CITY OF ROLLINGWOOD
SPECIAL CITY COUNCIL MEETING
AGENDA

Wednesday, August 10, 2022

Notice is hereby given that the City Council of the City of Rollingwood, Texas will hold a meeting, open to the public, in the Municipal Building at 403 Nixon Drive in Rollingwood, Texas on August 10, 2022 at 7:00 PM. Members of the public and the City Council may participate in the meeting virtually, as long as a quorum of the City Council and the presiding officer are physically present at the Municipal Building, in accordance with the Texas Open Meetings Act. The public may watch this meeting live and have the opportunity to comment via audio devices at the link below. The public may also participate in this meeting by dialing one of the toll-free numbers below and entering the meeting ID and Passcode.

Link: https://us02web.zoom.us/j/5307372193?pwd=QmNUbmZBQ1IwUlNjNmk5RnJrelRFUT09

Toll-Free Numbers: (833) 548-0276 or (833) 548-0282

Meeting ID: 530 737 2193

Password: 9fryms

The public will be permitted to offer public comments via their audio devices when logged in to the meeting or telephonically by calling in as provided by the agenda and as permitted by the presiding officer during the meeting. If a member of the public is having difficulties accessing the public meeting, they can contact the city at awayman@rollingwoodtx.gov. Written questions or comments may be submitted up to two hours before the meeting. A video recording of the meeting will be made and will be posted to the City's website and available to the public in accordance with the Texas Public Information Act upon written request.

CALL REGULAR CITY COUNCIL MEETING TO ORDER

1. Roll Call

PUBLIC COMMENTS

Citizens wishing to address the City Council for items not on the agenda will be received at this time. Please limit comments to 3 minutes. In accordance with the Open Meetings Act, the City Council is restricted from discussing or taking action on items not listed on the agenda.

Citizens who wish to address the Council with regard to matters on the agenda will be received at the time the item is considered.

BUDGET & TAX RATE

2. Discussion and possible action to set a public hearing on the FY 2022-2023 Budget for September 21, 2022

3. Discussion and possible action to set a public hearing on the proposed Ad Valorem Tax Rate for September 21, 2022

4. Discussion and possible action to set a proposed Ad Valorem Tax Rate

BOND ELECTION PRESENTATION AND WORKSHOP

5. Presentation from the City's Financial Advisor, U.S. Capital Advisors, regarding a possible November Bond Election for (1) potable water infrastructure, (2) drainage infrastructure and/or (3) emergency services and municipal building facilities.

6. Discussion with the City's Bond Counsel, Orrick, Herrington & Sutcliffe LLP, regarding a possible November 2022 Bond Election for (1) potable water infrastructure, (2) drainage infrastructure and/or (3) emergency services and municipal building facilities.

ADJOURNMENT OF MEETING

CERTIFICATION OF POSTING

I hereby certify that the above Notice of Meeting was posted on the bulletin board at the Rollingwood Municipal Building, in Rollingwood, Texas and to the City website at www.rollingwoodtx.gov on Friday, August 5, 2022 at 5:00 p.m.

Desiree Adair

Desiree Adair, City Secretary

NOTICE -

The City of Rollingwood is committed to compliance with the Americans with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. Please contact the City Secretary, at (512) 327-1838 for information. Hearing-impaired or speech-disabled persons equipped with telecommunication devices for the deaf may call (512) 272-9116 or may utilize the stateside Relay Texas Program at 1-800-735-2988.

The City Council will announce that it will go into executive session, if necessary, to deliberate any matter listed on this agenda for which an exception to open meetings requirements permits such closed deliberation, including but not limited to consultation with the city's attorney(s) pursuant to Texas Local Government Code section 551.071, as announced at the time of the closed session.

Consultation with legal counsel pursuant to section 551.071 of the Texas Local Government Code;
discussion of personnel matters pursuant to section 551.074 of the Texas Local Government Code;
real estate acquisition pursuant to section 551.072 of the Texas Local Government Code;
prospective gifts pursuant to section 551.073 of the Texas Local Government Code;
security personnel and device pursuant to section 551.076 of the Texas Local Government Code;
and/or economic development pursuant to section 551.087 of the Texas Local Government Code.
Action, if any, will be taken in open session.

AGENDA ITEM SUMMARY SHEET

City of Rollingwood

Meeting Date: August 10, 2022

Submitted By:

Staff

Agenda Item:

Discussion and possible action to set a proposed Ad Valorem Tax Rate

Background:

The purpose of this agenda item is to set the proposed Ad Valorem Tax Rate for Fiscal Year 2022-2023, beginning on October 1, 2022. The rate that is adopted at this meeting is not the final tax rate for the year, but rather is a ceiling, meaning that you can adopt a rate at or below that rate but cannot exceed it.

The tax rate options, calculated based on the city's property values, are the No New Revenue Rate and the Voter Approval Rate.

The **No New Revenue Rate** is the rate that would produce the same amount of revenues received in the previous year, if applied to the same properties taxed in both years.

The **Voter Approval Rate** is the rate that would produce about 3.5% more revenue than the year before. It is called the Voter Approval Rate because, if exceeded, the voters can petition for an election on the tax rate increase.

There are other rate options and implications, including the **De Minimis Rate** and the **8% De Minimis Rate**, but at the May City Council Meeting, the City Council expressed the intent to not exceed the Voter Approval Rate, which would have included a sped-up budget timeline.

The current rate for Fiscal Year 2021-2022 is $0.2193 per $100 valuation. For the upcoming fiscal year, the new tax rate calculations based on property values are as follows:

No New Revenue Rate: **$0.1796** per $100 valuation. The No New Revenue rate would produce $1,381,048 in M&O Revenue (not including debt service).

Voter Approval Rate: **$0.1818** per $100 valuation. The Voter Approval Rate would produce $1,412,997 in M&O revenue (not including debt service).

The M&O Revenue difference between the No New Revenue Rate and the Voter Approval Rate is $31,949.

Description:

Voting Options:

Voter Approval: Move to set the proposed Ad Valorem tax rate for Fiscal year 2021-2022 at **$0.1818** per $100 valuation, which is the Voter Approval Rate

No New Revenue: Motion to set the proposed Ad Valorem tax rate for Fiscal year 2021-2022 at **$0.1796** per $100 valuation, which is the No New Revenue Rate

Action Requested:

Staff recommendation is to act to set the proposed Ad Valorem Tax rate at the **Voter Approval** rate. This rate preserves the Council's optionality during future tax rate and budget discussions as the Council can choose to set a rate at this rate or lower, but cannot go above the amount proposed today.

Fiscal Impacts:

See above. No Fiscal Impacts at this time.

Rollingwood Projected Yr-End Totals 2021-2022

CITY OF ROLLINGWOOD
ESTIMATED REVENUE

Last Updated:
8/8/2022

	CALCULATED M&O	I&S	TOTAL		M&O REVENUE	DEBT SERVICE	TOTAL
2022 NNR RATE	$ 0.0951	$ 0.0845	$ 0.1796		$ 1,381,048	$ 1,237,610	$ 2,618,658
2022 VOTER APPROVAL RATE	$ 0.0973	$ 0.0845	$ 0.1818		$ 1,412,997	$ 1,237,610	$ 2,650,607
2022 ADJUSTED TAXABLE VALUE	$ 1,452,206,537			DIFFERENCE	$ 31,949	$ -	$ 31,949

Notice About 2022 Tax Rates

(current year)

Property Tax Rates in City of Rollingwood
(taxing unit's name)

This notice concerns the 2022 *(current year)* property tax rates for City of Rollingwood *(taxing unit's name)*.

This notice provides information about two tax rates used in adopting the current tax year's tax rate. The no-new-revenue tax rate would Impose the same amount of taxes as last year if you compare properties taxed in both years. In most cases, the voter-approval tax rate is the highest tax rate a taxing unit can adopt without holding an election. In each case, these rates are calculated by dividing the total amount of taxes by the current taxable value with adjustments as required by state law. The rates are given per $100 of property value.

Taxing units preferring to list the rates can expand this section to include an explanation of how these tax rates were calculated.

This year's no-new-revenue tax rate . . . . . $ 0.1796 /$100

This year's voter-approval tax rate . . . . . $ 0.1818 /$100

To see the full calculations, please visit www.rollingwoodtx.gov *(website address)* for a copy of the Tax Rate Calculation Worksheet.

Unencumbered Fund Balances

The following estimated balances will be left in the taxing unit's accounts at the end of the fiscal year. These balances are not encumbered by corresponding debt obligation.

Type of Fund	Balance
Maintenance and Operations	$ 1,179,209
Debt Service	$ 0

Current Year Debt Service

The following amounts are for long-term debts that are secured by property taxes. These amounts will be paid from upcoming property tax revenues *(or additional sales tax revenues, if applicable)*.

Description of Debt	Principal or Contract Payment to be Paid From Property Taxes	Interest to be Paid From Property Taxes	Other Amounts to be Paid	Total Payment
Debt Service - 2012	$ 305,000.00	$ 8,235.00	$ 0	$ 313,235.00
Debt Service - 2014	$135,000.00	$64,350.00	$ 0	$199,350.00
Debt Service - 2019	$115,000.00	$295,250.00	$ 0	$410,250.00
Debt Service - 2020	$290,000.00	$24,775.00	$ 0	$314,775.00

(expand as needed)

Total required for 2022 (current year) debt service ..... $ 1,237,610.00

– Amount *(if any)* paid from funds listed in unencumbered funds ..... $ 0

– Amount *(if any)* paid from other resources ..... $ 0

– Excess collections last year ..... $ 0

= Total to be paid from taxes in _____ (current year) ..... $ 1,237,610.00

+ Amount added in anticipation that the taxing unit will collect only 100 (collection rate)% of its taxes in 2022 (current year) ..... $ 0

= Total Debt Levy ..... $ 1,237,610.00

Voter-Approval Tax Rate Adjustments

State Criminal Justice Mandate

The _____ (county name) County Auditor certifies that _____ (county name) County has spent $ _____ (amount) *(minus any amount received from state revenue for such costs)* in the previous 12 months for the maintenance and operations cost of keeping inmates sentenced to the Texas Department of Criminal Justice. _____ (county name) County Sheriff has provided _____ (county name) information on these costs, minus the state revenues received for the reimbursement of such costs. This increased the voter-approval tax rate by $ _____ (amount of increase)/$100.

Indigent Health Care Compensation Expenditures

The _____ (county name) spent $ _____ (amount) from July 1 _____ (prior year) to Jun 30 _____ (current year) on indigent health care compensation procedures at the increased minimum eligibility standards, less the amount of state assistance. For the current tax year, the amount of increase above last year's enhanced indigent health care expenditures is $_____ . This increased the voter-approval tax rate by $ _____/$100.

Indigent Defense Compensation Expenditures

The _____ (county name) spent $ _____ (amount) from July 1 _____ (prior year) to June 30 _____ (current year) to provide appointed counsel for indigent individuals, less the amount of state grants received by the county. In the preceding year, the county spent $_____ (amount) for indigent defense compensation expenditures. The amount of increase above last year's indigent defense expenditures is $_____ (amount of increase). This increased the voter-approval rate by $ _____ (amount of increase)/$100 to recoup _____ *(use one phrase to complete sentence: the increased expenditures, or 5% more than the preceding year's expenditures)*.

County Hospital Expenditures

4.

The _____ spent $ _____ from July 1 _____ to June 30 _____
(name of taxing unit) *(amount)* *(prior year)* *(current year)*

on expenditures to maintain and operate an eligible county hospital. In the preceding year, the _____
(taxing unit name)

spent $_____ for county hospital expenditures. For the current tax year, the amount of increase above last year's expenditures is

$_____. This increased the voter-approval tax rate by _____ /$100 to recoup _____ .
(amount of increase) *(use one phrase to complete sentence: the increased expenditures, or 8% more than the preceding year's expenditures)*

This notice contains a summary of the no-new-revenue and voter-approval calculations as

certified by Ashley Wayman, City Administrator .
(designated individual's name and position) (date)

Visit Texas.gov/PropertyTaxes to find a link to your local property tax database on which you can easily access information regarding your property taxes, including information about proposed tax rates and scheduled public hearings of each entity that taxes your property.

The 86th Texas Legislature modified the manner in which the voter-approval tax rate is calculated to limit the rate of growth of property taxes in the state.

City of Rollingwood, Texas

November 2022 Bond Election

Tax Rate Analyses

Municipal Facilities, Water Lines, & Drainage Projects

Draft 2

August 9, 2022

James Gilley, Jr.
Managing Director
U.S. Capital Advisors, LLC
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Office: 512-813-1110
Mobile: 713-516-8804

City of Rollingwood, Texas

November 2022 Bond Election
Schedule of Outstanding Debt Service

2022 Tax Assumptions [a]

2022 Taxable AV	$	1,463,006,859
2012 Taxable AV	$	471,698,556
10 Year Avg. Growth		21.0%
Tax Rates (2021)		
M&O	$	0.1150
I&S		0.1043
TOTAL	$	0.2193
Assumed Collection Rate		98.0%

Schedule of Outstanding Debt Service [b]

		currently callable			callable 8/1/2023			callable 8/1/2028			currently callable					
		General Obligation Bonds, Taxable Series 2012A			General Obligation Bonds, Series 2014			General Obligation Refunding Bonds, Series 2019			Tax Notes, Series 2020			GRAND TOTAL		
FYE 9/30	Tax Year	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total
2022	2021	$ 300,000	$ 15,735	$ 315,735	$ 130,000	$ 69,550	$ 199,550	$ 110,000	$ 299,650	$ 409,650	$ 285,000	$ 29,050	$ 314,050	$ 825,000	$ 413,985	$ 1,238,985
2023	2022	305,000	8,235	313,235	135,000	64,350	199,350	115,000	295,250	410,250	290,000	24,775	314,775	845,000	392,610	1,237,610
2024	2023			-	140,000	58,950	198,950	425,000	290,650	715,650	295,000	20,280	315,280	860,000	369,880	1,229,880
2025	2024			-	145,000	54,750	199,750	440,000	273,650	713,650	300,000	15,560	315,560	885,000	343,960	1,228,960
2026	2025			-	150,000	50,400	200,400	455,000	256,050	711,050	305,000	10,610	315,610	910,000	317,060	1,227,060
2027	2026			-	150,000	45,900	195,900	475,000	237,850	712,850	310,000	2,713	312,713	935,000	286,463	1,221,463
2028	2027			-	155,000	41,400	196,400	495,000	218,850	713,850			-	650,000	260,250	910,250
2029	2028			-	160,000	36,750	196,750	515,000	199,050	714,050			-	675,000	235,800	910,800
2030	2029			-	165,000	31,150	196,150	530,000	183,600	713,600			-	695,000	214,750	909,750
2031	2030			-	170,000	25,375	195,375	545,000	167,700	712,700			-	715,000	193,075	908,075
2032	2031			-	180,000	19,425	199,425	565,000	151,350	716,350			-	745,000	170,775	915,775
2033	2032			-	185,000	13,125	198,125	580,000	134,400	714,400			-	765,000	147,525	912,525
2034	2033			-	190,000	6,650	196,650	600,000	117,000	717,000			-	790,000	123,650	913,650
2035	2034			-			-	620,000	99,000	719,000			-	620,000	99,000	719,000
2036	2035			-			-	635,000	80,400	715,400			-	635,000	80,400	715,400
2037	2036			-			-	660,000	61,350	721,350			-	660,000	61,350	721,350
2038	2037			-			-	680,000	41,550	721,550			-	680,000	41,550	721,550
2039	2038			-			-	705,000	21,150	726,150			-	705,000	21,150	726,150
2040	2039			-			-						-	-	-	-
Total		$ 605,000	$ 23,970	$ 628,970	$ 2,055,000	$ 517,775	$ 2,572,775	$ 9,150,000	$ 3,128,500	$ 12,278,500	$ 1,785,000	$ 102,988	$ 1,887,988	$ 13,595,000	$ 3,773,233	$ 17,368,233

(a) Source: Travis County Appraisal District.

(b) Assumes all of the City's outstanding debt service paid from I&S tax levy.

City of Rollingwood, Texas

Capital Improvement Plan - November 2022 Bond Election
Estimated Payment Grid and Sensitivity Analysis

2022 Tax Assumptions

Assessed Valuation	$	1,463,006,859
M&O Rate (2021)	$	0.1150
I&S Rate (2021)		0.1043
TOTAL	$	0.2193
Est. Tax Collection %		98%
Hypothetical Home Value	$	1,000,000

Assumed Interest Rates

	Current	Plus 25 bps	Plus 50 bps
20 Year	4.00%	4.25%	4.50%
30 Year	4.30%	4.55%	4.80%

Project	Term (Years)	Estimated Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
Water Lines	30	$ 5,300,000	$317,761	$327,292	$336,952	
			$ 0.0222	$ 0.0228	$ 0.0235	**Estimated I&S Rate Increase**
			$ 221.63	$ 228.28	$ 235.02	**Cost to Homeowner @ $1MM**

Project	Term (Years)	Estimated Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
Drainage	30	$ 8,950,000 (50% funded)	$536,596	$552,691	$569,005	
			$ 0.0374	$ 0.0385	$ 0.0397	**Estimated I&S Rate Increase**
			$ 374.26	$ 385.49	$ 396.87	**Cost to Homeowner @ $1MM**

Project	Term (Years)	Estimated Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
Facilities	20	$ 2,500,000	$183,954	$188,050	$192,190	
			$ 0.0128	$ 0.0131	$ 0.0134	**Estimated I&S Rate Increase**
			$ 128.30	$ 131.16	$ 134.05	**Cost to Homeowner @ $1MM**

*Assumes S&P AA rates estimated as current, figures subject to change. Tax rates estimated assuming collection rate of 98%.
2022 freeze adjusted TAV provided by Travis CAD

City of Rollingwood, Texas

Capital Improvement Plan - November 2022 Bond Election
Estimated Payment Grid and Sensitivity Analysis

2022 Tax Assumptions

Assessed Valuation	$	1,463,006,859
M&O Rate (2021)	$	0.1150
I&S Rate (2021)		0.1043
TOTAL	$	0.2193
Est. Tax Collection %		98%
Hypothetical Home Value	$	1,000,000

Assumed Interest Rates

	Current	Plus 25 bps	Plus 50 bps
20 Year	4.00%	4.25%	4.50%
30 Year	4.30%	4.55%	4.80%

Term (Years)	Project Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
20	$ 5,000,000	$ 367,909	$ 376,099	$ 384,381	
		$ 0.0257	$ 0.0262	$ 0.0268	**Estimated I&S Rate Increase**
		$ 256.61	$ 262.32	$ 268.10	**Cost to Homeowner @ $1MM**
30	$ 5,000,000	$ 299,775	$ 308,766	$ 317,880	
		$ 0.0209	$ 0.0215	$ 0.0222	**Estimated I&S Rate Increase**
		$ 209.08	$ 215.36	$ 221.71	**Cost to Homeowner @ $1MM**

Term (Years)	Project Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
20	$ 8,000,000	$ 588,654	$ 601,759	$ 615,009	
		$ 0.0411	$ 0.0420	$ 0.0429	**Estimated I&S Rate Increase**
		$ 410.57	$ 419.71	$ 428.95	**Cost to Homeowner @ $1MM**
30	$ 8,000,000	$ 479,639	$ 494,025	$ 508,608	
		$ 0.0335	$ 0.0345	$ 0.0355	**Estimated I&S Rate Increase**
		$ 334.54	$ 344.57	$ 354.74	**Cost to Homeowner @ $1MM**

Term (Years)	Project Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
20	$ 10,000,000	$ 735,818	$ 752,198	$ 768,761	
		$ 0.0513	$ 0.0525	$ 0.0536	**Estimated I&S Rate Increase**
		$ 513.21	$ 524.64	$ 536.19	**Cost to Homeowner @ $1MM**
30	$ 10,000,000	$ 599,549	$ 617,532	$ 635,759	
		$ 0.0418	$ 0.0431	$ 0.0443	**Estimated I&S Rate Increase**
		$ 418.17	$ 430.71	$ 443.43	**Cost to Homeowner @ $1MM**

*Assumes S&P AA rates estimated as current, figures subject to change. Tax rates estimated assuming collection rate of 98%.
2022 freeze adjusted TAV provided by Travis CAD

City of Rollingwood, Texas

Capital Improvement Plan - November 2022 Bond Election
Estimated Payment Grid and Sensitivity Analysis

2022 Tax Assumptions

Assessed Valuation	$	1,463,006,859
M&O Rate (2021)	$	0.1150
I&S Rate (2021)		0.1043
TOTAL	$	0.2193
Est. Tax Collection %		98%
Hypothetical Home Value	$	1,000,000

Assumed Interest Rates

	Current	Plus 25 bps	Plus 50 bps
20 Year	4.00%	4.25%	4.50%
30 Year	4.30%	4.55%	4.80%

Term (Years)	Project Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
20	$ 12,000,000	$ 882,981	$ 902,638	$ 922,514	
		$ 0.0616	$ 0.0630	$ 0.0643	**Estimated I&S Rate Increase**
		$ 615.86	$ 629.57	$ 643.43	**Cost to Homeowner @ $1MM**
30	$ 12,000,000	$ 719,459	$ 741,038	$ 762,911	
		$ 0.0502	$ 0.0517	$ 0.0532	**Estimated I&S Rate Increase**
		$ 501.80	$ 516.85	$ 532.11	**Cost to Homeowner @ $1MM**

Term (Years)	Project Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
20	$ 15,000,000	$ 1,103,726	$ 1,128,298	$ 1,153,142	
		$ 0.0770	$ 0.0787	$ 0.0804	**Estimated I&S Rate Increase**
		$ 769.82	$ 786.96	$ 804.29	**Cost to Homeowner @ $1MM**
30	$ 15,000,000	$ 899,324	$ 926,298	$ 953,639	
		$ 0.0627	$ 0.0646	$ 0.0665	**Estimated I&S Rate Increase**
		$ 627.25	$ 646.07	$ 665.14	**Cost to Homeowner @ $1MM**

Term (Years)	Project Cost	Estimated Annual Payment at Interest Rates: Current	Plus 25 bps	Plus 50 bps	
20	$ 20,000,000	$ 1,471,635	$ 1,504,397	$ 1,537,523	
		$ 0.1026	$ 0.1049	$ 0.1072	**Estimated I&S Rate Increase**
		$ 1,026.43	$ 1,049.28	$ 1,072.38	**Cost to Homeowner @ $1MM**
30	$ 20,000,000	$ 1,199,098	$ 1,235,063	$ 1,271,519	
		$ 0.0836	$ 0.0861	$ 0.0887	**Estimated I&S Rate Increase**
		$ 836.34	$ 861.42	$ 886.85	**Cost to Homeowner @ $1MM**

*Assumes S&P AA rates estimated as current, figures subject to change. Tax rates estimated assuming collection rate of 98%.
2022 freeze adjusted TAV provided by Travis CAD

City of Rollingwood, Texas

November 2022 Bond Election

$20 Million GO Bonds - 20 Year Deferred Principal Structure

2022 Tax Assumptions [a]	
2022 Assessed Valuation	$ 1,463,006,859
2021 Assessed Valuation	$ 1,196,611,702
Assumed Growth Rate (5 years)	3%
Collection Rate	98.0%
2021 Tax Rate	
M&O	$ 0.1150
I&S	0.1043
Total	$ 0.2193
Estimated 2022 M&O Tax Rate	$ 0.0900

Issuance Assumptions: [b]	
GO Bond voted authorization	Nov 2022
Competitive Sale Date	7/1/2023
Closing Date	8/1/2023
First Interest Payment	2/1/2024
First Principal Payment	8/1/2024
Designation	Non-Bank Qualified
Interest Rate [c]	4.50%
Par Amount	$ 20,000,000
Maturity	20 Years

FYE 9/30	Tax Year	Assessed Valuation [a]	Assumed Growth Rate	Outstanding Debt Service	Proposed Bond Debt Service: Principal	Proposed Bond Debt Service: Interest [c]	Proposed Bond Debt Service: Total	GRAND TOTAL DEBT SERVICE	Calculated Tax Rate [d]: I&S Debt Service Tax Rate: Existing	I&S Debt Service Tax Rate: Proposed	I&S Debt Service Tax Rate: Total	Assumed M&O	Total	% Increase/ Decrease Over 2021 Total
2022	2021	$ 1,196,611,702	0%	$ 1,238,985	$ -	$ -	$ -	$ 1,238,985	$ 0.1043	$ -	$ 0.1043	$ 0.1150	$ 0.2193	N/A
2023	2022	1,463,006,859	0%	1,237,610	-	-	-	1,237,610	0.0863	-	0.0863	0.0900	0.1763	-19.60%
2024	2023	1,506,897,065	3%	1,229,880	400,000	900,000	1,300,000	2,529,880	0.0833	0.0880	0.1713	0.0900	0.2613	19.16%
2025	2024	1,552,103,977	3%	1,228,960	410,000	882,000	1,292,000	2,520,960	0.0808	0.0849	0.1657	0.0900	0.2557	16.62%
2026	2025	1,598,667,096	3%	1,227,060	420,000	863,550	1,283,550	2,510,610	0.0783	0.0819	0.1602	0.0900	0.2502	14.11%
2027	2026	1,646,627,109	3%	1,221,463	430,000	844,650	1,274,650	2,496,113	0.0757	0.0790	0.1547	0.0900	0.2447	11.57%
2028	2027	1,696,025,922	3%	910,250	805,000	825,300	1,630,300	2,540,550	0.0548	0.0981	0.1529	0.0900	0.2429	10.74%
2029	2028	1,696,025,922	0%	910,800	845,000	789,075	1,634,075	2,544,875	0.0548	0.0983	0.1531	0.0900	0.2431	10.86%
2030	2029	1,696,025,922	0%	909,750	880,000	751,050	1,631,050	2,540,800	0.0547	0.0981	0.1529	0.0900	0.2429	10.75%
2031	2030	1,696,025,922	0%	908,075	920,000	711,450	1,631,450	2,539,525	0.0546	0.0982	0.1528	0.0900	0.2428	10.71%
2032	2031	1,696,025,922	0%	915,775	965,000	670,050	1,635,050	2,550,825	0.0551	0.0984	0.1535	0.0900	0.2435	11.02%
2033	2032	1,696,025,922	0%	912,525	1,005,000	626,625	1,631,625	2,544,150	0.0549	0.0982	0.1531	0.0900	0.2431	10.84%
2034	2033	1,696,025,922	0%	913,650	1,050,000	581,400	1,631,400	2,545,050	0.0550	0.0982	0.1531	0.0900	0.2431	10.86%
2035	2034	1,696,025,922	0%	719,000	1,100,000	534,150	1,634,150	2,353,150	0.0433	0.0983	0.1416	0.0900	0.2316	5.60%
2036	2035	1,696,025,922	0%	715,400	1,150,000	484,650	1,634,650	2,350,050	0.0430	0.0983	0.1414	0.0900	0.2314	5.51%
2037	2036	1,696,025,922	0%	721,350	1,200,000	432,900	1,632,900	2,354,250	0.0434	0.0982	0.1416	0.0900	0.2316	5.63%
2038	2037	1,696,025,922	0%	721,550	1,255,000	378,900	1,633,900	2,355,450	0.0434	0.0983	0.1417	0.0900	0.2317	5.66%
2039	2038	1,696,025,922	0%	726,150	1,310,000	322,425	1,632,425	2,358,575	0.0437	0.0982	0.1419	0.0900	0.2319	5.75%
2040	2039	1,696,025,922	0%	-	1,370,000	263,475	1,633,475	1,633,475	-	0.0983	0.0983	0.0900	0.1883	-14.15%
2041	2040	1,696,025,922	0%	-	1,430,000	201,825	1,631,825	1,631,825	-	0.0982	0.0982	0.0900	0.1882	-14.19%
2042	2041	1,696,025,922	0%	-	1,495,000	137,475	1,632,475	1,632,475	-	0.0982	0.0982	0.0900	0.1882	-14.17%
2043	2042	1,696,025,922	0%	-	1,560,000	70,200	1,630,200	1,630,200	-	0.0981	0.0981	0.0900	0.1962	-10.55%
Total				$ 17,368,233	$ 20,000,000	$ 11,271,150	$ 31,271,150	$ 48,639,383						

(a) Source: Travis County Appraisal District. Assumes 2% annual growth in assessed valuation for 5 years.
(b) Preliminary and subject to change. Assumes successful bond election occurring on uniform election date November 2022
(c) Interest shown for planning purposes only. Assumes S&P 'AA' rated non-bank qualified
(d) Tax rate calculated on taxable assessed valuation assuming 98% collection rate. Assumes tax year 2022 M&O rate estimated at $0.0900. 2021 tax rates shown as actual

City of Rollingwood, Texas

November 2022 Bond Election

$20 Million GO Bonds - 30 Year Level Debt Service Structure

2022 Tax Assumptions [a]	
2022 Assessed Valuation	$ 1,463,006,859
2021 Assessed Valuation	$ 1,196,611,702
Assumed Growth Rate (5 years)	3%
Collection Rate	98.0%
2021 Tax Rate	
M&O	$ 0.1150
I&S	0.1043
Total	$ 0.2193
Estimated 2022 M&O Tax Rate	$ 0.0900

Issuance Assumptions: [b]	
GO Bond voted authorization	Nov 2022
Competitive Sale Date	7/1/2023
Closing Date	8/1/2023
First Interest Payment	2/1/2024
First Principal Payment	8/1/2024
Designation	Non-Bank Qualified
Interest Rate [c]	4.80%
Par Amount	$ 20,000,000
Maturity	30 Years

FYE 9/30	Tax Year	Assessed Valuation [a]	Assumed Growth Rate	Outstanding Debt Service	Proposed Bond Debt Service: Principal	Proposed Bond Debt Service: Interest [c]	Proposed Bond Debt Service: Total	GRAND TOTAL DEBT SERVICE	Calculated Tax Rate [d]: I&S Debt Service Tax Rate: Existing	I&S Debt Service Tax Rate: Proposed	I&S Debt Service Tax Rate: Total	Assumed M&O	Total	% Increase/ Decrease Over 2021 Total
2022	2021	$ 1,196,611,702	0%	$ 1,238,985	$ -	$ -	$ -	$ 1,238,985	$ 0.1043	$ -	$ 0.1043	$ 0.1150	$ 0.2193	N/A
2023	2022	1,463,006,859	0%	1,237,610	-	-	-	1,237,610	0.0863	-	0.0863	0.0900	0.1763	-19.60%
2024	2023	1,506,897,065	3%	1,229,880	310,000	960,000	1,270,000	2,499,880	0.0833	0.0860	0.1693	0.0900	0.2593	18.23%
2025	2024	1,552,103,977	3%	1,228,960	325,000	945,120	1,270,120	2,499,080	0.0808	0.0835	0.1643	0.0900	0.2543	15.96%
2026	2025	1,598,667,096	3%	1,227,060	340,000	929,520	1,269,520	2,496,580	0.0783	0.0810	0.1594	0.0900	0.2494	13.70%
2027	2026	1,646,627,109	3%	1,221,463	360,000	913,200	1,273,200	2,494,663	0.0757	0.0789	0.1546	0.0900	0.2446	11.53%
2028	2027	1,696,025,922	3%	910,250	375,000	895,920	1,270,920	2,181,170	0.0548	0.0765	0.1312	0.0900	0.2212	0.88%
2029	2028	1,696,025,922	0%	910,800	395,000	877,920	1,272,920	2,183,720	0.0548	0.0766	0.1314	0.0900	0.2214	0.95%
2030	2029	1,696,025,922	0%	909,750	415,000	858,960	1,273,960	2,183,710	0.0547	0.0766	0.1314	0.0900	0.2214	0.95%
2031	2030	1,696,025,922	0%	908,075	430,000	839,040	1,269,040	2,177,115	0.0546	0.0764	0.1310	0.0900	0.2210	0.77%
2032	2031	1,696,025,922	0%	915,775	455,000	818,400	1,273,400	2,189,175	0.0551	0.0766	0.1317	0.0900	0.2217	1.10%
2033	2032	1,696,025,922	0%	912,525	475,000	796,560	1,271,560	2,184,085	0.0549	0.0765	0.1314	0.0900	0.2214	0.96%
2034	2033	1,696,025,922	0%	913,650	500,000	773,760	1,273,760	2,187,410	0.0550	0.0766	0.1316	0.0900	0.2216	1.05%
2035	2034	1,696,025,922	0%	719,000	520,000	749,760	1,269,760	1,988,760	0.0433	0.0764	0.1197	0.0900	0.2097	-4.40%
2036	2035	1,696,025,922	0%	715,400	545,000	724,800	1,269,800	1,985,200	0.0430	0.0764	0.1194	0.0900	0.2094	-4.50%
2037	2036	1,696,025,922	0%	721,350	575,000	698,640	1,273,640	1,994,990	0.0434	0.0766	0.1200	0.0900	0.2100	-4.23%
2038	2037	1,696,025,922	0%	721,550	600,000	671,040	1,271,040	1,992,590	0.0434	0.0765	0.1199	0.0900	0.2099	-4.29%
2039	2038	1,696,025,922	0%	726,150	630,000	642,240	1,272,240	1,998,390	0.0437	0.0765	0.1202	0.0900	0.2102	-4.13%
2040	2039	1,696,025,922	0%	-	660,000	612,000	1,272,000	1,272,000	-	0.0765	0.0765	0.0900	0.1665	-24.06%
2041	2040	1,696,025,922	0%	-	690,000	580,320	1,270,320	1,270,320	-	0.0764	0.0764	0.0900	0.1664	-24.11%
2042	2041	1,696,025,922	0%	-	725,000	547,200	1,272,200	1,272,200	-	0.0765	0.0765	0.0900	0.1665	-24.06%
2043	2042	1,696,025,922	0%	-	760,000	512,400	1,272,400	1,272,400	-	0.0766	0.0766	0.0900	0.1531	-30.18%
2044	2043	1,696,025,922	0%	-	795,000	475,920	1,270,920	1,270,920	-	0.0765	0.0765	0.0900	0.1529	-30.26%
2045	2044	1,696,025,922	0%	-	835,000	437,760	1,272,760	1,272,760	-	0.0766	0.0766	0.0900	0.1532	-30.16%
2046	2045	1,696,025,922	0%	-	875,000	397,680	1,272,680	1,272,680	-	0.0766	0.0766	0.0900	0.1531	-30.17%
2047	2046	1,696,025,922	0%	-	915,000	355,680	1,270,680	1,270,680	-	0.0765	0.0765	0.0900	0.1529	-30.28%
2048	2047	1,696,025,922	0%	-	960,000	311,760	1,271,760	1,271,760	-	0.0765	0.0765	0.0900	0.1530	-30.22%
2049	2048	1,696,025,922	0%	-	1,005,000	265,680	1,270,680	1,270,680	-	0.0765	0.0765	0.0900	0.1529	-30.28%
2050	2049	1,696,025,922	0%	-	1,055,000	217,440	1,272,440	1,272,440	-	0.0766	0.0766	0.0900	0.1531	-30.18%
2051	2050	1,696,025,922	0%	-	1,105,000	166,800	1,271,800	1,271,800	-	0.0765	0.0765	0.0900	0.1530	-30.22%
2052	2051	1,696,025,922	0%	-	1,155,000	113,760	1,268,760	1,268,760	-	0.0763	0.0763	0.0900	0.1527	-30.38%
2053	2052	1,696,025,922	0%	-	1,215,000	58,320	1,273,320	1,273,320	-	0.0766	0.0766	0.0900	0.1532	-30.13%
Total				$ 17,368,233	$ 20,000,000	$ 18,147,600	$ 38,147,600	$ 55,515,833						

(a) Source: Travis County Appraisal District. Assumes 2% annual growth in assessed valuation for 5 years.
(b) Preliminary and subject to change. Assumes successful bond election occurring on uniform election date November 2022
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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN

FINAL REPORT

PREPARED FOR:
CITY OF ROLLINGWOOD
403 NIXON DRIVE
ROLLINGWOOD, TEXAS 78746

PREPARED BY

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

JUNE 2020

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
FINAL REPORT

Prepared For:

City of Rollingwood
403 Nixon Drive
Rollingwood, TX 78746

Prepared by:

K Friese + Associates, Inc.
1120 S Capital of Texas Highway
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Firm No: F-6535

June 2020

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1 GLOSSARY AND ACRONYMS

AOI – Area of Interest: defined as areas within the City that are prone to property flooding and street flooding.

