officer is hereby authorized, in the name and on behalf of the Issuer, to approve, distribute, and deliver a preliminary official statement and a final official statement relating to the Bonds to be used by the Purchaser in the marketing of the Bonds.

(c) The Designated Financial Officer is authorized, in connection with effecting the sale of the Bonds, to obtain from a municipal bond insurance company so designated in the Pricing Certificate (the "Insurer") a municipal bond insurance policy (the "Insurance Policy") in support of the Bonds. To that end, should the Designated Financial Officer exercise such authority and commit the Issuer to obtain a municipal bond insurance policy, for so long as the Insurance Policy is in effect, the requirements of the Insurer relating to the issuance of the Insurance Policy as set forth in the Pricing Certificate are incorporated by reference into this Resolution and made a part hereof for all purposes, notwithstanding any other provision of this Resolution to the contrary. The Designated Financial Officer shall have the authority to execute any documents to effect the issuance of the Insurance Policy by the Insurer.

(d) The Mayor and Mayor Pro Tem, the City Clerk, City Manager and Finance Director of the Issuer shall be and they are hereby expressly authorized, empowered and directed from time to time and at any time to do and perform all such acts and things and to execute, acknowledge and deliver in the name and on behalf of the Issuer such documents, certificates and other instruments, whether or not herein mentioned, as may be

necessary or desirable in order to carry out the terms and provisions of this Ordinance, the Bonds, the sale of the Bonds, the Paying Agent/Registrar Agreement, and the Blanket Issuer Letter of Representations of the Issuer to DTC. In case any officer whose signature shall appear on any Bond shall cease to be such officer before the delivery of such Bond, such signature shall nevertheless be valid and sufficient for all purposes the same as if such officer had remained in office until such delivery.

Section 26. DEFAULT AND REMEDIES

(a) Events of Default. Each of the following occurrences or events for the purpose of this Ordinance is hereby declared to be an Event of Default:

(i) the failure to make payment of the principal of or interest on any of the Bonds when the same becomes due and payable; or

(ii) default in the performance or observance of any other covenant, agreement or obligation of the Issuer, the failure to perform which materially, adversely affects the rights of the registered owners of the Bonds, including, but not limited to, their prospect or ability to be repaid in accordance with this Ordinance, and the continuation thereof for a period of 60 days after notice of such default is given by any Registered Owner to the Issuer.

(b) Remedies for Default.

(i) Upon the happening of any Event of Default, then and in every case, any Registered Owner or an authorized representative thereof, including, but not limited to, a trustee or trustees therefor, may proceed against the Issuer for the purpose of protecting and enforcing the rights of the Registered Owners under this Ordinance, by mandamus or other suit, action or special proceeding in equity or at law, in any court of competent jurisdiction, for any relief permitted by law, including the specific performance of any covenant or agreement contained herein, or thereby to enjoin any act or thing that may be unlawful or in violation of any right of the Registered Owners hereunder or any combination of such remedies.

(ii) It is provided that all such proceedings shall be instituted and maintained for the equal benefit of all Registered Owners of Bonds then outstanding.

(c) Remedies Not Exclusive.

(i) No remedy herein conferred or reserved is intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or under the Bonds or now or hereafter existing at law or in equity; provided, however, that notwithstanding any other provision of this Ordinance, the right to accelerate the debt evidenced by the Bonds shall not be available as a remedy under this Ordinance.

(ii) The exercise of any remedy herein conferred or reserved shall not be deemed a waiver of any other available remedy.

(iii) By accepting the delivery of a Bond authorized under this Ordinance, such Registered Owner agrees that the certifications required to effectuate any covenants or representations contained in this Ordinance do not and shall never constitute or give rise to a personal or pecuniary liability or charge against the officers, employees or trustees of the Issuer or the City Council.

(iv) None of the members of the City Council, nor any other official or officer, agent, or employee of the Issuer, shall be charged personally by the registered owners with any liability, or be

held personally liable to the registered owners under any term or provision of this Ordinance, or because of any Event of Default or alleged Event of Default under this Ordinance.

Section 27. COMPLIANCE WITH RULE 15c2-12.

(a) Definitions. As used in this Section, the following terms have the meanings ascribed to such terms below:

“MSRB” means the Municipal Securities Rulemaking Board.

“Rule” means SEC Rule 15c2-12, as amended from time to time.

“SEC” means the United States Securities and Exchange Commission.

(b) Annual Reports.

(i) The Issuer shall provide annually to the MSRB, within twelve months after the end of each Fiscal Year ending in or after 2020, financial information and operating data with respect to the Issuer of the general type set forth in the Pricing Certificate. Any financial statements so to be provided shall be (1) prepared in accordance with the accounting principles described in the Issuer’s annual financial report, or such other accounting principles as the Issuer may be required to employ from time to time pursuant to state law or regulation, and (2) audited, if the Issuer commissions an audit of such statements and the audit is completed within the period during which they must be provided. If the audit of such financial statements is not complete within such period, then the Issuer shall provide unaudited financial statements by the required time and will provide audited financial statements for the applicable Fiscal Year to the MSRB, when and if the audit report on such statements become available. Such information shall be transmitted electronically to the MSRB, in such format and accompanied by such identifying information as prescribed by the MSRB.

(ii) If the Issuer changes its fiscal year, it will notify the MSRB of the change (and of the date of the new fiscal year end) prior to the next date by which the Issuer otherwise would be required to provide financial information and operating data pursuant to this Section. The financial information and operating data to be provided pursuant to this Section may be set forth in full in one or more documents or may be included by specific reference to any document that is available to the public on the MSRB’s internet website or filed with the SEC. All documents provided to the MSRB pursuant to this Section shall be accompanied by identifying information as prescribed by the MSRB.

(c) Notice of Certain Events.

(i) The Issuer shall file notice of any of the following events with respect to the Bonds with the MSRB in a timely manner and not more than 10 business days after occurrence of the event:

- (1) Principal and interest payment delinquencies;
- (2) Non-payment related defaults, if material;
- (3) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (4) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (5) Substitution of credit or liquidity providers, or their failure to perform;
- (6) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB), or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;
- (7) Modifications to rights of holders of the Bonds, if material;

- (8) Bond calls, if material, and tender offers;
- (9) Defeasances;
- (10) Release, substitution, or sale of property securing repayment of the Bonds, if material;
- (11) Rating changes;
- (12) Bankruptcy, insolvency, receivership, or similar event of the Issuer;
- (13) The consummation of a merger, consolidation, or acquisition involving the Issuer or the sale of all or substantially all of the assets of the Issuer, other than in the ordinary course of business, the entry into of a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (14) Appointment of a successor or additional trustee or the change of name of a trustee, if material;
- (15) Incurrence of a Financial Obligation of the Issuer, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Issuer, any of which affect security holders, if material; and
- (16) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Issuer, any of which reflect financial difficulties.

For these purposes, (i) any event described in the immediately preceding paragraph (12) is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent, or similar officer for the Issuer in a proceeding under the United States Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Issuer, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers of the Issuer in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement, or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Issuer., and (ii) the Issuer intends the words used in the immediately preceding paragraphs (15) and (16) and the definition of Financial Obligation in this Section to have the same meanings as when they are used in the Rule, as evidenced by SEC Release No. 34-83885, dated August 20, 2018.

The Issuer shall notify the MSRB, in an electronic format as prescribed by the MSRB, in a timely manner, of any failure by the Issuer to provide financial information or operating data in accordance with this subsection by the time required. All documents provided to the MSRB pursuant to this subsection shall be accompanied by identifying information as prescribed by the MSRB.

(d) Limitations, Disclaimers, and Amendments.

(i) The Issuer shall be obligated to observe and perform the covenants specified in this Section for so long as, but only for so long as, the Issuer remains an “obligated person” with respect to the Bonds within the meaning of the Rule, except that the Issuer in any event will give notice of any deposit made in accordance with this Ordinance or applicable law that causes Bonds no longer to be outstanding.

(ii) The provisions of this Section are for the sole benefit of the registered owners and beneficial owners of the Bonds, and nothing in this Section, express or implied, shall give any benefit or any legal or equitable right, remedy, or claim hereunder to any other person. The Issuer undertakes to provide only the financial information, operating data, financial statements, and notices which it has expressly agreed to provide pursuant to this Section and does not hereby undertake to provide any other information that may be relevant or material to a complete presentation of the Issuer’s financial results, condition, or prospects or hereby undertake to update any information

provided in accordance with this Section or otherwise, except as expressly provided herein. The Issuer does not make any representation or warranty concerning such information or its usefulness to a decision to invest in or sell Bonds at any future date.

(iii) UNDER NO CIRCUMSTANCES SHALL THE ISSUER BE LIABLE TO THE REGISTERED OWNER OR BENEFICIAL OWNER OF ANY BOND OR ANY OTHER PERSON, IN CONTRACT OR TORT, FOR DAMAGES RESULTING IN WHOLE OR IN PART FROM ANY BREACH BY THE ISSUER, WHETHER NEGLIGENT OR WITHOUT FAULT ON ITS PART, OF ANY COVENANT SPECIFIED IN THIS SECTION, BUT EVERY RIGHT AND REMEDY OF ANY SUCH PERSON, IN CONTRACT OR TORT, FOR OR ON ACCOUNT OF ANY SUCH BREACH SHALL BE LIMITED TO AN ACTION FOR MANDAMUS OR SPECIFIC PERFORMANCE.

(iv) No default by the Issuer in observing or performing its obligations under this Section shall comprise a breach of or default under this Ordinance for purposes of any other provision of this Ordinance. Nothing in this Section is intended or shall act to disclaim, waive, or otherwise limit the duties of the Issuer under federal and state securities laws.

(v) Should the Rule be amended to obligate the Issuer to make filings with or provide notices to entities other than the MSRB, the Issuer hereby agrees to undertake such obligation with respect to the Bonds in accordance with the Rule as amended. The provisions of this Section may be amended by the Issuer from time to time to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status, or type of operations of the Issuer, but only if (1) the provisions of this Section, as so amended, would have permitted an underwriter to purchase or sell Bonds in the primary offering of the Bonds in compliance with the Rule, taking into account any amendments or interpretations of the Rule since such offering as well as such changed circumstances and (2) either (a) the registered owners of a majority in aggregate principal amount (or any greater amount required by any other provision of this Ordinance that authorizes such an amendment) of the outstanding Bonds consent to such amendment or (b) a person that is unaffiliated with the Issuer (such as nationally recognized bond counsel) determined that such amendment will not materially impair the interest of the registered owners and beneficial owners of the Bonds. The Issuer may also amend or repeal the provisions of this continuing disclosure agreement if the SEC amends or repeals the applicable provision of the Rule or a court of final jurisdiction enters judgment that such provisions of the Rule are invalid, but only if and to the extent that the provisions of this sentence would not prevent an underwriter from lawfully purchasing or selling Bonds in the primary offering of the Bonds. If the Issuer so amends the provisions of this Section, it shall include with any amended financial information or operating data next provided in accordance with subsection (b) of this Section an explanation, in narrative form, of the reason for the amendment and of the impact of any change in the type of financial information or operating data so provided.

Section 28. METHOD OF AMENDMENT. The Issuer hereby reserves the right to amend this Ordinance subject to the following terms and conditions, to wit:

(a) The Issuer may from time to time, without the consent of any holder of a First Lien Obligation, except as otherwise required by paragraph (b) below, amend or supplement this Ordinance in order to (i) cure any ambiguity, defect or omission in this Ordinance that does not materially adversely affect the interests of the holders of First Lien Obligations, (ii) grant additional rights or security for the benefit of the holders of First Lien Obligations, (iii) add events of default as shall not be inconsistent with the provisions of this Ordinance and that shall not materially adversely affect the interests of the holders of First Lien Obligations, (iv) qualify this Ordinance under the Trust Indenture Act of 1939, as amended, or corresponding provisions of federal laws from time to time in effect, or (v) make such other provisions in regard to matters or questions

arising under this Ordinance as shall not be inconsistent with the provisions of this Ordinance and that shall not in the opinion of the Issuer's Bond Counsel materially adversely affect the interests of the holders of First Lien Obligations.

(b) That the owners of First Lien Obligations aggregating in principal amount 51% of the aggregate principal amount of then outstanding First Lien Obligations (for purposes of this sentence only, 100% of the aggregate principal amount of First Lien Obligations which are insured by a bond insurance provider at the time that the Issuer seeks approval of an amendment shall be deemed to be owned by such bond insurance provider) shall have the right from time to time to approve any amendment to this Ordinance which may be deemed necessary or desirable by the Issuer; provided, however, that without the consent of the owners of all of the First Lien Obligations at the time outstanding, nothing herein contained shall permit or be construed to permit the amendment of the terms and conditions in this Ordinance or in the First Lien Obligations so as to:

- (1) Make any change in the maturity of any of the outstanding First Lien Obligations;
- (2) Reduce the rate of interest borne by any of the outstanding First Lien Obligations;
- (3) Reduce the amount of the principal payable on the outstanding First Lien Obligations;
- (4) Modify the terms of payment of principal of or interest on the outstanding First Lien Obligations or impose any conditions with respect to such payment;
- (5) Affect the rights of the holders of less than all of the First Lien Obligations then outstanding;
- (6) Change the minimum percentage of the principal amount of First Lien Obligations necessary for consent to such amendment; or
- (7) Amend this subsection (b) of this Section 28.

(c) If at any time the Issuer shall desire to amend this Ordinance under this Section, the Issuer shall send by U.S. mail to each registered owner of the affected First Lien Obligations a copy of the proposed amendment. Such notice shall briefly set forth the nature of the proposed amendment.