CAPCOG – Capital Area Council of Governments

CIP – Capital Improvement Plan

City – City of Rollingwood

FEMA – Federal Emergency Management Program

FIS – Flood Insurance Study

GIS – Geographic Information System

HMGP – Hazard Mitigation Grant Program

KFA – K Friese + Associates, Inc.

NFIP – National Flood Insurance Program

NOAA – National Oceanic and Atmospheric Administration

TCAD – Travis County Appraisal District

TCEQ – Texas Commission on Environmental Quality

TNRIS – Texas Natural Resource Information System

2 INTRODUCTION

The City of Rollingwood (City) contracted K Friese & Associates, Inc. (KFA) to perform a city-wide Infrastructure Improvements Plan (IIP) to identify and mitigate local infrastructure concerns, with a focus on stormwater drainage and flooding issues. This plan provides potential mitigations for these issues and a summary of potential funding sources to guide the City's development of a Capital Improvement Program (CIP).

To identify drainage issues in the City, the project team spent the first half of 2019 gathering data by distributing a public survey, holding an open house, and reviewing drainage concerns and solutions that were documented prior to this plan. The team also conducted fieldwork, created a web-based geodatabase of existing infrastructure, and developed an inundation model to assess flooding depths and velocities within the City.

Following the data collection and modeling efforts, the project team identified areas of interest (AOIs) and developed project concepts to address the highest priority issues. This final report includes summary sheets and cost estimates for these project concepts, as well as an analysis of potential external funding sources.

This report documents the methodology and results of the plan in the following sections:

- *Data Collection:* This section describes the combination of public outreach, hydraulic and hydrologic modeling, data synthesis, field investigation, and coordination with City staff that provided the information needed to develop this plan.
- *Findings:* This section details the methodology and results of the process by which the project team used the collected data to identify and rank the top 23 AOIs.
- *Recommendations:* This section contains information regarding the CIP projects and associated cost estimates that are recommended for further analysis and design to mitigate drainage issues at the AOIs.
- *Next Steps:* This section provides a roadmap for further analysis and coordination for the City of Rollingwood to undertake to successfully implement the projects recommended by this plan.

Figure 1: Edgegrove Drive Low Water Crossing (September 11, 2019)

3 DATA COLLECTION

This section of the report describes the data gathered by the project team from a variety of methods and sources that form the foundation for the plan.

3.1 GEOGRAPHIC DATA INVENTORY

Drainage-related data, including as-built documentation of infrastructure, and Geographic Information System (GIS) mapping data, was gathered and reviewed. Sources included the City of Rollingwood, the Federal Emergency Management Agency (FEMA), the Capital Area Council of Governments (CAPCOG), the City of Austin, the Texas Commission on Environmental Quality (TCEQ), the Texas Natural Resource Information System (TNRIS), and the Travis County Appraisal District (TCAD). Most GIS data was collected to provide background mapping data for jurisdictional boundaries, parcel boundaries, street names, creek centerlines, and FEMA flood hazard zones.

3.2 CITY COORDINATION

Site visits were conducted with City staff to incorporate their knowledge into the inventory. The experience and familiarity of City staff provided insight to better understand and document drainage issues including the severity and frequency of recurring issues, as well as maintenance impacts.

The City Engineer, LNV, provided documentation of past drainage complaints received by the City, including photo and video files for approximately a dozen properties. Other notable data obtained from the City included a previous survey prepared in CAD for the purpose of mapping city stormwater infrastructure for the TCEQ Municipal Separate Storm Sewer System (MS4) program.

3.3 FIELD INVESTIGATION

The KFA project team drove each City street in Rollingwood to build a database of geolocated existing infrastructure. The resulting inventory, which also builds upon as-built data provided by LNV, the City Engineer, is shown in a series of maps provided in **Appendix A**. The inventory includes the following infrastructure components (as observable from the right-of-way):

- Drainage infrastructure, including culverts, ditches, and inlets
- Water & wastewater infrastructure, including distribution lines, hydrants, manholes, and valves
- Electric infrastructure, including overhead utility lines and electric poles
- Observations of pavement issues based on a visual inspection during fieldwork

KFA conducted dry and wet weather field visits to investigate potential drainage concerns around the City to determine contributing factors and to assess the severity of each identified issue. Additional drainage concerns were documented and recorded during field visits with City staff and public outreach efforts. Through this process, KFA created an inventory in the form of a GIS database to track drainage issues for the IIP and develop a comprehensive view of the issues facing the City.

Figure 2: South Crest Drive, Looking West (June 6, 2019)

3.4 PUBLIC INVOLVEMENT

The largest collective data source within a community are those who live there and experience it every day. A public survey was sent out to the residents and businesses within the City to utilize this data source. The purpose of the public survey was to gather data regarding drainage concerns in and around the home or business of the participants as well as any city-wide concerns. The questions were designed to retrieve objective data and to solicit comments from the participants. A flyer accompanied the survey explaining the purpose of the Infrastructure Improvements Plan and detailing the response process. Participants had the option to fill out the survey online, via email, or by U.S. mail. The flyer and public survey sent out to the community are provided in **Appendix B.**

3.4.1 Public Meeting

The City and KFA hosted a public meeting for the Infrastructure Improvements Plan on Tuesday, March 26, 2019. The public meeting was held at City Hall from 4 p.m. to 8 p.m. Nineteen attendees recorded their names on the sign-in sheet, and an estimated five to ten others were in attendance.

Figure 3: City Hall Public Meeting (March 26, 2019)

3.4.2 Public Survey

According to the American Community Survey, there are 533 housing units within the City of Rollingwood. A total of 106 public survey responses were received online, by mail, and at the public meeting, which equals approximately 20 percent participation.

Each public survey response was reviewed and incorporated into a GIS database and map. The database provided a method to analyze both the content and the spatial locations of the responses and issues. Maps of survey responses are included in **Appendix C.** The responses provide firsthand accounts of those affected by known issues, such as the intersection of Nixon and Pleasant, the Hatley culvert, and the Edgegrove Drive low water crossing. However, respondents also identified previously undocumented drainage issues, including ponding at the east Timberline bend and overtopping of the culvert on east Rollingwood Drive.

3.4.3 Citizen Input

In addition to the public meeting and survey, the project team received input directly from a number of citizens via email, including photos and videos of historic flooding at various locations throughout the City. These flooding complaints have been organized and incorporated into the GIS database for this plan.

3.5 HYDRAULIC MODELING

The project team developed a preliminary existing conditions hydrologic and hydraulic model for the entire City limits utilizing Infoworks ICM v8.0.4. The model was used to identify areas at risk of flooding and estimate potential flood depths and velocities. A rapid assessment "rain-on-mesh" model was created for the 100-year storm. A "rain-on-mesh" model simulates rainfall directly on a surface and utilizes two-dimensional (2D) hydraulic computations to compute overland and channel flow. Because the model is conceptual, it conservatively assumes no infiltration of rainfall. More detailed modeling would be required to assess the impacts of increases in impervious cover on the City's drainage system.

The primary inputs into the model were the terrain surface, rainfall hyetographs and existing drainage infrastructure. The surface data used was the 2017 LiDAR downloaded from TNRIS and processed in ArcGIS. The 100-year rainfall depth of 10.2-inches used was from the COA DCM (December 2018) and was applied using a 24-hour SCS Type 3 storm distribution. A Manning's n-value of 0.055 (for grass cover) was selected to model overland flow ease, or resistance. This value was chosen to represent an average of the various surfaces throughout City. The model also included approximately a dozen of the largest culverts and pipes, including the Bee Cave Road, Edgegrove Drive, Pleasant Cove, and Rollingwood Drive culverts. Pipes whose total diameter at one location was less than 36 inches were not incorporated into the high-level model.

The projected depths and velocities produced by the model were a helpful tool to identify, confirm, and prioritize flooding issues throughout the development of this plan. A map of model depths can be seen in **Appendix D.**

4 FINDINGS

This section of the report describes how the project team used the data they collected to develop a list of AOIs for CIP project candidacy. An area of interest map is provided in **Appendix F** for reference.

4.1 AREA OF INTEREST IDENTIFICATION

A list of preliminary AOIs was developed using 2D modeling results, public input, field observations, and input from City staff. In total, 23 AOIs were identified. These areas of interest were categorized into their corresponding watersheds, drainage areas, and sub-basins.

- *Watersheds:* The watershed boundary divides the City into the portion that drains to Town Lake (or Lady Bird Lake), and the portion that drains to Eanes Creek.
- *Drainage Areas:* LNV delineated drainage basins for the 2012 City of Rollingwood Drainage Area Map. KFA reviewed these drainage areas delineations for consistency with available contour data and known drainage patterns within the City and used them for this plan.
- *Sub-basins:* Sub-basins were delineated for Drainage Area 5. Drainage Area 5 contains multiple tributaries with three or more areas of interest each. Because of the number of tributaries and potential interdependency of the AOIs, it was necessary to subdivide Drainage Area 5 into Sub-basins. The Drainage Areas and Sub-basins are shown on the map in **Appendix F**.

4.2 AREA OF INTEREST PRIORITIZATION

Due to the scale of improvements and a review of the 100-year storm inundation model, a 200-foot buffer around each area of interest was assumed to be its area of influence. This buffer was analyzed for each area of interest to determine the percentage of parcels in this buffer that experience:

- Depth of flooding at structures greater than or equal to 6 inches (based on the most recently available building footprint GIS data from the City of Austin GIS database, 2013). 6-inch depths were selected based on a review of model results as an effective threshold to distinguish between AOIs for the purpose of prioritization for the IIP.
- Flooding velocities greater than or equal to 6 feet per second (based on the maximum permissible velocity in the 100-year storm, from the City of Rollingwood Drainage Criteria Manual)

These factors were used to assess the need for a project at that area of interest. The percentage of parcels within the buffer that meet the depth criteria and the percentage of parcels within the buffer that meet the velocity criteria were added together to obtain a need-based rating for each area of interest, as shown in **Table 1**.

Figure 4: Nixon Drive Culvert, Looking Southeast/Downstream (June 6, 2019)

Five projects received equivalent ratings using this process: projects C, I, A, P, and U. For these projects, public comments received in the spring of 2019 as part of the development of this Infrastructure Improvements Plan were referenced to prioritize the AOIs with the most apparent impact to private property.

Upon further analysis of area of interest C, no project was proposed. For this reason, C was moved to the bottom of the priority list.

4.2.1 Project Dependencies

In addition to the prioritization based on flooding depth and velocities, another factor considered was project interdependency. It is recommended that where projects are interdependent – that is, they are directly upstream or downstream from one another – the downstream projects be completed first. It is possible that improving hydraulic efficiency will result in higher peak flows downstream, and it would be prudent for the City to construct downstream improvements prior to upstream improvements to mitigate potential impacts. Due to this risk of downstream impacts, it is further recommended that the City model potential improvements for interdependent AOIs together. Modeling the system together will ensure the City reaches the desired outcome for the system as a whole.

One example is AOI M. AOI M is considered to be a higher priority than project K, even though project K's initial ranking is higher. This is because AOI M is located downstream of AOI K and in order for improvements at AOI K to begin, the improvements at AOI M would need to be complete. The same principle is true for projects L and H. These recommendations have been incorporated into the rankings provided in **Table 1**.

Figure 5: Bee Caves Road Culvert, Downstream (September 11, 2019)

Projects involving drainage infrastructure large enough to be included in the citywide model were included in a proposed conditions inundation model to determine preliminary culvert and storm drain sizing. This model was compared to the existing conditions inundation model to assess project impact.

Table 1: Area of Interest Prioritization

Watershed	Drainage Basin	Drainage Subbasin	ID	Description	200-ft Area of Influence		Score	Ranking
					% of Parcels with Velocity > 6 fps	% of Parcels with Depth > 6" at Structures		
Eanes	10	-	B	Bee Caves Road low water crossing	75%	25%	1.00	1
Eanes	10	-	G	Edgegrove low water crossing	63%	13%	0.75	2
Town Lake	5	5-2	M*	Nixon/Pleasant property/roadway flooding	20%	40%	0.60	3
Town Lake	5	5-2	K	303 Pleasant Drive property flooding	0%	71%	0.71	4
Eanes	10	-	D	Timberline-South Crest roadway and property flooding	50%	17%	0.67	5
Town Lake	6	-	W	Hatley Drive and Riley Road flooding	33%	33%	0.66	6
Town Lake	5	5-1	L*	Pleasant Cove flooding	18%	36%	0.55	7
Town Lake	5	5-1	H	City Hall property flooding	29%	29%	0.57	8
Eanes	10	-	J	Rollingwood Drive ponding across from underground pond	0%	43%	0.43	9
Eanes	14	-	T	Rollingwood Drive property flooding	0%	30%	0.30	10
Eanes	10	-	N	Timberline ravine property flooding	0%	25%	0.25	11
Town Lake	5	5-4	Q	Rock Way Cove flooding and ponding	0%	20%	0.20	12
Eanes	14	-	S	Timberline bend water ponding	0%	18%	0.18	13
Town Lake	6	-	R	Hatley flooding and ponding	0%	18%	0.18	14
Town Lake	5	5-1	F	Nixon/Gentry property and road flooding	0%	17%	0.17	15
Town Lake	5	5-2	V	Pleasant Drive property flooding	0%	15%	0.15	16
Town Lake	5	5-4	O	Kristy Drive flooding	0%	10%	0.10	17
Town Lake	5	5-1	E	Randolph property flooding	0%	8%	0.08	18
Town Lake	5	5-2	I	Park Hills flooding and ponding	0%	0%	0.00	19
Eanes	9	-	A	Rollingwood Drive ponding in yards	0%	0%	0.00	20
Town Lake	5	5-3	P	Wallis/Hatley yard flooding	0%	0%	0.00	21
Town Lake	6	-	U	Vance/Riley ponding in road	0%	0%	0.00	22
Eanes	10	-	C**	Rollingwood Drive south side property flooding	0%	0%	0.00	23

*AOI is downstream of an AOI with a higher rating. It is given higher priority than the upstream AOI because downstream AOI's should be addressed first to mitigate adverse impacts.
**No project is recommended at this AOI due to further analysis, so this AOI is listed as the lowest priority level.

5 RECOMMENDATIONS

This section of the plan contains a summary of CIP project concepts that were developed by the project team to address the drainage issues at the AOIs described in the previous section. Specific project summaries and cost estimates can be found in **Appendix H** and **Appendix I**, respectively.

5.1 CIP DEVELOPMENT

The proposed improvements included in each CIP project are based on preliminary level engineering, field visits, and high-level topographic information; these are not detailed engineering analysis or design. The following sections discuss the CIP development process and prioritization.

Guiding principles from the City of Rollingwood Drainage Criteria Manual were used to determine planning-level preliminary sizing for recommended CIP projects: runoff from the 100-year storm event should be generally contained within City right-of-way. While modeling more frequent storm events was not included within the scope of this plan, the CIP project concepts that were developed provide planning-level approximations of pipe sizes and other parameters that could achieve other Drainage Criteria Manual objectives, like mitigation of adverse downstream impacts and runoff from the 25-year storm event contained within drainage infrastructure. Further analysis through modeling and design is required to determine exact design parameters.

5.2 PROJECT COST ESTIMATES

Planning-level cost estimates were developed for the proposed projects. These cost estimates are based on the preliminary project concepts developed to mitigate the issue at each area of interest, and are likely to vary when detailed design is completed for each project.

The cost estimates include:

- *Engineering & Surveying:* Engineering, surveying, and environmental costs were estimated as a uniform percentage of construction costs for each project.
- *Permitting Fees:* Estimated fees required by TCEQ or FEMA have been included in project cost estimates.
- *Construction:* Unit costs and quantities are provided in the project cost estimate sheets. Traffic control and roadway reconstruction are included where necessary.

The estimates do not include costs for:

- *Right-of-Way & Easement Acquisition:* It was determined in the course of the project through close coordination with the City that additional research is required to determine right-of-way and easement acquisition needs. It is recommended that the City perform this research prior to implementation of recommended CIP projects.

Due to these limitations in available information and the associated impacts on the design of proposed projects, it is recommended that construction costs continue to be refined as this information is made available and projects are further developed.

Cost summary sheets for each project can be found in **Appendix I**. A summary of costs is provided in **Table 2**. As shown in the table, costs for projects that comprise a combined system are bundled together. These project combinations are projects E and F; projects M, K, and V; projects Q and P; and projects S and T.

Also note that a cost estimate was not generated for the Bee Cave Road crossing of Eanes Creek at AOI B. The flooding along Bee Cave Road has added complexity with the adjacent tributary, roadway design implications and would require significant TxDOT involvement. It is the opinion of KFA that this AOI would

require its own feasibility study to understand flooding sources, roadway implications and involvement with TxDOT prior to developing a cost estimate.

Table 2: Project Ranking and Cost Summary

ID	Project Name	Cost	Ranking*
B	Bee Caves Road Drainage Improvements	*Not Estimated*	1
G	Edgegrove Drainage Improvements	$ 2,631,000	2
M	Nixon/Pleasant Roadway Drainage Improvements	$ 5,283,000	3
K	Pleasant Drive Drainage Improvements	*included in M*	4
D	Timberline-South Crest Drainage Improvements	$ 558,000	5
W	Hatley Drive Drainage Improvements	$ 654,000	6
L	Pleasant Cove Drainage Improvements	$ 490,000	7
H	City Hall Property Drainage Improvements	$ 475,000	8
J	Underground Infiltration Basin Drainage Improvements	$ 883,000	9
T	East Rollingwood Drive Drainage Improvements	$ 2,122,000	10
N	Timberline Drive Drainage Improvements	$ 380,000	11
Q	Rock Way Cove Drainage Improvements	$ 816,000	12
S	East Timberline Drive Drainage Improvements	*included in T*	13
R	Hatley Drive Drainage Improvements	$ 400,000	14
F	Nixon/Gentry Drainage Improvements	$ 2,024,000	15
V	Pleasant Drive Drainage Improvements	*included in M*	16
O	Kristy Drive Drainage Improvements	$ 217,000	17
E	Randolph Place Drainage Improvements	*included in F*	18
I	Park Hills Drainage Improvements	$ 238,000	19
A	Rollingwood Drive West Drainage Improvements	$ 589,000	20
P	Wallis and Hatley Drainage Improvements	*included in Q*	21
U	Riley Rd and Vance Ln Drainage Improvements	$ 141,000	22
C	Rollingwood Drive South Drainage Improvements	*Not Estimated*	23
	SUM	**$ 17,901,000**	

* Ranking is based on velocities and flooding depths at structures from the inundation model.

5.3 ADDITIONAL INFRASTRUCTURE IMPROVEMENTS

While this Infrastructure Improvements Plan is focused primarily on drainage, additional infrastructure improvements have been incorporated into the plan in several ways:

- Projects identified and recommended for inclusion by City staff
- Projects identified by the project team during development of the IIP
- Recommended next steps listed in this section of the report

5.3.1 Projects Identified by City Staff

City staff reviewed the recommended CIP projects identified by this plan for alignment with other infrastructure needs that were identified at the time of this plan, to see if projects could be completed concurrently for time and cost efficiency. The City provided construction plans and a cost estimate for a waterline improvement project on South Crest Drive that could be completed in conjunction with project D. A cost estimate for this waterline is included on the project summary and cost estimate sheets for project D in **Appendix H** and **Appendix I**.

5.3.2 Projects Identified by IIP

Roadway reconstruction has been incorporated into project concepts and cost estimates where necessitated by the drainage improvements. For example, raising and repaving the road on Pleasant Cove is recommended for project L in conjunction with regrading the adjacent channel to seek to maintain access to homes during flooding events. Similarly, roadway improvements are included with project G along Edgegrove Drive and South Crest Drive to accommodate the bridge that is recommended to replace the existing low water crossing on Edgegrove Drive.

5.3.3 Recommended Next Steps

For a detailed assessment of other infrastructure improvements, it is recommended that the City allocate resources to the creation of the following citywide plans to assess infrastructure needs comprehensively:

- Sidewalk Master Plan
- Utility Master Plan
- Traffic Calming Master Plan *(The City completed a Traffic Calming Study in 2001 that can be used as a reference, but an updated plan should be completed to assess current needs.)*

As discussed in **Section 6.2** of this report, verification of right-of-way and easement data across the City should be performed prior to the design of the drainage projects recommended by this plan. Similarly, this data should be obtained prior to developing the other infrastructure plans listed above. Knowledge of where the City currently holds right-of-way and easements will be crucial information to inform what options are available to the City when it comes to the installation of sidewalks, underground utilities, and other potential projects.

When the drainage projects proposed by this plan go out for design and construction, all current City plans (including the above list) should be reviewed for two reasons:

1. If any additional projects are proposed in the vicinity of the drainage projects, the City should consider whether it makes sense to combine the projects for the sake of time and cost efficiency.
2. Infrastructure projects like sidewalks and traffic speed humps are likely to impact drainage patterns. As detailed design parameters are developed for each drainage project, it is important to consider whether the addition of other infrastructure should be considered in the drainage analysis for the project.

6 NEXT STEPS

While this Plan provides a preliminary assessment of top drainage issues and potential solutions across the City of Rollingwood, additional study, coordination, analysis, and design are required for implementation.

6.1 ONGOING DATA NEEDS

During the course of this project, a significant data needs issue came to KFA's attention that must be addressed prior to design and implementation of CIP projects. There is currently no comprehensive and up-to-date database of right-of-way and easements belonging to the City. The lines between public right-of-way and private property with respect to drainage, utility, roadway and other public infrastructure have been blurred over time through verbal agreements and changes in property ownership.

Without this data, the definition and design parameters for each of the recommended CIP projects will be unclear. For example, if the City has or is able to obtain a drainage easement for a swale that can sufficiently contain runoff from the 25-year storm, it may not be necessary to build underground storm drain infrastructure to convey runoff in this location. On the other hand, if no easement exists and one cannot be obtained, the City may choose to construct storm drain in order to reroute the flow to where drainage conditions can be monitored and maintained by the City.

Due to the relative lack of existing documentation, defining existing easements and right-of-way will be a greater than average effort. For the purposes of this plan, it has been assumed that the City will pursue easements on private property where necessary in order to implement recommended drainage projects.

Figure 6: Rockway Cove Culvert, Looking Southwest/Upstream (September 11, 2019)

6.2 MODELING

The 2D 100-year inundation model prepared for this project is a preliminary model that is appropriate for planning purposes. In order to more fully understand project dependencies and mitigate adverse impacts, each proposed project must be modeled with a greater level of detail. It is assumed that a more thorough assessment of adverse impacts will be completed at the time of design for each project, when detailed design parameters are determined.

6.3 INTERAGENCY COORDINATION

It is also strongly recommended that prior to moving forward with the design of any of these projects, the City of Rollingwood coordinate with the City of Austin Watershed Protection Department to discuss what

permitting, coordination, and mitigation measures may be required based on the potential impacts of the proposed projects on City of Austin waterways downstream of the City of Rollingwood.

6.4 ATLAS 14 CONSIDERATIONS

The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) published Atlas 14 Volume 11 (Texas) in September of 2018. Atlas 14 is a historical rainfall study that provides updated precipitation frequency estimates based on new statistical methods and a greater range of historical precipitation data extending through 2017. Rainfall precipitation frequency estimates are used for the purposes of flood risk management and infrastructure design, including the sizing of pipes and ponds, and determination of floodplain limits. During the development of this plan, discussions have arisen regarding the incorporation of Atlas 14 rainfall data into the modeling and recommendations.

6.4.1 Approach to Rainfall Data for This Plan

The hydraulic modeling and preliminary pipe sizing for this Infrastructure Improvements Plan is based on current City of Rollingwood policies, including the following sections of the City code and drainage ordinance:

- "Storm drainage facilities shall be designed and constructed in compliance with this Article 3.09, the City of Austin, Texas (COA) Drainage Criteria Manual Section 2-8 in effect on September 9, 2014 (the "COA DCM Regulations") and the City of Rollingwood Drainage Criteria Manual (Rollingwood DCM) attached to this Article as Appendix 3.09 A, and incorporated herein by reference. No amendments made to the COA-DCM Regulations by the COA shall become effective unless adopted by the Rollingwood City Council" (Drainage Ordinance Sec. 3.09.002).
- "Drainage calculation methods shall be based on the COA DCM (Supplement 9 – 2014) Sections 2-8" (Drainage Ordinance Sec. 3.09.005(c)).
- "The areas of special flood hazard identified by the Federal Emergency Management Agency in the current scientific and engineering report entitled, "The Flood Insurance Study (FIS) for Travis County, Texas and Incorporated Areas," dated January 6, 2016, with accompanying flood insurance rate maps or flood boundary-floodway maps (FIRM or FBFM), index panel 48453C0445H, dated January 6, 2016, and any revisions thereto are hereby adopted by reference and declared to be a part of this article" (City Code Sec. 103-116).

Atlas 14 rainfall data is not incorporated into this plan because of the complex policy questions that must first be answered that will determine *how* Atlas 14 rainfall data is incorporated into the City of Rollingwood's code, ordinance and criteria manuals. These questions are numerous and far-reaching, including the following:

- **Which storm frequencies will the City choose to regulate?** The Atlas 14 study includes rainfall data for the one-, two-, five-, ten-, 25-, 50-, 100-, 200-, 500-, and 1000-year storm events. The degree to which the City decides to regulate stormwater runoff based on the new rainfall data will determine which of these storm events are incorporated into design criteria for new drainage infrastructure.
- **What level of service will the City seek to provide for stormwater management?** For example, channels are currently designed to contain runoff from the 25-year storm event within the channel and runoff from the 100-year storm event within the public right-of-way (City code Sec. 103-231). Instead of maintaining the analogous level of service with their drainage infrastructure for the updated rainfall data, some cities are choosing to modify design parameters. An example of this approach could be the City of Rollingwood changing its drainage criteria to require the 10-

year storm event to be contained within the channel and the 25-year event within the right-of-way.

- **How will the City of Rollingwood respond to modifications to FEMA floodplain limits?** The floodplain boundaries within the City of Rollingwood are directly tied to the floodplain boundaries within the City of Austin. Therefore, revisions that the City of Austin decides to submit to FEMA to modify the FEMA Flood Insurance Rate Map (FIRM) panels in the Austin area directly impact the City of Rollingwood. It is known that the City of Austin will re-study the watersheds within the City utilizing the Atlas 14 rainfall data, and therefore the FEMA FIRM panels (which delineate floodplains) for the City of Rollingwood will change. The City should consider whether it wants to participate in the re-study with the City of Austin and what benefits that may serve.
- **How will flood insurance requirements change for properties where the floodplain has changed?** The City of Rollingwood currently refers to FEMA's Flood Insurance Study (FIS) for Travis County from 2016 for the determination of areas of special flood hazard (City code Sec. 103-116). As a member of the National Flood Insurance Program (NFIP), the City must adopt updates to the FIS and FIRM panel in order to avoid suspension from the NFIP. Note that the City may adopt an ordinance that automatically adopts the most recently available flood elevation data provided by FEMA. The revision of the floodplain limits and elevations within the City of Rollingwood will change the number of properties that require flood insurance.
- **How will changes to floodplains affect development regulations?** This is up to the City of Rollingwood. At a minimum, the City must have a floodplain management ordinance that meets or exceeds the minimum NFIP requirements. It is suggested that City staff review the floodplain regulation changes proposed by the City of Austin to start a discussion on regulations that could benefit the City of Rollingwood. (http://austintexas.gov/floodplainrules)
- **When will the City of Rollingwood take action regarding Atlas 14?** With respect to floodplain regulations, it is recommended that the City of Rollingwood begin taking action now. As stated above, the City of Austin will revise the FEMA floodplain boundaries and this will directly impact the City of Rollingwood whether the City is prepared or not. If the City begins to educate residents on the potential changes due to Atlas 14 and begins to regulate development and stormwater management to higher standards now, the City will be better prepared for the coming changes. Like the City of Austin and Travis County, it may benefit the City to use the 500-year floodplain as a proxy for the new Atlas 14 100-year floodplain until final results of the new rainfall data have been incorporated into the FEMA FIRMs. This approach in combination with public education will help ease the impact of the revised FEMA maps when they are adopted. With respect to City stormwater management, such as City stormwater infrastructure, or requirements for development permit applications outside of the floodplain, the City should begin discussing how it would like to regulate stormwater (see the first two bullets above).

Ultimately, the Atlas 14 rainfall data illustrates that Central Texas is more likely to experience larger rain events than previously thought. The City regulates stormwater through the Drainage Criteria Manual and Code of Ordinances in order to protect the public from flood risk and reduce expense after flood events. Updates to rainfall data deserve particularly careful consideration in Rollingwood, given the City's proximity to Lady Bird Lake, lack of residential impervious cover limitations, and shared boundaries with the City of Austin and the City of West Lake Hills. Because of the complexities and implications of Atlas 14 incorporation, 100-year rainfall data from the City of Austin Type III SCS 24-hour storm duration was used for this plan's preliminary hydraulic modeling in accordance with the City of Rollingwood's current drainage ordinance.

While the City determines its desired direction regarding Atlas 14, it should continue to assess appropriate rainfall data to use on a project-by-project basis. In order to account for likely increases in project costs due to future incorporation of Atlas 14 data, a contingency of 10% has been incorporated into the preliminary project cost estimates included in this plan. This figure is based on cost increases experienced by other agencies as a result of incorporating Atlas 14 data into hydraulic analysis for previous projects.

6.4.2 Recommended Approach for Future Consideration of Policy Implications

It remains for the City to determine its response to Atlas 14 data. The following steps are recommended for the City to investigate Atlas 14 further and begin to make important policy decisions:

- Conduct a peer review of similarly sized municipalities in Central Texas to learn what approach to design criteria and development regulations other communities are adopting in response to the Atlas 14 data.
- Develop a set of Atlas 14 adoption scenarios outlining potential paths the City could take to incorporate the data into City policies.
- Conduct public meetings. Educate the public on the potential impacts and receive input on an appropriate path forward for the City.
- Perform an economic study to analyze the costs and benefits of different Atlas 14 adoption scenarios to the residents and businesses of Rollingwood.
- Develop and adopt new policies in accordance with the City's goals and priorities.

Finally, it is recommended that the City update the improvements proposed by this plan once decisions have been made regarding implementation of Atlas 14 rainfall data, as it may have a significant impact on drainage facility sizing, target level of service, and other design parameters within the City's Drainage Criteria Manual.

6.5 PLANNING & DESIGN

The project concepts provided in **Appendix H** provide a possible way to improve drainage at each of area of interest identified by this plan. These project summaries provide order-of-magnitude cost estimates and give a head-start to future planning and design efforts, but are not fully vetted and modeled improvements. Similarly, the cost estimates are intended for planning and programming purposes only and should not be used for construction.

Further coordination with the City and drainage analysis is required to develop specific design parameters and detailed design for each project. A major unknown element for project development is where the City currently has right-of-way and drainage easements. Additional research to determine where easements exist and where they can be acquired will help inform the final design for each project recommended by this plan.

6.6 REGIONAL DETENTION CONSIDERATIONS

Another topic for further study is whether regional detention can play a larger role in improving the drainage conditions within Rollingwood. Runoff generally flows faster through storm drain systems than it does overland, so installing storm sewer systems can increase downstream flow rates. Detention is one way to counteract this effect.

For this plan, the preliminary pipe sizing was based on the City of Rollingwood Drainage Criteria Manual and preliminary review of downstream impacts. When runoff that currently flows overland is captured and conveyed in a storm drain system, the runoff travels faster which can potentially increase peak flows

at the outfall. While detailed impact analysis was not performed, an effort was made to review the preliminary pipe sizing with respect to potential downstream impacts. In order to not cause any downstream impacts, the pipes in some systems may perform at a level of service lower than the current Criteria Manual guidance. An alternative solution to allow larger pipes and a higher level of service while preventing downstream impacts is to provide detention at key locations.

One location for potential detention discussed with City staff is the creek bed just upstream of the Pleasant Cove culvert. By observation of the inundation mapping, this area is already storing runoff upstream of the culvert. It is possible that culvert crossing (AOI L) could be optimized to maximize the natural storage area upstream of the crossing. In addition, there may be opportunity to grade out the channel banks to increase the size of the storage area or combine the area with AOI H. Note that grading within this area will require careful consideration for slope stability and environmental review to ensure USACE permitting is not required.

6.7 ADDITIONAL CONSIDERATIONS

As previously noted, the primary challenge within the City in terms of improving the drainage infrastructure is the lack of right-of-way and easements. However, there are also other challenges the City faces with regulating new development. Moving forward, the City should consider the following to maximize benefit to the residents, utilize funding efficiently, and effectively regulate new development:

1. Ensure new development is considering offsite contributing drainage area as well as site impacts. Establish a policy for drainage easement dedication for new development when offsite runoff will be conveyed through the property. In order improve the drainage within the City, the City must have the ability to maintain drainage infrastructure.
2. For the City to plan for and design City stormwater infrastructure to accommodate an ultimate, fully-developed future condition, it would be prudent to establish a maximum allowable impervious cover percentage for residential land use. If impervious cover is not regulated, additional drainage infrastructure, higher development fees, and/or acquisition of more drainage easements will be necessary to allow the City to continue to mitigate flooding issues.
3. Additional policy-related measures for floodplain management can be found in *A Guide for Higher Standards in Floodplain Management,* prepared by the Association of State Floodplain Managers in 2013 and made available at https://www.floods.org/ace-files/documentlibrary/committees/3-13_Higher_Standards_in_Floodplain_Management2.pdf. This guide contains language that can help communities such as Rollingwood establish new policies or strengthen existing ones to protect their communities from flood risk. Examples include requirements for finished floor elevations, foundation design, setbacks for land adjacent to streams, and use restrictions.
4. Establish drainage criteria that requires the comparative review of the flow rate, velocity, depth, and flow type of runoff leaving development and redevelopment projects between pre- and post-project conditions. While the City does currently require new development to detain runoff, it is equally as important to ascertain that runoff leaving a site as sheet flow pre-project does not then leave as concentrated flow post-project. It is also vital that development maintains existing drainage patterns so runoff does not leave the site in a different location post-project.

6.8 SUMMARY OF OUTSIDE FUNDING MECHANISMS

As part of the KFA Project Team, The Goodman Corporation researched external funding sources that could be leveraged by the City to assist with implementation of the recommended CIP projects. Examples include Texas Water Development Board grants, TxDOT Transportation Alternatives funding, and FEMA Flood Mitigation Assistance (FMA). These and other funding sources are described in **Appendix J** as they relate to the specific CIP projects recommended by this plan.

The majority of the recommended projects are, at a minimum, eligible for one or more discretionary funding sources. However, the competitiveness of the projects varies and is difficult to estimate without the completion of further evaluation via a benefit-cost analysis.

Based on the analysis completed thus far, the best projects for discretionary funding support appear to be the Bee Caves Road Drainage Improvement project and the projects related to City Hall Drainage.

Figure 7: Pleasant Cove Culvert, Looking Northeast/Downstream (September 11, 2019)

Recommended next steps for the City to pursue external funding are as follows:

- Conduct detailed outreach with individual property owners to obtain and assemble census tract-level information related to individual flood-related losses, National Flood Insurance Program (NFIP) insurance status, and claim amounts. This information will help to validate whether or not FMA grants will be applicable to individual projects.
- Perform a benefit-cost analysis for all of the projects. Due to the nature of these projects, it is recommended that FEMA methodology be used. This data could also be used to adjust the project ranking information provided as well as determine which projects are or are not eligible for Hazard Mitigation Grant Program (HMGP) funds through FEMA.
- Develop and process for ongoing coordination with Travis County, the City of Austin Watershed Protection Department, and the Lower Colorado River Authority and any other applicable entities to identify opportunities for partnership projects.

6.9 SUMMARY OF INTERNAL FUNDING MECHANISMS

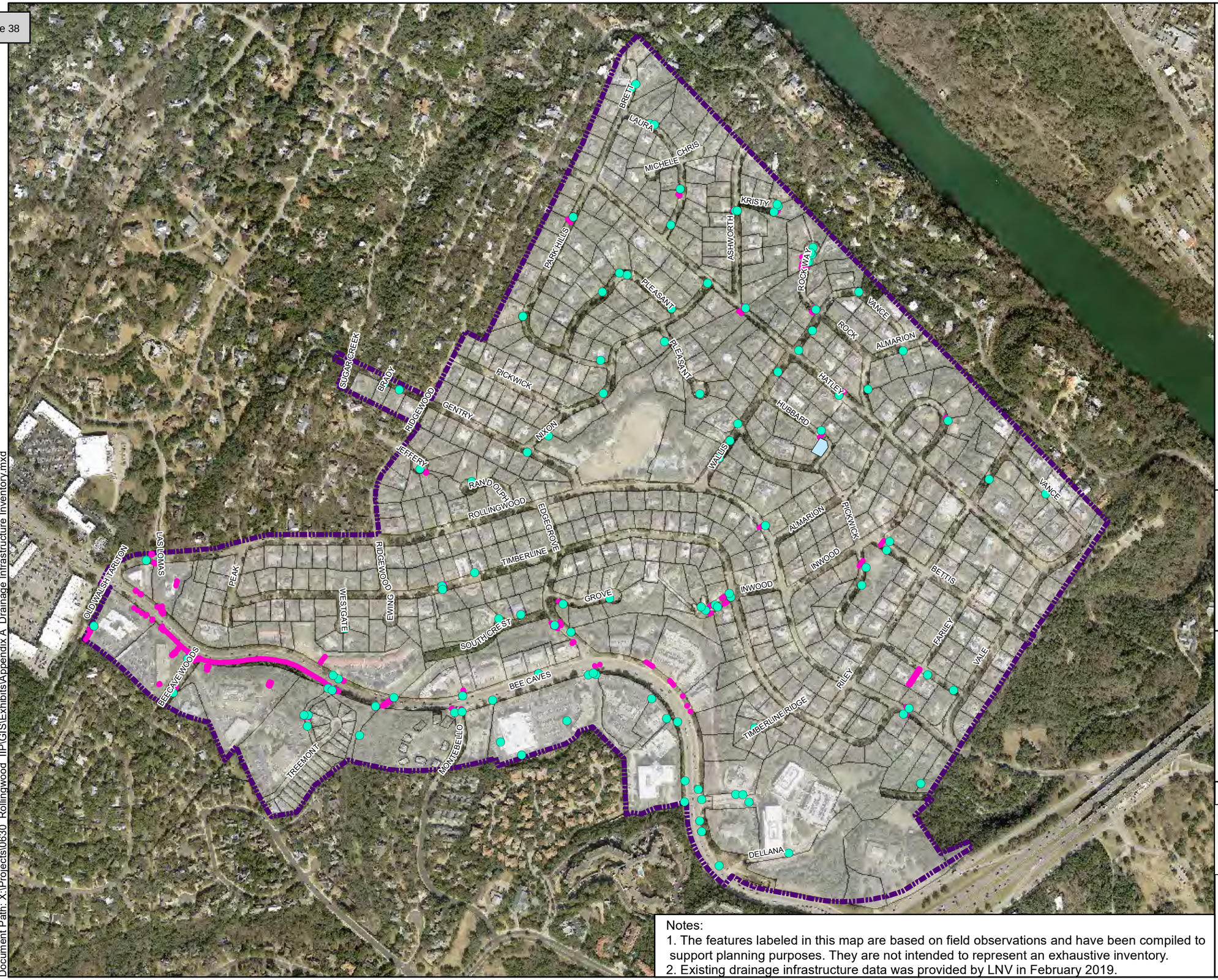
In addition to the external funding mechanisms mentioned above, there are internal funding mechanisms that the City could leverage to support the installation and maintenance of drainage infrastructure. Two such funding mechanisms are outlined below:

1. Drainage Utility Fee: Several municipalities in the area, including Austin, Fredericksburg, and Killeen, have implemented a drainage utility fee for this purpose. The amount and structure of drainage utility fees can vary; in some cities the amount of the fee is based on property size, zoning classification, or amount of impervious cover, while others use a flat monthly rate.
2. Rollingwood Stormwater Discharge Permit (RSDP): Another option for the City to consider is to modify the current RSDP structure to require redevelopment efforts to contribute to a fund for citywide drainage improvements.

Appendices

Appendix A: Infrastructure Inventory Maps

- Drainage Infrastructure Inventory
- Electric Infrastructure Within Right-of-Way
- Water & Wastewater Infrastructure Within Right-of-Way
- Results of Visual Pavement Observations



Legend

- Rollingwood City Limits
- Parcels
- Existing Detention Pond
- Existing Inlets
- Existing Drainage Infrastructure (2010)

City of Rollingwood Infrastructure Improvements Plan

Drainage Infrastructure Inventory

N

0 600 1,200 Feet

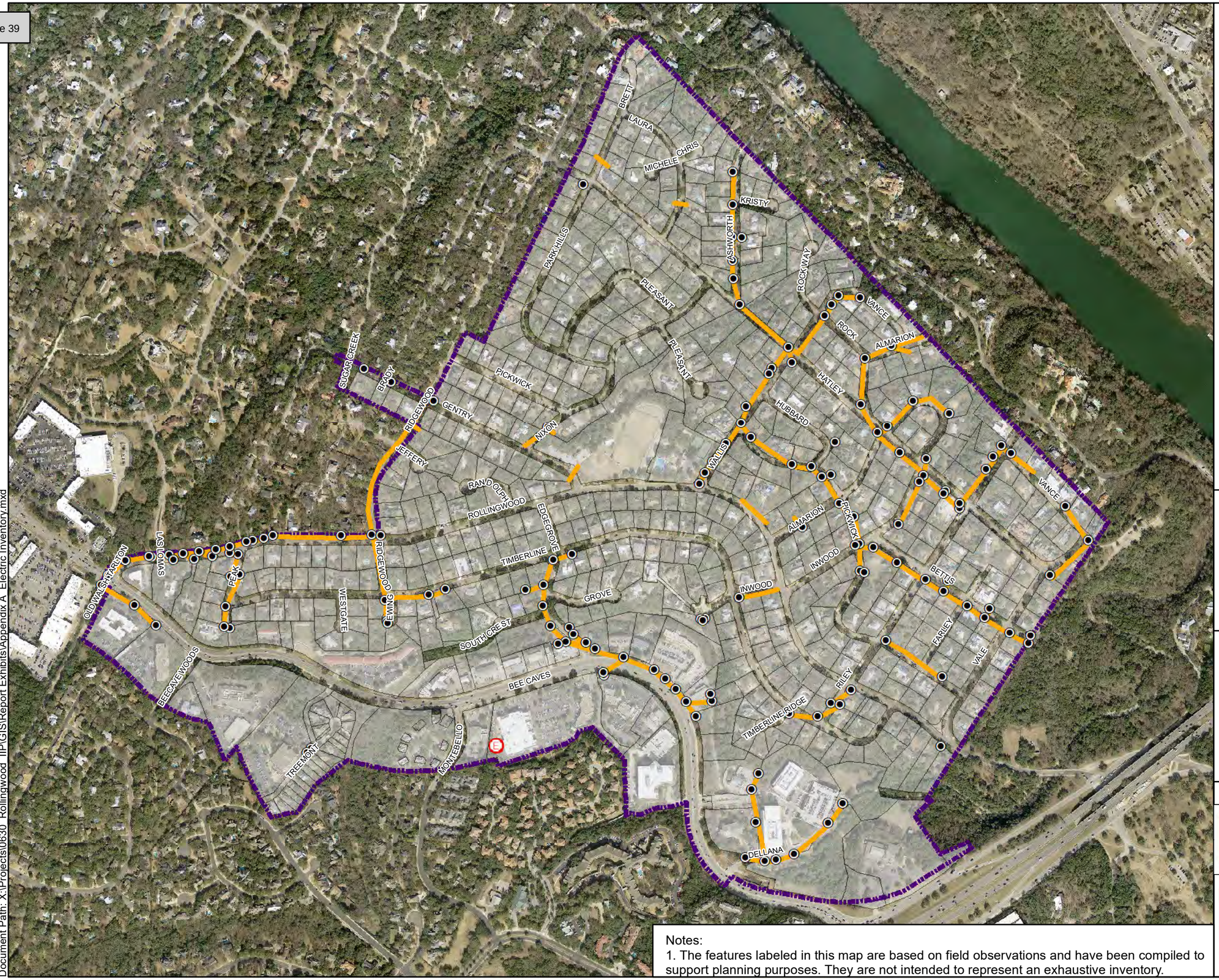
Date: 10/25/2019

ROLLINGWOOD TEXAS

K FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. The features labeled in this map are based on field observations and have been compiled to support planning purposes. They are not intended to represent an exhaustive inventory.
2. Existing drainage infrastructure data was provided by LNV in February 2019.

Document Path: X:\Projects\0630 Rollingwood II\GIS\Exhibits\Appendix A Drainage Infrastructure Inventory.mxd



Legend

- Rollingwood City Limits
- Parcels
- Overhead Electric in Right-of-Way
- Electric Manhole
- Electric Pole

City of Rollingwood Infrastructure Improvements Plan

Electric Infrastructure Within Right-of-Way

N

0 600 1,200 Feet

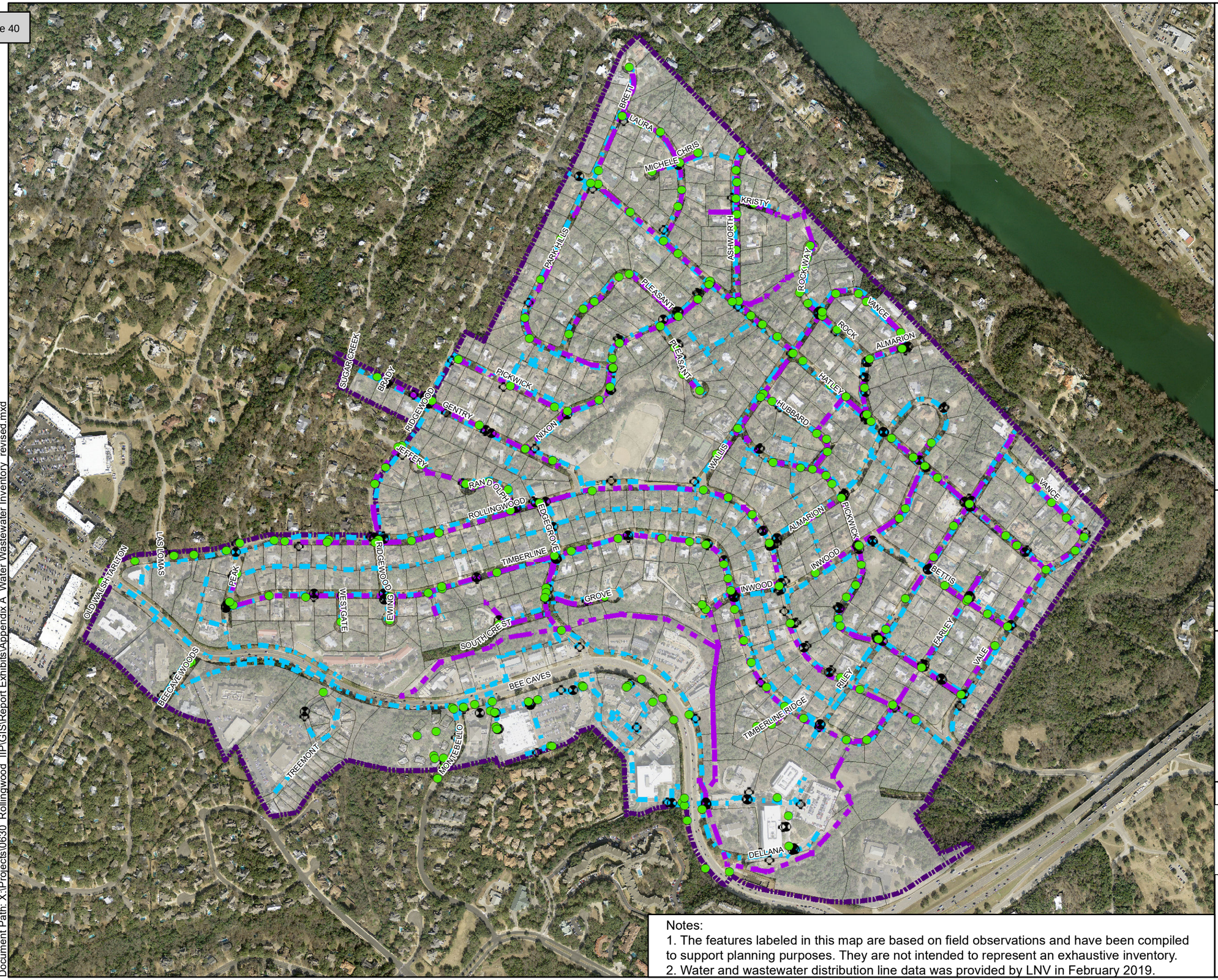
Date: 11/26/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. The features labeled in this map are based on field observations and have been compiled to support planning purposes. They are not intended to represent an exhaustive inventory.

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix A Electric Inventory.mxd



Legend

- Rollingwood City Limits
- Parcels
- Utility Manhole
- Fire Hydrant
- Valve
- Wastewater Collection Line
- Water Distribution Line

City of Rollingwood Infrastructure Improvements Plan

Water & Wastewater Infrastructure Within Right-of-Way

N

0 600 1,200 Feet

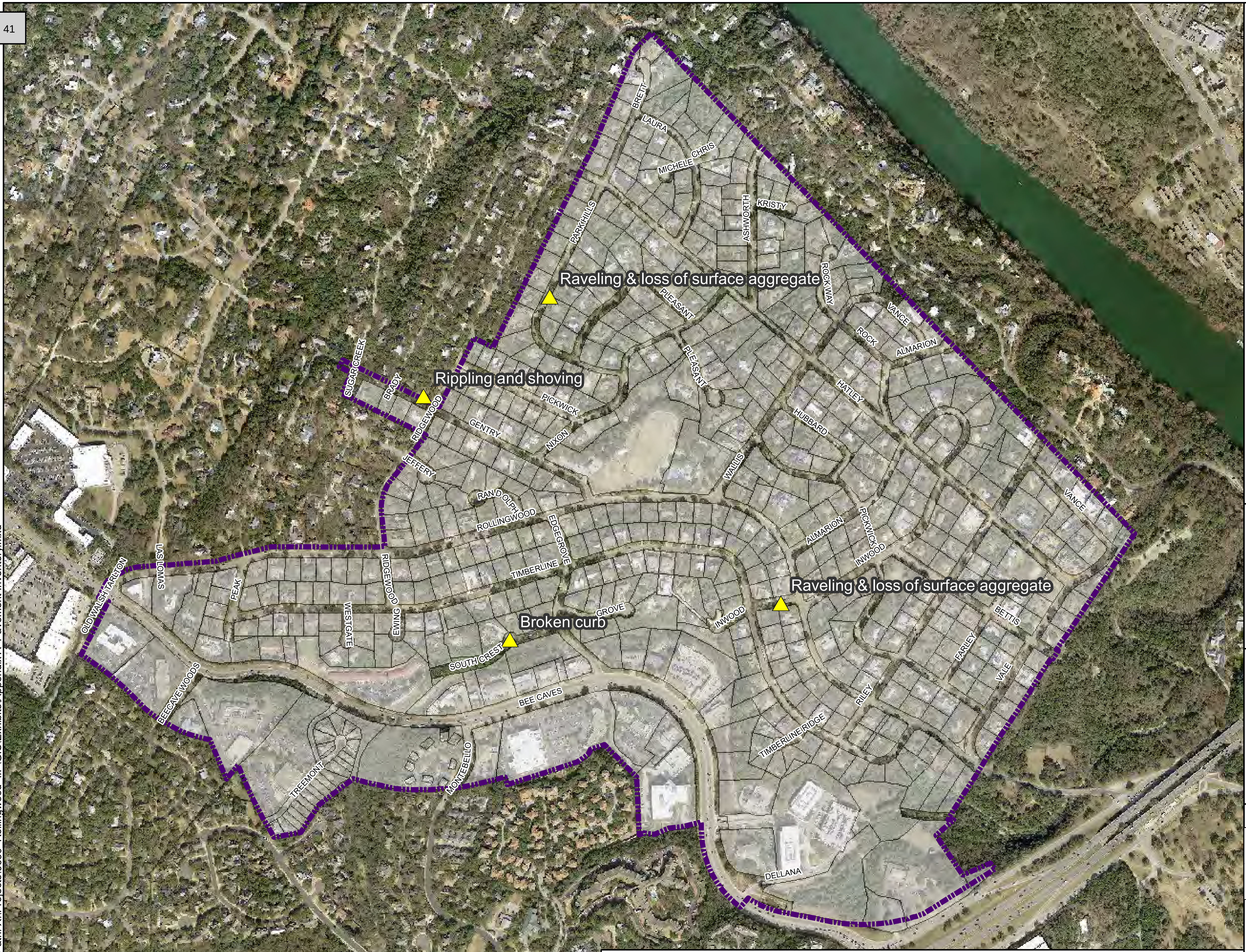
Date: 6/10/2020

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. The features labeled in this map are based on field observations and have been compiled to support planning purposes. They are not intended to represent an exhaustive inventory.
2. Water and wastewater distribution line data was provided by LNV in February 2019.

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix A Water Wastewater Inventory_revised.mxd



Notes:
1. The features labeled in this map are based on field observations conducted in February 2019 and have been compiled to support planning purposes. They are not intended to represent an exhaustive inventory.

Legend

- Rollingwood City Limits
- Parcels
- Pavement Issues from Visual Inspection

City of Rollingwood Infrastructure Improvements Plan

Results of Visual Pavement Observations

N

0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K FRIESE + ASSOCIATES PUBLIC PROJECT ENGINEERING

FIRM NO. 6535

Document Path: X:\Projects\0630_Rollingwood_IIP\GIS\Exhibits\Appendix A_Pavement Inventory.mxd

Appendix B: Public Outreach Materials

- Public Flyer
- Public Survey

ROLLINGWOOD TEXAS

PUBLIC SURVEY

Date: _____

First Name: _____ **Last Name:** _____

Address: _____

House# *Street Name*

We have heard your concerns about flooding and drainage in our City, and to address these concerns we are developing an Infrastructure Improvements Plan.

The City of Rollingwood Infrastructure Improvements Plan will identify areas of interest related to drainage and pavement conditions, prioritize those areas, and create project concepts to address the issues that are present.

If you are aware of a drainage problem near your property, please take a few minutes to complete and return the brief survey (on the back of this letter) or go to https://arcg.is/15rXqD online to complete and submit the survey electronically. We will use the information you provide as one source of data, along with other information that we collect to help identify and prioritize public infrastructure concerns within the City. If you have relevant photos of flooding, please upload them to the website mentioned above.

CITY OF ROLLINGWOOD

Infrastructure Improvements Plan

Please share your concerns by returning the survey:

By Mail

Attn: Amber Lewis
403 Nixon Drive
Rollingwood, TX 78746

By Email

clafollette@kfriese.com

Online

https://arcg.is/15rXqD

If you would like assistance completing your survey or would like more information about the Infrastructure Improvements Plan, join City staff and engineers from K Friese + Associates for a public meeting:

Where: **403 Nixon Drive (City Hall)**

When: **Tuesday, March 26th, 2019 from 4-8 PM**

CITY OF ROLLINGWOOD TEXAS

ROLLINGWOOD TEXAS

PUBLIC SURVEY

LOCAL Flooding Issues

1. How long have you lived at this address?
   _____ Months _____ Years

2. Do you have any drainage concerns on your property?
   (Check all that apply)
   - ☐ Ponding in front yard
   - ☐ Ponding in backyard
   - ☐ Water in garage
   - ☐ Water in house
   - ☐ Septic (on-site wastewater) related problems
   - ☐ Other _____

3. How often do these issues occur?
   - ☐ Once every couple of years
   - ☐ Once or twice a year
   - ☐ 3-6 times a year
   - ☐ Every time it rains
   - ☐ Other _____

4. Approximately how deep is the water?
   - ☐ 1-2 inches
   - ☐ 3-4 inches
   - ☐ 5-6 inches
   - ☐ >6 inches

5. How long does the water remain after the rain has stopped?
   - ☐ A few minutes
   - ☐ 30 minutes
   - ☐ 1 hour
   - ☐ Several hours
   - ☐ 1 day or longer

6. Where is the water coming from?

   _____

   _____

CITY-WIDE Flooding Issues

1. Are there any roadway or public flooding issues in your area? If so, please describe the issue and state the location.

   _____

   _____

   _____

2. When did the issue(s) begin?

   _____

   _____

   _____

3. How often does the issue(s) occur?
   - ☐ Once every couple of years
   - ☐ Once or twice a year
   - ☐ 3-6 times a year
   - ☐ Every time it rains
   - ☐ Other _____

4. Comments

   _____

   _____

   _____

CITY OF ROLLINGWOOD TEXAS

Appendix C: Public Survey Response Maps

- Public Surveys Received
- Type of Flooding Reported by Survey
- Frequency of Flooding Reported by Survey
- Ponding Duration Reported by Survey
- Flooding Issues Reported Within Right-of-Way by Survey

Legend

- Rollingwood City Limits
- Parcels
- Public Survey Received

BRETT
LAURA
MICHELE
CHRIS
KRISTY
ASHWORTH
PARK HILLS
PLEASANT
ROCKWAY
VANCE
ROCK
ALMARION
HATLEY
HUBBARD
WALLIS
PICKWICK
NIXON
CENTRY
RIDGEWOOD
BRADY
SUGAR CREEK
JEFFERY
RAN'D OLPH
ROLLINGWOOD
EDGEGROVE
TIMBERLINE
LASTHOMAS
PEAK
WESTGATE
EWING
GROVE
INWOOD
SOUTHCREST
BEE CAVES
BEECAVE WOODS
OLD WASHINGTON
TREEMONT
MONTEBELLO
TIMBERLINE RIDGE
RILEY
FARLEY
VALE
BETTIS
DELLANA

City of Rollingwood Infrastructure Improvements Plan

Public Surveys Received

N

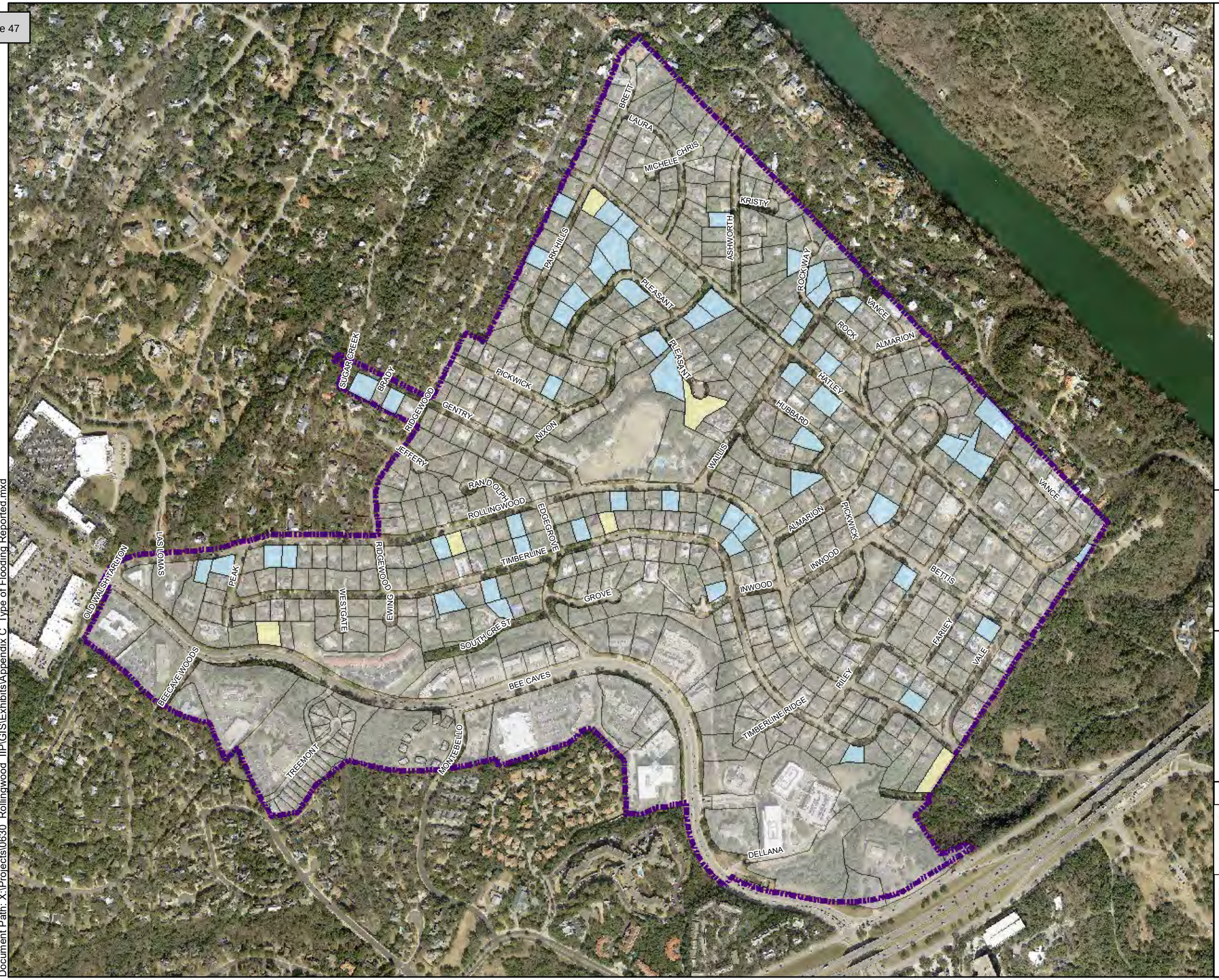
0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Exhibits\Appendix C Public Survey Received.mxd