(d) Whenever at any time within one year from the date of the mailing of such notice the Issuer shall receive an instrument or instruments executed by the holders of at least 51% in aggregate principal amount of all of the First Lien Obligations then outstanding that are required for the amendment, which instrument or instruments shall refer to the proposed amendment and that shall specifically consent to and approve such amendment, the Issuer may adopt the amendment in substantially the same form.

(e) Upon the adoption of any amendatory Ordinance pursuant to the provisions of this Section, this Ordinance shall be deemed to be modified and amended in accordance with such amendatory Ordinance, and the respective rights, duties, and obligations of the Issuer and all holders of such affected First Lien Obligations shall thereafter be determined, exercised, and enforced, subject in all respects to such amendment.

(f) Any consent given by the holder of a First Lien Obligation pursuant to the provisions of this Section shall be irrevocable for a period of six months from the date of the mailing of notice as provided for in this Section, and shall be conclusive and binding upon all future holders of the same First Lien Obligation during such period. Such consent may be revoked at any time after six months from the date of mailing of said notice by the holder who gave such consent, or by a successor in title, by filing notice with the Issuer, but

such revocation shall not be effective if the holders of 51% in aggregate principal amount of the affected First Lien Obligations then outstanding, have, prior to the attempted revocation, consented to and approved the amendment.

(g) For the purposes of establishing ownership of the First Lien Obligations, the Issuer shall rely solely upon the registration of the ownership of such First Lien Obligation on the registration books kept by the respective paying agent/registrar of such First Lien Obligations.

(h) That the foregoing provisions of this Section notwithstanding, the Issuer by action of the City Council may amend this Ordinance for any one or more of the following purposes:

(1) To add to the covenants and agreements of the Issuer in this Ordinance contained, other covenants and agreements thereafter to be observed, grant additional rights or remedies to bondholders or to surrender, restrict or limit any right or power herein reserved to or conferred upon the Issuer;

(2) To make such provisions for the purpose of curing any ambiguity, or curing, correcting or supplementing any defective provision contained in this Ordinance, or in regard to clarifying matters or questions arising under this Ordinance, including, without limitation, those matters described in Section 27(d)(v) hereof, or those matters necessary to obtain a rating on the Bonds or to obtain the approving opinion of the Attorney General of Texas as required by law, as are necessary or desirable and not contrary to or inconsistent with this Ordinance and which shall not adversely affect the interests of the holders of the First Lien Obligations;

(3) To make such amendments to this Ordinance as may be required, in the opinion of nationally-recognized bond counsel selected by the Issuer, to ensure compliance with sections 103 and 141 through 150 of the Code and the regulations promulgated thereunder and applicable thereto;

(4) To modify any of the provisions of this Ordinance in any other respect whatever, provided that (i) such modification shall be, and be expressed to be, effective only after all First Lien Obligations outstanding at the date of the adoption of such modification shall cease to be outstanding, and (ii) such modification shall be specifically referred to in the text of all First Lien Obligations issued after the date of the adoption of such modification.

Section 29. REDEMPTION OF REFUNDED OBLIGATIONS. (a) Subject to execution and delivery of the Purchase Agreement with the Purchaser, the Issuer hereby directs that the Refunded Obligations be called for redemption on the dates and at the prices set forth in the Pricing Certificate.

(b) The paying agent/registrar for the Refunded Obligations is hereby directed to provide the appropriate notice of redemption as required by the Refunded Obligations and is hereby directed to make appropriate arrangements so that the Refunded Obligations may be redeemed on the redemption dates.

(c) If the redemption of the Refunded Obligations results in the partial refunding of any maturity of the Refunded Obligations, the Designated Financial Officer shall direct the paying agent/registrar for the Refunded Obligations to designate at random and by lot which of the Refunded Obligations will be payable from and secured solely from Pledged Revenues of the Issuer's Waterworks and Sewer System pursuant to the Series 2017 Ordinance. For purposes of such determination and designation, all Refunded Obligations registered in denominations greater than \$5,000 in principal amount shall be considered to be registered in separate \$5,000 denominations. The paying agent/registrar shall notify by first-class mail all Registered Owners of all affected bonds of such maturities that: (i) a portion of such bonds have been refunded and are secured until final maturity solely with cash and investments maintained by the Escrow Agent in the Escrow

Fund, (ii) the principal amount of all affected bonds of such maturities registered in the name of such Registered Owner that have been refunded and are payable solely from cash and investments in the Escrow Fund and the remaining principal amount of all affected bonds of such maturities registered in the name of such Registered Owner, if any, have not been refunded and are payable and secured solely from Pledged Revenues of the Issuer's Waterworks and Sewer System described in the Series 2017 Ordinance, (iii) the Registered Owner is required to submit his or her Refunded Obligations to the paying agent/registrar, for the purposes of re-registering such Registered Owner's bonds and assigning new CUSIP numbers in order to distinguish the source of payment for the principal and interest on such bonds, and (iv) payment of principal of and interest on such bonds may, in some circumstances, be delayed until such bonds have been re-registered and new CUSIP numbers have been assigned as required by (iii) above.

(d) The source of funds for payment of the principal of and interest on the Refunded Obligations on their respective maturity or redemption dates shall be from the funds deposited with the Escrow Agent, pursuant to the Escrow Agreement.

Section 30. SEVERABILITY. If any section, article, paragraph, sentence, clause, phrase or word in this Ordinance, or application thereof to any persons or circumstances is held invalid or unconstitutional by a court of competent jurisdiction, such holding shall not affect the validity of the remaining portion of this Ordinance, despite such invalidity, which remaining portions shall remain in full force and effect.

Section 31. NO PERSONAL LIABILITY. No recourse shall be had for payment of the principal of or interest on any Bonds or for any claim based thereon, or on this Ordinance, against any official or employee of the Issuer or any person executing any Bond.

Section 33. OPEN MEETING. It is hereby officially found and determined that the meeting at which this Ordinance was adopted was open to the public, and that public notice of the time, place and purpose of said meeting was given, all as required by Chapter 551, Texas Government Code.

Section 34. IMMEDIATE EFFECTIVE DATE. This Ordinance shall take effect and be in force immediately upon and after its adoption by the City Council in accordance with the provisions of Section 1201.028, Texas Government Code and the provisions of the City Charter of the Issuer, and it is accordingly so ordained.

(Execution Page Follows)

APPROVED AND ADOPTED ON THE 3RD DAY OF MARCH, 2020

Brenda Gunter, Mayor
City of San Angelo, Texas

Attest

Julia Antilley, City Clerk
City of San Angelo, Texas

Approved As to Form:

Approved As to Content:

Rodolfo Segura Jr
McCall, Parkhurst & Horton L.L.P.

Tina Dierschke, Finance Director
City of San Angelo, Texas

[CITY SEAL]



City of San Angelo, Texas

Refunding Update

February 26, 2020



SPECIALIZED PUBLIC FINANCE INC.
FINANCIAL ADVISORY SERVICES

Vince Viaille | Managing Director

Office 214.373.3911 | Cell 806.773.4546
vince@spfmuni.com

Patrick Q. Smith | Director

Office 214.373.3911 | Cell 214.499.0412
patrick@spfmuni.com

Refunding Summary

Reviews Refinancing of the Series 2011 G.O. Bonds and the Series 2011A C/Os



Refunded Bonds				
Issue	Maturities	Interest Rates	Amount	Callable
GO Ref Bds Ser 2011	2021-2023	4.00% - 5.00%	\$ 5,930,000	2/15/2020
C/O Ser 2011A	2021-2024	3.00% - 3.75%	\$ 795,000	2/15/2020
Total			\$ 6,725,000	

Preliminary Summary of Results	
Par Amount of Refunding Bonds	\$ 6,745,000
Est. True Interest Cost (TIC)	1.957%
Total Gross Debt Service Savings	\$ 189,793
Net Present Value Savings (\$)	\$ 180,375
Net Present Value Savings (%)	2.682%

Fiscal Year	Series 2011 and Series 2011A Net Debt Service	Proposed Series 2020 Refunding Debt Service	Refunding Savings/ (Loss)
2020	\$ 47,431	\$ 25,282	\$ 22,149
2021	3,480,138	3,436,550	43,588
2022	1,748,244	1,706,650	41,594
2023	1,644,475	1,604,250	40,225
2024	213,938	171,700	42,238
	\$ 7,134,225	\$ 6,944,432	\$ 189,793

The refunding savings are currently below the 3.00% Net Present Value threshold.

Notes:

Interest Rates as of February 26 and are preliminary and subject to change.

Refunding Summary

Reviews Taxable Advance Refinancing of the Series 2017 W&S Revenue Bonds



Refunded Bonds				
Issue	Maturities	Interest Rates	Amount	Callable
2017 W&S Rev. Bonds	2023-2046	2.824-4.401%	\$ 42,875,000	2/15/2022
Total			\$ 42,875,000	

Preliminary Summary of Results	
Par Amount of Refunding Bonds	\$ 46,215,000
Est. True Interest Cost (TIC)	3.121%
Total Gross Debt Service Savings	\$ 4,080,727
Net Present Value Savings (\$)	\$ 2,746,210
Net Present Value Savings (%)	6.405%

Notes:

Interest Rates as provided by Raymond James.

Assumes refunding bonds close on May 27, 2020. Projected Annual Savings reflects only debt service.

being refunded. No assurances can be made that rates shown represent rates as of actual refunding date.

The Refunding Bonds maintain the 2022 Optional Redemption Feature.

Fiscal Year	Prior Net Debt Service	Refunding Debt Service	Refunding Savings/ (Loss)
2020	\$ 330,080	\$ 312,682	\$ 17,398
2021	2,858,479	2,698,532	159,947
2022	2,858,485	2,698,673	159,812
2023	2,854,499	2,694,783	159,716
2024	2,856,227	2,692,947	163,280
2025	2,854,854	2,694,080	160,775
2026	2,856,060	2,697,366	158,694
2027	2,859,333	2,698,030	161,303
2028	2,859,491	2,696,438	163,053
2029	2,856,410	2,697,856	158,555
2030	2,859,449	2,697,485	161,964
2031	2,858,632	2,695,286	163,346
2032	2,859,086	2,700,657	158,429
2033	2,854,573	2,693,547	161,026
2034	2,855,545	2,694,324	161,222
2035	2,858,428	2,697,732	160,696
2036	2,858,115	2,695,680	162,435
2037	2,854,606	2,693,440	161,166
2038	2,856,313	2,694,200	162,113
2039	2,857,852	2,697,800	160,052
2040	2,855,431	2,694,240	161,191
2041	2,858,829	2,697,315	161,514
2042	2,857,827	2,696,828	160,999
2043	2,857,313	2,698,783	158,530
2044	2,857,068	2,698,098	158,970
2045	2,856,871	2,694,773	162,099
2046	84,396	41,954	42,443
\$	71,844,251	\$67,763,524	\$4,080,727

Ten-Year History of Tax-Exempt Interest Rates

The Bond Buyer's 20 Bond G.O. Index



History of Municipal Interest Rates



ORDINANCE NO. 2020-_____

AUTHORIZING THE ISSUANCE OF CITY OF SAN ANGELO, TEXAS GENERAL OBLIGATION REFUNDING BONDS, SERIES 2020; ESTABLISHING PROCEDURES AND DELEGATING AUTHORITY FOR THE SALE AND DELIVERY OF THE BONDS; LEVYING AN AD VALOREM TAX; PROVIDING FOR THE SECURITY AND PAYMENT OF SAID BONDS; PROVIDING AN EFFECTIVE DATE; AND ENACTING OTHER PROVISIONS RELATING TO THE SUBJECT.

THE STATE OF TEXAS	§
COUNTY OF TOM GREEN	§
CITY OF SAN ANGELO	§

WHEREAS, the City has previously issued, and there are presently certain outstanding, (1) general obligation bonds of the City of San Angelo, Texas (the “Issuer”) secured by a pledge of ad valorem tax revenues, and (2) certificates of obligation of the Issuer secured by a pledge of ad valorem tax revenues and surplus revenues of the Issuer’s Waterworks and Sewer System, all as further described below (collectively, the “Eligible Refunded Obligations”):

City of San Angelo, Texas General Obligation Refunding Bonds, Series 2011, dated April 1, 2011, scheduled to mature February 15 in the years 2021 through 2023, inclusive, aggregating \$5,930,000; and

City of San Angelo, Texas Combination Tax and Limited Surplus Revenue Certificates of Obligation, Series 2011A, dated June 1, 2011, scheduled to mature February 15 in the years 2021 through 2024, inclusive, aggregating \$795,000;

WHEREAS, the Issuer now desires to refund all or part of the Eligible Refunded Obligations, and those Eligible Refunded Obligations designated by the Pricing Officer in the Pricing Certificate, each as defined below, to be refunded are herein referred to as the “Refunded Obligations”;

WHEREAS, Chapter 1207, Texas Government Code, authorizes the Issuer to issue refunding bonds and to deposit the proceeds from the sale thereof, together with any other available funds or resources, directly with a paying agent for any of the Refunded Obligations or a trust company or commercial bank that does not act as a depository for the Issuer and is named in these proceedings, and such deposit, if made before the payment dates of the Refunded Obligations, shall constitute the making of firm banking and financial arrangements for the discharge and final payment of the Refunded Obligations;

WHEREAS, Chapter 1207, Texas Government Code, further authorizes the Issuer to enter into an escrow agreement with such paying agent for the Refunded Obligations or trust company or commercial bank with respect to the safekeeping, investment, reinvestment, administration and disposition of any such deposit, upon such terms and conditions as the Issuer and such paying agent or trust company or commercial bank may agree;

WHEREAS, this City Council hereby finds and determines that it is a public purpose and in the best interests of the Issuer to refund the Refunded Obligations in order to achieve a present value debt service savings of at least 3.00%, with such savings, among other information and terms to be included in a pricing certificate (the "Pricing Certificate") to be executed by the Pricing Officer (hereinafter designated), all in accordance with the provisions of Section 1207.007, Texas Government Code;

WHEREAS, all the Refunded Obligations mature or are subject to redemption prior to maturity within 20 years of the date of the bonds hereinafter authorized;

WHEREAS, the bonds hereafter authorized are being issued and delivered pursuant to said Chapter 1207, Texas Government Code; and

WHEREAS, it is officially found, determined, and declared that the meeting at which this Ordinance has been adopted was open to the public and public notice of the time, place and subject matter of the public business to be considered and acted upon at said meeting, including this Ordinance, was given, all as required by the applicable provisions of Tex. Gov't Code Ann. ch. 551; Now, Therefore

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANGELO, TEXAS:

Section 1. RECITALS, AMOUNT, PURPOSE AND DESIGNATION OF THE BONDS.