Legend

- Rollingwood City Limits
- Parcels
- Yard/Driveway Flooding Reported
- Home/Garage Flooding Reported

City of Rollingwood Infrastructure Improvements Plan

Type of Flooding Reported by Survey

N

0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood II\GIS\Exhibits\Appendix C Type of Flooding Reported.mxd

Legend

- Rollingwood City Limits
- Parcels

Frequency of Reported Issue

- Once every couple of years
- Once or twice a year
- 3-6 times a year
- Every time it rains

City of Rollingwood Infrastructure Improvements Plan

Frequency of Flooding Reported by Survey

N

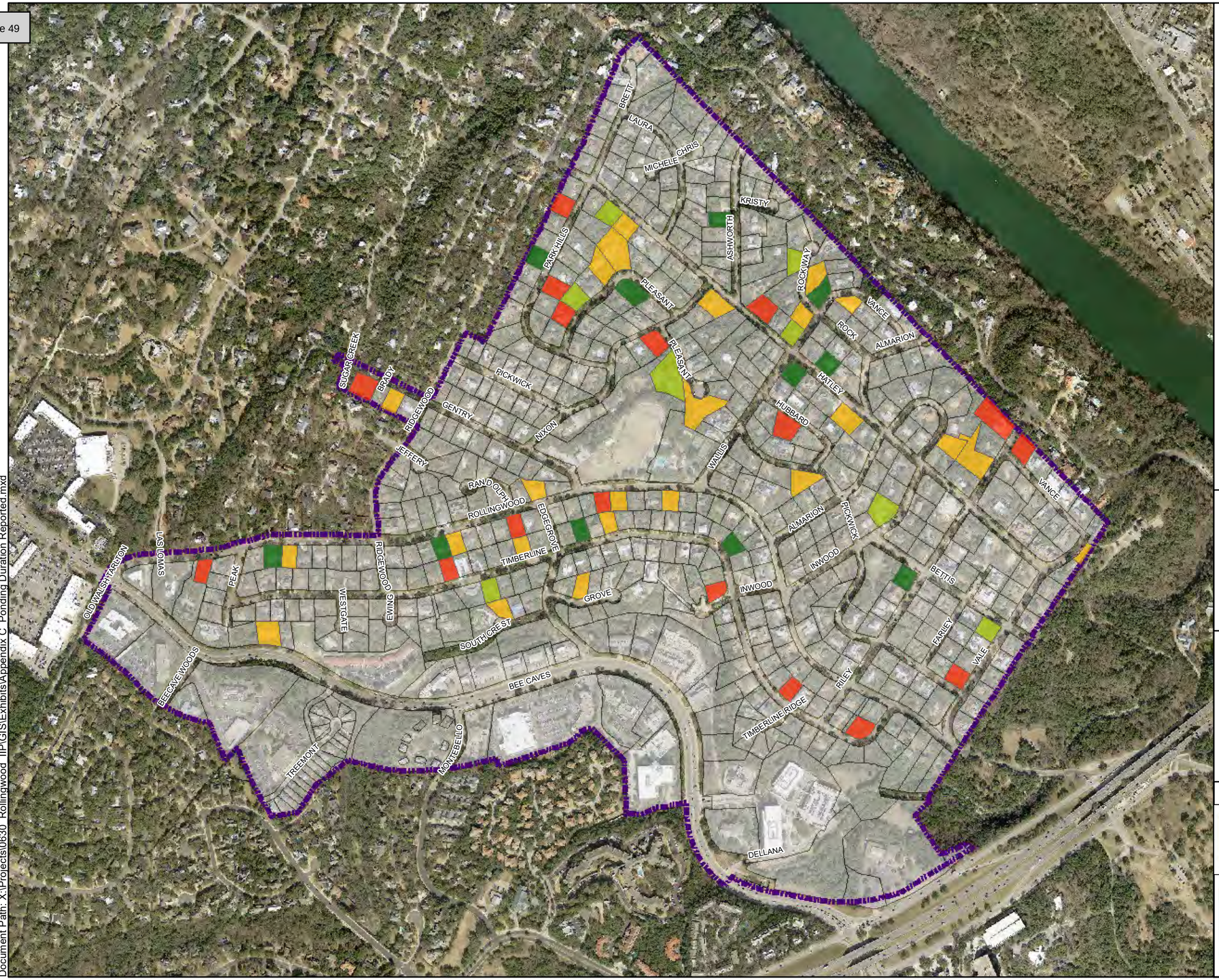
0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood II\PGIS\Exhibits\Appendix C Frequency of Flooding Reported.mxd



Legend

- Rollingwood City Limits
- Parcels

Ponding Duration Reported

- 30 minutes
- 1 hour
- Several hours
- 1 day or longer

City of Rollingwood Infrastructure Improvements Plan

Ponding Duration Reported by Survey

N

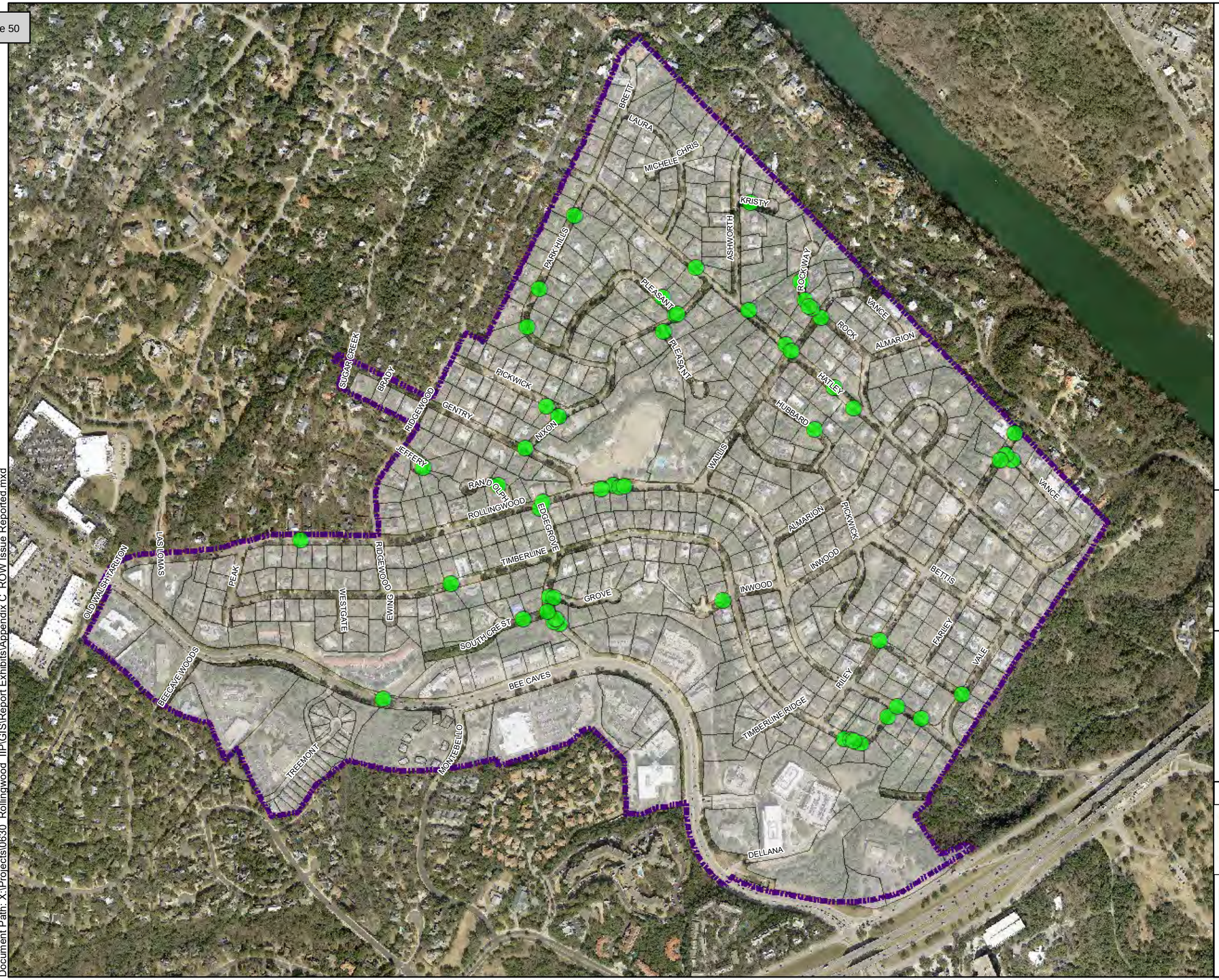
0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Exhibits\Appendix C Ponding Duration Reported.mxd



Legend

- Rollingwood City Limits
- Parcels
- Flooding Issues Reported in Right-of-Way

City of Rollingwood Infrastructure Improvements Plan

Flooding Issues Reported Within Right-of-Way by Survey

N

0 600 1,200 Feet

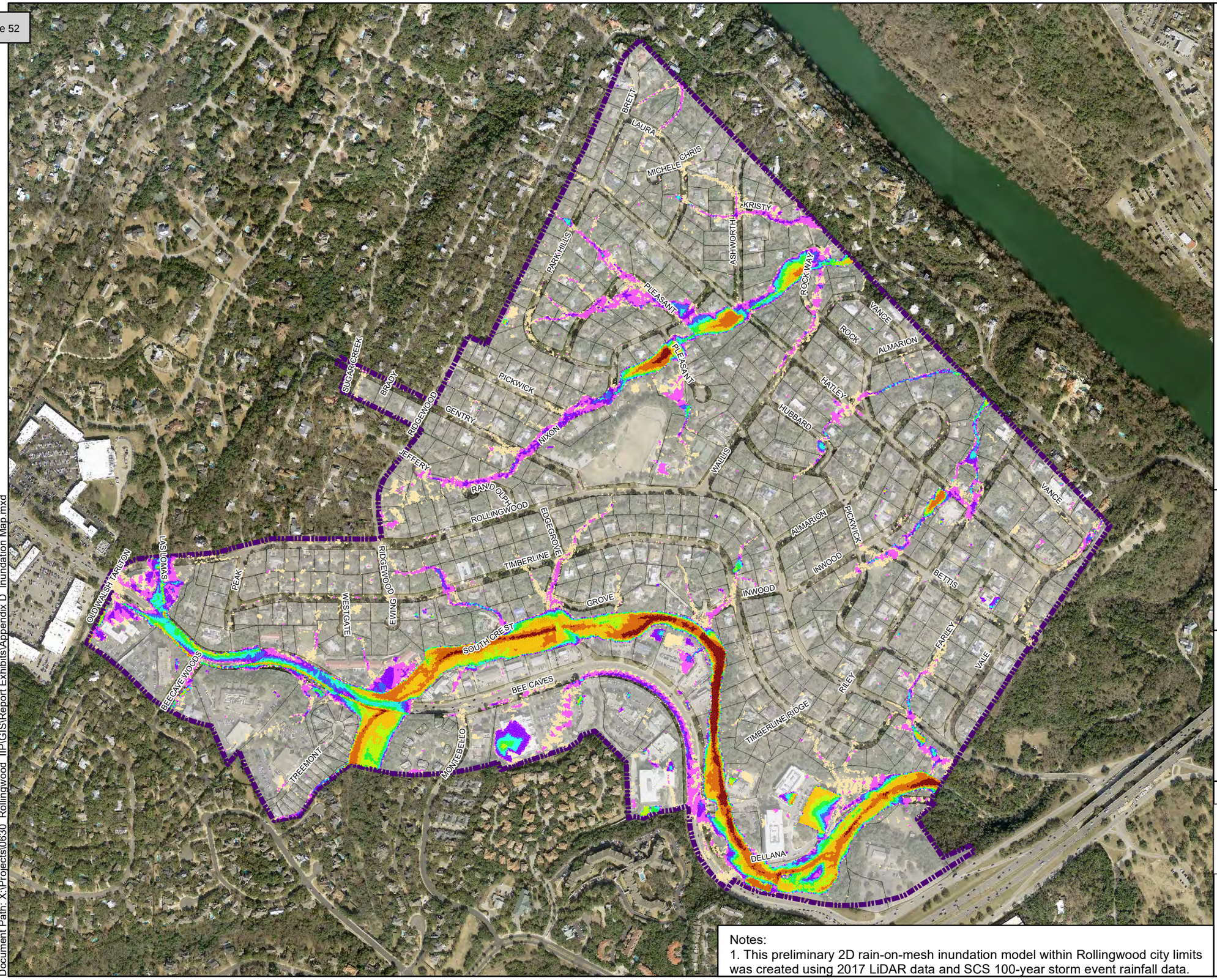
Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix C ROW Issue Reported.mxd

Appendix D: Existing 100-year Storm Inundation Map



Legend

- Rollingwood City Limits
- Parcels

Model Depths

100-yr Storm Inundation

- 3-6 in
- 6-12 in
- 12-18 in
- 18-24 in
- 2-3 ft
- 3-4 ft
- 4-5 ft
- 5-7 ft
- 7-10 ft
- 10-20 ft

City of Rollingwood Infrastructure Improvements Plan

100-year Storm Event Inundation Map

N

0 600 1,200 Feet

Date: 11/26/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. This preliminary 2D rain-on-mesh inundation model within Rollingwood city limits was created using 2017 LiDAR data and SCS 100-year storm event rainfall data.

Document Path: X:\Projects\0630 Rollingwood II\GIS\Report Exhibits\Appendix D Inundation Map.mxd

Appendix E: FEMA Flood Insurance Rate Map (January 6, 2016)

USERS

This m… National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Texas State Plane Central Zone (FIPS zone 4203). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the City of Austin and CAPCOG. The projection used in the preparation of the FIRMs was Texas State Plane Central Zone (FIPSZONE 4203) and the horizontal datum was NAD83, GRS1980 spheroid.

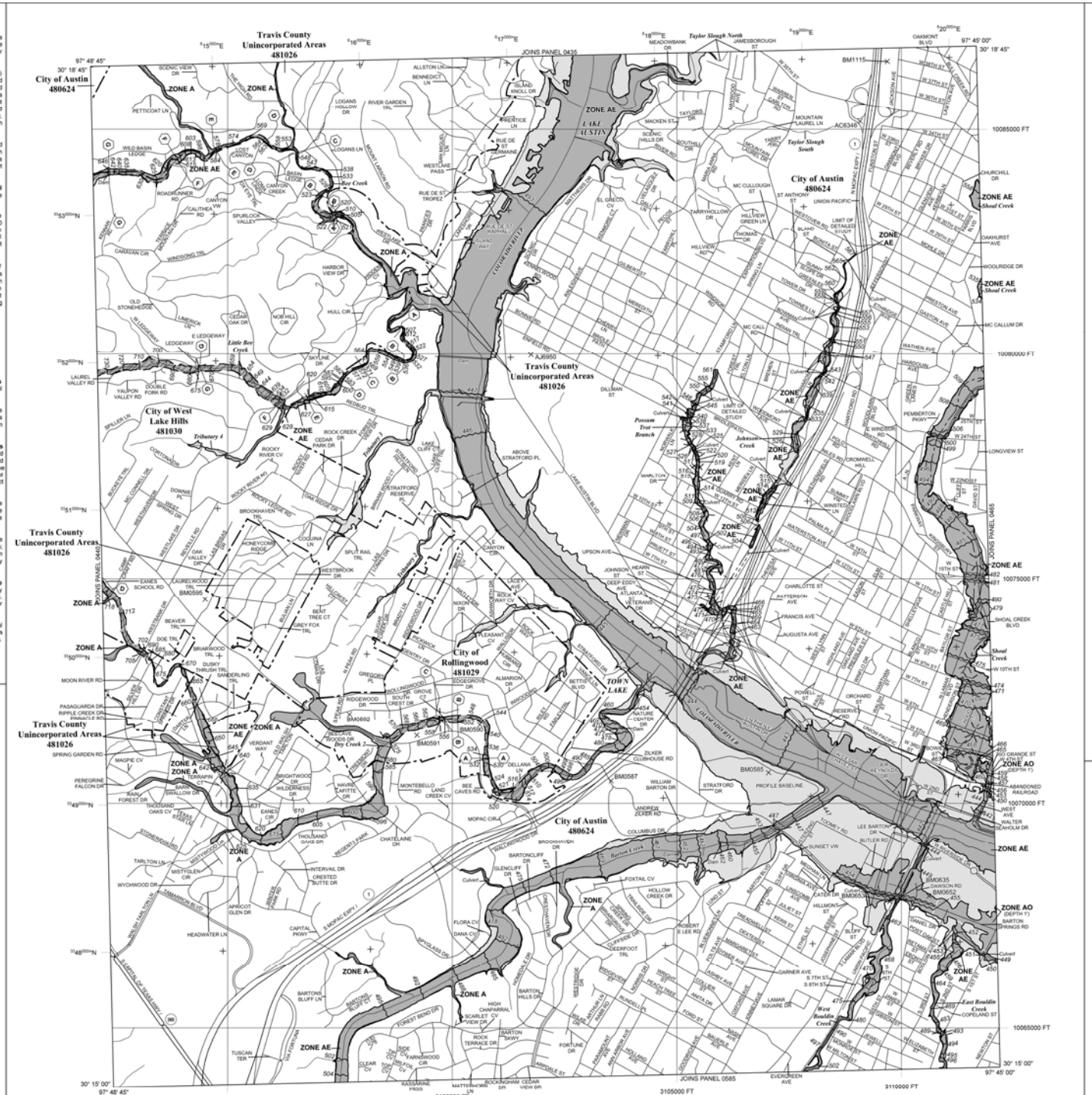
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) S… INUNDATION BY THE 1% ANNUAL CHA…

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A–A Cross section line
- 23–23 Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT 5000-foot ticks: Texas State Plane Central Zone (FIPS Zone 4203); Lambert Conformal Conic projection
- 1000-meter Universal Transverse Mercator grid values, zone 14
- DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Station

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
June 16, 1993

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
June 5, 1997, January 19, 2000, April 15, 2002, September 26, 2008
January 6, 2016 - to update corporate limits, to change Special Flood Hazard Areas, to reflect updated topographic information, to incorporate previously issued Letters of Map Revision

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0445J

FIRM

FLOOD INSURANCE RATE MAP

TRAVIS COUNTY, TEXAS AND INCORPORATED AREAS

PANEL 445 OF 730
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
AUSTIN, CITY OF	480624	0445	J
ROLLINGWOOD, CITY OF	481029	0445	J
TRAVIS COUNTY	481026	0445	J
WEST LAKE HILLS, CITY OF	481030	0445	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
48453C0445J
MAP REVISED
JANUARY 6, 2016

Federal Emergency Management Agency

Appendix F: Identified Areas of Interest Map

Legend

- Rollingwood City Limits
- Parcels
- Area of Interest
- Drainage Areas

100-yr Inundation

- 3-6 in
- 6-12 in
- 12-18 in
- 18-24 in
- 2-3 ft
- 3-4 ft
- 4-5 ft
- 5-7 ft
- 7-10 ft
- 10-20 ft

City of Rollingwood Infrastructure Improvements Plan

Identified Areas of Interest Map

N

0 600 1,200 Feet

Date: 10/25/2019

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. Drainage area boundaries 5, 6, 9, 10, and 14 developed by LNV.
2. Sub-basin boundaries, 5-1, 5-2, 5-3, and 5-4 developed by KFA.

Document Path: X:\Projects\0630 Rollingwood IIP\GIS\Exhibits\Appendix F Areas of Interest.mxd

Appendix G: Proposed Projects Map

Legend

- Rollingwood City Limits
- Parcels
- Area of Interest
- Proposed Channel Improvements
- Proposed Roadway Improvements
- Proposed Storm Sewer
- Proposed Detention Pond
- Proposed Culvert Improvements
- Proposed Bridge

100-yr Inundation

- 3-6 in
- 6-12 in
- 12-18 in
- 18-24 in
- 2-3 ft
- 3-4 ft
- 4-5 ft
- 5-7 ft
- 7-10 ft
- 10-20 ft

City of Rollingwood Infrastructure Improvements Plan

Proposed Improvements Map

N

0 600 1,200 Feet

Date: 10/30/2019

ROLLINGWOOD TEXAS

K FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

Notes:
1. Location of proposed improvements is approximate and is subject to change based on further analysis and design.

Document Path: \\KFSERVER2\Projects\Projects\0630 Rollingwood IIP\GIS\Report Exhibits\Appendix G Proposed Improvements Map.mxd

Appendix H: Project Summary Sheets

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Table 1: Project Ranking and Cost Summary

Project ID	Project Name	Cost	Rank*
B	Bee Caves Road Drainage Improvements	UNK	1
G	Edgegrove Drainage Improvements	$ 2,631,000	2
M	Nixon/Pleasant Roadway Drainage Improvements	$ 5,283,000	3
K	Pleasant Drive Drainage Improvements	included in M	4
D	Timberline-South Crest Drainage Improvements	$ 558,000	5
W	Hatley Drive Drainage Improvements	$ 654,000	6
L	Pleasant Cove Drainage Improvements	$ 490,000	7
H	City Hall Property Drainage Improvements	$ 475,000	8
J	Underground Infiltration Basin Drainage Improvements	$ 883,000	9
T	East Rollingwood Drive Drainage Improvements	$ 2,122,000	10
N	Timberline Drive Drainage Improvements	$ 380,000	11
Q	Rock Way Cove Drainage Improvements	$ 816,000	12
S	East Timberline Drive Drainage Improvements	included in T	13
R	Hatley Drive Drainage Improvements	$ 400,000	14
F	Nixon/Gentry Drainage Improvements	$ 2,024,000	15
V	Pleasant Drive Drainage Improvements	included in M	16
O	Kristy Drive Drainage Improvments	$ 217,000	17
E	Randolph Place Drainage Improvements	included in F	18
I	Park Hills Drainage Improvements	$ 238,000	19
A	Rollingwood Drive West Drainage Improvements	$ 589,000	20
P	Wallis and Hatley Drainage Improvements	included in Q	21
U	Riley Rd and Vance Ln Drainage Improvements	$ 141,000	22
C	Rollingwood Drive South Drainage Improvements	UNK	23
	SUM	**$ 17,901,000**	

* Rank is based on velocities and flooding depths at structures from the inundation model.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: A
Project Name: Rollingwood Drive West Drainage Improvements
Drainage Basin: 9

Problem Description

Property flooding between Las Lomas Dr and S. Peak Rd on Rollingwood Dr.

Proposed Improvements

Install 24" RCP underground storm sewer system of approximately 500 feet in length with approximately 5 inlets, 5 driveway reconstructions, and curb construction along entire length. Connect to Eanes Creek tributary crossing at Las Lomas Drive.

CIP Ranking

20 out of **23**

Project Costs

Engineering & Survey:	$ 86,000
Construction:	$ 472,000
Other:	$ 31,000
ROW/Easements:	UNK
Total:	**$ 589,000**
Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	6 Months

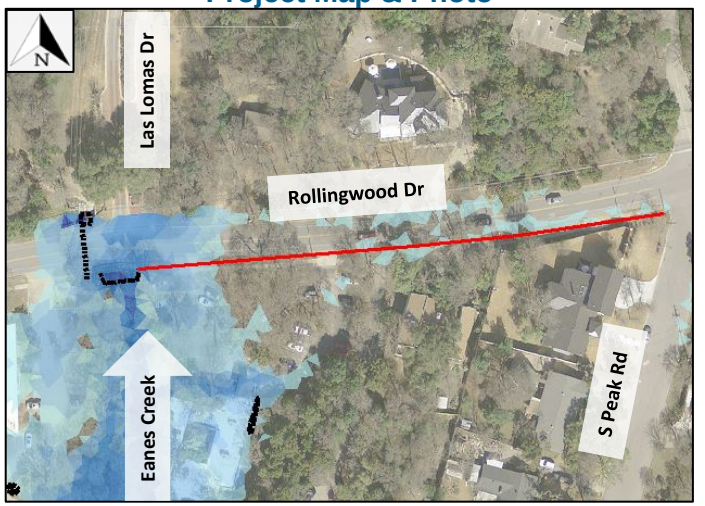
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Existing culverts in black.
Existing 100-yr inundation shown.

Rollingwood Drive looking northwest.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: B
Project Name: Bee Caves Road Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway flooding at Bee Caves Road. Existing 2-42" CMPs.

Proposed Improvements

Further discussion is needed to determine the desired outcome of a project along Bee Caves Road. Potential project complications include but are not limited to: TxDOT coordination, raising the roadway profile, multiple sources of flooding (Eanes Creek and the Tributary that runs along Bee Caves), the length of flooding along Bee Caves and potential utility conflicts. Due to the number of unknowns, a cost estimate was not generated but it is expected to be within the tens of millions of dollars. The cost incurred by the City would be subject to negotiations with TxDOT and is unknown.

CIP Ranking

1 out of **23**

Project Costs

Engineering & Survey:	$	-
Construction:	$	-
Other:	$	-
ROW/Easements:		UNK
Total:		**UNK**
Conceptual Cost Range:		N/A
Estimated Construction Duration:		N/A

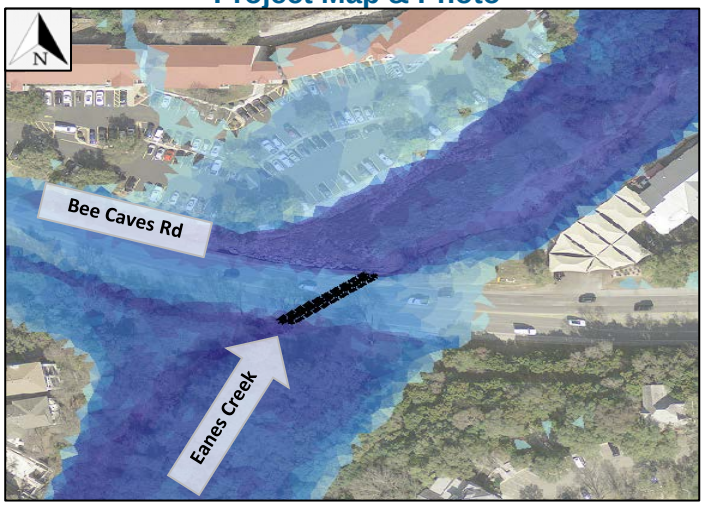
Possible Impacts

N/A

Assumptions

N/A

Project Map & Photo



Bee Caves Road, existing culverts in black.
Existing 100-yr inundation shown.

Bee Caves Road, downstream. 9/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: C
Project Name: Rollingwood Drive South Drainage Improvements
Drainage Basin: 10

Problem Description

Property flooding along Rollingwood Drive.

Proposed Improvements

This AOI was studied using modeling and field observations, and existing infrastructure appears sufficient for this location. A CIP project is not recommended at this AOI at this time.

CIP Ranking

23 out of **23**

Project Costs

Engineering & Survey:	$	-
Construction:	$	-
Other:	$	-
ROW/Easements:		UNK
Total:		**UNK**
Conceptual Cost Range:		N/A
Estimated Construction Duration:		N/A

Possible Impacts

N/A

Assumptions

N/A

Project Map & Photo

Rollingwood Drive.
Existing 100-yr inundation shown.

Rollingwood Drive, looking east. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: D
Project Name: Timberline-South Crest Drainage Improvements
Drainage Basin: 10

Problem Description

Property flooding between Timberline Drive and South Crest Drive. Roadway flooding on Timberline Drive.

Proposed Improvements

Regrade and improve the channel between 4907 and 4905 South Crest Drive to 4908 Timberline Drive, approximately 475 feet. At the end of the channel, build a drop inlet leading to approximately 140 feet of 48" underground storm sewer.

CIP Ranking

5 out of **23**

Project Costs

Engineering & Survey:	$	80,000
Construction:	$	438,000
Other:	$	40,000
ROW/Easements:		UNK
Total:	**$**	**558,000**

Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	6 Months

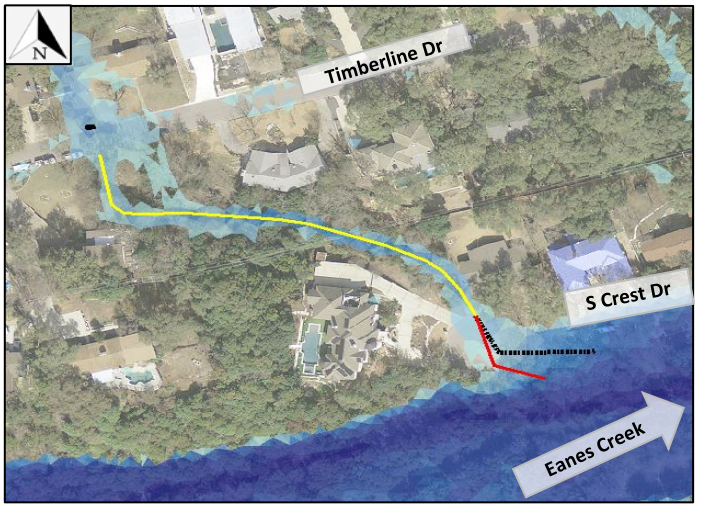
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- Cost included estimate completed by Peabody General Contractors and provided to KFA by the City for waterline improvements along South Crest Drive.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Channel improvements in yellow, proposed storm sewer in red. Existing channel in black. Existing 100-yr inundation shown.

South Crest Drive during rain event, looking north. 06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: E
Project Name: Randolph Place Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding along Randolph Place.

Proposed Improvements

Install approximately 272 feet of 24" RCP, 846 feet of 36" RCP, 125 feet of 5' x 3' RCB, and 626 feet of 6' x 3' RCB. Begin at Gentry Drive and discharge to channel near City Hall. It will include an estimated 20 curb inlets, 1 area inlet, and approximately 12 driveway reconstructions. This includes the improvements at AOI F. In accordance with downstream impacts the imporvements along AOI M should be completed first.

CIP Ranking

18 out of **23**

Project Costs

See Cost on AOI F

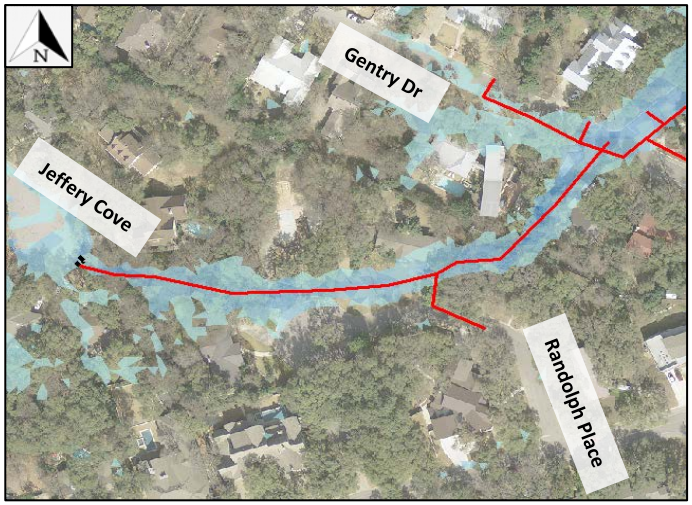
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red.
Existing 100-yr inundation shown.

3 Randolph Place looking west.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: F
Project Name: Nixon/Gentry Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding along Gentry Drive and Nixon Drive.

Proposed Improvements

Install approximately 272 feet of 24" RCP, 846 feet of 36" RCP, 125 feet of 5' x 3' RCB, and 626 feet of 6' x 3' RCB. Begin at Gentry Drive and discharge to channel near City Hall. It will include an estimated 20 curb inlets, 1 area inlet, and approximately 12 driveway reconstructions. This includes the improvements at AOI E. To mitigate downstream impacts, the improvements along AOI M should be completed first.

CIP Ranking

15 out of **23**

Project Costs**

**AOI E included

Engineering & Survey:	$ 300,000
Construction:	$ 1,648,000
Other:	$ 76,000
ROW/Easements:	UNK
Total:	**$ 2,024,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	15 Months

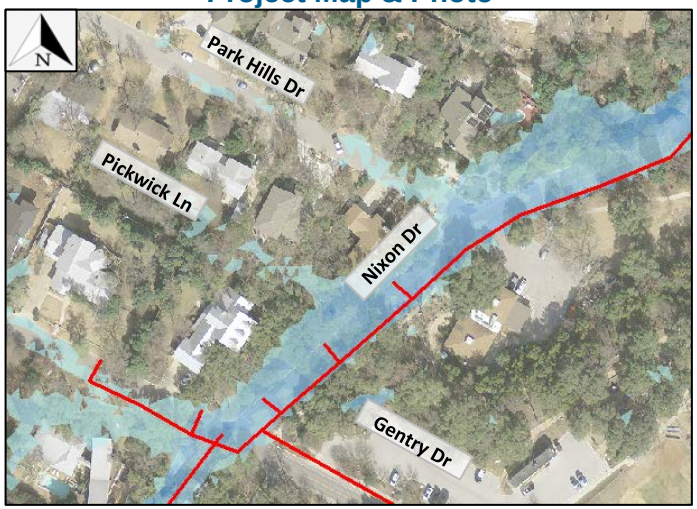
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed strom drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red.
Existing 100-yr inundation shown.