(a) The recitals set forth in the preamble hereof are incorporated herein and shall have the same force and effect as if set forth in this Section.

(b) The bonds of the City of San Angelo, Texas (the "Issuer"), are hereby authorized to be issued and delivered, in one or more series, in the aggregate principal amount hereinafter provided for the public purpose of providing funds to refund a portion of the Issuer's outstanding indebtedness and to pay the costs incurred in connection with the issuance of the Bonds.

(c) Each bond issued pursuant to this Ordinance shall be designated: "CITY OF SAN ANGELO, TEXAS, GENERAL OBLIGATION REFUNDING BOND, SERIES 2017B" (series to be designated as described in Section 2(a)), and initially there shall be issued, sold, and delivered hereunder fully registered Bonds, without interest coupons, payable to the respective registered owners thereof (with the initial bonds being made payable to the Initial Purchaser as described in Section 10 hereof), or to the registered assignee or assignees of said bonds or any portion or portions thereof (in each case, the "Registered Owner"). The Bonds shall be in the respective denominations and principal amounts, shall be numbered, shall mature and be payable on the date or dates in each of the years and in the principal amounts, and shall bear interest to their respective dates of maturity or redemption prior to maturity at the rates per annum, as set forth in the Respective Pricing Certificate.

Section 2. DELEGATION TO PRICING OFFICER.

(a) As authorized by Section 1207.007, Texas Government Code, as amended, the Assistant City Manager/Chief Financial Officer and Director of Finance (each a "Pricing Officer") are each hereby authorized to act on behalf of the Issuer in selling and delivering the Bonds, in one or more series, and with respect to each such series, determining which of the Eligible Refunded Obligations shall be refunded and carrying out the other procedures specified in this Ordinance, including, determining the date of the Bonds, any additional or different designation or title by which the Bonds shall be known, the price at which the Bonds will be sold, the years in which the Bonds will mature, the principal amount to mature in each of such years, the rate of interest to be borne by each such maturity, the interest payment and record dates, the price and terms upon and at which the Bonds shall be subject to redemption prior to maturity at the option of the Issuer, as well as any mandatory sinking fund redemption provisions, and all other matters relating to the issuance, sale, and delivery of the Bonds and the refunding of the Refunded Bonds, including without limitation establishing the redemption dates for and effecting the redemption of the Refunded Obligations and obtaining municipal bond insurance for all or any portion of the Bonds and providing for the terms and provisions thereof applicable to the Bonds, including the execution of any commitment agreements, membership agreements in mutual insurance companies, and other similar agreements, all of which shall be specified in the Pricing Certificate; provided that:

(i) the aggregate original principal amount of the Bonds authorized pursuant to this Ordinance, whether one or more series, shall not exceed \$8,000,000;

(ii) the refunding must produce a present value debt service savings, when calculated with respect to all of the Refunded Obligations, of at least 3.00%;

(iii) the interest rate on each series of the Bonds ("True Interest Cost") shall not exceed 3.00%;

(iv) the final maturity of the Bonds shall not be later than February 15, 2024; and

(iv) the delegation made hereby shall expire if not exercised by the Pricing Officer on or before the 180th day following the date of adoption of this Ordinance.

(b) In establishing the aggregate principal amount of the Bonds, the Pricing Officer shall establish an amount not exceeding the amount authorized in Subsection (a) hereof, which shall be sufficient in amount to provide for the purposes for which the Bonds are authorized and to pay costs of issuing the Bonds. The Pricing Officer shall determine whether the Bonds will be sold by private placement or negotiated or competitive sale. The Bonds shall be sold with and subject to such terms as set forth in the Pricing Certificate.

(c) It is hereby found and determined that the refunding of the Refunded Obligations is advisable and necessary in order to restructure the debt service requirements of the Issuer, and that the debt service requirements on the Bonds will be less than those on the Refunded Obligations, resulting in a reduction in the amount of principal and interest which otherwise would be payable. The Refunded Obligations are subject to redemption, at the option of the Issuer, and the Pricing Officer is hereby authorized to cause all of the Refunded Obligations to be called for redemption on the respective date or dates consistent with requirements set forth in subsection (a) of this

Section, and the proper notices of such redemption to be given, and in each case at a redemption price of par, plus accrued interest to the date fixed for redemption. In furtherance of authority granted by Section 1207.007(b), Texas Government Code, the Pricing Officer is further authorized to enter into and execute on behalf of the Issuer with the escrow agent or deposit agent named therein (the "Escrow Agent"), an escrow agreement or deposit agreement, in the form and substance as shall be approved by the Pricing Officer, which escrow agreement or deposit agreement will provide for the payment in full of the Refunded Obligations (the "Escrow Agreement").

In addition, the Pricing Officer is authorized to purchase such securities with proceeds of the Bonds, to execute such subscriptions for the purchase of the United States Treasury Securities State and Local Government Series, and to transfer and deposit such cash from available funds, as may be necessary or appropriate for the escrow fund (the "Escrow Fund") described in the Escrow Agreement.

(d) In satisfaction of Section 1201.022(a)(3)(B), Texas Government Code, the Board of Trustees hereby determines that the delegation of the authority to the Pricing Officer to approve the final terms of the Bonds set forth in this Ordinance is, and the decisions made by the Pricing Officer pursuant to such delegated authority and incorporated into the Pricing Certificate will be, in the Issuer's best interests, and the Pricing Officer is hereby authorized to make and include in the Pricing Certificate a finding to that effect.

Section 3. CHARACTERISTICS OF THE BONDS.

(a) Registration, Transfer, Conversion and Exchange; Authentication. The Issuer shall keep or cause to be kept at the designated office of the bank named in the Pricing Certificate as the paying agent/registrar for the Bonds (the "Paying Agent/Registrar"), books or records for the registration of the transfer, conversion and exchange of the Bonds (the "Registration Books"), and the Issuer hereby appoints the Paying Agent/Registrar as its registrar and transfer agent to keep such books or records and make such registrations of transfers, conversions and exchanges under such reasonable regulations as the Issuer and Paying Agent/Registrar may prescribe; and the Paying Agent/Registrar shall make such registrations, transfers, conversions and exchanges as herein provided. The Paying Agent/Registrar shall obtain and record in the Registration Books the address of the Registered Owner of each Bond to which payments with respect to the Bonds shall be mailed, as herein provided; but it shall be the duty of each Registered Owner to notify the Paying Agent/Registrar in writing of the address to which payments shall be mailed, and such interest payments shall not be mailed unless such notice has been given. The Issuer shall have the right to inspect the Registration Books during regular business hours of the Paying Agent/Registrar, but otherwise the Paying Agent/Registrar shall keep the Registration Books confidential and, unless otherwise required by law, shall not permit their inspection by any other entity. The Issuer shall pay the Paying Agent/Registrar's standard or customary fees and charges for making such registration, transfer, conversion, exchange and delivery of a substitute Bond or Bonds. Registration of assignments, transfers, conversions and exchanges of Bonds shall be made in the manner provided and with the effect stated in the FORM OF BOND set forth in this Ordinance. Each substitute Bond shall bear a letter and/or number to distinguish it from each other Bond.

Except as provided in Section 3(c) of this Ordinance, an authorized representative of the Paying Agent/Registrar shall, before the delivery of any such Bond, date and manually sign said Bond, and no such Bond shall be deemed to be issued or outstanding unless such Bond is so executed. The Paying Agent/Registrar promptly shall cancel all paid Bonds and Bonds surrendered for conversion and exchange. No additional ordinances, orders, or resolutions need be passed or adopted by the governing body of the Issuer or any other body or person so as to accomplish the foregoing conversion and exchange of any Bond or portion thereof, and the Paying Agent/Registrar shall provide for the printing, execution, and delivery of the substitute Bonds in the manner prescribed herein, and said Bonds shall be printed or typed on paper of customary weight and strength. Pursuant to Chapter 1201, Government Code, as amended, the duty of conversion and exchange of Bonds as aforesaid is hereby imposed upon the Paying Agent/Registrar, and, upon the execution of said Bond, the converted and exchanged Bond shall be valid, incontestable, and enforceable in the same manner and with the same effect as the Bonds that initially were issued and delivered pursuant to this Ordinance, approved by the Attorney General of the State of Texas (the "Attorney General") and registered by the Comptroller of Public Accounts of the State of Texas (the "Comptroller").

(b) Payment of Bonds and Interest. The Issuer hereby further appoints the Paying Agent/Registrar to act as the paying agent for paying the principal of and interest on the Bonds, all as provided in this Ordinance. The Paying Agent/Registrar shall keep proper records of all payments made by the Issuer and the Paying Agent/Registrar with respect to the Bonds, and of all conversions and exchanges of Bonds, and all replacements of Bonds, as provided in this Ordinance. However, in the event of a nonpayment of interest on a scheduled payment date, and for thirty (30) days thereafter, a new record date for such interest payment (a "Special Record Date") will be established by the Paying Agent/Registrar, if and when funds for the payment of such interest have been received from the Issuer. Notice of the past due interest shall be sent at least five (5) business days prior to the Special Record Date by United States mail, first-class postage prepaid, to the address of each Registered Owner appearing on the Registration Books at the close of business on the last business day next preceding the date of mailing of such notice.

(c) In General. The Bonds (i) shall be issued in fully registered form, without interest coupons, with the principal of and interest on such Bonds to be payable only to the Registered Owners thereof, (ii) may or shall be redeemed prior to their scheduled maturities, (iii) may be converted and exchanged for other Bonds, (iv) may be transferred and assigned, (v) shall have the characteristics, (vi) shall be signed, sealed, executed and authenticated, (vii) the principal of and interest on the Bonds shall be payable, and (viii) shall be administered and the Paying Agent/Registrar and the Issuer shall have certain duties and responsibilities with respect to the Bonds, all as provided, and in the manner and to the effect as required or indicated, in the FORM OF BOND set forth in this Ordinance. The Initial Bond is not required to be, and shall not be, authenticated by the Paying Agent/Registrar, but on each substitute Bond issued in conversion of and exchange for any Bond or Bonds issued under this Ordinance the Paying Agent/Registrar shall execute the PAYING AGENT/REGISTRAR'S AUTHENTICATION CERTIFICATE, in the form set forth in the FORM OF BOND.

(d) Paying Agent/Registrar for the Bonds. The Issuer covenants with the Registered Owners of the Bonds that at all times while the Bonds are outstanding the Issuer will provide a competent and legally qualified bank, trust company, financial institution, or other entity to act as and perform the services of Paying Agent/Registrar for the Bonds under this Ordinance, and that

the Paying Agent/Registrar will be a single entity. The Issuer reserves the right to, and may, at its option, change the Paying Agent/Registrar upon not less than 120 days written notice to the Paying Agent/Registrar, to be effective not later than 60 days prior to the next principal or interest payment date after such notice. In the event that the entity at any time acting as Paying Agent/Registrar (or its successor by merger, acquisition, or other method) should resign or otherwise cease to act as such, the Issuer covenants that promptly it will appoint a competent and legally qualified bank, trust company, financial institution, or other agency to act as Paying Agent/Registrar under this Ordinance. Upon any change in the Paying Agent/Registrar, the previous Paying Agent/Registrar promptly shall transfer and deliver the Registration Books (or a copy thereof), along with all other pertinent books and records relating to the Bonds, to the new Paying Agent/Registrar designated and appointed by the Issuer. Upon any change in the Paying Agent/Registrar, the Issuer promptly will cause a written notice thereof to be sent by the new Paying Agent/Registrar to each Registered Owner of the Bonds, by United States mail, first-class postage prepaid, which notice also shall give the address of the new Paying Agent/Registrar. By accepting the position and performing as such, each Paying Agent/Registrar shall be deemed to have agreed to the provisions of this Ordinance, and a certified copy of this Ordinance shall be delivered to each Paying Agent/Registrar.

(e) Authentication. Except as provided below, no Bond shall be valid or obligatory for any purpose or be entitled to any security or benefit of this Ordinance unless and until there appears thereon the Certificate of Paying Agent/Registrar substantially in the form provided in this Ordinance, duly authenticated by manual execution of the Paying Agent/Registrar. It shall not be required that the same authorized representative of the Paying Agent/Registrar sign the Certificate of Paying Agent/Registrar on all of the Bonds. In lieu of the executed Certificate of Paying Agent/Registrar described above, the Initial Bond delivered on the closing date shall have attached thereto the Comptroller's Registration Certificate substantially in the form provided in this Ordinance, manually executed by the Comptroller or by her duly authorized agent, which certificate shall be evidence that the Initial Bond has been duly approved by the Attorney General and that it is a valid and binding obligation of the Issuer, and has been registered by the Comptroller.

(f) Book-Entry-Only System. The Bonds issued in exchange for the Initial Bond shall be initially issued in the form of a separate, single, fully-registered Bond for each of the maturities thereof. Upon initial issuance, the ownership of each such Bond shall be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"), and except as provided in subsection (g) hereof, all of the outstanding Bonds shall be registered in the name of Cede & Co., as nominee of DTC.

With respect to Bonds registered in the name of Cede & Co., as nominee of DTC, the Issuer and the Paying Agent/Registrar shall have no responsibility or obligation to any securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations on whose behalf DTC was created ("DTC Participant") to hold securities to facilitate the clearance and settlement of securities transactions among DTC Participants or to any person on behalf of whom such a DTC Participant holds an interest in the Bonds. Without limiting the immediately preceding sentence, the Issuer and the Paying Agent/Registrar shall have no responsibility or obligation with respect to (i) the accuracy of the records of DTC, Cede & Co. or any DTC Participant with respect to any ownership interest in the Bonds, (ii) the delivery to any DTC Participant or any other person, other than a Registered Owner of Bonds, as shown on the

Registration Books, of any notice with respect to the Bonds, or (iii) the payment to any DTC Participant or any other person, other than a Registered Owner of Bonds, as shown in the Registration Books of any amount with respect to principal of or interest on the Bonds. Notwithstanding any other provision of this Ordinance to the contrary, the Issuer and the Paying Agent/Registrar shall be entitled to treat and consider the person in whose name each Bond is registered in the Registration Books as the absolute owner of such Bond for the purpose of payment of principal and interest with respect to such Bond, for the purpose of registering transfers with respect to such Bond, and for all other purposes whatsoever. The Paying Agent/Registrar shall pay all principal of and interest on the Bonds only to or upon the order of the Registered Owners, as shown in the Registration Books as provided in this Ordinance, or their respective attorneys duly authorized in writing, and all such payments shall be valid and effective to fully satisfy and discharge the Issuer's obligations with respect to payment of principal of and interest on the Bonds to the extent of the sum or sums so paid. No person other than a Registered Owner, as shown in the Registration Books, shall receive a Bond evidencing the obligation of the Issuer to make payments of principal and interest pursuant to this Ordinance. Upon delivery by DTC to the Paying Agent/Registrar of written notice to the effect that DTC has determined to substitute a new nominee in place of Cede & Co., and subject to the provisions in this Ordinance with respect to interest checks being mailed to the Registered Owner at the close of business on the Record date, the words "Cede & Co." in this Ordinance shall refer to such new nominee of DTC.

The previous execution and delivery of the Blanket Issuer Letter of Representations with respect to obligations of the Issuer is hereby ratified and confirmed; and the provisions thereof shall be fully applicable to the Bonds.

(g) Successor Securities Depository; Transfers Outside Book-Entry-Only System. In the event that the Issuer determines that DTC is incapable of discharging its responsibilities described herein and in the Blanket Issuer Letter of Representations to DTC or that it is in the best interest of the beneficial owners of the Bonds that they be able to obtain certificated Bonds, the Issuer shall (i) appoint a successor securities depository, qualified to act as such under Section 17A of the Securities and Exchange Act of 1934, as amended, notify DTC and DTC Participants of the appointment of such successor securities depository and transfer one or more separate Bonds to such successor securities depository or (ii) notify DTC and DTC Participants of the availability through DTC of Bonds and transfer one or more separate certificated Bonds to DTC Participants having Bonds credited to their DTC accounts. In such event, the Bonds shall no longer be restricted to being registered in the Registration Books in the name of Cede & Co., as nominee of DTC, but may be registered in the name of the successor securities depository, or its nominee, or in whatever name or names Registered Owners transferring or exchanging Bonds shall designate, in accordance with the provisions of this Ordinance.

(h) Payments to Cede & Co. Notwithstanding any other provision of this Ordinance to the contrary, so long as any Bond is registered in the name of Cede & Co., as nominee of DTC, all payments with respect to principal of and interest on such Bond and all notices with respect to such Bond shall be made and given, respectively, in the manner provided in the Blanket Issuer Letter of Representations to DTC.

(i) Cancellation of Initial Bond. On the closing date, the Initial Bond, representing the entire principal amount of the Bonds, payable in stated installments to the Initial Purchaser designated in Section 10 or its designee, executed by manual or facsimile signature of the Mayor

and City Clerk of the Issuer, approved by the Attorney General, and registered and manually signed by the Comptroller, will be delivered to the Initial Purchaser or its designee. Upon payment for the Initial Bond, the Paying Agent/Registrar shall cancel the Initial Bond and deliver to DTC on behalf of such Initial Purchaser one registered definitive Bond for each year of maturity of the Bonds, in the aggregate principal amount of all of the Bonds for such maturity. To the extent that the Paying Agent/Registrar is eligible to participate in DTC's FAST System, pursuant to an agreement between the Paying Agent/Registrar and DTC, the Paying Agent/Registrar shall hold the definitive Bonds in safekeeping for DTC.

(j) Conditional Notice of Redemption. With respect to any optional redemption of the Bonds, unless the prerequisites to such redemption required by this Ordinance have been met and moneys sufficient to pay the principal of and premium, if any, and interest on the Bonds to be redeemed shall have been received by the Paying Agent/Registrar prior to the giving of such notice of redemption, such notice shall state that said redemption may, at the option of the Issuer, be conditional upon the satisfaction of such prerequisites and receipt of such moneys by the Paying Agent/Registrar on or prior to the date fixed for such redemption, or upon any prerequisite set forth in such notice of redemption. If a conditional notice of redemption is given and such prerequisites to the redemption and sufficient moneys are not received, such notice shall be of no force and effect, the Issuer shall not redeem such Bonds and the Paying Agent/Registrar shall give notice, in the manner in which the notice of redemption was given, to the effect that the Bonds have not been redeemed.

Section 4. FORM OF BONDS. The form of the Bonds, including the form of Paying Agent/Registrar's Authentication Certificate, the form of Assignment and the form of Comptroller's Registration Certificate to be attached to the Initial Bond shall be, respectively, substantially as follows, with such appropriate variations, omissions or insertions as are permitted or required by this Ordinance, and with the Form of Bond to be modified pursuant to, and completed with information set forth in, the Pricing Certificate.

(a) [Form of Bond]

NO. R-__	UNITED STATES OF AMERICA STATE OF TEXAS CITY OF SAN ANGELO, TEXAS GENERAL OBLIGATION REFUNDING BOND SERIES 2020	PRINCIPAL AMOUNT \$_____
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Interest Rate	Dated Date	Maturity Date	CUSIP No.
	_____, 2020	_____, ____	

REGISTERED OWNER:

PRINCIPAL AMOUNT:

DOLLARS

ON THE MATURITY DATE specified above, the City of San Angelo, in Tom Green County, Texas (the "Issuer"), being a political subdivision and municipal corporation of the State of Texas, hereby promises to pay to the Registered Owner specified above, or registered assigns (hereinafter called the "Registered Owner"), on the Maturity Date specified above, the Principal Amount specified above. The Issuer promises to pay interest on the unpaid principal amount hereof (calculated on the basis of a 360-day year of twelve 30-day months) from _____, _____ at the Interest Rate per annum specified above. Interest is payable on _____, _____ and semiannually on each _____ and _____ thereafter to the Maturity Date specified above, or the date of redemption prior to maturity; except, if this Bond is required to be authenticated and the date of its authentication is later than the first Record Date (hereinafter defined), such Principal Amount shall bear interest from the interest payment date next preceding the date of authentication, unless such date of authentication is after any Record Date but on or before the next following interest payment date, in which case such principal amount shall bear interest from such next following interest payment date; provided, however, that if on the date of authentication hereof the interest on the Bond or Bonds, if any, for which this Bond is being exchanged is due but has not been paid, then this Bond shall bear interest from the date to which such interest has been paid in full.

THE PRINCIPAL OF AND INTEREST ON this Bond are payable in lawful money of the United States of America, without exchange or collection charges. The principal of this Bond shall be paid to the Registered Owner hereof upon presentation and surrender of this Bond at maturity, or upon the date fixed for its redemption prior to maturity, at the principal corporate trust office of _____, _____, Texas, which is the "Paying Agent/Registrar" for this Bond. The payment of interest on this Bond shall be made by the Paying Agent/Registrar to the Registered Owner hereof on each interest payment date by check or draft, dated as of such interest payment date, drawn by the Paying Agent/Registrar on, and payable solely from, funds of the Issuer required by the ordinance authorizing the issuance of this Bond (the "Bond Ordinance") to be on deposit with the Paying Agent/Registrar for such purpose as hereinafter provided; and such check or draft shall be sent by the Paying Agent/Registrar by United States mail, first-class postage prepaid, on each such interest payment date, to the Registered Owner hereof, at its address as it appeared on the _____ day of the month preceding each such date (the "Record Date") on the Registration Books kept by the Paying Agent/Registrar, as hereinafter described. In addition, interest may be paid by such other method, acceptable to the Paying Agent/Registrar, requested by, and at the risk and expense of, the Registered Owner. In the event of a non-payment of interest on a scheduled payment date, and for 30 days thereafter, a new record date for such interest payment (a "Special Record Date") will be established by the Paying Agent/Registrar, if and when funds for the payment of such interest have been received from the Issuer. Notice of the Special Record Date and of the scheduled payment date of the past due interest (which shall be 15 days after the Special Record Date) shall be sent at least five business days prior to the Special Record Date by United States mail, first-class postage prepaid, to the address of each Registered Owner of a Bond appearing on the Registration Books at the close of business on the last business day next preceding the date of mailing of such notice.

ANY ACCRUED INTEREST due at maturity or upon the redemption of this Bond prior to maturity as provided herein shall be paid to the Registered Owner upon presentation and surrender of this Bond for redemption and payment at the principal corporate trust office of the Paying Agent/Registrar. The Issuer covenants with the Registered Owner of this Bond that on or before each principal payment date, interest payment date, and accrued interest payment date for

this Bond it will make available to the Paying Agent/Registrar, from the “Interest and Sinking Fund” created by the Bond Ordinance, the amounts required to provide for the payment, in immediately available funds, of all principal of and interest on the Bonds, when due.

IF THE DATE for the payment of the principal of or interest on this Bond shall be a Saturday, Sunday, a legal holiday or a day on which banking institutions in the city where the principal corporate trust office of the Paying Agent/Registrar is located are authorized by law or executive order to close, then the date for such payment shall be the next succeeding day that is not such a Saturday, Sunday, legal holiday or day on which banking institutions are authorized to close; and payment on such date shall have the same force and effect as if made on the original date payment was due.

THIS BOND is one of a series of Bonds dated _____, _____, authorized in accordance with the Constitution and laws of the State of Texas in the principal amount of \$_____ for the public purposes of refunding certain outstanding obligations of the Issuer and paying the costs incurred in connection with the issuance of the Bonds.

[ON _____, _____, or on any date thereafter, the Bonds of this series may be redeemed prior to their scheduled maturities, at the option of the Issuer, with funds derived from any available and lawful source, as a whole, or in part, and, if in part, the particular Bonds, or portions thereof, to be redeemed shall be selected and designated by the Issuer (provided that a portion of a Bond may be redeemed only in an integral multiple of \$5,000), at a redemption price equal to the principal amount to be redeemed plus accrued interest to the date fixed for redemption.]

[THE BONDS scheduled to mature on _____ in the years ____ and ____ (the “Term Bonds”) are subject to scheduled mandatory redemption by the Paying Agent/Registrar by lot, or by any other customary method that results in a random selection, at a price equal to the principal amount thereof, plus accrued interest to the redemption date, out of moneys available for such purpose in the interest and sinking fund for the Bonds, on the dates and in the respective principal amounts, set forth in the following schedule:

Bonds Maturing		Bonds Maturing		Bonds Maturing	
<u> </u>		<u> </u>		<u> </u>	
<u>Year</u>	<u>Principal Amount</u>	<u>Year</u>	<u>Principal Amount</u>	<u>Year</u>	<u>Principal Amount</u>

⁽¹⁾ Stated maturity.

The principal amount of Term Bonds of a stated maturity required to be redeemed on any mandatory redemption date pursuant to the operation of the mandatory sinking fund redemption provisions shall be reduced, at the option of the Issuer, by the principal amount of any Term Bonds of the same maturity which, at least 45 days prior to a mandatory redemption date (1) shall have been acquired by the Issuer at a price not exceeding the principal amount of such Term Bonds plus accrued interest to the date of purchase thereof, and delivered to the Paying Agent/Registrar for cancellation, (2) shall have been purchased and canceled by the Paying Agent/Registrar at the

request of the Issuer at a price not exceeding the principal amount of such Term Bonds plus accrued interest to the date of purchase, or (3) shall have been redeemed pursuant to the optional redemption provisions and not theretofore credited against a mandatory redemption requirement.]

[AT LEAST 30 days prior to the date fixed for any redemption of Bonds or portions thereof prior to maturity a written notice of such redemption shall be sent by the Paying Agent/Registrar by United States mail, first-class postage prepaid, to the Registered Owner of each Bond to be redeemed at its address as it appeared on the 45th day prior to such redemption date; provided, however, that the failure of the Registered Owner to receive such notice, or any defect therein or in the sending or mailing thereof, shall not affect the validity or effectiveness of the proceedings for the redemption of any Bond. By the date fixed for any such redemption due provision shall be made with the Paying Agent/Registrar for the payment of the required redemption price for the Bonds or portions thereof that are to be so redeemed. If such written notice of redemption is sent and if due provision for such payment is made, all as provided above, the Bonds or portions thereof that are to be so redeemed thereby automatically shall be treated as redeemed prior to their scheduled maturities, and they shall not bear interest after the date fixed for redemption, and they shall not be regarded as being outstanding except for the right of the Registered Owner to receive the redemption price from the Paying Agent/Registrar out of the funds provided for such payment. If a portion of any Bond shall be redeemed, a substitute Bond or Bonds having the same maturity date, bearing interest at the same rate, in any denomination or denominations in any integral multiple of \$5,000, at the written request of the Registered Owner, and in aggregate principal amount equal to the unredeemed portion thereof, will be issued to the Registered Owner upon the surrender thereof for cancellation, at the expense of the Issuer, all as provided in the Bond Ordinance.