Nixon and Gentry intersection looking north. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: G
Project Name: Edgegrove Drive Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway flooding at Edgegrove Drive. Existing 2 - 32" RCP and 1 - 24" RCP.

Proposed Improvements

Bridge crossing approximately 300 feet in length and an estimated 46 feet in width (2 lanes, 2 shoulders/bike lanes, and sidewalk). Improve and regrade the channel 50 feet downstream and upstream of the crossing. Raise and rebuild the road about 350 feet in total length. The roadway improvements are along Edgegrove Drive and South Crest Drive. It is recommended this AOI should be coordinated with the proposed retail study along Eanes Creek.

CIP Ranking

2 out of **23**

Project Costs

Engineering & Survey:	$ 394,000
Construction:	$ 2,167,000
Other:	$ 70,000
ROW/Easements:	UNK
Total:	**$ 2,631,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	12 Months

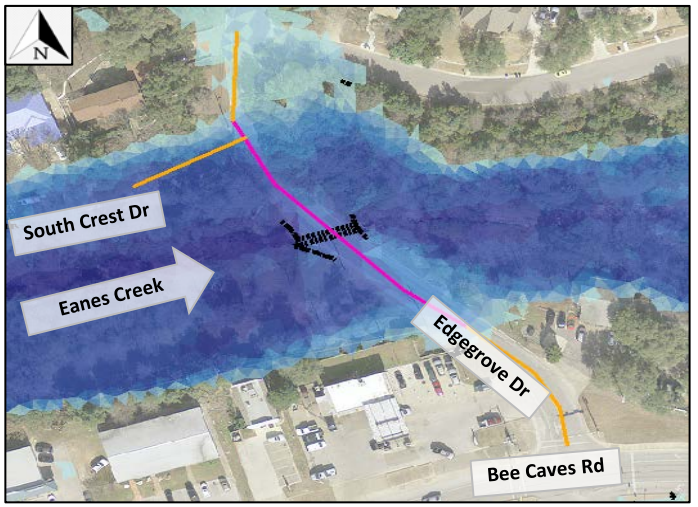
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. The bridge should be designed to ensure no upstream impacts. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- Flooding on Edgegrove Dr is controlled by Eanes Creek.
- It is assumed the proposed bridge will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and detailed hydraulic will need additional consideration and analysis.

Project Map & Photo



Proposed bridge in pink. Road improvements in orange. Existing culvert in black. Existing 100-yr inundation shown.

Edgegrove Drive, looking northeast. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: H
Project Name: City Hall Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding at City Hall and roadway flooding along Nixon Drive.

Proposed Improvements

Regrade Rollingwood City Hall property. Design and create a detention pond of approximately 0.20 acres at the existing community playground. This would include connecting to the improvements at AOI E and F. The detention pond may provide benefit for smaller storm events, however preliminary modeling shows that the area is too small to provide detention in the 100-year event. Further analysis is necessary to determine the potential benefits from a detention pond at this location.

CIP Ranking

8 out of **23**

Project Costs

Engineering & Survey:	$ 64,000
Construction:	$ 350,000
Other:	$ 61,000
ROW/Easements:	UNK
Total:	**$ 475,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	12 Months

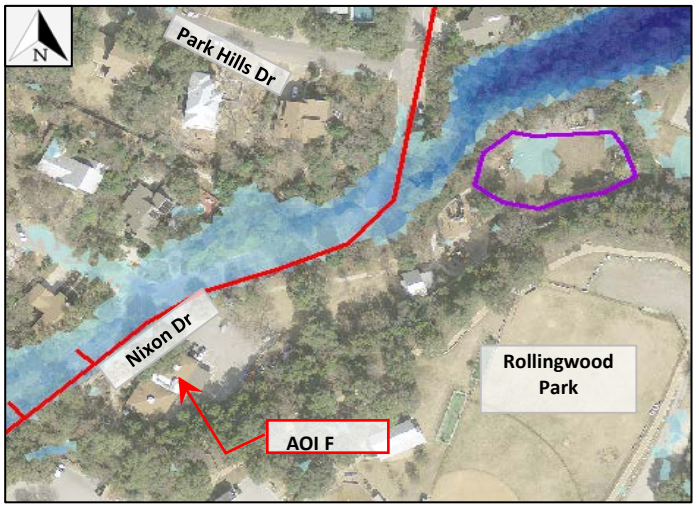
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed strom drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer (AOI F) and pond area in purple.
Existing 100-yr inundation shown.

Proposed area for detention. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: I
Project Name: Park Hills Drainage Improvements
Drainage Basin: 5

Problem Description

Property and roadway flooding along Park Hills Drive. Existing 24" RCP cross culvert.

Proposed Improvements

Double the size of the existing culvert, approximately 35 feet 24" RCP, to 2-24" RCPs with two new headwalls. Remove the existing culvert. Regrade the channel about 20 feet downstream and upstream. Another alternative improvement is to purchase an inundation easement and not upsize the existing culvert. Note downstream headwall could not be field located.

CIP Ranking

19 out of **23**

Project Costs

Engineering & Survey:	$	32,000
Construction:	$	175,000
Other:	$	31,000
ROW/Easements:		UNK
Total:	**$**	**238,000**

Conceptual Cost Range:	$200k - $250k
Estimated Construction Duration:	6 Months

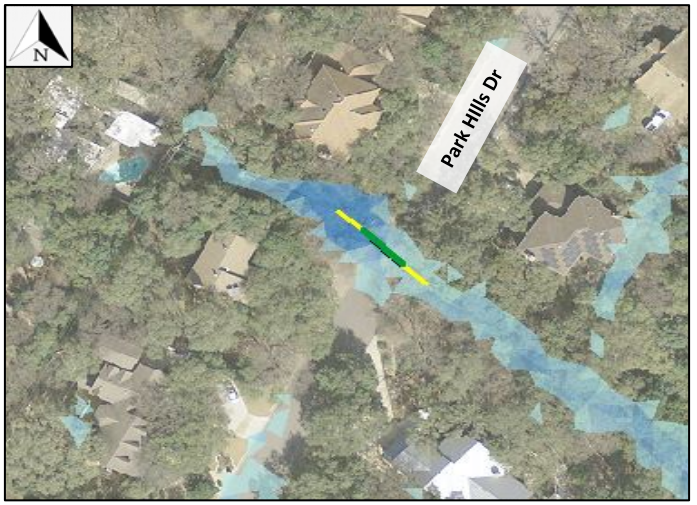
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed culvert in green. Channel improvements in yellow. Existing 100-yr inundation shown.

Park Hills Drive, upstream. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: J
Project Name: Underground Infiltration Basin Drainage Improvements
Drainage Basin: 10

Problem Description

Rollingwood Drive ponding across from the underground infiltration basin pond. The existing inlet and pipe are clogged with debris, and sediment, creating maintenance and ponding challenges.

Proposed Improvements

Abandon the underground vault and tie the existing lateral pipe, assuming a 24" RCP, into the proposed drainage system on Gentry Drive. Approximately 675 feet of proposed 24" RCP will be needed for the connection, approximately 10 inlets, and an estimated 2 driveway reconstructions.

CIP Ranking

9 out of **23**

Project Costs

Engineering & Survey:	$ 127,000
Construction:	$ 695,000
Other:	$ 61,000
ROW/Easements:	UNK
Total:	**$ 883,000**

Conceptual Cost Range:	$750k - $1M
Estimated Construction Duration:	12 Months

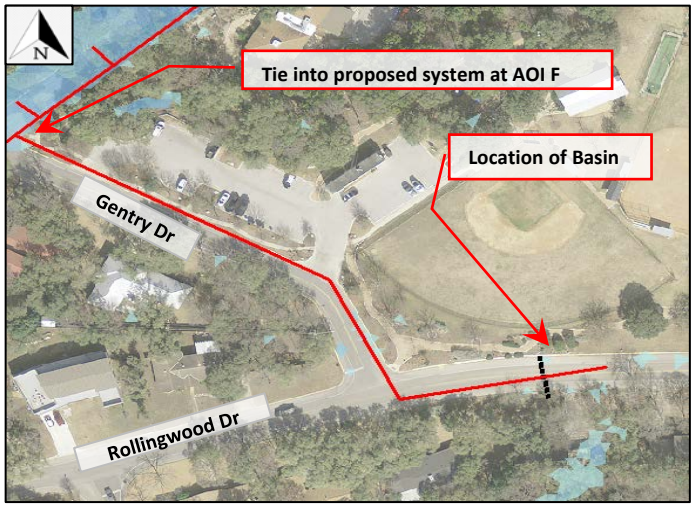
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and pond area will need additional consideration.
- The recommendation to abandon the underground basin was generated in coordination with City staff & City engineer.

Project Map & Photo



Rollingwood Drive, proposed storm sewer in red.
Existing 100-yr inundation shown.

Pond inlet during rain event. 06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: K
Project Name: Pleasant Drive Drainage Improvments
Drainage Basin: 5

Problem Description

Roadway and property flooding along Pleasant Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements at AOI V and AOI M.

CIP Ranking

4 out of **23**

Project Costs

See Cost on AOI M

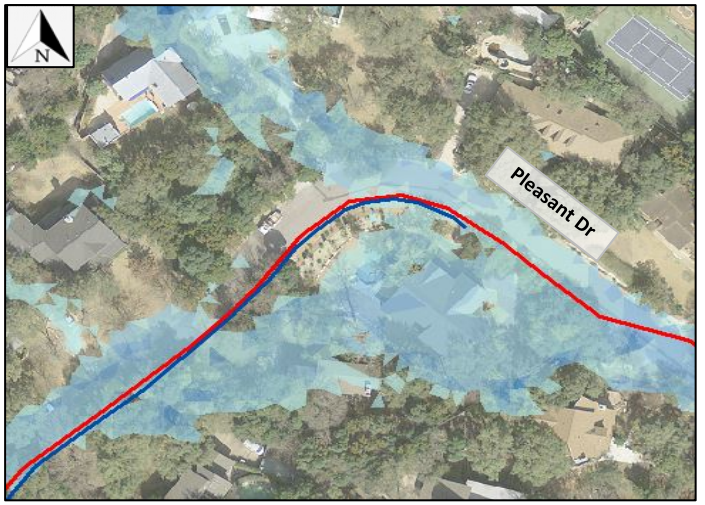
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Proposed 12" curb in blue. Existing 100-yr inundation shown.

Pleasant Drive, looking northeast/upstream.06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: L
Project Name: Pleasant Cove Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding. Existing 60" RCP cross culvert at Pleasant Cove.

Proposed Improvements

Install new roadside channel upstream, approximately 400 feet in length. The channel grading will be to an approximate channel of 20 feet wide, 2 feet deep with a 4 ft bottom width, and 4:1 side slopes. Approximately 1 driveway reconstruction with a crossing culvert of 24" RCP of an estimated 24 feet. Raise the roadway profile, an estimated 175 feet.

CIP Ranking

7 out of **23**

Project Costs

Engineering & Survey:	$ 67,000
Construction:	$ 368,000
Other:	$ 55,000
ROW/Easements:	UNK
Total:	**$ 490,000**

Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	9 Months

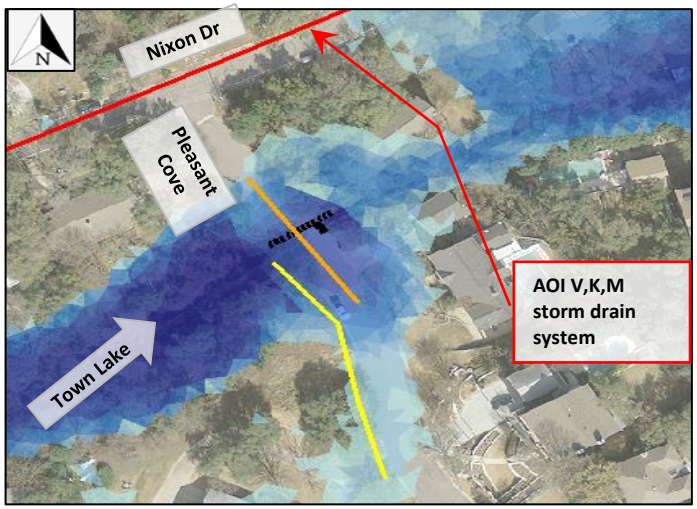
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed road improvements in orange, channel improvements in yellow. Existing culverts in black. Existing 100-yr inundation shown.

Pleasant Cove culvert crossing, upstream. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: M
Project Name: Nixon/Pleasant Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding on Nixon Drive. Property flooding between Pleasant Drive and Hatley Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements to AOI V and AOI K.

CIP Ranking

3 out of **23**

Project Costs**

**AOI V and AOI K included

Engineering & Survey:	$ 804,000
Construction:	$ 4,419,000
Other:	$ 60,000
ROW/Easements:	UNK
Total:	**$ 5,283,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	12 Months

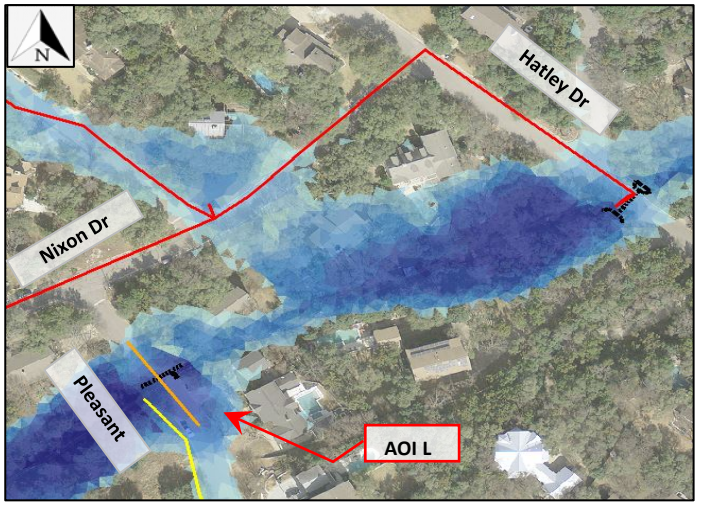
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Proposed 12" curb in blue. Existing culvert in black. Existing 100-yr inundation shown.

Nixon Drive during rain event, looking west. 06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: N
Project Name: Timberline Drive Drainage Improvements
Drainage Basin: 10

Problem Description

Roadway and property flooding along Timberline Drive and Inwood Drive.

Proposed Improvements

Install approximately 250 feet of 36" RCP underground storm sewer. Begin at a drop inlet in the ravine on 4803 Timberline Drive property and connect to existing storm sewer network on Inwood Drive. It will include clearing and regrading the ravine for approximately 10 feet, addition of approximately 2 inlets, and approximately 3 driveway reconstructions. The existing network outfalls into Eanes Creek south of Inwood Drive.

CIP Ranking

11 out of **23**

Project Costs

Engineering & Survey:	$ 54,000
Construction:	$ 295,000
Other:	$ 31,000
ROW/Easements:	UNK
Total:	**$ 380,000**
Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	6 Months

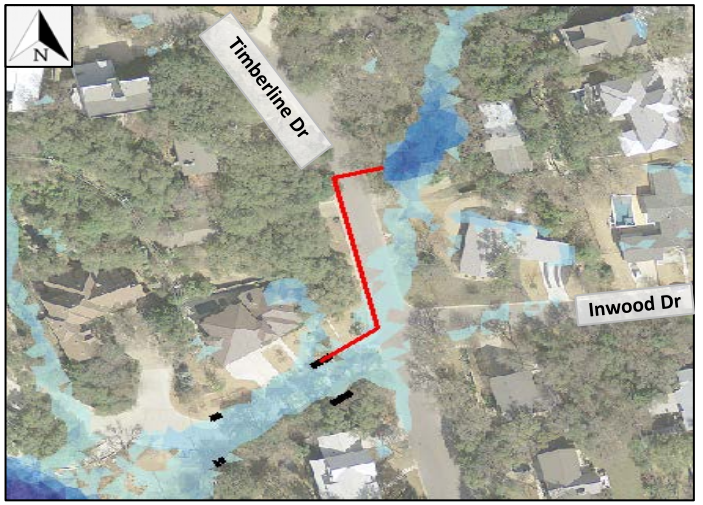
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red to existing inlets in black.
Existing 100-yr inundation shown.

Ravine at 4803 Timberline Drive. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: O
Project Name: Kristy Drive Drainage Improvments
Drainage Basin: 5

Problem Description

Roadway and property flooding along Kristy Drive.

Proposed Improvements

Approximately 475 feet of channel improvements along Kristy Drive.

CIP Ranking

17 out of **23**

Project Costs

Engineering & Survey:	$	29,000
Construction:	$	157,000
Other:	$	31,000
ROW/Easements:		UNK
Total:	**$**	**217,000**
Conceptual Cost Range:		$200k - $250k
Estimated Construction Duration:		6 Months

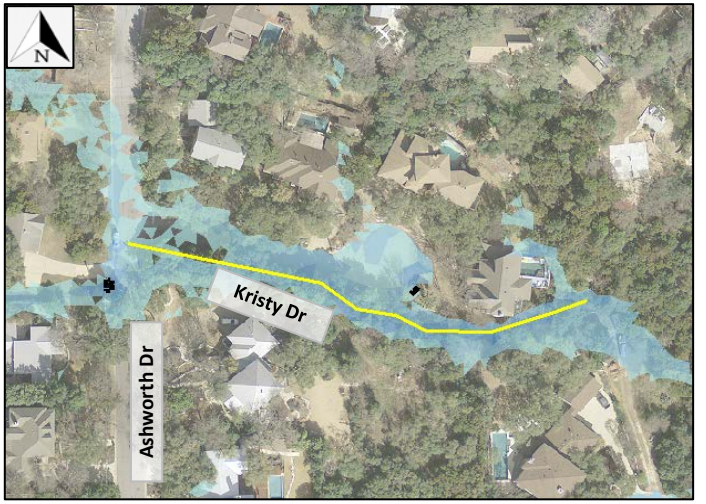
Possible Impacts

It is possible that the velocities and peak flow in the Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream impacts to adjacent properties will need to be reviewed in addition to the tributary impacts. Channel grading will impact multiple roadside trees.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the channel will have sufficient capacity for the design storm event.

Project Map & Photo



Channel improvements in yellow.
Existing 100-yr inundation shown.

Kristy Drive, looking northwest.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: P
Project Name: Wallis and Hatley Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding along Wallis Drive and roadway flooding at intersection of Wallis Drive and Hatley Drive.

Proposed Improvements

Install approximately 630 feet of 36" RCP underground storm sewer. Begin at the intersection of Hatley Drive and Wallis Drive and connect to the Town Lake tributary crossing on Rock Way Cove . It will include approximately 10 inlets and approximately 8 driveway reconstructions. This system includes the improvements at AOI Q.

CIP Ranking

21 out of **23**

Project Costs

See Cost on AOI Q

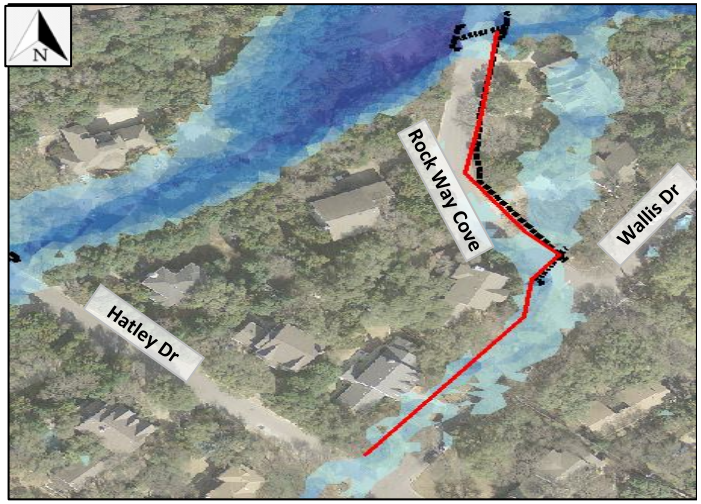
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

200 Wallis Drive, during rain event. 06/06/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: Q
Project Name: Rock Way Cove Drainage Improvements
Drainage Basin: 5

Problem Description

Property flooding along Rock Way Cove and roadway flooding at intersection of Rock Way Cove and Wallis Drive.

Proposed Improvements

Install approximately 630 feet of 36" RCP underground storm sewer. Begin at the intersection of Hatley Drive and Wallis Drive and connect to the Town Lake tributary crossing on Rock Way Cove . It will include approximately 10 inlets and approximately 2 driveway reconstructions. This system includes the improvements at AOI P.

CIP Ranking

12 out of **23**

Project Costs

**AOI P included

Engineering & Survey:	$	115,000
Construction:	$	631,000
Other:	$	70,000
ROW/Easements:		UNK
Total:	**$**	**816,000**

Conceptual Cost Range:	$750k - $1M
Estimated Construction Duration:	12 Months

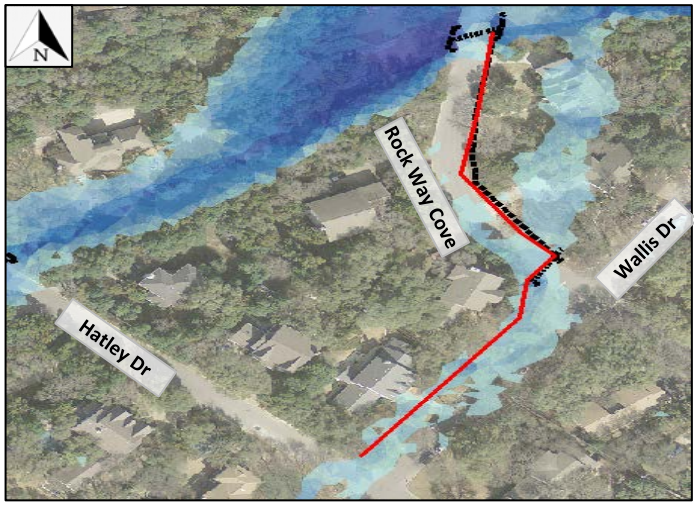
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed culverts will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

Outfall at Town Lake tributary. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: R
Project Name: Hatley Drive Drainage Improvements
Drainage Basin: 6

Problem Description

Roadway flooding at Hatley Drive and Almarion Way. Property flooding along Hubbard Circle and Hatley Drive.

Proposed Improvements

Install underground storm sewer of approximately 415 feet of 36" RCP. Start at Hately Drive property and outfall at the beginning of the Town Lake tributary channel on Almarion Way. It will include clearing and regrading downstream channel about 150 feet in length, 4 curb inlets, 1 area inlet, and 1 driveway reconstruction.

CIP Ranking

14 out of **23**

Project Costs

Engineering & Survey:	$	57,000
Construction:	$	312,000
Other:	$	31,000
ROW/Easements:		UNK
Total:	**$**	**400,000**

Conceptual Cost Range:	$250k - $500k
Estimated Construction Duration:	6 Months

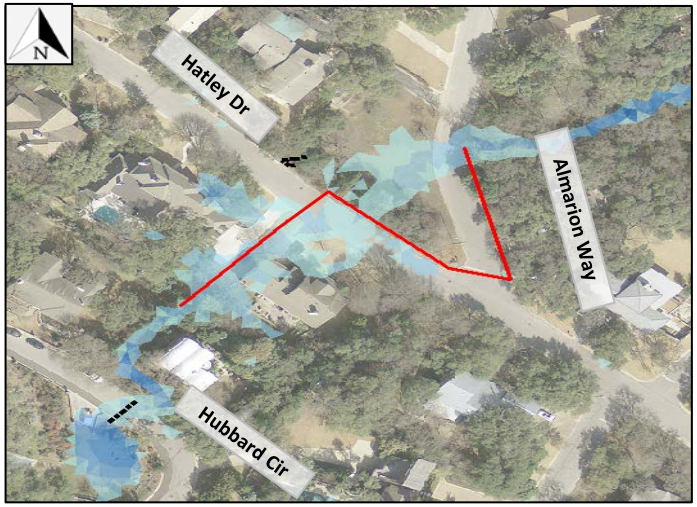
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red.
Existing 100-yr inundation shown.

Almarion Way, looking northwest. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: S
Project Name: East Timberline Drive Drainage Improvements
Drainage Basin: 14

Problem Description

Roadway flooding on Rollingwood Drive and Timberline Drive. Property flooding along Rollingwood Drive and Riley Drive.

Proposed Improvements

Install approximately 700 feet of 36" RCP underground storm sewer, 520 feet of 5' x 3' RCB, and 350 feet of 7' x 4' RCB. Begin at Farley Trial and outfall at Eanes Creek tributary downstream of Timberline Drive. It will include an estimated 22 inlets and approximately 15 driveway reconstructions. This includes the improvements at AOI T.

CIP Ranking

14 out of **23**

Project Costs

See Cost on AOI T

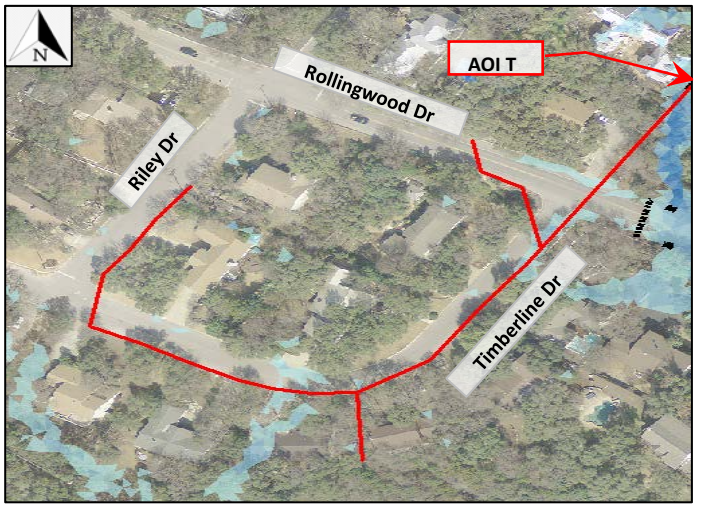
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream channel will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red.
Existing 100-yr inundation shown.

Timberline Drive looking northeast. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: T
Project Name: East Rollingwood Drive Drainage Improvements
Drainage Basin: 14

Problem Description

Roadway flooding on Rollingwood Drive and Pickwick Lane. Property flooding along Farley Trail and Rollingwood Drive.

Proposed Improvements

Install approximately 700 feet of 36" RCP underground storm sewer, 520 feet of 5' x 3' RCB, and 350 feet of 7' x 4' RCB. Begin at Farley Trail and outfall at Eanes Creek tributary downstream of Timberline Drive. It will include an estimated 22 inlets and approximately 15 driveway reconstructions. This includes the improvements at AOI S.

CIP Ranking

14 out of **23**

Project Costs**

**AOI S included

Engineering & Survey:	$ 313,000
Construction:	$ 1,718,000
Other:	$ 91,000
ROW/Easements:	UNK
Total:	**$ 2,122,000**
Conceptual Cost Range:	> $2M
Estimated Construction Duration:	18 Months

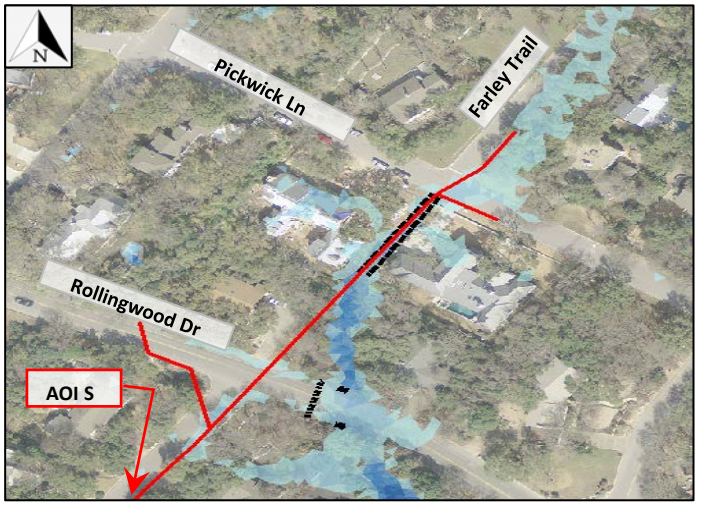
Possible Impacts

It is possible that the velocities and peak flow in Eanes Creek will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red, existing in black.
Existing culverts in black. Existing 100-yr inundation shown.

Half buried culvert at Rollingwood Drive. 09/11/2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: U
Project Name: Riley Rd and Vance Ln Drainage Improvements
Drainage Basin: 6

Problem Description

Property flooding at intersection of Riley Rd and Vance Ln.

Proposed Improvements

An approximate 3 foot curb cut at intersection of Vance Ln and Riley Rd and approximately 230 feet of channel improvements.

CIP Ranking

22 out of **23**

Project Costs

Engineering & Survey:	$	17,000
Construction:	$	94,000
Other:	$	30,000
ROW/Easements:		UNK
Total:	**$**	**141,000**

Conceptual Cost Range:	$100k - $150k
Estimated Construction Duration:	4 Months

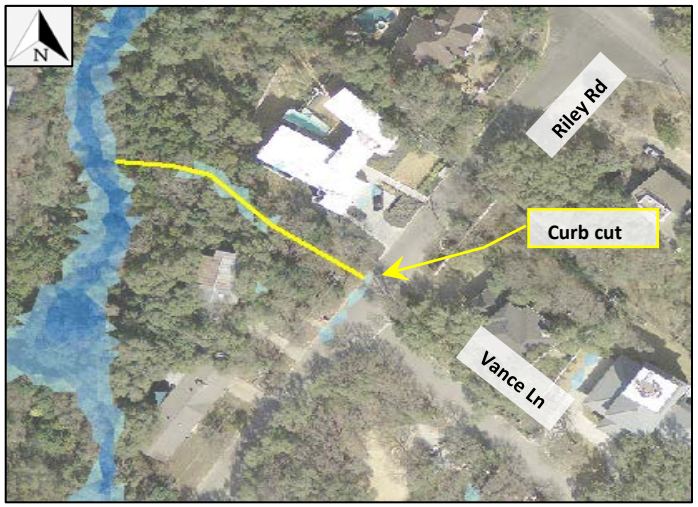
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary. The downstream system will need to be surveyed and analyzed for potential impacts.

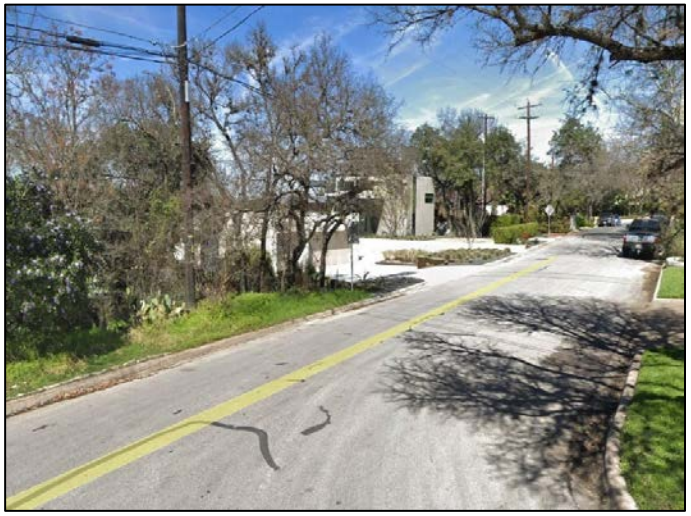
Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the channel will have sufficient capacity for the design storm event.

Project Map & Photo



Channel improvments shown in yellow.
Existing 100-yr inundation shown.



Riley Road off of Vance Lane, looking north.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: V
Project Name: Pleasant Drive Drainage Improvements
Drainage Basin: 5

Problem Description

Roadway flooding and property flooding on Pleasant Drive.

Proposed Improvements

Install approximately 248 feet of 36" RCP, 358 feet of 5' x 3' RCB, 303 feet of 6' x 3' RCB and 1382 feet of 8' x 4' RCB. Begin at Pleasant Drive and proposed detention pond (AOI H) and outfall at Town Lake tributary downstream of Hatley Drive. It will include an estimated 27 curb inlets, 1 area inlet, 675 feet of 12" tall curb, and approximately 16 driveway reconstructions. This includes the improvements at AOI K and AOI M.