IF AT THE TIME OF MAILING of notice of optional redemption there shall not have either been deposited with the Paying Agent/Registrar or legally authorized escrow agent immediately available funds sufficient to redeem all the Bonds called for redemption, such notice may state that it is conditional, and is subject to the deposit of the redemption moneys with the Paying Agent/Registrar or legally authorized escrow agent at or prior to the redemption date. If such redemption is not effectuated, the Paying Agent/Registrar shall, within five days thereafter, give notice in the manner in which the notice of redemption was given that such moneys were not so received and shall rescind the redemption.]

ALL BONDS OF THIS SERIES are issuable solely as fully registered bonds, without interest coupons, in the denomination of any integral multiple of \$5,000. As provided in the Bond Ordinance, this Bond may, at the request of the Registered Owner or the assignee or assignees hereof, be assigned, transferred, converted into and exchanged for a like aggregate principal amount of fully registered Bonds, without interest coupons, payable to the appropriate Registered Owner, assignee or assignees, as the case may be, having the same denomination or denominations in any integral multiple of \$5,000 as requested in writing by the appropriate Registered Owner, assignee or assignees, as the case may be, upon surrender of this Bond to the Paying Agent/Registrar for cancellation, all in accordance with the form and procedures set forth in the Bond Ordinance. Among other requirements for such assignment and transfer, this Bond must be presented and surrendered to the Paying Agent/Registrar, together with proper instruments of assignment, in form and with guarantee of signatures satisfactory to the Paying Agent/Registrar, evidencing assignment of this Bond or any portion or portions hereof in any integral multiple of \$5,000 to the assignee or assignees in whose name or names this Bond or any such portion or

portions hereof is or are to be registered. The Form of Assignment printed or endorsed on this Bond may be executed by the Registered Owner to evidence the assignment hereof, but such method is not exclusive, and other instruments of assignment satisfactory to the Paying Agent/Registrar may be used to evidence the assignment of this Bond or any portion or portions hereof from time to time by the Registered Owner. The Paying Agent/Registrar's reasonable standard or customary fees and charges for assigning, transferring, converting and exchanging any Bond or portion thereof will be paid by the Issuer. In any circumstance, any taxes or governmental charges required to be paid with respect thereto shall be paid by the one requesting such assignment, transfer, conversion or exchange, as a condition precedent to the exercise of such privilege. The Paying Agent/Registrar shall not be required to make any such transfer, conversion, or exchange (i) during the period commencing with the close of business on any Record Date and ending with the opening of business on the next following principal or interest payment date, or (ii) with respect to any Bond or any portion thereof called for redemption prior to maturity, within 45 days prior to its redemption date.

IN THE EVENT any Paying Agent/Registrar for the Bonds is changed by the Issuer, resigns, or otherwise ceases to act as such, the Issuer has covenanted in the Bond Ordinance that it promptly will appoint a competent and legally qualified substitute therefor, and cause written notice thereof to be mailed to the Registered Owners of the Bonds.

IT IS HEREBY certified, recited and covenanted that this Bond has been duly and validly authorized, issued and delivered; that all acts, conditions and things required or proper to be performed, exist and be done precedent to or in the authorization, issuance and delivery of this Bond have been performed, existed and been done in accordance with law; and that annual ad valorem taxes sufficient to provide for the payment of the interest on and principal of this Bond, as such interest comes due and such principal matures, have been levied and ordered to be levied against all taxable property in said Issuer, and have been pledged for such payment, within the limit prescribed by law.

THE ISSUER HAS RESERVED THE RIGHT to amend the Bond Ordinance as provided therein, and under some (but not all) circumstances amendments thereto must be approved by the Registered Owners of a majority in aggregate principal amount of the outstanding Bonds.

BY BECOMING the Registered Owner of this Bond, the Registered Owner thereby acknowledges all of the terms and provisions of the Bond Ordinance, agrees to be bound by such terms and provisions, acknowledges that the Bond Ordinance is duly recorded and available for inspection in the official minutes and records of the governing body of the Issuer, and agrees that the terms and provisions of this Bond and the Bond Ordinance constitute a contract between each Registered Owner hereof and the Issuer.

IN WITNESS WHEREOF, the Issuer has caused this Bond to be signed with the manual or facsimile signature of the Mayor of the Issuer (or in the Mayor's absence, of the Mayor Pro-Tem) and countersigned with the manual or facsimile signature of the City Clerk of said Issuer, and has caused the official seal of the Issuer to be duly impressed, or placed in facsimile, on this Bond.

(signature)
City Clerk

(signature)
Mayor

(SEAL)

(INSERT BOND INSURANCE LEGEND, IF ANY)

(b) [Form of Paying Agent/Registrar's Authentication Certificate]

PAYING AGENT/REGISTRAR'S AUTHENTICATION CERTIFICATE

(To be executed if this Bond is not accompanied by
an executed Comptroller's Registration Certificate)

It is hereby certified that this Bond has been issued under the provisions of the Bond Ordinance described in the text of this Bond; and that this Bond has been issued in conversion or replacement of, or in exchange for, a Bond, Bonds, or a portion of a Bond or Bonds of a series that originally was approved by the Attorney General of the State of Texas and registered by the Comptroller of Public Accounts of the State of Texas.

Dated: _____

[NAME OF PAYING AGENT/REGISTRAR
[CITY], [STATE]
Paying Agent/Registrar

By: _____
Authorized Representative

(c) [Form of Assignment]

ASSIGNMENT

For value received, the undersigned hereby sells, assigns and transfers unto:

_____.
Please insert Social Security or Taxpayer Identification Number of Transferee:

_____.
Please print or typewrite name and address, including zip code, of Transferee:

the within Bond and all rights thereunder, and hereby irrevocably constitutes and appoints _____, attorney, to register the transfer of the within Bond on the books kept for registration thereof, with full power of substitution in the premises.

Dated: _____

Signature Guaranteed:

NOTICE: Signature(s) must be guaranteed by an eligible guarantor institution participating in a securities transfer association recognized signature guarantee program.

NOTICE: The signature above must correspond with the name of the Registered Owner as it appears upon the front of this Bond in every particular, without alteration or enlargement or any change whatsoever.

(d) [Form of Comptroller's Registration Certificate]

COMPTROLLER'S REGISTRATION CERTIFICATE: REGISTER NO. _____

I hereby certify that there is on file and of record in my office a true and correct copy of the opinion of the Attorney General of the State of Texas approving this Bond and that this Bond has been registered this day by me.

Witness my signature and seal this

Comptroller of Public Accounts of the State of Texas

(COMPTROLLER'S SEAL)

(e) [Initial Bond Insertions]

(i) The Initial Bond shall be in the form set forth in paragraph (a) of this Section, except that:

A. immediately under the name of the Bond, the headings "Interest Rate" and "Maturity Date" shall both be completed with the words "As shown below" and "CUSIP No. ____" shall be deleted.

B. the first paragraph shall be deleted and the following will be inserted:

"THE CITY OF SAN ANGELO, TEXAS, in Tom Green County, Texas (the "Issuer"), being a political subdivision and municipal corporation of the State of Texas, hereby promises to pay to the Registered Owner specified above, or registered assigns (hereinafter called the "Registered Owner"), on _____ in each of the years, in the principal installments and bearing interest at the per annum rates set forth in the following schedule:

<u>Years</u>	<u>Principal Amounts</u>	<u>Interest Rates</u>
--------------	--------------------------	-----------------------

(Information from Pricing Certificate to be inserted)

The Issuer promises to pay interest on the unpaid principal amount hereof (calculated on the basis of a 360-day year of twelve 30-day months) from _____, _____ at the respective Interest Rate per annum specified above. Interest is payable on _____, _____ and semiannually on each _____ and _____ thereafter to the date of payment of the principal installment specified above, or the date of redemption prior to maturity; except, if this Bond is required to be authenticated and the date of its authentication is later than the first Record Date (hereinafter defined), such Principal Amount shall bear interest from the interest payment date next preceding the date of authentication, unless such date of authentication is after any Record Date but on or before the next following interest payment date, in which case such principal amount shall bear interest from such next following interest payment date; provided, however, that if on the date of authentication hereof the interest on the Bond or Bonds, if any, for which this Bond is being exchanged is due but has not been paid, then this Bond shall bear interest from the date to which such interest has been paid in full.”

C. The Initial Bond shall be numbered “T-1.”

Section 5. INTEREST AND SINKING FUND.

(a)) A special “Interest and Sinking Fund” is hereby created and shall be established and maintained by the Issuer as a separate fund or account and the funds therein shall be deposited into and held in an account at an official depository bank of said Issuer. Said Interest and Sinking Fund shall be kept separate and apart from all other funds and accounts of said Issuer, and shall be used only for paying the interest on and principal of said Bonds. All amounts received from the sale of the Bonds as accrued interest shall be deposited upon receipt to the Interest and Sinking Fund, and all ad valorem taxes levied and collected for and on account of said Bonds shall be deposited, as collected, to the credit of said Interest and Sinking Fund. During each year while any of said Bonds are outstanding and unpaid, the governing body of said Issuer shall compute and ascertain a rate and amount of ad valorem tax that will be sufficient to raise and produce the money required to pay the interest on said Bonds as such interest comes due, and to provide and maintain a sinking fund adequate to pay the principal of said Bonds as such principal matures (but never less than 2% of the original amount of said Bonds as a sinking fund each year); and said tax shall be based on the latest approved tax rolls of said Issuer, with full allowances being made for tax delinquencies and the cost of tax collection. Said rate and amount of ad valorem tax is hereby levied, and is hereby ordered to be levied, against all taxable property in said Issuer, for each year while any of said Bonds are outstanding and unpaid, and said tax shall be assessed and collected each such year and deposited to the credit of the aforesaid Interest and Sinking Fund. Said ad valorem taxes sufficient to provide for the payment of the interest on and principal of said Bonds, as such interest comes due and such principal matures, are hereby pledged for such payment, within the limit prescribed by law. If lawfully available moneys of the Issuer are on deposit in the Interest and Sinking Fund in advance of the time when ad valorem taxes are scheduled to be levied for any year, then the amount of taxes that otherwise would have been required to be levied pursuant to this Section may be reduced to the extent and by the amount of the lawfully available funds then on deposit in the Interest and Sinking Fund.

(b) Chapter 1208, Texas Government Code, applies to the issuance of the Bonds and the pledge of the taxes granted by the Issuer under this Section and Section 9, respectively, and is therefore valid, effective, and perfected. Should Texas law be amended at any time while the Bonds are outstanding and unpaid, the result of such amendment being that the pledge of the taxes

granted by the Issuer under this Section is to be subject to the filing requirements of Chapter 9, Texas Business & Commerce Code, in order to preserve to the Registered Owners of the Bonds a security interest in said pledge, the Issuer agrees to take such measures as it determines are reasonable and necessary under Texas law to comply with the applicable provisions of Chapter 9, Texas Business & Commerce Code and enable a filing of a security interest in said pledge to occur.

Section 6. DEFEASANCE OF BONDS.

(a) Any Bond and the interest thereon shall be deemed to be paid, retired and no longer outstanding (a "Defeased Bond") within the meaning of this Ordinance, except to the extent provided in subsection (d) of this Section, when payment of the principal of such Bond, plus interest thereon to the due date (whether such due date be by reason of maturity or otherwise) either (i) shall have been made or caused to be made in accordance with the terms thereof, or (ii) shall have been provided for on or before such due date by irrevocably depositing with or making available to the Paying Agent/Registrar in accordance with an escrow agreement or other instrument (the "Future Escrow Agreement") for such payment (1) lawful money of the United States of America sufficient to make such payment or (2) Defeasance Securities that mature as to principal and interest in such amounts and at such times as will insure the availability, without reinvestment, of sufficient money to provide for such payment, and when proper arrangements have been made by the Issuer with the Paying Agent/Registrar for the payment of its services until all Defeased Bonds shall have become due and payable. At such time as a Bond shall be deemed to be a Defeased Bond hereunder, as aforesaid, such Bond and the interest thereon shall no longer be secured by, payable from, or entitled to the benefits of, the ad valorem taxes herein levied and pledged as provided in this Ordinance, and such principal and interest shall be payable solely from such money or Defeasance Securities. Notwithstanding any other provision of this Ordinance to the contrary, it is hereby provided that any determination not to redeem Defeased Bonds that is made in conjunction with the payment arrangements specified in Subsection (a)(i) or (ii) of this Section shall not be irrevocable, provided that: (1) in the proceedings providing for such payment arrangements, the Issuer expressly reserves the right to call the Defeased Bonds for redemption; (2) gives notice of the reservation of that right to the Registered Owners of the Defeased Bonds immediately following the making of the payment arrangements; and (3) directs that notice of the reservation be included in any redemption notices that it authorizes.

(b) Any moneys so deposited with the Paying Agent/Registrar may at the written direction of the Issuer be invested in Defeasance Securities, maturing in the amounts and times as hereinbefore set forth, and all income from such Defeasance Securities received by the Paying Agent/Registrar that is not required for the payment of the Bonds and interest thereon, with respect to which such money has been so deposited, shall be turned over to the Issuer, or deposited as directed in writing by the Issuer. Any Future Escrow Agreement pursuant to which the money and/or Defeasance Securities are held for the payment of Defeased Bonds may contain provisions permitting the investment or reinvestment of such moneys in Defeasance Securities or the substitution of other Defeasance Securities upon the satisfaction of the requirements specified in Subsection (a)(i) or (ii) of this Section. All income from such Defeasance Securities received by the Paying Agent/Registrar which is not required for the payment of the Defeased Bonds, with respect to which such money has been so deposited, shall be remitted to the Issuer or deposited as directed in writing by the Issuer.