CIP Ranking

16 out of **23**

Project Costs

See Cost on AOI M

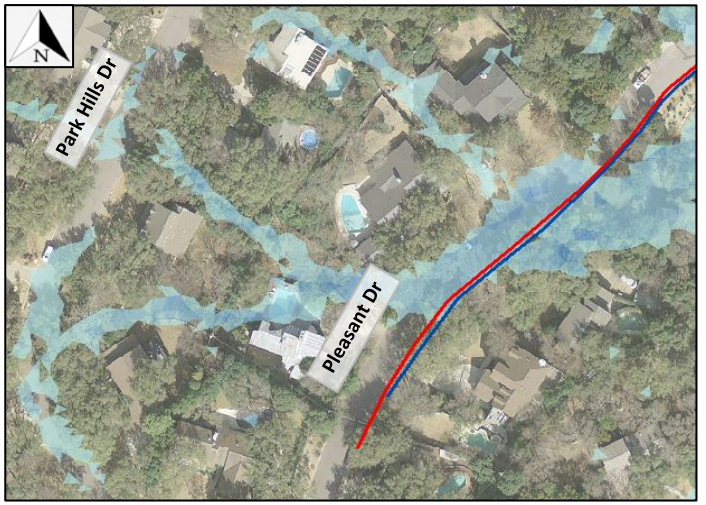
Possible Impacts

It is possible that the velocities and peak flow in Town Lake tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Proposed 12" curb in blue. Existing 100-yr inundation shown.

Pleasant Drive, looking northeast. 09/11/2019.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
COST SUMMARY

Project ID: W
Project Name: Hatley Drive Drainage Improvements
Drainage Basin: 6

Problem Description

Roadway flooding across Hatley Drive and at intersection with Riley Road. Property flooding and along Hatley Dr.

Proposed Improvements

Install approximately 390 feet of 36" RCP underground storm sewer. Begin at intersection of Hatley Drive and Riley Road and outfall at channel on Riley Road to Town Lake. It will include approximately 8 inlets, and approximately 2 driveway reconstructions. Keep existing 36" RCP crossing at Hatley Drive.

CIP Ranking

6 out of **23**

Project Costs

Engineering & Survey:	$ 90,000
Construction:	$ 494,000
Other:	$ 70,000
ROW/Easements:	UNK
Total:	**$ 654,000**
Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	12 Months

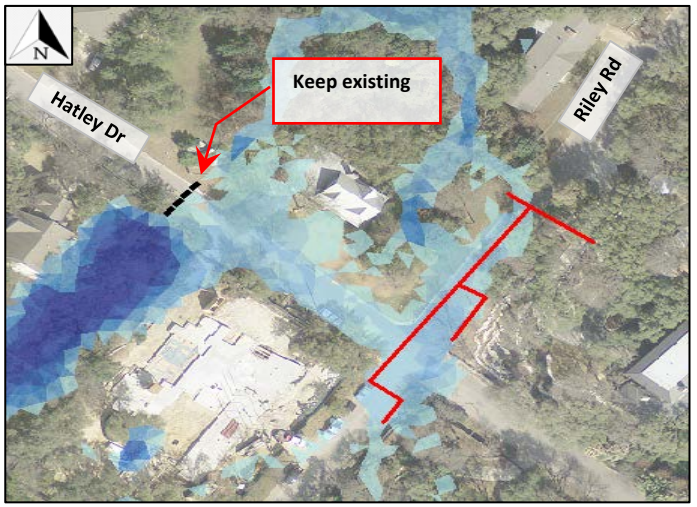
Possible Impacts

It is possible that the velocities and peak flow in Town Lake Tributary will increase downstream of the project due to these improvements. Further analysis to document impacts is necessary.

Assumptions

- It is assumed drainage easements and ROW can and will be obtained as necessary.
- It is assumed the proposed storm drain will have sufficient capacity for the design storm event.
- During detailed project design, the design storm and tailwater will need additional consideration.

Project Map & Photo



Proposed storm sewer in red. Existing culvert in black. Existing 100-yr inundation shown.

Crossing of Town Lake tributary at Hatley Drive. 09/09/2019

Appendix I: Opinions of Probable Cost

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: A **Total Cost Estimate: $ 589,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 42,900	$ 42,900
SURVEY (5%)	1	LS	$ 21,450	$ 21,450
ENVIRONMENTAL (5%)	1	LS	$ 21,450	$ 21,450
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 86,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(24 IN)	500	LF	$ 208	$ 104,000
RECONSTRUCTION OF DRIVEWAYS	5	EA	$ 4,000	$ 20,000
CUT AND RESTORE PAVEMENT	500	LF	$ 160	$ 80,000
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	500	LF	$ 10	$ 5,000
CURB INLET	5	EA	$ 5,500	$ 27,500
SAFETY END TREATMENT (24 IN)	1	EA	$ 1,250	$ 1,250
SUBTOTAL				$ 297,750
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 2,978
MOBILIZATION (8%)				$ 23,820
CONTINGENCY (35%)				$ 104,213
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 429,000
ATLAS 14 CONTINGENCY (10%)				$ 42,900
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 472,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

THIS DOCUMENT IS AN OPINION OF PROBABLE COST AND NOT TO BE USED FOR BID PURPOSES.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: B **Total Cost Estimate: $ -**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ -	$ -
SURVEY (5%)	1	LS	$ -	$ -
ENVIRONMENTAL (5%)	1	LS	$ -	$ -
TOTAL ENGINEERING AND SURVEYING COSTS:				$ -

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
SUBTOTAL				$ -
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ -
MOBILIZATION (8%)				$ -
CONTINGENCY (35%)				$ -
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ -
ATLAS 14 CONTINGENCY (10%)				$ -
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ -

NO PROJECT IS PROPOSED AT THIS AREA OF INTEREST AT THIS TIME, SO NO COST ESTIMATE IS PROPOSED.

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES		MO		$ -
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)		LS		$ -
TOTAL OTHER COSTS:				$ -

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: C **Total Cost Estimate: $ -**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ -	$ -
SURVEY (5%)	1	LS	$ -	$ -
ENVIRONMENTAL (5%)	1	LS	$ -	$ -
TOTAL ENGINEERING AND SURVEYING COSTS:				$ -

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
SUBTOTAL				$ -
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ -
MOBILIZATION (8%)				$ -
CONTINGENCY (35%)				$ -
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ -
ATLAS 14 CONTINGENCY (10%)				$ -
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ -

NO PROJECT IS PROPOSED AT THIS AREA OF INTEREST AT THIS TIME, SO NO COST ESTIMATE IS PROPOSED.

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES		MO	$ 5,000	$ -
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)		LS		$ -
TOTAL OTHER COSTS:				$ -

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: D **Total Cost Estimate: $ 558,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 39,800	$ 39,800
SURVEY (5%)	1	LS	$ 19,900	$ 19,900
ENVIRONMENTAL (5%)	1	LS	$ 19,900	$ 19,900
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 80,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(48 IN)	140	LF	$ 208	$ 29,120
HEADWALL	1	EA	$ 17,500	$ 17,500
DROP INLET	1	EA	$ 6,000	$ 6,000
CHANNEL IMPROVEMENTS	475	LF	$ 70	$ 33,250
RECONSTRUCTION OF DRIVEWAYS	1	EA	$ 4,000	$ 4,000
CUT AND RESTORE PAVEMENT	140	LF	$ 160	$ 22,400
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	475	LF	$ 10	$ 4,750
PROPOSED CUL-DE-SAC WATERMAIN IMPROVEMENTS LNV PROJECT [2]	1	LS	$ 98,929	$ 98,929
SUBTOTAL				$ 275,949
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 2,759
MOBILIZATION (8%)				$ 22,076
CONTINGENCY (35%)				$ 96,582
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 398,000
ATLAS 14 CONTINGENCY (10%)				$ 39,800
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 438,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 40,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

[2] PROJECT DATED JULY 07, 2018 WAS INFLATED TO NOVEMBER 2019

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: F, E **Total Cost Estimate: $ 2,024,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 149,800	$ 149,800
SURVEY (5%)	1	LS	$ 74,900	$ 74,900
ENVIRONMENTAL (5%)	1	LS	$ 74,900	$ 74,900
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 300,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	846	LF	$ 143	$ 120,978
RC PIPE (CL III)(24 IN)	272	LF	$ 95	$ 25,840
CONC BOX CULV (6 FT x 3 FT)	626	LF	$ 465	$ 291,090
CONC BOX CULV (5 FT x 3 FT)	125	LF	$ 642	$ 80,250
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	20	EA	$ 5,500	$ 110,000
CURB INLET	1	EA	$ 6,000	$ 6,000
CUT AND RESTORE PAVEMENT	1118	LF	$ 160	$ 178,880
BARRICADES, SIGNS AND TRAFFIC HANDLING	15	MO	$ 10,000	$ 150,000
PERMANENT EROSION CONTROL AND REVEGETATION	1118	LF	$ 10	$ 11,180
DRIVEWAY RECONSTRUCTION	12	EA	$ 4,000	$ 48,000
SUBTOTAL				$ 1,039,718
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 10,397
MOBILIZATION (8%)				$ 83,177
CONTINGENCY (35%)				$ 363,901
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,498,000
ATLAS 14 CONTINGENCY (10%)				$ 149,800
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,648,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	15	MO	$ 5,000	$ 75,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 76,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: G **Total Cost Estimate: $ 2,631,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 197,000	$ 197,000
SURVEY (5%)	1	LS	$ 98,500	$ 98,500
ENVIRONMENTAL (5%)	1	LS	$ 98,500	$ 98,500
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 394,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
BRIDGE	13800	SF	$ 75	$ 1,035,000
RAISE ROAD/ROAD IMPROVEMENTS	350	LF	$ 570	$ 199,500
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	650	LF	$ 10	$ 6,500
CHANNEL IMPROVEMENTS	100	LF	$ 70	$ 7,000
SUBTOTAL				$ 1,368,000
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 13,680
MOBILIZATION (8%)				$ 109,440
CONTINGENCY (35%)				$ 478,800
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,970,000
ATLAS 14 CONTINGENCY (10%)				$ 197,000
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 2,167,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 70,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: H **Total Cost Estimate: $ 475,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 31,800	$ 31,800
SURVEY (5%)	1	LS	$ 15,900	$ 15,900
ENVIRONMENTAL (5%)	1	LS	$ 15,900	$ 15,900
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 64,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	55	LF	$ 10	$ 550
DETENTION POND	1	EA	$ 100,000	$ 100,000
SUBTOTAL				$ 220,550
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 2,206
MOBILIZATION (8%)				$ 17,644
CONTINGENCY (35%)				$ 77,193
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 318,000
ATLAS 14 CONTINGENCY (10%)				$ 31,800
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 350,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 61,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

THIS DOCUMENT IS AN OPINION OF PROBABLE COST AND NOT TO BE USED FOR BID PURPOSES.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: I **Total Cost Estimate: $ 238,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 15,900	$ 15,900
SURVEY (5%)	1	LS	$ 7,950	$ 7,950
ENVIRONMENTAL (5%)	1	LS	$ 7,950	$ 7,950
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 32,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(24 IN)	70	LF	$ 95	$ 6,650
HEADWALL	2	EA	$ 17,500	$ 35,000
CHANNEL IMPROVEMENTS	40	LF	$ 70	$ 2,800
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	475	LF	$ 10	$ 4,750
REMOVE HEADWALL	2	EA	$ 401	$ 802
SUBTOTAL				$ 110,002
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 1,100
MOBILIZATION (8%)				$ 8,800
CONTINGENCY (35%)				$ 38,501
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 159,000
ATLAS 14 CONTINGENCY (10%)				$ 15,900
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 175,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: J **Total Cost Estimate: $ 883,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 63,100	$ 63,100
SURVEY (5%)	1	LS	$ 31,550	$ 31,550
ENVIRONMENTAL (5%)	1	LS	$ 31,550	$ 31,550
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 127,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(24 IN)	675	LF	$ 208	$ 140,400
RECONSTRUCTION OF DRIVEWAYS	2	EA	$ 4,000	$ 8,000
CUT AND RESTORE PAVEMENT	675	LF	$ 160	$ 108,000
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	675	LF	$ 10	$ 6,750
CURB INLET	10	EA	$ 5,500	$ 55,000
SUBTOTAL				$ 438,150
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 4,382
MOBILIZATION (8%)				$ 35,052
CONTINGENCY (35%)				$ 153,353
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 631,000
ATLAS 14 CONTINGENCY (10%)				$ 63,100
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 695,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 61,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

THIS DOCUMENT IS AN OPINION OF PROBABLE COST AND NOT TO BE USED FOR BID PURPOSES.

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: L **Total Cost Estimate: $ 490,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 33,400	$ 33,400
SURVEY (5%)	1	LS	$ 16,700	$ 16,700
ENVIRONMENTAL (5%)	1	LS	$ 16,700	$ 16,700
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 67,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(24 IN)	24	LF	$ 95	$ 2,280
SET (TY II) (24 IN) (RCP)	2	EA	$ 1,300	$ 2,600
CHANNEL IMPROVEMENTS	175	LF	$ 70	$ 12,250
RECONSTRUCTION OF DRIVEWAYS	1	EA	$ 4,000	$ 4,000
BARRICADES, SIGNS AND TRAFFIC HANDLING	9	MO	$ 10,000	$ 90,000
RAISE ROAD/ROAD IMPROVEMENTS	315	LF	$ 380	$ 119,700
PERMANENT EROSION CONTROL AND REVEGETATION	55	LF	$ 10	$ 550
SUBTOTAL				$ 231,380
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 2,314
MOBILIZATION (8%)				$ 18,510
CONTINGENCY (35%)				$ 80,983
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 334,000
ATLAS 14 CONTINGENCY (10%)				$ 33,400
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 368,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	9	MO	$ 5,000	$ 45,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 55,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: M, K, V **Total Cost Estimate: $ 5,283,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 401,700	$ 401,700
SURVEY (5%)	1	LS	$ 200,850	$ 200,850
ENVIRONMENTAL (5%)	1	LS	$ 200,850	$ 200,850
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 804,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	248	LF	$ 143	$ 35,464
CONC BOX CULV (6 FT x 3 FT)	303	LF	$ 465	$ 140,895
CONC BOX CULV (8 FT x 4 FT)	1382	LF	$ 573	$ 791,886
CONC BOX CULV (5 FT x 3 FT)	358	LF	$ 642	$ 229,836
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	27	EA	$ 5,500	$ 148,500
AREA INLET	1	EA	$ 6,000	$ 6,000
12" TALL CURB (TY II)	675	LF	$ 30	$ 20,250
CUT AND RESTORE PAVEMENT	2043	LF	$ 160	$ 326,880
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	2043	LF	$ 10	$ 20,430
DRIVEWAY RECONSTRUCTION	16	EA	$ 4,000	$ 64,000
SUBTOTAL				$ 1,921,641
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 19,216
MOBILIZATION (8%)				$ 153,731
CONTINGENCY (35%)				$ 1,922,000
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 4,017,000
ATLAS 14 CONTINGENCY (10%)				$ 401,700
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 4,419,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ -
TOTAL OTHER COSTS:				$ 60,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: N **Total Cost Estimate: $ 380,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 26,800	$ 26,800
SURVEY (5%)	1	LS	$ 13,400	$ 13,400
ENVIRONMENTAL (5%)	1	LS	$ 13,400	$ 13,400
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 54,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	250	LF	$ 143	$ 35,750
HEADWALL	1	EA	$ 17,500	$ 17,500
DROP INLET	1	EA	$ 6,000	$ 6,000
CHANNEL IMPROVEMENTS	10	LF	$ 70	$ 700
RECONSTRUCTION OF DRIVEWAYS	3	EA	$ 4,000	$ 12,000
CUT AND RESTORE PAVEMENT	250	LF	$ 160	$ 40,000
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	250	LF	$ 10	$ 2,500
CURB INLET	2	EA	$ 5,500	$ 11,000
SUBTOTAL				$ 185,450
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 1,855
MOBILIZATION (8%)				$ 14,836
CONTINGENCY (35%)				$ 64,908
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 268,000
ATLAS 14 CONTINGENCY (10%)				$ 26,800
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 295,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: O **Total Cost Estimate: $ 217,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 14,200	$ 14,200
SURVEY (5%)	1	LS	$ 7,100	$ 7,100
ENVIRONMENTAL (5%)	1	LS	$ 7,100	$ 7,100
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 29,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CHANNEL IMPROVEMENTS	475	LF	$ 70	$ 33,250
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	475	LF	$ 10	$ 4,750
SUBTOTAL				$ 98,000
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 980
MOBILIZATION (8%)				$ 7,840
CONTINGENCY (35%)				$ 34,300
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 142,000
ATLAS 14 CONTINGENCY (10%)				$ 14,200
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 157,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: Q, P **Total Cost Estimate: $ 816,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 57,300	$ 57,300
SURVEY (5%)	1	LS	$ 28,650	$ 28,650
ENVIRONMENTAL (5%)	1	LS	$ 28,650	$ 28,650
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 115,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	630	LF	$ 143	$ 90,090
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	10	EA	$ 5,500	$ 55,000
RECONSTRUCTION OF DRIVEWAYS	2	EA	$ 4,000	$ 8,000
CUT AND RESTORE PAVEMENT	630	LF	$ 160	$ 100,800
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	630	LF	$ 10	$ 6,300
SUBTOTAL				$ 397,690
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 3,977
MOBILIZATION (8%)				$ 31,815
CONTINGENCY (35%)				$ 139,192
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 573,000
ATLAS 14 CONTINGENCY (10%)				$ 57,300
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 631,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 70,000

[1] NOT INCLUDED IN OPINION OF PROBABLE TOTAL PROJECT COST

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: R **Total Cost Estimate: $ 400,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 28,300	$ 28,300
SURVEY (5%)	1	LS	$ 14,150	$ 14,150
ENVIRONMENTAL (5%)	1	LS	$ 14,150	$ 14,150
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 57,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	415	LF	$ 143	$ 59,345
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	4	EA	$ 5,500	$ 22,000
CURB INLET	1	EA	$ 6,000	$ 6,000
CUT AND RESTORE PAVEMENT	80	LF	$ 160	$ 12,800
BARRICADES, SIGNS AND TRAFFIC HANDLING	6	MO	$ 10,000	$ 60,000
PERMANENT EROSION CONTROL AND REVEGETATION	415	LF	$ 10	$ 4,150
CHANNEL IMPROVEMENTS	150	LF	$ 70	$ 10,500
DRIVEWAY RECONSTRUCTION	1	EA	$ 4,000	$ 4,000
SUBTOTAL				$ 196,295
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 1,963
MOBILIZATION (8%)				$ 15,704
CONTINGENCY (35%)				$ 68,703
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 283,000
ATLAS 14 CONTINGENCY (10%)				$ 28,300
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 312,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	6	MO	$ 5,000	$ 30,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 31,000

CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: T, S **Total Cost Estimate: $ 2,122,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 156,100	$ 156,100
SURVEY (5%)	1	LS	$ 78,050	$ 78,050
ENVIRONMENTAL (5%)	1	LS	$ 78,050	$ 78,050
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 313,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	700	LF	$ 130	$ 91,000
CONC BOX CULV (7 FT x 4 FT)	350	LF	$ 294	$ 102,900
CONC BOX CULV (5 FT x 3 FT)	520	LF	$ 470	$ 244,400
HEADWALL	1	EA	$ 17,500	$ 17,500
CURB INLET	22	EA	$ 5,500	$ 121,000
CUT AND RESTORE PAVEMENT	1570	LF	$ 160	$ 251,200
BARRICADES, SIGNS AND TRAFFIC HANDLING	18	MO	$ 10,000	$ 180,000
PERMANENT EROSION CONTROL AND REVEGETATION	1570	LF	$ 10	$ 15,700
DRIVEWAY RECONSTRUCTION	15	EA	$ 4,000	$ 60,000
SUBTOTAL				$ 1,083,700
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 10,837
MOBILIZATION (8%)				$ 86,696
CONTINGENCY (35%)				$ 379,295
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,561,000
ATLAS 14 CONTINGENCY (10%)				$ 156,100
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 1,718,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	18	MO	$ 5,000	$ 90,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 500	$ 500
TOTAL OTHER COSTS:				$ 91,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: U **Total Cost Estimate: $ 141,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 8,500	$ 8,500
SURVEY (5%)	1	LS	$ 4,250	$ 4,250
ENVIRONMENTAL (5%)	1	LS	$ 4,250	$ 4,250
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 17,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CHANNEL IMPROVEMENTS	230	LF	$ 70	$ 16,100
BARRICADES, SIGNS AND TRAFFIC HANDLING	4	MO	$ 10,000	$ 40,000
PERMANENT EROSION CONTROL AND REVEGETATION	230	LF	$ 10	$ 2,300
SUBTOTAL				$ 58,400
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 584
MOBILIZATION (8%)				$ 4,672
CONTINGENCY (35%)				$ 20,440
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 85,000
ATLAS 14 CONTINGENCY (10%)				$ 8,500
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 94,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	4	MO	$ 5,000	$ 20,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 30,000

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CITY OF ROLLINGWOOD
INFRASTRUCTURE IMPROVEMENTS PLAN
ROLLINGWOOD DRIVE WEST DRAINAGE IMPROVEMENTS
OPINION OF PROBABLE COST

Project ID: W **Total Cost Estimate: $ 654,000**

ENGINEERING AND SURVEYING				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ENGINEERING (10%)	1	LS	$ 44,900	$ 44,900
SURVEY (5%)	1	LS	$ 22,450	$ 22,450
ENVIRONMENTAL (5%)	1	LS	$ 22,450	$ 22,450
TOTAL ENGINEERING AND SURVEYING COSTS:				$ 90,000

CONSTRUCTION COSTS				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
RC PIPE (CL III)(36 IN)	390	LF	$ 143	$ 55,770
HEADWALL	1	EA	$ 17,500	$ 17,500
RECONSTRUCTION OF DRIVEWAYS	2	EA	$ 4,000	$ 8,000
CUT AND RESTORE PAVEMENT	390	LF	$ 160	$ 62,400
BARRICADES, SIGNS AND TRAFFIC HANDLING	12	MO	$ 10,000	$ 120,000
PERMANENT EROSION CONTROL AND REVEGETATION	390	LF	$ 10	$ 3,900
CURB INLET	8	EA	$ 5,500	$ 44,000
SUBTOTAL				$ 311,570
TEMPORARY EROSION AND SEDIMENT CONTROLS (1%)				$ 3,116
MOBILIZATION (8%)				$ 24,926
CONTINGENCY (35%)				$ 109,050
SUBTOTAL ESTIMATED CONSTRUCTION COSTS:				$ 449,000
ATLAS 14 CONTINGENCY (10%)				$ 44,900
TOTAL ESTIMATED CONSTRUCTION COSTS:				$ 494,000

OTHER				
DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
CONSTRUCTION PHASE SERVICES	12	MO	$ 5,000	$ 60,000
ROW/EASEMENT ACQUISITION [1]		LS	UNK	UNK
PERMITTING (FEMA OR TCEQ)	1	LS	$ 9,200	$ 9,200
TOTAL OTHER COSTS:				$ 70,000

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Appendix J: External Funding Sources Memorandum

THE GOODMAN CORPORATION

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PHONE: (713) 951-7951

THEGOODMANCORP.COM

MEMO

Date: **October 31, 2019**
To: **K. Friese + Associates (KFA)**
From: **The Goodman Corporation (TGC)**
Subject: **City of Rollingwood Infrastructure Improvements Plan: Potential Capital Improvement Program (CIP) Project Funding Sources**

Background

TGC is assisting KFA in the review of recommended City of Rollingwood (City) Capital Improvement Program (CIP) projects. TGC's review is specific to recommendations related to discretionary funding opportunities and other project specific recommendations related to funding and implementation. This memo summarizes these recommendations. The order of projects listed within this memo is based on the ranked CIP order as established by KFA.

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MEMO

Funding Types

This memorandum refers to various funding opportunities. For ease of reference, commonly referenced funding opportunities are summarized and described below. Other funding opportunities are identified as they apply to individual projects.

Economic Development Administration Disaster Recovery (EDA-DR)	Refers to EDA funding made available after a Presidential Disaster Declaration and administered directly through the EDA. The EDA typically requires for there to be a rational nexus between the proposed project, the disaster suffered, and job growth, attraction, and/or retention.
Flood Mitigation Assistance (FMA)	Refers to Federal Emergency Management Agency (FEMA) funds which are made available annually and allocated through the Texas Water Development Board. This particular program requires a connection between the project and its potential to benefit National Flood Insurance Program (NFIP) policy holders who have suffered significant or repetitive losses.
Hazard Mitigation Grant Program (HMGP)	Refers to FEMA funds made available after a Presidential Disaster Declaration and channeled through the Texas General Land Office (GLO). HMGP funding can be used for a variety of project types to include acquisition and a variety stormwater management type to include drainage improvements and floodwater diversion and storage. Nearly every project in this analysis is technically eligible for HMGP funds. However, it is very difficult to determine the potential for funding without the completion of a Benefit Cost Analysis (BCA) per FEMA criteria.

Surface Transportation Block Grant (STBG)	Refers to federal discretionary dollars made available through the Capital Area Metropolitan Planning Organization (CAMPO). STBG funds can be spent on most mobility-related capital projects so long as the facility is federally functionally classified as a collector or above. The only two roadways within the City which meet this criteria are Rollingwood Drive and FM 2244/Bee Caves Road.
Texas Water Development Board (TWDB)	Refers to funding potentially made available via Proposition 8, Flood Infrastructure Fund Amendment. The proposition will create a fund for projects related to flood drainage, mitigation and control. The majority of funding will be in the form of low interest loans and grants to provide the match for federal funds. So, these funds could theoretically be applied to the EDA-DR, FMA, and HMGP resources previously referenced.
Transportation Alternatives Set-Aside Program (TAP)	Refers to federal discretionary dollars for sidewalks, bike facilities, and other multi-modal investments. Funds are made available through CAMPO as well as through Texas Department of Transportation (TxDOT) itself for small urban and rural areas of the state.
TxDOT On-System	Refers to TxDOT funding reserved for on-system facilities (meaning, TxDOT owned and operated facilities) or otherwise used at the discretion of a District office or at the Texas Transportation Commission. This could mean funds derived from Propositions 1 & 7 or from TxDOT Category 2 funding.

Project ID:	B
Project Name:	Bee Cave Road Drainage Improvements

Comments and Recommendations: The issues and resultant recommendations relative to this project should be further evaluated through engineering studies and meetings with TxDOT, as the issue is completely specific to the flooding of their facility. TxDOT is currently performing an overlay project on the road so it is logical to schedule a meeting with the TxDOT Austin District Office to understand how the overlay project could impact any future programming decisions for future roadway specific projects, especially in light of TxDOT's reconstruction and widening of the section of FM 2244 west of Walsh Tarlton. Depending on the recommended solution, there could be a variety of TxDOT resources available.

Further project scope development is needed prior to the recommendation of any specific funding opportunities. A project involving a significant roadway reconstruction and/or bridge replacement would result in a recommendation for the pursuit of roadway/highway centric funding. Close coordination with TxDOT is recommended as the frequency and severity of roadway flooding could be interpreted as an impediment to safe travel, especially for emergency services. A potential funding partnership with TxDOT could be explored towards a solution. A project on this facility would be eligible for TxDOT On-System funds and could potentially be ranked high as FM 2244 is designated as a portion of the National Highway System (NHS) and as a Principal Arterial.

Project eligible for HMGP funding but will likely yield a low BCA based on travel time delay alone. However, if the elevation of the bridge will have other positive downstream impacts, then a higher BCA is possible. TxDOT may or may not be supportive of using FEMA funding as part of a broader project involving their facility.

Project could be a very strong candidate for EDA-DR funding based upon strength of economic development argument (movement of goods, freight, etc.) along Bee Caves Road during rain events. However, the same caveat related to mixing funding sources applies.

Project ID:	G
Project Name:	Edgegrove Drive Drainage Improvements
Comments and Recommendations: The recommended project is not eligible for most types of federal funding as Edgegrove Drive is considered to be a local road and it does not appear that this flooding impacts any adjacent property. However, there are elements of the project which could theoretically be funded through TAP resources, such as the proposed bicycle facilities and pedestrian improvements. The road also provides a key connection between an adjacent Major Collector (Rollingwood Drive) and Principal Arterial (FM 2244/Bee Caves Road), which may make it more attractive for funding partnerships. Project eligible for HMGP funding but will likely yield a low BCA based on travel time delay alone. However, if the elevation of the bridge will have other positive downstream impacts, then a higher BCA is possible. Potential for EDA-DR funds based on project benefits.	

Project ID:	M, K, V, L
Project Name:	Nixon / Pleasant Drainage Improvements
Comments and Recommendations: The recommended project appears to have some potential to reduce localized flooding for residential structures along Nixon and Pleasant Drives. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures and the individual property owners themselves have NFIP severe or repetitive losses, then FMA funding made available through the Texas Water Development Board (TWDB) and FEMA may be an option. Project eligible for HMGP funding but will require a closer analysis of structural damage reduction and vehicular delay through modeling to determine BCA. However, due to the relatively high cost of the combined project, it may be difficult to quantify a BCA over 1.0.	

Project ID:	D
Project Name:	Timberline-South Crest Drainage Improvements
Comments and Recommendations: Area inundation does not appear sufficient to justify competitive discretionary funding resources.	

Project ID:	W
Project Name:	Hatley Drive Drainage Improvements
Comments and Recommendations: The project appears to have some potential to reduce localized flooding for residential structures along Hatley Drive. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP application based on calculated structural damage.	

Project ID:	H
Project Name:	City Hall Drainage Improvements
Comments and Recommendations: Project appears to be dependent upon AOI E and F improvements. However, the project and its benefits may lead to opportunities within the HMGP and EDA-DR Programs due to the benefits created at City Hall and the Rollingwood Police Department. FMA funding may also be applicable for this project dependent upon flood damage historically experienced at public facilities.	

Project ID:	J
Project Name:	Underground Sand Filtration Pond Drainage Improvements
Comments and Recommendations: Project appears to be dependent upon AOI E and F improvements. Regardless, the minor ponding experienced at the pond inlet is not significant enough to warrant competitive discretionary funding resources.	

Project ID:	T, S
Project Name:	East Rollingwood Drive and East Timberline Drive Drainage Improvements
Comments and Recommendations: The recommended project appears to have the potential to reduce localized flooding for residential structures. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option.	

Project ID:	N
Project Name:	Timberline Drive Drainage Improvements
Comments and Recommendations: Incorporating these improvements into a larger CIP project which involved sidewalk/roadway reconstruction could facilitate a grant request for sidewalks, curb, gutter, new stormwater systems, and ADA compliant ramps through CAMPO's TAP/STBG programs. HMGP and FMA funding may also be an option dependent upon historical flooding claims and damage but it appears to be unlikely based on the existing ponding maps.	

Project ID:	Q, P
Project Name:	Rock Way Cove Drainage Improvements + Wallis and Hatley Drainage Improvements
Comments and Recommendations: : The project appears to have some potential to reduce localized flooding for residential structures along Hatley Drive. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP application based on calculated structural damage. Additionally, the addition of sidewalks to the project scope, as well as expansion of the scope to connect activity centers such as Rollingwood Park and/or Pool could potentially create grant opportunities for a project that included sidewalks, curb, gutter, new stormwater systems, and ADA compliant ramps.	

Project ID:	R
Project Name:	Hatley Drive Drainage Improvements
Comments and Recommendations: The project appears to have some potential to reduce localized flooding for residential structures along Hatley Drive. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP application based on calculated structural damage.	

Project ID:	O
Project Name:	Kristy Drive Drainage Improvements
Comments and Recommendations: The project appears to have some potential to reduce localized flooding for residential structures along Kristy Drive. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP application based on calculated structural damage.	

Project ID:	E, F
Project Name:	Nixon/Gentry, Randolph Place Drainage Improvements
Comments and Recommendations: The recommended project appears to have the potential to reduce localized flooding for residential structures along Town Lake tributary. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. HMGP, and EDA-DR resources may be applicable due to a reduction along Nixon adjacent to Rollingwood City Hall. However, the direct nexus between this project and AOI project H is unclear.	

Project ID:	I
Project Name:	Park Hills Drainage Improvements
Comments and Recommendations: The recommended project appears to have the potential to reduce localized flooding for residential structures along Town Lake tributary. Additional analysis and modeling may need to be completed to confirm this, but if so, and the structures have NFIP severe or repetitive losses, then FMA funding made available through the TWDB and FEMA may be an option. Potential for HMGP funding based on historic structural losses.	

Project ID:	A
Project Name:	Rollingwood Drive West Drainage Improvements
Comments and Recommendations: Area inundation does not appear sufficient to justify competitive discretionary funding resources for drainage component alone. Scope expansion to include access management, roadway, and/or sidewalk and bicycle improvements could potentially allow for the creation of discretionary funding opportunities through CAMPO's STBG program which would also support the overall area drainage objectives. The facility does meet the federal functional classification requirements for STBG funding application through CAMPO.	

Project ID:	U
Project Name:	Riley Road and Vance Lane Drainage Improvements
Comments and Recommendations: Per engineering report, inundation does not appear sufficient to justify competitive discretionary funding resources.	

Project ID:	C
Project Name:	Rollingwood Drive South Drainage Improvements
Comments and Recommendations: Per engineering report, inundation does not appear sufficient to justify development of a project.	

Next Steps

Prior to determining how these projects could best be funded, it is recommended that the following is completed, or at least considered:

- The calculated BCA of each of these projects. Due to the nature of these projects, it is recommended that FEMA methodology be used. This data could also be used to adjust the project ranking information provided as well as determine which projects are or are not HMGP eligible.
- Outreach with the community to determine the real world "true up" of the flooding demonstrated in the ponding maps. As many of these projects are based on individual locations of "spot" flooding, it will be helpful to understand the experienced severity and the associated frequency. Rather than a public meeting or survey tool, discussion with individual property owners could likely provide the additional information. These discussions could also include information relative to individual flood-related losses, NFIP insurance status, and claim amounts. This information will help to validate whether or not FMA grants will be applicable to individual projects. It is important to note that census tract level information.
- Coordination should occur with Travis County, the City of Austin Watershed Protection Department, and the Lower Colorado River Authority and/or any other applicable entities to understand if there are any opportunities for partnership projects or project specific restrictions related to downstream impacts.
- *Possible Next Step:* The City could develop funding applications which includes all or some of the projects identified. The local match participation amount could be adjusted (20%, 25%, 50%, etc.) to elevate the competitiveness of the project. It is important to remember that HMGP funds are only made available after a disaster declaration.

Conclusion

The majority of the recommended projects are, at a minimum, eligible for one or more discretionary funding sources. However, the competitiveness of the projects vary and are difficult to estimate without the completion of further evaluation via a benefit-cost analysis. Based on the information provided to date by KFA, the best projects for discretionary funding support appear to be the Bee Caves Road Drainage Improvement project and the projects related to City Hall Drainage.

It is our recommendation that the City use the framework provided here to monitor and identify funding opportunities. Grant funds can be pursued when identified and if awarded, will allow for the City to reallocate funding to other projects at that time.

CITY OF ROLLINGWOOD
WATER SYSTEM CAPITAL IMPROVEMENTS PLAN

FINAL REPORT

PREPARED FOR:
CITY OF ROLLINGWOOD
403 NIXON DRIVE
ROLLINGWOOD, TEXAS 78746

PREPARED BY

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

MAY 2022

CITY OF ROLLINGWOOD
WATER SYSTEM CAPITAL IMPROVEMENTS PLAN
FINAL REPORT

Prepared For:

City of Rollingwood
403 Nixon Drive
Rollingwood, TX 78746

Prepared by:

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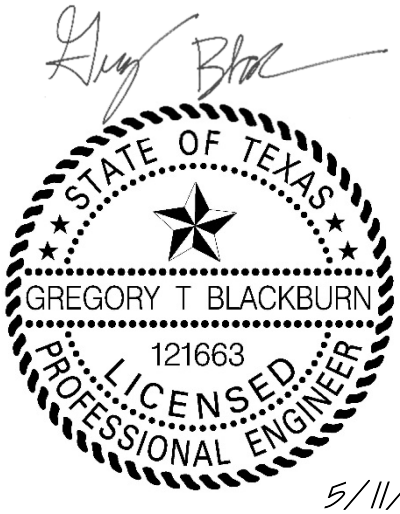

5/11/2022

May 2022

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EXHIBITS

APPENDICES

1 GLOSSARY AND ACRONYMS

CIP – Capital Improvement Plan

City – City of Rollingwood

EPS – Extended Period Simulation

GIS – Geographic Information System

KFA – K Friese + Associates

LCRA – Lower Colorado River Authority

MGD – Million Gallons per Day

PRV – Pressure Reducing Valve

PSI – Pounds per Square Inch

TCEQ – Texas Commission on Environmental Quality

TWDB – Texas Water Development Board

2 INTRODUCTION

The City of Rollingwood (City) contracted K Friese + Associates (KFA) to perform a city-wide Water System Capital Improvements Plan (CIP) to review the operation of the current system, identify potential issues, review fire flow availability, examine causes for repeated water main breaks, and other issues. This plan provides recommendations for potential improvements to address these issues and to guide the City's development of a CIP.

The project team began by gathering as-builts and updating the City's GIS data for the water system. KFA met with the City's Public Works Department staff and Crossroads, who services the City's water system, to further update the GIS mapping and learn about known issues in the system, such as water main breaks, valves that did not work properly, and pressure reducing valves (PRVs) that did not function properly, among others. KFA also performed site visits to field identify surface features and potential issues. Once the data collection was completed, KFA modeled the water system to identify areas in the system that had high or low pressures, pipes with excessive velocities, and locations with insufficient fire flows.

Following the data collection and modeling efforts, the project team developed project concepts to address the existing water system concerns. This final report includes summary sheets and cost estimates for these project concepts.

This report documents the methodology and results of the plan in the following sections:

- *Data Collection:* This section describes the data collection, coordination with City staff, and field investigations.
- *Hydraulic Modeling:* This section details the methodology and results of the process by which the project team used the collected data to perform hydraulic modeling of the water system to identify and rank the CIP projects.
- *Recommendations:* This section contains information regarding the CIP projects and associated cost estimates that are recommended for further analysis and design.
- *Next Steps:* This section provides a roadmap for further analysis and coordination for the City of Rollingwood to undertake to successfully implement the projects recommended by this plan.

3 DATA COLLECTION

KFA obtained the City's GIS data for the water system from the City's previous consultant, LNV, and used that data source as the base. Through research of available as-builts drawings, previous reports, coordination with City staff, and field investigations, KFA updated the GIS data to represent the existing water system more accurately. Data that was updated includes, but is not limited to, alignments, diameters, active vs. abandoned features, pipe connectivity, and PRV settings. Because much of the data seems to conflict with experiences of field personnel, it is recommended that ongoing field investigations and testing of valves/pipelines to further refine the mapping and operations of the existing system continue on an ongoing basis.

4 EXISTING WATER SYSTEM

A map of the existing system, including major water infrastructure and pressure plane boundaries, is included as **Exhibit 1.**

City of Rollingwood
Travis County, TX

Existing
Active Water System

Hatley
Master Meter PRV

Hatley/Nixon
PRV

Hatley/Almarion
PRV

Riley
Master Meter

Colorado River (Ladybird Lake)

2244

Bee Cave
Master Meter PRV

Rollingwood/Riley
PRV

1

Waterline (Diameter)

- 1"
- 2"
- 4"
- 6"
- 8"
- 12"
- Unknown
- Pressure Release Valve
- Parcel Boundary

Pressure Zone

- Upper (770')
- Lower (700')

Data Sources:
City of Rollingwood (2021)
Aerial Source: Stratmap (2021)

N

0 600 1,200 Feet

Date: 5/10/2022

ROLLINGWOOD TEXAS

K·FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
FIRM NO. 6535

4.1 WATER SUPPLY

The City owns and operates the water distribution system within its City Limits. As the City has no water treatment infrastructure or raw water supply, all treated water is purchased wholesale from the City of Austin and delivered to Rollingwood at three (3) interconnection points, where it is then distributed to system customers through Rollingwood's distribution system.

4.1.1 WHOLESALE WATER SERVICE AGREEMENT AND SUMMARY

The wholesale of treated water between the cities of Rollingwood and Austin is defined by the 2000 Agreement for Wholesale Water Service (**Appendix A**) and the First Amendment (**Appendix B**) to the Agreement. The maximum volume and flow rate defined by the Agreement is a monthly average of 1.0 million gallons per day (MGD) and an instantaneous maximum flow rate of 694.4 gallons per minute (gpm), which is approximately a 3.0 multiplier on the average flow limitation. The Agreement also mentions that when Rollingwood reaches 75% of the maximum monthly average flow rate that the parties shall negotiate adjustments to the maximum service level.

The First Amendment adds a new clause that says the City of Austin may require Rollingwood to provide its own source of raw water that will be treated and delivered by Austin to Rollingwood with 12 months' notice. To our knowledge this notification has not been sent to date. The purpose of this clause is so that Rollingwood's raw water supply will not count against Austin's contracted maximum raw water supply from the Colorado River. Per the current 2021 Region K Water Plan for the Lower Colorado Water Planning Group (October 2020), it appears the City of Austin plans to enact this clause to require Rollingwood to have its own raw water supply prior to 2040. Rollingwood will need to have a separate raw water contract with the Lower Colorado River Authority (LCRA), but the raw water will then still be delivered to Rollingwood via the COA infrastructure. KFA recommends that Rollingwood begins discussions with the COA and LCRA in the near future to determine the timing and renegotiation of rates, both to remove the raw water portion of the COA contract and to develop a raw water purchase contract with the LCRA.

4.2 PIPES

The distribution system for the water system consists of approximately 15.7 miles of mains ranging in size from 1-inch to 12-inch lines serving a mixture of residential and commercial customers. Through data collection and in discussions with the City it was noted that the water system includes many small diameter lines that run through properties' backyards and not within the right-of-way.

4.3 PRESSURE REDUCING VALVES & METERS

There are five (5) existing PRVs throughout the water system, serving as connections between the Austin Water system and the City's system, and internally between the City's two (2) pressure zones. Each of the pressure zones were intended to maintain pressures between 50 and 85 psi. The Texas Commission on Environmental Quality (TCEQ) requires a minimum system pressure of 35 psi under normal operations. However, for this CIP design, a minimum pressure of 50 psi was used to provide a safety factor above the TCEQ minimum and to minimize potential customer complaints of low pressures.

Additionally, the three (3) internal PRVs serve as backup connections. The internal PRVs are set to allow water to flow from the higher-pressure zone to the lower pressure zone in the event that the pressure drops significantly in the lower zone (i.e., main break or fire emergency). There are also many private PRVs on individual service lines; however, the number and locations are not known at this time. A list of the PRVs and settings for the existing system are shown in **Table 1**. The system had several valves that were designed to be closed to separate the upper and lower pressure planes. However, it was discovered through field investigations that some of these valves were left open, allowing the water to

bypass the PRV's and enter the lower pressure plane. This increased the typical pressure in the lower pressure plane above the intended maximum and resulted in repeated main breaks. Measurements in the field found the lower pressure zone experiencing at least 95 psi.

Table 1: Existing Pressure Reducing Valves and Settings

PRV	Setting (ft)
Bee Cave Woods Master Meter	770
Hatley Master Meter	710
Hatley/Nixon	690
Rollingwood/Riley	690
Hatley/Almarion[1]	690

1 – This PRV is currently out of service.

At the three (3) connection points to the City of Austin system, there are master meters to measure the flow into the City system. The master meters are located on Bee Cave Woods, Hatley, and Riley. The majority of the water supply for the higher-pressure plane comes through the Bee Cave Woods meter, as this connects to a higher-pressure plane within the City of Austin system.

5 HYDRAULIC MODELING

This section of the report describes how the project team used the data they collected to develop the CIP list.

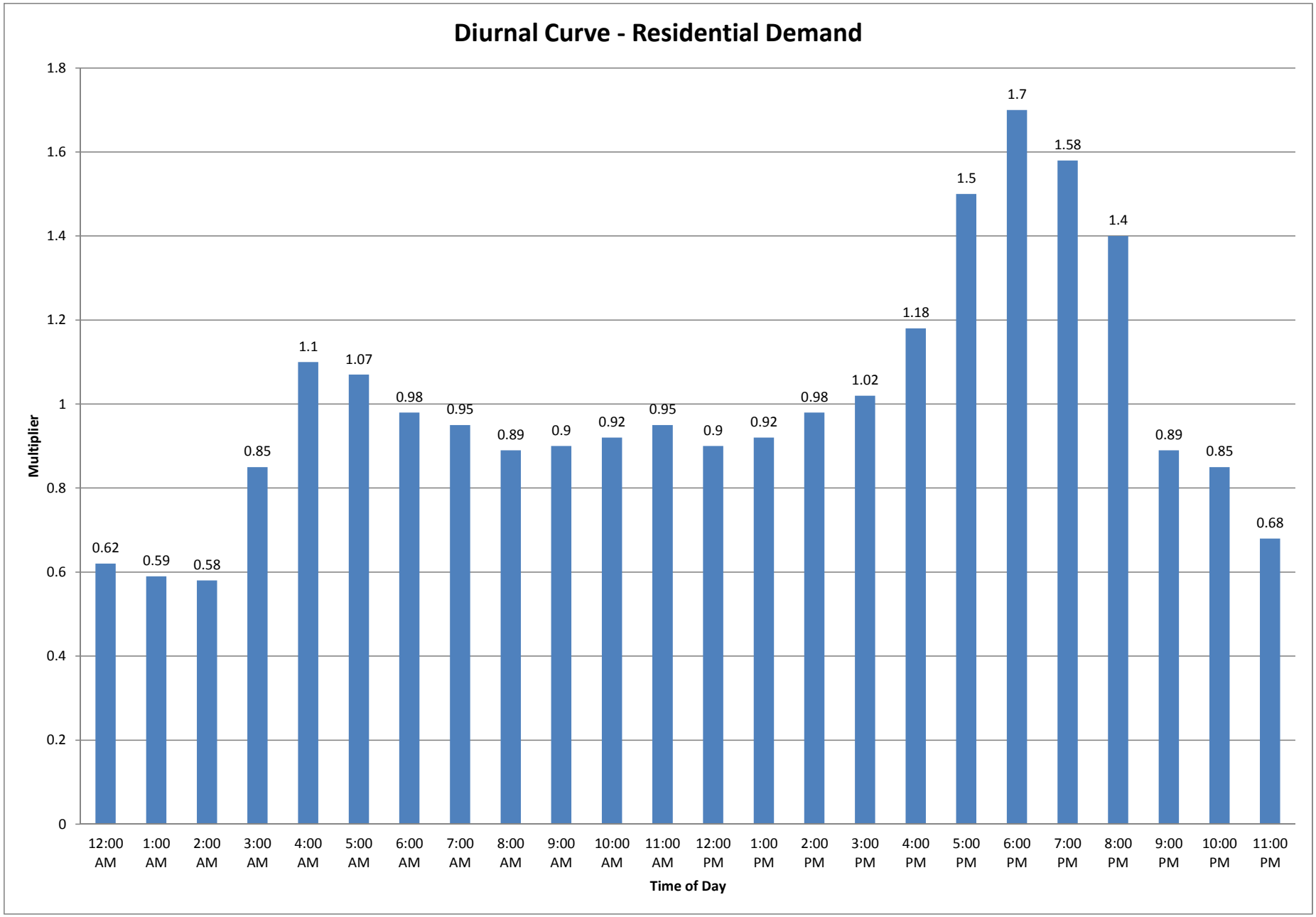
5.1 DESIGN CRITERIA

In order to properly model, size, and plan for future facilities, design criteria must be established. The modeling criteria used for the updated CIP is shown in **Table 2**. The model was run and evaluated using the maximum day supply from the City of Austin delivery points, provided by the City of Rollingwood.

Table 2: Planning and Design Criteria

Criteria	Value
Max Day Unit Demand	0.41gpm/LUE
Fire Flow (Residential)	1,500 gpm
Fire Flow (Commercial)	3,500 gpm
Maximum Pressure	85 psi
Minimum Pressure	50 psi
Minimum Fire Flow Pressure	20 psi at Maximum Day Demand
C-Factor	120

These criteria were used to generate water demands for the service area during extended period and fire flow scenarios. Once the water demands were determined, the design criteria were utilized to calculate capacity of the existing facilities and to size the planned facilities. Diurnal curves, representing the hourly water demand, have been developed for residential and commercial demands. These curves are shown in **Exhibit 2** and **Exhibit 3**. The diurnal curves are applied to each demand node based on the development.


Diurnal Curve - Residential Demand
Multiplier
Time of Day
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.62
0.59
0.58
0.85
1.1
1.07
0.98
0.95
0.89
0.9
0.92
0.95
0.9
0.92
0.98
1.02
1.18
1.5
1.7
1.58
1.4
0.89
0.85
0.68
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6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
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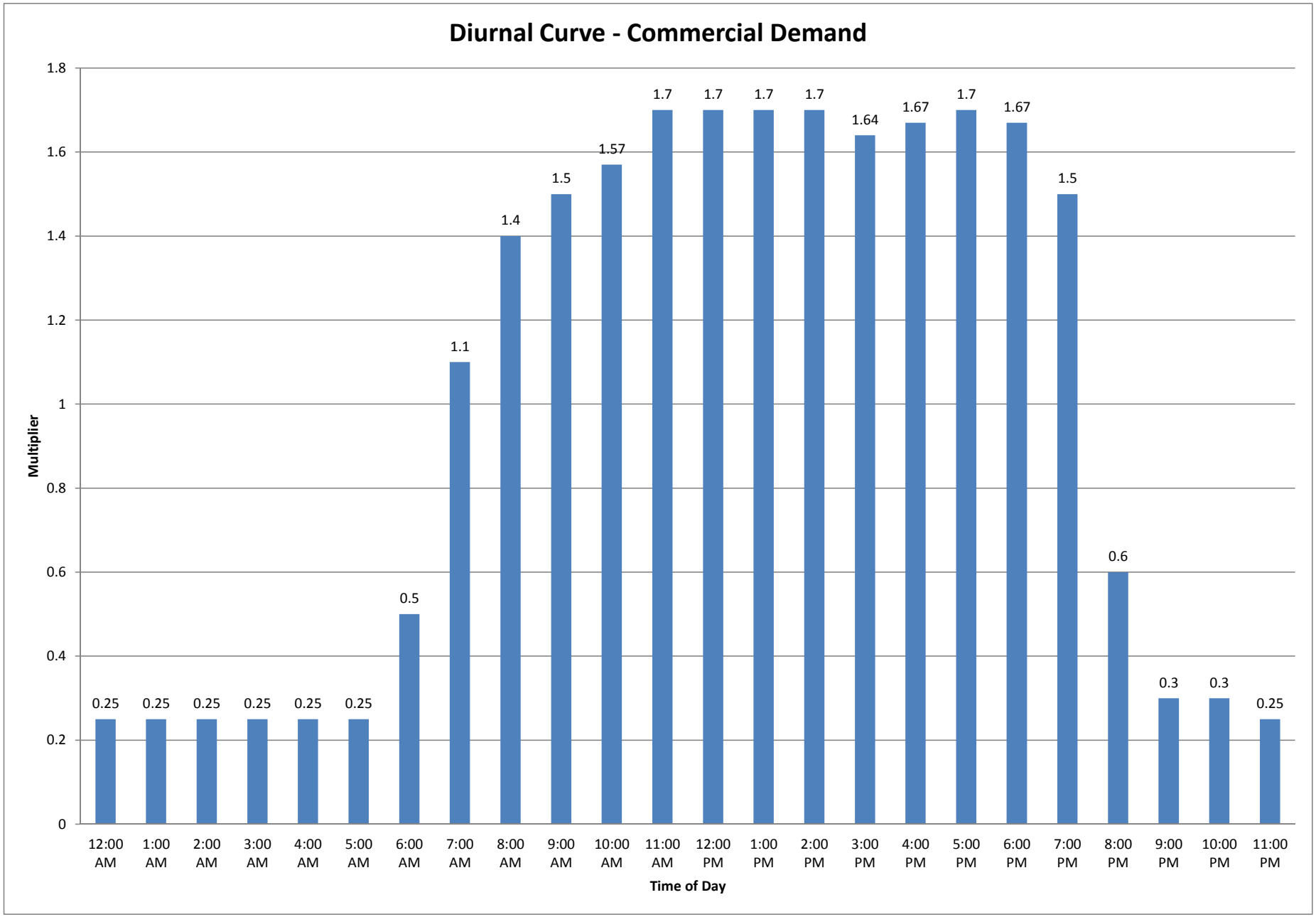
Diurnal Curve - Commercial Demand
Multiplier
Time of Day
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.25
0.25
0.25
0.25
0.25
0.25
0.5
1.1
1.4
1.5
1.57
1.7
1.7
1.7
1.7
1.64
1.67
1.7
1.67
1.5
0.6
0.3
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0.25
12:00 AM
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5.2 WATER MODELING

Water models of the current system and proposed future systems were developed using WaterCAD Version V8i by Haested Methods. These models were used to evaluate options for system expansion. The model evaluation included static, extended period (24-hour), and fire flow analysis of each system.

The GIS data of the existing water system was imported into WaterCAD to develop the existing model. The model consists primarily of pipes, nodes, reservoirs, and PRVs. Each element has specific attributes assigned to define system characteristics and operation. A list of the primary attributes for each element and their definition is shown in **Table 3**.

Table 3 Water Model Element Attributes

Attribute	Definition
Pipe (Water Main)	
ID	ID to differentiate pipes
Pipe Diameter	Nominal value in inches
Pipe Material	Asbestos Cement, Cast Iron, Ductile Iron, or PVC
C-Factor	120
Open/Closed	Closed pipes represent closed valves in the system
Check Valve	Pipes can be defined to flow in one direction only
Node (Water Demand Point)	
ID	ID to differentiate nodes
Elevation	Ground elevation in feet
Demand	Assign water demand for node and assign diurnal curve
Zone	Label node's pressure zone
Reservoir (Water Supply Source)	
ID	ID to differentiate reservoirs
Elevation	Represents pressure plane of water system to the system
Pressure Reducing Valve (PRV)	
ID	ID to differentiate PRVs
Elevation	Ground elevation in feet
Diameter	Nominal valve diameter in inches
Settings	Define valve operation

5.3 EXTENDED PERIOD SIMULATION

The Extended Period Simulation (EPS) analysis is used to model the City's water system over a 24-hour period to model the pressures and flow rates changing throughout the system based on the demands varying per the associated diurnal curves. This ensures that the system is able to meet the highest demand peaks throughout a full day, and to see how the system reacts to the changing demands. The model output shows the pressures at each node, flow and velocity in each pipe, and flow through the PRVs. If the design criteria shown in **Table 2** are not met, then proposed improvements are added to the model to resolve the issue.

5.4 FIRE FLOW ANALYSIS

The fire flow analysis is used to model the City's water system to ensure that the system has sufficient capacity during a fire emergency, without causing low pressure to the rest of the system. The required

fire flow at each node is input based on the type of property that it serves (residential vs. commercial), as shown in **Table 2**. The model output is the total available fire flow at each node and the minimum residual pressure at each node and the overall system. If there is not enough available fire flow, or the residual pressures are too low, proposed improvements are added to the model to resolve the issue.

6 RECOMMENDATIONS

This section of the plan contains a summary of CIP project concepts that were developed by the project team to address the water system issues described in the previous section. Specific project summaries and cost estimates can be found in **Appendix C** and **Appendix D**, respectively.

6.1 MODELING RESULTS

The system modeling results showed several areas that did not meet the pressure or fire flow requirements listed in **Table 2**. The southeast portion of the City at the Town Centre had maximum pressures above 110 PSI. The northeast area of the City had two locations of low-pressure concerns, the 6-inch waterline along Hatley and the 6-inch main within Ashworth Dr.

From the modeling results, the main concern is the lack of sufficient fire flow in multiple locations throughout the City. In general, there was a lack of available fire flow at the dead-ends of small diameter pipes within cul-de-sacs, along Pickwick Ln, Inwood Rd, Bettis Blvd, Gentry Dr, Park Hills Dr and Laura Ln.

Several solutions were developed to solve these flow concerns. The most comprehensive change is adding an additional pressure plane to the City's water system, for a total of three (3) separate pressure planes interconnected with PRV's and adjusting the current boundaries of the high- and low-pressure planes. This is anticipated to be achieved by installing a new PRV at the Town Centre. Other project improvements include upsizing small diameter pipes and adding additional looping within the system. The overall proposed Water CIP improvement map can be seen in **Exhibit 4**. The new PRV settings can be found below in **Table 4**

Table 4 Proposed Pressure Reducing Valves and Settings

PRV	Setting (ft)
Bee Cave Woods Master Meter	770
Hatley Master Meter	710
Hatley/Nixon[1]	------
Rollingwood/Riley	730
Hatley/Almarion[2]	730
Town Centre	690

1 – This PRV will be abandoned

2 – This PRV is currently out of service, but will need to be repaired

City of Rollingwood
Travis County, TX

Proposed
Water CIP Projects

Existing Waterline
Pressure Release Valve
Water CIP Project
Proposed Project
Proposed Abandonment

Parcel Boundary
Pressure Zone
Zone 1 (770')
Zone 2 (730')
Zone 3 (690')

Data Sources: KFA (2022)
City of Rollingwood (2021)
Aerial Source: Stratmap (2021)

N

0 600 1,200 Feet

Date: 5/10/2022

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Project Q
Project F
Project S
Project T
Hatley Master Meter PRV
Hatley/Nixon PRV
Colorado River (Ladybird Lake)
Hatley/Almarion PRV (Project A)
Riley Master Meter
Project G
Project J
Project I
Project D
Project E
Project C
Project O
Project M
Project H
Project B
Project L
Project K
Project R
2244
Bee Cave Master Meter PRV
Town Centre PRV (Project P)
Project N
Rollingwood/Riley PRV
1

6.2 CIP DEVELOPMENT

The proposed CIP projects work in conjunction together to update the existing water system to address and satisfy all design criteria applied during the modeling phase. The water system is currently not experiencing any large-scale system deficiencies and there are no immediate concerns of system failures. The proposed CIP projects are to provide a reliable water system with sufficient system pressures, and adequate fire flow to meet the design standards.

The various proposed projects have been consolidated into three (3) main categories: Maintenance, Fire Flow Improvements, and System Improvements.

Maintenance projects are projects that are low cost and can be completed by City staff or subcontractors to address minor concerns within the system. In addition to the daily maintenance that the Public Works department conducts, a larger update needs to be made to the current organization of the water system. The current boundaries of the high- and low- pressure zones need to be amended. The existing PRV that is out of service at Hatley/Almarion needs to be repaired and put back into service, and along with the Riley/Rollingwood PRV, be set to a hydraulic grade setting of 730-ft. Furthermore, the homes along Ashworth Dr will be moved over to the high-pressure zone by ensuring the loop between Chris Cove and Ashworth Dr is completed. The open valve in Hatley Dr, between Wallis Dr and Ashworth Dr, will be closed to separate the pressure planes. This pressure plane adjustment will fix low pressure issues along Hatley Dr and Ashworth Dr. Adjusting the PRV settings at the Hatley/Almarion PRV and the Riley/Rollingwood PRV, thus allowing the low-pressure zone to be fed from the high-pressure zone rather than the Riley Master Meter COA feed point, will also increase pressure within the entire low-pressure zone, and should help reduce low pressure complaints from citizens.

The fire flow improvement projects were identified to provide sufficient fire flows to meet the design criteria, which includes several aspects. The main condition that all proposed areas failed was to deliver the required fire flow demand. A secondary design condition is that there must be a fire hydrant within 500-ft of a home as accessed along streets. The fire flow improvement projects can be classified into four subgroups:

1. Water mains within the system that do not meet fire flow requirements and have existing fire hydrants on the line. These lines should be addressed, as the fire hydrants have the highest potential of being necessary for fire protection.
2. Small diameter water mains that do not meet fire flow requirements but also have an existing fire hydrant on the line. These projects would be prioritized next to ensure firefighting capabilities should the existing hydrants be used.
3. Small diameter water mains that do not meet fire flow requirements, but also do not have an existing fire hydrant on the line and do not have a local fire hydrant on another main within 500-ft of the homes. These lines are required to be addressed to provide sufficient fire hydrant spatial coverage of the homes within the City limits.
4. Small diameter water mains that do not meet fire flow requirements, do not have existing fire hydrants on the line, and are located within 500-ft of existing hydrants located on another water main. These mains are the lowest priority because they can be covered by other localized existing mains. However, these lines are included in the CIP proposed projects because, while not necessary for firefighting protection, they provide a complete system that meets fire flow requirements and for the potential need necessitated by large sprinkler systems being incorporated into new homes in the community.

System update projects include projects to fix specific concerns within the system, not related to fire flow improvements. Projects include the following:

- Vance/Vale waterline replacement - addresses continued instances of main breaks occurring in the area resulting in city-wide boil water notices. The 4-inch diameter waterlines are undersized, are not buried to an adequate depth, are bedded improperly, and are made of pipe material that does not meet industry standards.
- Inwood Interconnect - provides additional looping within the system and improves pressure concerns during normal operation
- Backyard abandonment projects - while not required for functionality, this will provide for operational ease and overall system resiliency. Many of the waterlines located in easements in backyards of private properties are difficult for City Staff to access and isolate in the event of a main break.
- Towne Centre PRV installation - this area of the city experiences pressures exceeding the maximum design criteria, however, there is no records of main breaks or customer complaints in the area. These customers within the affected area may have individual PRVs on their service lines, which would likely eliminate the need for this project.

The proposed CIP projects have been prioritized by “high” or “low” priorities relative to one another. However, depending on the amount of City funding in each fiscal year, these projects can be grouped as needed to provide the best value to the City. **Table 5** shows the proposed improvements accomplished with each project. Note that the proposed improvements included in each CIP project are based on preliminary level engineering, field visits, and high-level topographic information; these are not detailed engineering analysis or design.

Table 5: Proposed System Improvements Analysis

Project ID	Street	Project Type	Existing Fire Hydrant(s) on Water Main?	Other Available Fire Hydrants within 500 ft to Deliver Min. Fire Flow?	Approx. # Homes Impacted	Current Fire Flow Available within 500' (gpm)	Proposed Fire Flow (gpm)	Notes
A	Hatley	Maintenance	N/A	N/A	15-20	N/A	N/A	Pressure Plane adjustment to address low pressure issues
B	Vance	System Improvements	N/A	N/A	N/A	N/A	N/A	Main replacement for repeated breaks and maintenance issues.
C	Inwood/Rollingwood	System Improvements	Yes	No	5-10	*1,289*	*2,519*	Interconnect mains at Rollingwood/Inwood to provide better looping for the system and address fire flow concerns. Improves fire flows along Inwood Road.
D	Pickwick	Fire Flow Improvements	Yes	No	35-40	*988 (Pickwick FH)*	*1,906*	Upsize existing 4-inch and 6-inch to 8-inch main to provide better looping for the system and address fire flow concerns along Pickwick.
E	Bettis	Fire Flow Improvements	Yes	No	5-10	*359*	*2,812*	Install new 8-inch main along Bettis Blvd between Riley Rd and Inwood Rd to provide better looping for the system and address fire flow concerns along Inwood Rd.
F	Park Hills Dr	Fire Flow Improvements	Yes	No	40-45	*1,133*	*2,007*	Upsize existing 6-inch mains within Park Hills Dr and Laura Ln to 8-inch main to provide better looping for the system and address fire flow concerns along Hatley Dr, Laura Ln, and Park Hills Dr. These streets must be upsized together to achieve the system benefits, so they are packaged as project F.
	Laura Ln	Fire Flow Improvements				*1,216*	*2,207*	
G	Gentry Dr	Fire Flow Improvements	Yes	No	10-15	*1,221*	*1,693*	Upsize existing 6-inch main that deadends at Gentry Dr with an 8-inch main to provide sufficient fire flow for the two existing fire hydrants.
H	Inwood Cv	Fire Flow Improvements	Yes	No	5-10	1,045	*3,189*	Upsize existing 4-inch main within the Inwood Cv cul-de-sac to an 8-inch main to provide enough fire flow to the existing fire hydrant located on the line.
I	Jeffrey Cv	Fire Flow Improvements	Yes	No	5-10	131	*1,924*	Upsize existing 2-inch main to an 8-inch line to provide sufficient fire flow for Jeffrey Cv.
J	Pleasant Cv	Fire Flow Improvements	Yes	No	5-10	711 (at end, 1,494 at approx FH location)	*1,503 (1,641)*	Upsize the existing 4-inch and 6-inch mains along Pleasant Cv with an 8-inch main to provide sufficient fire flow at the existing fire hydrant.
K	S. Crest Dr	Fire Flow Improvements	No	No	1-5	0 (144 in main)	*3,500*	Upsize the existing 6-inch main to an 8-inch main and install a fire hydrant to provide sufficient fire flow and fire hydrant coverage along S. Crest Dr.
L	Westgate Circle	Fire Flow Improvements	No	No	1-5	0 (901 in main)	*2,805*	Upsize the existing 4-inch main to an 8-inch main and install a fire hydrant to provide sufficient fire flow and fire hydrant coverage within the Westgate Circle cul-de-sac.
M	Ewing Easement	Fire Flow Improvements	No	No	1-5	0 (1,106 in main)	*3,213*	Upsize the existing 4-inch main located in the easement adjacent to Ewing Circle to an 8-inch main and install a new fire hydrant to provide sufficient fire flows and fire hydrant coverage for the homes served off this line.
N	Timberline Ridge	Fire Flow Improvements	No	No	1-5	0 (460 in main)	*1,938*	Upsise the existing 4-inch main within Timberline Ridge Dr to an 8-inch main and install a new fire hydrant to provide sufficient fire flow and fire hydrant coverages for all of the homes within the cul-de-sac.
O	Rollingwood/Ridgewood	System Improvements	N/A	N/A	N/A	N/A	N/A	Abandonment projects for operational management purposes
P	Town Centre PRV	System Improvements	N/A	N/A	N/A	N/A	N/A	Pressure plane adjustment to address high pressure issues at the Town Centre complex.
Q	Brett Cv	Fire Flow Improvements	No	Yes	5-10	>1,500 (476 in main)	*1,699 (upsize)*	Upsize existing main from 4-inch to 8-inch main within Brett Cv to provide improved flows for domestic and sprinkler system use. This area is currently covered by fire hydrants within 500 feet.
R	Ewing Circle	Fire Flow Improvements	No	Yes	5-10	>1,500 (937 in main)	*3,014 (upsize)*	Upsize existing main from 4-inch to 8-inch main within Ewing Circle to provide improved flows for domestic and sprinkler system use. This area is currently covered by fire hydrants within 500 feet.
S	Michele Circle	Fire Flow Improvements	No	Yes	5-10	>1,500 (167 in main)	*1,884 (upsize)*	Upsize existing main from 2-inch to 8-inch main within Michelle Circle to provide improved flows for domestic and sprinkler system use. This area is currently covered by fire hydrants within 500 feet.
T	Kristy Dr	Fire Flow Improvements	No	Yes	5-10	>1,500 (578 in main)	*1,793 (upsize)*	Upsize existing main from 4-inch to 8-inch main within Kristy Drive to provide improved flows for domestic and sprinkler system use. This area is currently covered by fire hydrants within 500 feet.

italics - analysis done assuming all projects have been completed

6.3 PROJECT COST ESTIMATES

Planning-level cost estimates were developed for the proposed projects. These cost estimates are based on the preliminary project concepts developed to mitigate the issues identified and are likely to vary when detailed design is completed for each project.