(c) The term “Defeasance Securities” means any securities and obligations now or hereafter authorized by State law that are eligible to discharge obligations such as the Bonds.

(d) Until all Defeased Bonds shall have become due and payable, the Paying Agent/Registrar shall perform the services of Paying Agent/Registrar for such Defeased Bonds the same as if they had not been defeased, and the Issuer shall make proper arrangements to provide and pay for such services as required by this Ordinance.

(e) In the event that the Issuer elects to defease less than all of the principal amount of Bonds of a maturity, the Paying Agent/Registrar shall select, or cause to be selected, such amount of Bonds by such random method as it deems fair and appropriate.

Section 7. DAMAGED, MUTILATED, LOST, STOLEN, OR DESTROYED BONDS.

(a) Replacement Bonds. In the event any outstanding Bond is damaged, mutilated, lost, stolen or destroyed, the Paying Agent/Registrar shall cause to be printed, executed and delivered, a new Bond of the same principal amount, maturity and interest rate, as the damaged, mutilated, lost, stolen or destroyed Bond, in replacement for such Bond in the manner hereinafter provided.

(b) Application for Replacement Bonds. Application for replacement of damaged, mutilated, lost, stolen or destroyed Bonds shall be made by the Registered Owner thereof to the Paying Agent/Registrar. In every case of loss, theft or destruction of a Bond, the Registered Owner applying for a replacement Bond shall furnish to the Issuer and to the Paying Agent/Registrar such security or indemnity as may be required by them to save each of them harmless from any loss or damage with respect thereto. Also, in every case of loss, theft or destruction of a Bond, the Registered Owner shall furnish to the Issuer and to the Paying Agent/Registrar evidence to their satisfaction of the loss, theft or destruction of such Bond, as the case may be. In every case of damage or mutilation of a Bond, the Registered Owner shall surrender to the Paying Agent/Registrar for cancellation the Bond so damaged or mutilated.

(c) No Default Occurred. Notwithstanding the foregoing provisions of this Ordinance, in the event any such Bond shall have matured, and no default has occurred that is then continuing in the payment of the principal of, redemption premium, if any, or interest on the Bond, the Issuer may authorize the payment of the same (without surrender thereof except in the case of a damaged or mutilated Bond) instead of issuing a replacement Bond, provided security or indemnity is furnished as above provided in this Section.

(d) Charge for Issuing Replacement Bonds. Prior to the issuance of any replacement Bond, the Paying Agent/Registrar shall charge the Registered Owner of such Bond with all legal, printing, and other expenses in connection therewith. Every replacement Bond issued pursuant to the provisions of this Section by virtue of the fact that any Bond is lost, stolen or destroyed shall constitute a contractual obligation of the Issuer whether or not the lost, stolen or destroyed Bond shall be found at any time, or be enforceable by anyone, and shall be entitled to all the benefits of this Ordinance equally and proportionately with any and all other Bonds duly issued under this Ordinance.

(e) Authority for Issuing Replacement Bonds. In accordance with Sec. 1206.022, Government Code, this Section 7 of this Ordinance shall constitute authority for the issuance of

any such replacement Bond without necessity of further action by the governing body of the Issuer or any other body or person, and the duty of the replacement of such Bonds is hereby authorized and imposed upon the Paying Agent/Registrar, and the Paying Agent/Registrar shall authenticate and deliver such Bonds in the form and manner and with the effect, as provided in Section 3(a) of this Ordinance for Bonds issued in conversion and exchange for other Bonds.

Section 8. CUSTODY, APPROVAL, AND REGISTRATION OF BONDS; BOND COUNSEL'S OPINION; CUSIP NUMBERS AND CONTINGENT INSURANCE PROVISION, IF OBTAINED; ENGAGEMENT OF BOND COUNSEL.

(a) The Mayor of the Issuer and each of the Pricing Officers are hereby authorized to have control of the Bonds initially issued and delivered hereunder and all necessary records and proceedings pertaining to the Bonds pending their delivery and their investigation, examination, and approval by the Attorney General of the State of Texas, and their registration by the Comptroller of Public Accounts of the State of Texas. Upon registration of the Bonds said Comptroller of Public Accounts (or a deputy designated in writing to act for said Comptroller) shall manually sign the Comptroller's Registration Certificate attached to such Bonds, and the seal of said Comptroller shall be impressed, or placed in facsimile, on such Bond. The approving legal opinion of the Issuer's Bond Counsel and the assigned CUSIP numbers may, at the option of the Issuer, be printed on the Bonds issued and delivered under this Ordinance, but neither shall have any legal effect, and shall be solely for the convenience and information of the registered owners of the Bonds. In addition, if bond insurance is obtained, the Bonds may bear an appropriate legend as provided by the insurer.

(b) The obligation of the Initial Purchaser to accept delivery of the Bonds is subject to the Initial Purchaser being furnished with the final, approving opinion of McCall, Parkhurst & Horton L.L.P., bond counsel to the Issuer, which opinion shall be dated as of and delivered on the date of initial delivery of the Bonds to the Initial Purchaser. The engagement of such firm as bond counsel to the Issuer in connection with issuance, sale and delivery of the Bonds is hereby approved and confirmed. The execution and delivery of an engagement letter between the Issuer and such firm, with respect to such services as bond counsel, is hereby authorized in such form as may be approved by the Mayor, and the Mayor is hereby authorized to execute such engagement letter.

Section 9. COVENANTS REGARDING TAX EXEMPTION OF INTEREST ON THE BONDS.

(a) Covenants. The Issuer covenants to take any action necessary to assure, or refrain from any action that would adversely affect, the treatment of the Bonds as obligations described in section 103 of the Internal Revenue Code of 1986, as amended (the "Code"), the interest on which is not includable in the "gross income" of the holder for purposes of federal income taxation. In furtherance thereof, the Issuer covenants as follows:

(1) to take any action to assure that no more than 10 percent of the proceeds of the Bonds (less amounts deposited to a reserve fund, if any) are used for any "private business use," as defined in section 141(b)(6) of the Code or, if more than 10 percent of the proceeds or the projects financed or refinanced therewith (the "Projects") are so used, such amounts, whether or not received by the Issuer, with respect to such private business use, do not,

under the terms of this Ordinance or any underlying arrangement, directly or indirectly, secure or provide for the payment of more than 10 percent of the debt service on the Bonds, in contravention of section 141(b)(2) of the Code;

(2) to take any action to assure that in the event that the “private business use” described in subsection (1) hereof exceeds 5 percent of the proceeds of the Bonds or the projects financed therewith (less amounts deposited into a reserve fund, if any) then the amount in excess of 5 percent is used for a “private business use” that is “related” and not “disproportionate,” within the meaning of section 141(b)(3) of the Code, to the governmental use;

(3) to take any action to assure that no amount that is greater than the lesser of \$5,000,000, or 5 percent of the proceeds of the Bonds (less amounts deposited into a reserve fund, if any) is directly or indirectly used to finance loans to persons, other than state or local governmental units, in contravention of section 141(c) of the Code;

(4) to refrain from taking any action that would otherwise result in the Bonds being treated as “private activity bonds” within the meaning of section 141(b) of the Code;

(5) to refrain from taking any action that would result in the Bonds being “federally guaranteed” within the meaning of section 149(b) of the Code;

(6) to refrain from using any portion of the proceeds of the Bonds, directly or indirectly, to acquire or to replace funds that were used, directly or indirectly, to acquire investment property (as defined in section 148(b)(2) of the Code) that produces a materially higher yield over the term of the Bonds, other than investment property acquired with —

(A) proceeds of the Bonds invested for a reasonable temporary period of 3 years or less, or, in the case of refunding bonds, for a period of 90 days or less until such proceeds are needed for the purpose for which the Bonds or refunding bonds are issued,

(B) amounts invested in a bona fide debt service fund, within the meaning of section 1.148-1(b) of the rules and regulations of the United States Department of the Treasury (“Treasury Regulations”), and

(C) amounts deposited in any reasonably required reserve or replacement fund to the extent such amounts do not exceed 10 percent of the proceeds of the Bonds;

(7) to otherwise restrict the use of the proceeds of the Bonds or amounts treated as proceeds of the Bonds, as may be necessary, so that the Bonds do not otherwise contravene the requirements of section 148 of the Code (relating to arbitrage);

(8) to refrain from using the proceeds of the Bonds or proceeds of any prior bonds to pay debt service on another issue more than 90 days after the date of issue of the Bonds in contravention of the requirements of section 149(d) of the Code (relating to advance refundings);

(9) to pay to the United States of America at least once during each five-year period (beginning on the date of delivery of the Bonds) an amount that is at least equal to 90 percent of the “Excess Earnings,” within the meaning of section 148(f) of the Code and to pay to the United States of America, not later than 60 days after the Bonds have been paid in full, 100 percent of the amount then required to be paid as a result of Excess Earnings under section 148(f) of the Code.

(b) Rebate Fund. In order to facilitate compliance with the above covenant (a)(9), a “Rebate Fund” is hereby established by the Issuer for the sole benefit of the United States of America, and such Rebate Fund shall not be subject to the claim of any other person, including without limitation the Bondholders. The Rebate Fund is established for the additional purpose of compliance with section 148 of the Code.

(c) Use of Proceeds. For purposes of the foregoing covenants (a)(1) and (a)(2), the Issuer understands that the term “proceeds” includes “disposition proceeds” as defined in the Treasury Regulations and, in the case of refunding bonds, transferred proceeds (if any) and proceeds of the refunded bonds expended prior to the date of issuance of the Bonds. It is the understanding of the Issuer that the covenants contained herein are intended to assure compliance with the Code and any regulations or rulings promulgated by the United States Department of the Treasury pursuant thereto. In the event that regulations or rulings are hereafter promulgated that modify or expand provisions of the Code, as applicable to the Bonds, the Issuer will not be required to comply with any covenant contained herein to the extent that such failure to comply, in the opinion of nationally-recognized bond counsel, will not adversely affect the exemption from federal income taxation of interest on the Bonds under section 103 of the Code. In the event that regulations or rulings are hereafter promulgated that impose additional requirements applicable to the Bonds, the Issuer agrees to comply with the additional requirements to the extent necessary, in the opinion of nationally-recognized bond counsel, to preserve the exemption from federal income taxation of interest on the Bonds under section 103 of the Code. In furtherance of such intention, the Issuer hereby authorizes and directs the Mayor or Pricing Officer to execute any documents, certificates or reports required by the Code and to make such elections, on behalf of the Issuer, that may be permitted by the Code as are consistent with the purpose for the issuance of the Bonds.

(d) Disposition of Projects. The Issuer covenants that the property constituting the projects financed or refinanced with the proceeds of the Bonds will not be sold or otherwise disposed in a transaction resulting in the receipt by the Issuer of cash or other compensation, unless any action taken in connection with such disposition will not adversely affect the tax-exempt status of the Bonds. For purpose of the foregoing, the Issuer may rely on an opinion of nationally-recognized bond counsel that the action taken in connection with such sale or other disposition will not adversely affect the tax-exempt status of the Bonds. For purposes of the foregoing, the portion of the property comprising personal property and disposed in the ordinary course shall not be treated as a transaction resulting in the receipt of cash or other compensation. For purposes hereof, the Issuer shall not be obligated to comply with this covenant if it obtains an opinion that such failure to comply will not adversely affect the excludability for federal income tax purposes from gross income of the interest.

Section 10. SALE OF BONDS AND APPROVAL OF OFFICIAL STATEMENT;
FURTHER PROCEDURES.

(a) The Bonds shall be sold and delivered subject to the provisions of Section 1 and Section 3 through a negotiated sale, competitive sale or private placement and pursuant to the terms and provisions of a purchase contract or a notice of sale and bidding instructions and official bid form (in either case, the “Purchase Agreement”) which the Pricing Officer is hereby authorized to execute and deliver and in which the initial purchaser or purchasers (collectively, the “Initial Purchaser”) of the Bonds shall be designated. The Bonds shall initially be registered in the name of the Initial Purchaser thereof as set forth in the Pricing Certificate.

(b) The Mayor and City Clerk are further authorized and directed to execute and deliver for and on behalf of the Issuer copies of a Preliminary Official Statement and Official Statement, prepared in connection with the offering of the Bonds by the Initial Purchaser, in final form as may be required by the Initial Purchaser, and such final Official Statement in the form and content as approved by the Pricing Officer or as manually executed by said officials shall be deemed to be approved by the City Council of the Issuer and constitute the Official Statement authorized for distribution and use by the Initial Purchaser. The form and substance of the Preliminary Official Statement for the Bonds and any addenda, supplement or amendment thereto, all as approved by the Pricing Officer, are hereby deemed to be approved in all respects by the City Council of the Issuer, and the Preliminary Official Statement is hereby deemed final as of its date (except for the omission of pricing and related information) within the meaning and for the purpose of paragraph (b)(1) of the Rule (hereinafter defined).

(c) The Pricing Officer is authorized, in connection with effecting the sale of the Bonds, to obtain from a municipal bond insurance company so designated in the Pricing Certificate (the “Insurer”) a municipal bond insurance policy (the “Insurance Policy”) in support of the Bonds. To that end, should the Pricing Officer exercise such authority and commit the Issuer to obtain a municipal bond insurance policy, for so long as the Insurance Policy is in effect, the requirements of the Insurer relating to the issuance of the Insurance Policy as set forth in the Pricing Certificate are incorporated by reference into this Ordinance and made a part hereof for all purposes, notwithstanding any other provision of this Ordinance to the contrary. The Pricing Officer shall have the authority to execute any documents to effect the issuance of the Insurance Policy by the Insurer.

(d) The Mayor, the City Clerk the City Manager and each Pricing Officer shall be and they are hereby expressly authorized, empowered and directed from time to time and at any time to do and perform all such acts and things and to execute, acknowledge and deliver in the name and on behalf of the Issuer such documents, certificates and other instruments, whether or not herein mentioned, as may be necessary or desirable in order to carry out the terms and provisions of this Ordinance, the Pricing Certificate, the Bonds, the sale of the Bonds and the Official Statement. In case any officer whose signature shall appear on any Bond shall cease to be such officer before the delivery of such Bond, such signature shall nevertheless be valid and sufficient for all purposes the same as if such officer had remained in office until such delivery.

Section 11. COMPLIANCE WITH RULE 15c2-12.

(a) Definitions.

As used in this Section, the following terms have the meanings ascribed to such terms

below:

“*Financial Obligation*” means a (a) debt obligation; (b) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (c) guarantee of a debt obligation or any such derivative instrument; provided that “financial obligation” shall not include municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

“*MSRB*” means the Municipal Securities Rulemaking Board or any successor to its functions under the Rule.

“*Rule*” means SEC Rule 15c2-12, as amended from time to time.

“*SEC*” means the United States Securities and Exchange Commission.

(b) Annual Reports.

The Issuer shall provide annually to the MSRB, within twelve months after the end of each fiscal year ending in or after 2020, financial information and operating data with respect to the Issuer of the general type included in the Official Statement, being the information determined by the Pricing Officer in the Pricing Certificate, if any. The Issuer will update and provide the information in the numbered tables within six months after the end of each fiscal year ending in and after 2020. The Issuer will additionally provide audited financial statements within 12 months after the end of each fiscal year ending in or after 2020. Any financial statements so to be provided shall be (1) prepared in accordance with the accounting principles described in the notes to the financial statements included in the Official Statement, or such other accounting principles as the Issuer may be required to employ from time to time pursuant to state law or regulation, and (2) audited, if the Issuer commissions an audit of such statements and the audit is completed within the period during which they must be provided. If the audit of such financial statements is not complete within such period, then the Issuer shall provide unaudited financial statements by the required time and will provide audited financial statements for the applicable fiscal year to the MSRB, when and if the audit report on such statements become available. Such information shall be transmitted electronically to the MSRB, in such format and accompanied by such identifying information as prescribed by the MSRB.

If the Issuer changes its fiscal year, it will notify the MSRB of the change (and of the date of the new fiscal year end) prior to the next date by which the Issuer otherwise would be required to provide financial information and operating data pursuant to this Section. The financial information and operating data to be provided pursuant to this Section may be set forth in full in one or more documents or may be included by specific reference to any document (including an official statement or other offering document, if it is available from the MSRB) that theretofore has been provided to the MSRB or filed with the SEC.

(c) Notice of Certain Events. (i) The Issuer shall file notice of any of the following events with respect to the Bonds with the MSRB in a timely manner and not more than 10 business days after occurrence of the event:

- (1) Principal and interest payment delinquencies;
- (2) Non-payment related defaults, if material;
- (3) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (4) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (5) Substitution of credit or liquidity providers, or their failure to perform;
- (6) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB), or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;
- (7) Modifications to rights of holders of the Bonds, if material;
- (8) Bond calls, if material, and tender offers;
- (9) Defeasances;
- (10) Release, substitution, or sale of property securing repayment of the Bonds, if material;
- (11) Rating changes;
- (12) Bankruptcy, insolvency, receivership, or similar event of the Issuer;
- (13) The consummation of a merger, consolidation, or acquisition involving the Issuer or the sale of all or substantially all of the assets of the Issuer, other than in the ordinary course of business, the entry into of a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (14) Appointment of a successor or additional trustee or the change of name of a trustee, if material;
- (15) Incurrence of a Financial Obligation of the Issuer, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Issuer, any of which affect security holders, if material; and
- (16) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Issuer, any of which reflect financial difficulties.

For these purposes, (i) any event described in the immediately preceding paragraph (12) is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent, or similar officer for the Issuer in a proceeding under the United States Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Issuer, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers of the Issuer in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement, or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Issuer., and (ii) the Issuer intends the words used in (15) and (16) in the immediately preceding paragraphs and the definition of Financial Obligation in this Section to have the same meanings as when they are used in the Rule, as evidenced by SEC Release No. 34-83885, dated August 20, 2018.

The Issuer shall file notice with the MSRB, in a timely manner, of any failure by the Issuer to provide financial information or operating data in accordance with Subsection (b) of this Section by the time required by such Subsection.

(d) Limitations, Disclaimers, and Amendments. (i) The Issuer shall be obligated to observe and perform the covenants specified in this Section for so long as, but only for so long as, the Issuer remains an “obligated person” with respect to the Bonds within the meaning of the Rule, except that the Issuer in any event will give the notice required by Subsection (a) hereof of any Bond calls and defeasance that cause the Issuer to no longer be such an “obligated person”.

(ii) The provisions of this Section are for the sole benefit of the registered owners and beneficial owners of the Bonds, and nothing in this Section, express or implied, shall give any benefit or any legal or equitable right, remedy, or claim hereunder to any other person. The Issuer undertakes to provide only the financial information, operating data, financial statements, and notices which it has expressly agreed to provide pursuant to this Section and does not hereby undertake to provide any other information that may be relevant or material to a complete presentation of the Issuer’s financial results, condition, or prospects or hereby undertake to update any information provided in accordance with this Section or otherwise, except as expressly provided herein. The Issuer does not make any representation or warranty concerning such information or its usefulness to a decision to invest in or sell Bonds at any future date.

(iii) UNDER NO CIRCUMSTANCES SHALL THE ISSUER BE LIABLE TO THE REGISTERED OWNER OR BENEFICIAL OWNER OF ANY BOND OR ANY OTHER PERSON, IN CONTRACT OR TORT, FOR DAMAGES RESULTING IN WHOLE OR IN PART FROM ANY BREACH BY THE ISSUER, WHETHER NEGLIGENT OR WITHOUT FAULT ON ITS PART, OF ANY COVENANT SPECIFIED IN THIS SECTION, BUT EVERY RIGHT AND REMEDY OF ANY SUCH PERSON, IN CONTRACT OR TORT, FOR OR ON ACCOUNT OF ANY SUCH BREACH SHALL BE LIMITED TO AN ACTION FOR MANDAMUS OR SPECIFIC PERFORMANCE.

(iv) No default by the Issuer in observing or performing its obligations under this Section shall comprise a breach of or default under the Ordinance for purposes of any other provision of this Ordinance. Nothing in this Section is intended or shall act to disclaim, waive, or otherwise limit the duties of the Issuer under federal and state securities laws.

(v) The provisions of this Section may be amended by the Issuer from time to time to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status, or type of operations of the Issuer, but only if (1) the provisions of this Section, as so amended, would have permitted an underwriter to purchase or sell Bonds in the primary offering of the Bonds in compliance with the Rule, taking into account any amendments or interpretations of the Rule since such offering as well as such changed circumstances and (2) either (a) the registered owners of a majority in aggregate principal amount (or any greater amount required by any other provision of this Ordinance that authorizes such an amendment) of the outstanding Bonds consent to such amendment or (b) a person that is unaffiliated with the Issuer (such as nationally recognized bond counsel) determined that such amendment will not materially impair the interest of the registered owners and beneficial owners of the Bonds. If the Issuer so amends the provisions of this Section, it shall include with any amended financial information or operating data next provided in accordance with subsection (a) of this Section an explanation, in narrative form, of the reason for the amendment and of the impact of any change in the type of financial information or operating data so provided. The Issuer may also amend or repeal the provisions of this continuing disclosure agreement if the SEC amends or

repeals the applicable provision of the Rule or a court of final jurisdiction enters judgment that such provisions of the Rule are invalid, but only if and to the extent that the provisions of this sentence would not prevent an underwriter from lawfully purchasing or selling Bonds in the primary offering of the Bonds.

Section 12. METHOD OF AMENDMENT. The Issuer hereby reserves the right to amend this Ordinance subject to the following terms and conditions, to-wit:

(a) The Issuer may from time to time, without the consent of any holder, except as otherwise required by paragraph (b) below, amend or supplement this Ordinance in order to (i) cure any ambiguity, defect or omission in this Ordinance that does not materially adversely affect the interests of the holders, (ii) grant additional rights or security for the benefit of the holders, (iii) add events of default as shall not be inconsistent with the provisions of this Ordinance and that shall not materially adversely affect the interests of the holders, (iv) qualify this Ordinance under the Trust Indenture Act of 1939, as amended, or corresponding provisions of federal laws from time to time in effect, or (v) make such other provisions in regard to matters or questions arising under this Ordinance as shall not be inconsistent with the provisions of this Ordinance and that shall not in the opinion of nationally recognized bond counsel materially adversely affect the interests of the holders.

(b) Except as provided in paragraph (a) above, the holders of Bonds aggregating in principal amount 51% of the aggregate principal amount of then outstanding Bonds that are the subject of a proposed amendment shall have the right from time to time to approve any amendment hereto that may be deemed necessary or desirable by the Issuer; provided, however, that without the consent of 100% of the holders in aggregate principal amount of the then outstanding Bonds, nothing herein contained shall permit or be construed to permit amendment of the terms and conditions of this Ordinance or in any of the Bonds so as to:

- (1) Make any change in the maturity of any of the outstanding Bonds;
- (2) Reduce the rate of interest borne by any of the outstanding Bonds;
- (3) Reduce the amount of the principal of, or redemption premium, if any, payable on any outstanding Bonds;
- (4) Modify the terms of payment of principal or of interest or redemption premium on outstanding Bonds or any of them or impose any condition with respect to such payment; or
- (5) Change the minimum percentage of the principal amount of Bonds necessary for consent to such amendment.

(c) If at any time the Issuer shall desire to amend this Ordinance under this Section, the Issuer shall send by U.S. mail to each registered owner of the affected Bonds a copy of the proposed amendment. Such notice shall briefly set forth the nature of the proposed amendment and shall state that a copy thereof is on file at the office of the Issuer for inspection by all holders of such Bonds.

(d) Whenever at any time within one year from the date of mailing of such notice the Issuer shall receive an instrument or instruments executed by the holders of at least 51% in aggregate principal amount of all of the Bonds then outstanding that are required for the amendment, which instrument or instruments shall consent to and approve such amendment, the Issuer may adopt the amendment in substantially the same form.

(e) Upon the adoption of any amendatory Ordinance pursuant to the provisions of this Section, this Ordinance shall be deemed to be modified and amended in accordance with such amendatory Ordinance, and the respective rights, duties, and obligations of the Issuer and all holders of such affected Bonds shall thereafter be determined, exercised, and enforced, subject in all respects to such amendment.

(f) Any consent given by the holder of a Bond pursuant to the provisions of this Section shall be irrevocable for a period of six months from the date of the publication of the notice provided for in this Section, and shall be conclusive and binding upon all future holders of the same Bond during such period. Such consent may be revoked at any time after six months from the date of the publication of said notice by the holder who gave such consent, or by a successor in title, by filing notice with the Issuer, but such revocation shall not be effective if the holders of a majority in aggregate principal amount of the affected Bonds then outstanding, have, prior to the attempted revocation, consented to and approved the amendment.

For the purposes of establishing ownership of the Bonds, the Issuer shall rely solely upon the registration of the ownership of such Bonds on the registration books kept by the Paying Agent/Registrar.

Section 13. DEFAULT AND REMEDIES.

(a) Events of Default. Each of the following occurrences or events for the purpose of this Ordinance is hereby declared to be an Event of Default:

(i) the failure to make payment of the principal of or interest on any of the Bonds when the same becomes due and payable; or

(ii) default in the performance or observance of any other covenant, agreement or obligation of the Issuer, the failure to perform which materially, adversely affects the rights of the Registered Owners of the Bonds, including, but not limited to, their prospect or ability to be repaid in accordance with this Ordinance, and the continuation thereof for a period of 60 days after notice of such default is given by any Registered Owner to the Issuer.

(b) Remedies for Default.

(i) Upon the happening of any Event of Default, then and in every case, any Registered Owner or an authorized representative thereof, including, but not limited to, a trustee or trustees therefor, may proceed against the Issuer for the purpose of protecting and enforcing the rights of the Registered Owners under this Ordinance, by mandamus or other suit, action or special proceeding in equity or at law, in any court of competent jurisdiction, for any relief permitted by law, including the specific performance of any

covenant or agreement contained herein, or thereby to enjoin any act or thing that may be unlawful or in violation of any right of the Registered Owners hereunder or any combination of such remedies.

(ii) It is provided that all such proceedings shall be instituted and maintained for the equal benefit of all Registered Owners of Bonds then outstanding.

(c) Remedies Not Exclusive.

(i) No remedy herein conferred or reserved is intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or under the Bonds or now or hereafter existing at law or in equity; provided, however, that notwithstanding any other provision of this Ordinance, the right to accelerate the debt evidenced by the Bonds shall not be available as a remedy under this Ordinance.

(ii) The exercise of any remedy herein conferred or reserved shall not be deemed a waiver of any other available remedy.

(iii) By accepting the delivery of a Bond authorized under this Ordinance, such Registered Owner agrees that the certifications required to effectuate any covenants or representations contained in this Ordinance do not and shall never constitute or give rise to a personal or pecuniary liability or charge against the officers, employees or agents of the Issuer or the members of its governing body.

Section 14. APPROVAL OF ESCROW AGREEMENT AND TRANSFER OF FUNDS. In furtherance of authority granted by Section 1207.007(b), Texas Government Code, the Pricing Officer is further authorized to enter into and execute on behalf of the Issuer with the escrow agent named therein (the "Escrow Agent"), an escrow or similar agreement (the "Escrow Agreement"), in the form and substance as shall be approved by the Pricing Officer, which agreement will provide for the payment in full of the Refunded Obligations. In addition, the Pricing Officer is authorized to purchase such securities, to execute such subscriptions for the purchase of the Escrowed Securities (as defined in the Escrow Agreement), if any, and to authorize such contributions for the escrow fund (the "Escrow Fund") as provided in the Escrow Agreement.

Section 15. REDEMPTION OF REFUNDED OBLIGATIONS.

(a) Subject to execution and delivery of the Purchase Agreement with the Initial Purchaser, the Issuer hereby directs that the Refunded Obligations be called for redemption on the dates and at such prices as set forth in the Pricing Certificate. The Pricing Officer is hereby authorized and directed to issue or cause to be issued Notice of Redemption of the Refunded Obligations in substantially the form set forth in Exhibit A attached hereto, completed with information from the Pricing Certificate, to the paying agents for the Refunded Obligations.

(b) In addition, the paying agent for the Refunded Obligations is hereby directed to provide the appropriate notices of redemption and defeasance as specified by the ordinance authorizing the issuance of Refunded Obligations and is hereby directed to make appropriate arrangements so that the Refunded Obligations may be redeemed on their redemption dates. The

Refunded Obligations shall be presented for redemption at the paying agent therefor, and shall not bear interest after the date fixed for redemption.

(c) If the redemption of the Refunded Obligations results in the partial refunding of any maturity of the Refunded Obligations, the Pricing Officer shall direct the paying agent/registrar for the Refunded Obligations to designate at random and by lot which of the Refunded Obligations will be payable from and secured solely from ad valorem taxes of the Issuer pursuant to the ordinance of the Issuer authorizing the issuance of such Refunded Obligations (the "Refunded Bond Ordinance"). The paying agent/registrar shall notify by first-class mail all registered owners of all affected bonds of such maturities that: (i) a portion of such bonds have been refunded and are secured until final maturity solely with cash and investments maintained by the Escrow Agent in the Escrow Fund, (ii) the principal amount of all affected bonds of such maturities registered in the name of such registered owner that have been refunded and are payable solely from cash and investments in the Escrow Fund and the remaining principal amount of all affected bonds of such maturities registered in the name of such registered owner, if any, have not been refunded and are payable and secured solely from ad valorem taxes of the Issuer described in the Refunded Obligation Ordinance, (iii) the registered owner is required to submit his or her Refunded Obligations to the paying agent/registrar, for the purposes of re-registering such registered owner's bonds and assigning new CUSIP numbers in order to distinguish the source of payment for the principal and interest on such bonds, and (iv) payment of principal of and interest on such bonds may, in some circumstances, be delayed until such bonds have been re-registered and new CUSIP numbers have been assigned as required by (iii) above.

(d) The source of funds for payment of the principal of and interest on the Refunded Obligations on their respective maturity or redemption dates shall be from the funds deposited with the Escrow Agent pursuant to the Escrow Agreement approved in Section 14 of this Ordinance.

Section 16. APPROPRIATION. To pay the debt service coming due on the Bonds prior to receipt of the taxes levied to pay such debt service, if any, there is hereby appropriated from current funds on hand, which are hereby certified to be on hand and available for such purpose, an amount, which together with capitalized interest received from the sale of the Bonds, if any, will be sufficient to pay such debt service, and such amount shall be used for no other purpose.

Section 17. SEVERABILITY. If any section, article, paragraph, sentence, clause, phrase or word in this Ordinance, or application thereof to any persons or circumstances is held invalid or unconstitutional by a court of competent jurisdiction, such holding shall not affect the validity of the remaining portion of this Ordinance, despite such invalidity, which remaining portions shall remain in full force and effect.

Section 18. EFFECTIVE DATE. In accordance with the provisions of Texas Government Code Section 1201.028, this Ordinance shall be effective immediately upon its adoption by the City Council.

[Remainder of page intentionally left blank]

EXHIBIT A

[FORM OF NOTICE OF REDEMPTION]

NOTICE OF REDEMPTION

NOTICE IS HEREBY GIVEN that the City of San Angelo, Texas has called for redemption the outstanding [Bonds/Certificates] of the City described as follows:

City of San Angelo, Texas [General Obligation Refunding Bonds]/[Combination Tax and Limited Surplus Revenue Certificates of Obligation], Series 2011[A], dated [April/June] 1, 2011, scheduled to mature February 15 in the years 2021 through [2023/2024], inclusive, aggregating [\$5,930,000/\$795,000] (and being all of the outstanding [Bonds/Certificates] of said series scheduled to mature on and after February 15, 2021);

Redemption date: _____; redeemable at a redemption price of par plus accrued interest at the Designated Payment/Transfer Office of [NAME OF PAYING AGENT/REGISTRAR], Dallas, Texas (the "Paying Agent") only upon presentation and surrender thereof by the holder thereof.

If moneys sufficient for the payment of such redemption price are held by or on behalf of the Paying Agent, the described [Bonds/Certificates] shall become due and payable on the redemption date specified, and the interest thereon shall cease to accrue from and after the redemption date.

In compliance with section 3406 of the Internal Revenue Code of 1986, the Paying Agent may be obligated to deduct and withhold 30 percent of such payment from the remittance to any payee who has failed to provide the Paying Agent with a valid taxpayer identification number. To avoid the imposition of the withholding of tax, such payees should submit a taxpayer identification number when surrendering the [Bonds/Certificates] for redemption.

NOTICE IS FURTHER GIVEN that all [Bonds/Certificates] should be submitted to the following address:

[INSERT ADDRESS]

REPORT TO MAYOR & MEMBERS OF CITY COUNCIL



Requestor: Kimberly Holle, Budget Manager, Budget, 325-657-4211

Meeting Date: March 3, 2020

Item type: Regular Item

Caption:

First public hearing and introduction of an ordinance amending the budget for the fiscal year beginning October 1, 2019, and ending September 30, 2020, for capital items and projects (Presentation made by Finance Director Tina Dierschke)

Summary/History:

This proposed amendment contains the following items (additional information attached):

- Reconstruction of Airport entrance road
- KSAB revenue from Solid Waste

Financial Impact:

See Exhibit A of the ordinance.

Other Information/Recommendation:

Staff recommends approval.

Attachments:

- | | |
|----------------------------------|------------------------------------|
| 1. Ordinance 03.03.20 | Ordinance 03.03.20.docx |
| 2. BA Memo - ALL | BA Memo - ALL.pdf |
| 3. 03.03.20 FIN Budget Amendment | 03.03.20 FIN Budget Amendment.pptx |

Presentation:

Tina Dierschke

Approvals/Reviews:

Kimberly Holle	Created/Initiated
Tina Dierschke	Approved
Theresa James	Approved
Julia Antilley	Final Approval

**AN ORDINANCE OF THE CITY OF SAN ANGELO AMENDING
THE BUDGET FOR THE FISCAL YEAR BEGINNING OCTOBER
1, 2019, AND ENDING SEPTEMBER 30, 2020, FOR CAPITAL
ITEMS AND PROJECTS.**

WHEREAS the City of San Angelo has determined that certain budgeted amounts should be amended due to project changes and unforeseen circumstances, and

WHEREAS the resources necessary for these changes are available;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANGELO, TEXAS THAT:

The City's budget for fiscal year 2019-2020 be amended by the amounts contained in Exhibit A.

INTRODUCED on the 3rd day of March, 2020, and APPROVED and ADOPTED on this 17th day of March.

ATTEST:

CITY OF SAN ANGELO, TEXAS:

Julia Antilley, City Clerk

Brenda Gunter, Mayor

APPROVED AS TO CONTENT:

APPROVED AS TO FORM:

Tina Dierschke, Finance Director

Theresa James, City Attorney

City of San Angelo
Proposed Budget Amendment
Exhibit A

Fund	Total Revenue Amendment	Total Expense Amendment	Net Benefit/(Cost)
Airport Passenger Facility Charges Fund	\$-	\$169,541	\$(169,541)
Keep San Angelo Beautiful Fund	\$50,000	\$50,000	\$-
	\$50,000	\$219,541	\$(169,541)

City of San Angelo
Proposed Budget Amendment
Additional Information

Project/Need	Source of Funding	Revenue	Expense	Net Benefit/(Cost)
Design/engineering services for reconstruction of Airport entrance road	Airport Passenger Facility Charges Fund Balance	\$-	\$169,541	\$(169,541)
Budget for Hazardous Waste Disposal Project	Solid Waste	\$50,000	\$50,000	\$-
		\$50,000	\$219,541	\$(169,541)

Memo

To: Tina Dierschke, Finance Director

From: Robert Salas, Director of NFS

Date: 02/21/20

Re: Budget Amendment Request

Purpose of Budget Amendment Request:

Budget funds for the household hazardous waste disposal project.

Source of Funding:

Solid Waste fund

Funding previously approved? If so, by City Manager or City Council and when?

City council approved on 2/18/2020

Project/Budget to be amended	Current Budget	Proposed Change	Proposed Revised Budget
Revenue		50,000	50,000
Expense		50,000	50,000
			0
			0
			0
			0

Additional Comments:

Memo

To: Tina Dierschke, Finance Director

From: Jeremy Valgardson, Airport Director

Date: 2/21/2020

Re: Budget Amendment Request

Purpose of Budget Amendment Request:

Budget for engineering services/design related to the reconstruction of the airport entrance road and amendment to PFC Application #11.

Source of Funding:

PFC Fund Balance - this project has been approved by the FAA.

Funding previously approved? If so, by City Manager or City Council and when?

Project/Budget to be amended	Current Budget	Proposed Change	Proposed Revised Budget
PFC Expense	0	169,541	169,541
			0
			0
			0
			0
			0

Additional Comments:

This amount is subject to change pending direction from City Council on the March 3, 2020 meeting.



City Council

March 3, 2020



Budget Amendment

Keep San Angelo Beautiful Fund

Revenue

Expense

KSAB Revenue

\$50,000

KSAB Expense

\$50,000



Budget Amendment

Airport PFC Fund	Revenue	Expense
PFC Expense		\$169,541





City Council

March 3, 2020





**APPLICATION FOR
BOARDS and COMMISSIONS**

Name: Clara B. Freeze
 Address: [REDACTED]
 City: San Angelo State: TX Zip: 76904
 Phone (Home): [REDACTED] (Office): [REDACTED]
 Resident of San Angelo since: Returned 1981 SMD: 6
 Are you a registered voter of San Angelo? Yes: ☒ No: ☐
 Occupation/Business Affiliation: Retired
 Occupation/Business Address: [REDACTED]
 Title/Position: [REDACTED]
 Email: [REDACTED]

By executing this document, the applicant does hereby certify and affirm the truth and accuracy of the information contained herein. The applicant further authorizes the City Council, or its designee, to verify any information. The applicant agrees to release and hold harmless the City from all claims incident to the verification of information contained herein.

Clara B. Freeze
 Applicant's Signature Date

NOTE: This application is a public record. * Public Service opportunities are offered by the City of San Angelo without regard to race, color, national origin, religion, sex, or disability.

Return to: julia.antilley@cosatx.us or City of San Angelo, c/o City Clerk, 72 W. College, San Angelo, Texas 76903

Applying for:

- ☐ Airport Advisory Board
- ☐ Airport Zoning Board
- ☐ Animal Shelter Advisory Committee
- ☒ Civic Events Advisory Board
- ☐ Civil Service Commission
- ☐ Construction Board of Adjustment & Appeals
- ☐ Design & Historic Review Commission
- ☐ Economic Development Corporation
- ☐ Fairmount Cemetery Board
- ☐ Fort Concho Museum Board
- ☐ Keep San Angelo Beautiful Board
- ☐ Park Commission
- ☐ Parks & Recreation Advisory Board
- ☐ Planning Commission
- ☐ Public Art Commission
- ☐ Tax Increment Reinvestment Zone Board
- ☐ Water Advisory Board
- ☐ Zoning Board of Adjustment

Specific membership criteria requirements apply - see back page for more information.

Recommended by: [REDACTED]

Feel free to attach additional sheets, if necessary.

Based on your board selection, do you meet the membership criteria? Yes ☐ No ☒
 If no, which criteria (see back page for board criteria): no criteria on back of this application

Education and/or Professional Licenses: High School and some college

Current Municipal and Civic Organization Memberships (position and dates): Le Cotone, Security President
N.A.A.C.P. Blackshin by Students Association, Vice President

Previous Municipal Experience (position, location, and dates): N/A

What personal qualifications can you bring to this board? Dependable, Listener, Organizer

What is your personal vision for the City? a place that will keep our young adults here and be the place where other young adults want to come!

Why do you want to serve on this board? To help maintain and put events that will be held in a safe, clean environment, to enhance the quality of life in the community

Additional relevant information: and businesses

*The City Council adopted the Code of Ethics for members of the City Council and for the City's boards and commissions to assure public confidence in the integrity of local government and its effective and fair operation. Therefore, all Members shall comply with the laws of the nation, the State of Texas, and the City of San Angelo in the performance of their public duties. If you been convicted of a MISDEMEANOR or FELONY, and/or placed on probation, fined or given a suspended sentence such as pretrial diversion or deferred adjudication in court within the last ten years, disclosure of such should be forwarded under separate cover. For a complete copy of the Code of Ethics, contact the City Clerk.



Revised: 03/2019