The cost estimates include:

- *Engineering & Surveying:* Engineering, surveying, and environmental costs were estimated as a uniform percentage of construction costs for each project.
- *Construction:* Unit costs and quantities are provided in the project cost estimate sheets. Traffic control and roadway reconstruction are included where necessary.

The estimates do not include costs for:

- *Right-of-Way & Easement Acquisition:* Right-of-way and easement acquisition was assumed not to be necessary for these projects. However, it is recommended that the City perform this research prior to implementation of recommended CIP projects.

Cost summary sheets for each project can be found in **Appendix D**. A summary of costs is provided in **Table 6.**

Table 6: Project Cost Summary

ID	Project Name	Cost	Priority
A	Hatley/Almarion PRV Replacement	$37,000	High
B	Vance & Vale St Water Improvements	$1,275,000	High
C	Inwood Rd Interconnect	$65,000	High
D	Pickwick Dr Fire Flow Improvements	$718,000	High
E	Bettis Blvd Fire Improvements	$189,000	High
F	Park Hills Dr/Laura Ln Fire Improvements	$751,000	High
G	Gentry Dr Fire Improvements	$232,000	High
H	Inwood Cove Fire Improvements	$105,000	High
I	Jeffrey Cove Fire Improvements	$105,000	High
J	Pleasant Cove Fire Improvements	$268,000	High
K	S. Crest Dr Fire Improvements	$167,000	High
L	Westgate Circle Fire Improvements	$105,000	High
M	Ewing Easement Main Fire Improvements	$84,000	High
N	Timberline Ridge Fire Improvements	$105,000	High
O	Abandonment Projects	$494,000	Low
P	Town Centre PRV	$112,000	Low
Q	Brett Cove Fire Improvements	$167,000	Low
R	Ewing Circle Fire Improvements	$105,000	Low
S	Michele Circle Fire Improvements	$84,000	Low
T	Kristy Dr Fire Improvements	$148,000	Low
	Total CIP Cost	$5,316,000	

7 NEXT STEPS

While this Plan provides a preliminary assessment of top water service issues and potential solutions across the City of Rollingwood, additional study, coordination, analysis, and engineering design are required for implementation.

7.1 ONGOING DATA NEEDS

During the course of this project, a significant data needs issue came to KFA's attention that must be addressed prior to design and implementation of CIP projects. There is currently no comprehensive and up-to-date database of the existing water infrastructure. The current GIS database that KFA has put together was developed with old construction plan sets that were hard to follow and may or may not have been implemented. The City has since begun field investigations to determine if waterlines are active, have been abandoned, or have already been upsized. The City will need to continue these field investigations and continue to update the GIS database until the entirety of the water system has been mapped out.

7.2 MODELING

The current WaterCAD model was developed using the latest GIS database. As the field investigations provide updated information for the database and as proposed improvements are installed, the recommendation is that the water model is updated with the changes. The field investigation changes may alter the recommendations for the proposed CIP projects as the design.

7.3 FUNDING SOURCES

It is KFA's understanding that the City of Rollingwood is limited in the availability of City funds for implementation of the recommended CIP projects. The City may consider looking into applying for the Texas Water Development Board (TWDB) programs. The TWDB offers a variety of cost-effective loan and grant programs that the proposed projects may be eligible for. KFA recommends initiating contact with the TWDB regional team and beginning the relationship to advance future collaboration for funding for the proposed CIP projects.

8 APPENDICES

Appendix A: 2000 Agreement for Wholesale Water Service

2000 AGREEMENT FOR WHOLESALE WATER SERVICE BETWEEN THE CITY OF AUSTIN AND THE CITY OF ROLLINGWOOD

THE STATE OF TEXAS)
)
COUNTY OF TRAVIS)

KNOW ALL BY THESE PRESENTS:

THIS AGREEMENT ("Agreement") for the provision of wholesale water service is made and entered into by and between the of City of Austin, Texas ("Austin"), a Texas home rule municipal corporation, and the City of Rollingwood, a Texas general law municipal corporation ("Rollingwood"), collectively ("Parties"), and may be referred to as the "2000 Rollingwood Water Service Agreement".

WHEREAS, Austin and Rollingwood previously entered into a wholesale water service agreement dated January 2, 1968, entitled "Water Contract" ("1968 Water Contract"), pursuant to which Austin provided a potable water supply to Rollingwood for its distribution system that served connections within its existing corporate boundaries. The 1968 Water Contract expired of its own terms on January 2, 1998;

WHEREAS, Austin has provided additional wholesale water service to Rollingwood since the expiration of the 1968 Water Contract;

WHEREAS, Austin and Rollingwood desires to enter into a new wholesale water service agreement to set out terms and conditions for Austin's continued provision of wholesale water service to Rollingwood for its distribution system that currently serves more than 300 retail connections within its corporate boundaries and extraterritorial jurisdiction;

WHEREAS, Austin and Rollingwood are authorized to enter into this agreement pursuant to the provision of the Interlocal Cooperation Act, V.T.C.A. Government Code, Chapter 791 and other applicable law;

WHEREAS, the Austin City Council, by Resolution No. 991209-30, dated December 9, 1999, has duly authorized the negotiation and execution of a wholesale water service agreement with Rollingwood;

WHEREAS, the Rollingwood City Council, by Approved and Signed Minutes, Regular Council Meeting, dated December 15, 1999, has duly authorized the negotiation and execution of a wholesale water service agreement with Austin;

WHEREAS, Austin and Rollingwood, as authorized by their respective city councils, intend to set forth a comprehensive statement of all terms and conditions applicable to the continued provision of wholesale water service by Austin to Rollingwood ;

NOW, THEREFORE, in consideration of the foregoing premises and the mutual undertakings herein contained, the parties agree as follows:

ARTICLE I
DEFINITIONS

The following terms shall have the meanings set out below:

1.01. Austin Water Facilities, Austin System or Austin's Water System: means all water treatment, transmission and distribution facilities, lines, mains, reservoirs, pump stations, residential, commercial, and industrial connections and any other parts or components that comprise the public water system of Austin.

1.02. Austin Water Capital Recovery Fee: means a charge imposed on each service unit of new development pursuant to Chapter 25-9 of the 1999 Austin City Code to generate revenue for funding or recouping the costs of capital improvements or facility expansions of Austin's Water System.

1.03. Commission: means the Texas Natural Resource Conservation Commission or its successor agency.

1.04. Connection: means a single family residential unit or each commercial or industrial establishment to which drinking water is supplied from Rollingwood's system.

1.05. Default: means the omission or failure of a party to perform their contractual duty under this agreement.

1.06. Director: means the Director of Austin's Water and Wastewater Utility or the Director's authorized designee.

1.07. Metering Facility: means the meter, meter vault, and all metering equipment required to measure wholesale water service to Rollingwood at the agreed points of delivery. The term also includes any other facilities constructed by Rollingwood that are associated with the metering facilities.

1.08. New Development: means the subdivision of land, the construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure, or any use or extension of the use of land, that increases the number of service units for water service. The term includes the sale of water taps resulting from the conversion of an individual well to Rollingwood's System.

1.09. Point of Delivery: means the points designated and approved under this Agreement at which Rollingwood shall receive water from the Austin Water System for distribution within Rollingwood's Water System as more particularly described below.

1.10. Rollingwood Water Facilities, Rollingwood Water System or Rollingwood's System: means the lines, reservoirs, pump stations, mains, residential, commercial, and industrial connections and any other parts or components that comprise the public water system of Rollingwood.

1.11. Water: means potable water meeting the requirements of the Texas Natural Resource Conservation Commission for human consumption and other domestic uses.

1.12. Wholesale Water Service Area: means Rollingwood's corporate city limits and extraterritorial jurisdiction as amended from time to time by Rollingwood. This term does not include any area outside of Rollingwood's corporate city limits, as of the effective date of this agreement, that is served by Austin's water system prior to annexation by Rollingwood.

1.13. Wholesale Water Service: means Austin's provision of a potable water supply to Rollingwood for its distribution system that serves retail connections in its wholesale water service area.

ARTICLE II.
DELIVERY OF WATER

2.01. Maximum Volume and Rate of Flow. Subject to all the terms and conditions set forth in this Agreement, Austin agrees to sell and Rollingwood agrees to buy potable water for the operation of Rollingwood's Water System for domestic, commercial and industrial uses on an as-needed basis in an amount not to exceed a monthly average of 1.0 million gallons per day (MGD) and at a rate not exceeding 694.4 gallons per minute (GPM) and at a minimum pressure of 35 (psi) pounds per square inch under normal operating conditions at the master meter(s) located at the agreed point(s) of delivery in **Exhibit A**. The parties agree that a monthly average of 1.0 (MGD) is the maximum level of service to which Rollingwood is entitled under this Agreement.

The parties agree that when use by Rollingwood reaches or exceeds seventy five per cent (75%) of the maximum level of 1.0 million gallons per day (MGD) established hereunder based on a monthly average for any monthly billing period during the term of this Agreement, the parties shall negotiate with regard to an appropriate adjustment of the maximum service level described under this agreement. **The parties agree that the maximum service level provided under this agreement will not be increased unless Rollingwood secures a raw water supply and assigns that supply to Austin to provide any proposed increased service level under this agreement. The parties shall negotiate a wholesale water rate adjustment for the raw water supply assigned to Austin by Rollingwood over the agreed 1.0 MGD monthly average limit that is used by Austin to provide water service under this agreement.** Any increase in the maximum service level provided under this agreement must be made by written amendment of this Agreement and shall be subject to review and approval by the Austin City Council and the Rollingwood City Council and the ability of Austin to provide such additional water service.

In the event that Austin is unable or unwilling to provide the increased level of water service requested by Rollingwood, Rollingwood may endeavor to secure supplemental water service from another provider.

If Rollingwood secures another source of water supply without having first negotiated in good faith with Austin as described above or without having first secured a written final decision from the Director that Austin is unwilling or unable to provide the requested increase in the maximum level of water service to be provided under this agreement, Austin may reduce the maximum level of

service to be provided hereunder commensurate with the maximum contracted level of potable water service acquired by Rollingwood from such other source and Austin shall be released from any obligation to provide the same under this agreement. If Rollingwood desires to secure an additional source of water supply it must first provide Austin with written notice of its need for additional water service. The notice must include the quantity of water needed by Rollingwood and all other information requested by the Director and must be provided to the Director. Austin shall respond to Rollingwood's notice within 180 days.

2.02. Sole Supply Intended. Rollingwood and Austin agree that Austin shall provide the sole source of water for the operation of the Rollingwood System during the term of this agreement and the parties do not construe this agreement to provide for supplemental, backup, peak-load or as-available service.

2.03. Manner of Delivery. During the term of this agreement, Rollingwood shall provide retail water service to connections within the wholesale water service area in this agreement.

2.04. Nondiscrimination. Water service to Rollingwood by Austin shall be nondiscriminatory and consistent with Austin's policies, ordinances and regulations applicable to wholesale water services as established by the Austin City Council and amended from time to time.

2.05. Water Capital Recovery Fees. The parties agree that the assessment and collection of Austin's Water Capital Recovery Fee within Rollingwoods' wholesale water service area is authorized by Texas Local Government Code, '395.011(c). Rollingwood shall collect, on behalf of Austin, Austin's Water Capital Recovery Fee from its customers for each service unit of new development connected to Rollingwood's System in the agreed wholesale water service area at the time Rollingwood's connection is made.

The amount of the Water Capital Recovery Fee shall be calculated per service unit in accordance with the provisions of Chapter 25-9 of the 1999 Austin City Code, as adopted by Austin. The amount collected by Rollingwood, on behalf of Austin, shall be the amount of Austin's Water Capital Recovery Fee in effect at the time each connection of a new service unit is made, following notice to Rollingwood of any change as provided in this subsection. The number of service units for which the fee is charged shall be calculated in accordance with Chapter 25-9 of the 1999 Austin City Code, as adopted by Austin.

Austin agrees to provide Rollingwood with written notice of any change in the amount of the Water Capital Recovery Fee to be collected by Rollingwood under this Agreement, and such change will be effective on the date the notice is received by Rollingwood or the effective date of Austin's ordinance, whichever is later.

Rollingwood agrees to remit all Water Capital Recovery Fees collected to Austin monthly together with a report of all new water connections made within each calendar month. The report shall also contain the service address, meter size, date of connection, and amount remitted for each new connection within each monthly period to the Director. Rollingwood shall not retain any portion of the Austin Water Capital Recovery Fees collected. If no new connections are made during the month, Rollingwood shall not be required to prepare a monthly report of new connections to Austin.

For each calendar year, Rollingwood shall provide to the Director an annual report that states the total number of connections and the type of connections by use (residential, multi-family, commercial, industrial) by February 28th of the following year.

2.06. Points of Delivery. The points of delivery are shown on **Exhibit "A"**. Exhibit A is attached to this agreement and incorporated by reference for all purposes. The points of delivery may be changed at any time by agreement in writing between the Director and Rollingwood. In the event that Rollingwood requests a change in the points of delivery, Rollingwood shall bear the expense of changing such points of delivery. In the event that Austin requests an addition or change in the points of delivery, Austin shall bear the expense of changing such points of delivery.

2.07. Approval of Changes or Additional Points of Delivery. Prior to adding or changing any point of delivery to Austin's Water System, Rollingwood shall submit a written request to the Director for approval of the additional or new point of delivery accompanied by an engineering report and plans, prepared by a registered professional engineer and approved by the Rollingwood City Council, which detail the proposed changed or new point of delivery, the area to be served, the design, size, location and configuration of meters to be installed, and other pertinent information requested by Austin. The parties agree that the undeveloped tracts, constituting approximately 32 acres collectively, zoned commercial in Rollingwood will require Rollingwood to request an additional point of delivery to Austin's Water System or some other mutually agreed upon methodology for the provision of fire protection.

2.08. Backflow Prevention. Rollingwood, at its own expense, shall install a backflow prevention assembly (Reduced Pressure Zone Valve) on all points of delivery from Austin's Water System within 90 days after the effective date of this contract. All approved additional points of delivery in the future will be required to have a backflow prevention assembly installed at the time of construction at Rollingwood's own expense.

ARTICLE III.
COMPLIANCE WITH STATE LAWS AND CITY REGULATIONS

3.01. Legal Lots Required. Rollingwood shall not sell taps or otherwise permit the connection of water service to any customer within the agreed wholesale water service area unless the property is exempt from or in compliance with the provisions of Chapter 212, Texas Local Government Code, as amended.

3.02. Service Outside Rollingwood; Enlargement of Rollingwood Boundaries or Service Area. This Agreement provides for the purchase of wholesale water by Rollingwood from Austin for delivery to retail customers within the agreed wholesale water service area. Rollingwood agrees that it shall not sell, resell, or deliver water to areas outside the agreed wholesale water service area as of the effective date of this Agreement unless it first obtains either the prior written consent of Austin or is ordered to provide such service by the Commission in involuntary proceedings that are not initiated by Rollingwood. In the latter event, Rollingwood shall provide written notice to Austin of the proceedings at the Commission relating to the expansion of Rollingwood's service to areas

now outside of Rollingwood's corporate limits. Rollingwood further agrees that it will not initiate any proceedings to enlarge its service area through any other agency or court of competent jurisdiction without the prior written notification to Austin of such expansion.

3.03. Curtailment and Conservation Restrictions. Delivery, volume, and pressure of potable water to Rollingwood under this Agreement is subject to and limited by Austin's available water supply and water system treatment and transportation capabilities. Austin shall have the right to curtail or ration wholesale service to Rollingwood in times of high system demand in the same manner and to the same extent that Austin imposes such curtailment or water rationing on other wholesale customers of Austin. Austin will give written notice to Rollingwood of the implementation and termination of any conservation and user restrictions it imposes on its customers, and Rollingwood agrees to impose on its customers and enforce the same voluntary and mandatory conservation and use restrictions Austin imposes on its own customers within three business days of receipt of notice from Austin.

3.04. Temporary Curtailment of Service for Maintenance, Capital Replacement or Emergency Operations. Austin shall have the right at all times to curtail water service hereunder in the event of a required maintenance operation, replacement of capital facilities or emergency for a reasonable period necessary to complete such maintenance operations or capital replacement, effect emergency repairs or otherwise respond to emergency conditions necessitating the temporary suspension of water service or decreased volume or pressure. For any curtailment other than one caused by an emergency, Austin, if possible, will give at least 72 hours telephonic notice to Rollingwood. In the event of an emergency curtailment, Austin will give telephonic notice as soon as possible.

3.05. Cooperation During Maintenance or Emergency. Rollingwood shall cooperate with Austin during periods of emergency or required maintenance or replacement of equipment and, if necessary, Rollingwood shall, at its sole expense, discontinue, cycle, test, inspect, or otherwise operate and maintain its pumps or other Rollingwood Water Facilities in a manner determined by the Director to be necessary to the safe and efficient completion of such operations.

3.06. Water Conservation Program. Rollingwood will adopt and enforce a water conservation program sufficient to meet the requirements of the Texas Natural Resource Conservation Commission ("TNRCC") water conservation rules, as amended. Rollingwood shall also adopt and enforce water conservation measures that meet or exceed the following standards:

(1) promote the participation of its citizens in the water conservation programs offered by Austin with bill stuffers (4 times/year minimum) and advertising;

(2) adopt an incentive plan for low-flush toilet retrofits that will include Austin rebates plus matching Rollingwood rebates (would currently add $60 per toilet, for a total rebate of $120);

(3) send letters to high volume water users offering irrigation audits;

(4) review its landscaping ordinances to promote water conservation, with the consideration of recommendations by the Austin Water Conservation Office;

now outside of Rollingwood's corporate limits. Rollingwood further agrees that it will not initiate any proceedings to enlarge its service area through any other agency or court of competent jurisdiction without the prior written notification to Austin of such expansion.

3.03. Curtailment and Conservation Restrictions. Delivery, volume, and pressure of potable water to Rollingwood under this Agreement is subject to and limited by Austin's available water supply and water system treatment and transportation capabilities. Austin shall have the right to curtail or ration wholesale service to Rollingwood in times of high system demand in the same manner and to the same extent that Austin imposes such curtailment or water rationing on other wholesale customers of Austin. Austin will give written notice to Rollingwood of the implementation and termination of any conservation and user restrictions it imposes on its customers, and Rollingwood agrees to impose on its customers and enforce the same voluntary and mandatory conservation and use restrictions Austin imposes on its own customers within three business days of receipt of notice from Austin.

3.04. Temporary Curtailment of Service for Maintenance, Capital Replacement or Emergency Operations. Austin shall have the right at all times to curtail water service hereunder in the event of a required maintenance operation, replacement of capital facilities or emergency for a reasonable period necessary to complete such maintenance operations or capital replacement, effect emergency repairs or otherwise respond to emergency conditions necessitating the temporary suspension of water service or decreased volume or pressure. For any curtailment other than one caused by an emergency, Austin, if possible, will give at least 72 hours telephonic notice to Rollingwood. In the event of an emergency curtailment, Austin will give telephonic notice as soon as possible.

3.05. Cooperation During Maintenance or Emergency. Rollingwood shall cooperate with Austin during periods of emergency or required maintenance or replacement of equipment and, if necessary, Rollingwood shall, at its sole expense, discontinue, cycle, test, inspect, or otherwise operate and maintain its pumps or other Rollingwood Water Facilities in a manner determined by the Director to be necessary to the safe and efficient completion of such operations.

3.06. Water Conservation Program. Rollingwood will adopt and enforce a water conservation program sufficient to meet the requirements of the Texas Natural Resource Conservation Commission ("TNRCC") water conservation rules, as amended. Rollingwood shall also adopt and enforce water conservation measures that meet or exceed the following standards:

(1) promote the participation of its citizens in the water conservation programs offered by Austin with bill stuffers (4 times/year minimum) and advertising;

(2) adopt an incentive plan for low-flush toilet retrofits that will include Austin rebates plus matching Rollingwood rebates (would currently add $60 per toilet, for a total rebate of $120);

(3) send letters to high volume water users offering irrigation audits;

(4) review its landscaping ordinances to promote water conservation, with the consideration of recommendations by the Austin Water Conservation Office;

(5) adopt an ordinance requiring separate water meters for commercial irrigation where feasible;

(6) in consultation with the Austin Water Conservation Office, adopt a conservation water rate ordinance that is effective in promoting water conservation; and

(7) provide a rebate for purchasing horizontal axis washing machines (now set at $50).

3.07. Water Conservation Ordinance . Separate from the requirements of Section 3.06, Rollingwood agrees to adopt and enforce an ordinance with similar provisions to Austin's emergency and peak day water management provisions, Chapter 4-2, Article II, 1999 City Code, as in effect on the date of this Agreement, within the wholesale water service area in this agreement. In the event that ordinance is amended, Austin will give written notice to Rollingwood of those amendments and will request that Rollingwood amend its ordinance to include similar provisions.

3.08. Timely Adoption of Conservation Plan . All ordinances and programs to be adopted by Rollingwood relating to toilet retrofits, emergency and peak day water management, conservation water rate, horizontal axis washing machines, and separate water meters for commercial irrigation, must be adopted before October 1, 2000.

3.09. Penalty Provision . If Rollingwood fails to comply with all the terms of this Agreement with respect to adopting and enforcing water conservation measures, Austin may impose on Rollingwood a monthly water surcharge equal to 25% of the rate determined by cost of service methodology, for as long as Rollingwood remains out of compliance. Before imposing such a surcharge, Austin will give Rollingwood written notice of any such failure, specifying in detail the alleged non-compliance. Rollingwood will have 90 days for the date of the notice to cure the failure. In the event Austin or Rollingwood do not agree on the satisfaction of any of the terms of this Section, either party may request mandatory mediation to resolve the conflict.

ARTICLE IV.
WATER RATES, CHARGES AND BILLING

4.01. Wholesale Water Rates. Rollingwood agrees to make payments to Austin for all water delivered to Rollingwood under this agreement in accordance with the wholesale water rate established and amended from time to time by the Austin City Council for Rollingwood's customer class. The parties agreed billing and payments procedures are below in Section 4.05 and 4.06.

4.02. Rollingwood Water Rates and Charges. During the term of this agreement, Rollingwood shall fix and collect rates and charges for retail water service to its customers that are, in the opinion of the Rollingwood City Council, sufficient, together with any other revenues available to Rollingwood, to produce the amount necessary to operate, repair, and maintain the Rollingwood System, and to pay the cost of wholesale water service from Austin under this agreement.

Rollingwood shall be solely responsible for ensuring that its retail rates and charges are determined and collected in accordance with applicable law.

4.03. Customer Connection Fees. Rollingwood shall be solely responsible for the proper exercise of its governmental power to assess and collect fees, rates, taxes or other charges and for ensuring that the assessment and collection of the same is in compliance with applicable law.

4.04. Utility Service Regulations Applicable. Austin shall deliver wholesale water and charge Rollingwood in accordance with the terms of this Agreement. Rollingwood shall make payments to Austin for wholesale water delivered hereunder in accordance with Austin's Utility Service Regulations, as amended from time to time by Austin Council and the terms of this Agreement.

4.05. Billing and Payment. Austin shall send a bill to Rollingwood once per month setting forth the quantity of water delivered to Rollingwood as determined by Austin's periodic readings of the master meter(s) installed at the agreed points of delivery. Each bill shall include a due date and the total amount owed to Austin based on the metered quantity of wholesale water delivered multiplied by Austin's wholesale water rate for Rollingwood's customer class as amended from time to time by the Austin City Council. Rollingwood shall pay the total amount owed to Austin by the due date on each bill for wholesale water service. If Rollingwood in good faith questions the amount of the bill, Rollingwood shall follow the procedures therefore established in the City of Austin Utility Customer Service Regulations in Chapter 18-4 of the 1999 Austin City Code, as adopted by Austin. In the event of a conflict between this Agreement and the terms of Austin's Utility Service Regulations, the provisions of this Agreement shall prevail.

Rollingwood agrees to make timely payments to Austin for wholesale water service. Payments shall be considered past due 30 days after the due date of each bill for wholesale water service. Austin may apply a late charge on past due payments in accordance with its policies and ordinances applicable to other customers of Austin.

4.06. Effect of Default for Non-Payment. With respect to monthly billings, if Austin has not received payment from Rollingwood by the due date, the bill shall be considered delinquent, unless contested in good faith. In such event, Austin shall notify Rollingwood of such delinquency in writing, if Rollingwood fails to make payment of the delinquent billing within 30 calendar days from the due date, then Austin may, at its discretion, temporarily terminate service to Rollingwood until payment is made, subject to Rollingwood's right of continuity of service during a good faith appeal or a disputed bill as provided by applicable state laws and regulations and Austin's Utility Service Regulations, Chapter 18-4 of the 1999 Austin City Code, as adopted by Austin.

4.07. Penalty for Exceeding Flow Limits. In the event Rollingwood's monthly average of 1.0 million gallons per day (MGD) is ever exceeded, without the assignment of sufficient raw water supply to Austin, Rollingwood agrees to pay a penalty of $5,000 per month for each month of exceedance of the monthly average under this agreement. Within 30 days of an exceedance of the monthly average, without the assignment of a sufficient raw supply to Austin, Rollingwood must escrow the sum of $5,000 with Austin, and retain an engineer to prepare a report explaining the reasons for the exceedance of the monthly average, and within 60 days of the exceedance of the monthly average under this agreement, without the assignment of a sufficient raw water supply to

Austin, present the engineer's report and proposed solution to Austin. Within 120 days of the exceedance of the monthly average,without the assignment of a sufficient raw water supply to Austin, Rollingwood must take appropriate action, as detailed in the engineer's report. If Rollingwood either completes the curative action within 120 days or, if the parties agree that the curative action cannot be completed within 120 days, commences the curative action within 120 days and thereafter diligently pursue the curative action to completion, Austin will return the $5,000 escrow deposited with Austin. If Rollingwood fails to act within 120 days as required by this section, then the $5,000 escrow will be retained by Austin as an additional penalty for Rollingwood's violation of the monthly average limit contained in this Agreement. Based on the engineer's report and following a written request by Austin, Rollingwood will take immediate corrective action to reduce the exceedance of the monthly average under this agreement . The return or forfeiture of the $5,000 escrow amount shall not exempt Rollingwood from the requirement of escrowing another $5,000 with Austin should any subsequent exceedances of the monthly average occur.

4.08. Obligation of Rollingwood. The parties agree that Rollingwood's obligation under this agreement to make payments to Austin for water service in any fiscal year are a current expense for that fiscal year payable solely from the revenues of Rollingwood's Water System for that fiscal year. The obligation of Rollingwood to make payments to Austin does not constitute a general obligation or indebtedness of Rollingwood for which Rollingwood is obligated to levy or pledge any form of taxation.

ARTICLE V.
MASTER METERS

5.01. Master Meters Required. Water consumed by Rollingwood shall be measured by master water meters of a design, size, location and configuration approved by the Director and Rollingwood. The parties agree that the existing master water meters located at the points of delivery in **Exhibit A** shall be deemed approved under this Section upon the effective date of this agreement.

5.02. Master Meter Installations. A master meter (s) and related facilities, including a meter loop, a meter house or pit and appurtenances required for properly measuring the quantity of water delivered to Rollingwood shall be installed at each agreed new point of delivery of wholesale water to Rollingwood. Rollingwood, at its own expense, shall install and provide the meter loop, and the meter house or pit and appurtenances unless such expense is related to Austin's desire to change the point of delivery in which event Austin shall bear such expense. Austin shall provide and install the master meter(s) and the meter(s) shall be the property of Austin for all purposes hereunder. In the event that Rollingwood requests a change in the agreed points of delivery, Rollingwood shall bear the expense of providing and installing the meter. In the event Austin requests an addition or change in the points of delivery, Austin shall bear the expense of providing and installing the meter. Austin shall operate and maintain the master meter(s) and related equipment and appurtenances and shall calibrate the metering equipment annually and more frequently upon request by Rollingwood provided, however, that the additional cost of calibrating the metering equipment shall be directly borne by Rollingwood if requested more frequently than once every twelve (12) months. Any meter registering within AWWA (American Water Works Association) standards for that type and size of meter shall be deemed to be accurate. Unless otherwise agreed in writing, if any meter fails to

register accurately for any period, City's charge for the amount of water furnished during such period shall be determined in accordance with Austin's Utility Service Regulations as in effect on the effective date of this Agreement. Austin shall read the metering equipment at least once for each monthly billing cycle.

ARTICLE VI.
CONSTRUCTION OF FACILITIES

6.01. Construction by Rollingwood. Unless otherwise agreed in writing, Rollingwood shall be solely responsible for design, engineering, financing, construction, installation, inspection, operation, maintenance, repair and replacement of all Rollingwood capital facilities for the transmission and delivery of water within the wholesale water service area in this agreement.

6.02. Reselling of Water. Rollingwood shall not permit the resale of potable water provided by Austin under this agreement.

6.03. Approval of Plans and Specifications. All Metering Facilities shall be constructed or installed to City of Austin Standard Specifications and in accordance with plans and specifications approved by Austin, the Commission, the Texas Department of Health and any other agency having jurisdiction thereof.

All plans and specifications for Metering Facilities to be constructed by Rollingwood shall be subject to review and approval of the Director prior to commencement of construction which approval will not be unreasonably withheld or delayed. The Director will review and approve or disapprove any plans submitted under this subsection within 30 days of submittal. Upon request by the Director, Rollingwood shall timely submit all documents that are needed for the review and approval of plans and specifications. If any plans are not approved, the Director will provide written comments to Rollingwood specifying in detail the changes that will be required for approval of the plans and specifications. Rollingwood agrees not to advertise for bids until approval from the Director has been secured with respect to the plans and specifications.

If after approval of the plans and specifications for particular Metering Facilities by Austin, Rollingwood fails to enter a construction contract for those facilities within two years, Rollingwood must resubmit the plans and specifications for review and approval by the Director to assure their conformity with Austin's then current specifications, current laws, ordinances, and regulations. If such plans and specifications do not conform to the then existing standards, then, upon the request of the Director, Rollingwood agrees to revise the plans and specifications to meet Austin's standards before commencement of construction.

6.04. Construction Responsibilities. Unless otherwise agreed in writing, it is understood and acknowledged that Rollingwood is responsible for the design, engineering, financing, construction, inspection and ownership of all Rollingwood Water Facilities.

6.05. Inspection by City. Austin may, but is not obligated to, inspect all phases of the construction and installation of Metering Facility and may charge City inspection fees for the

inspections of the Metering Facility. Inspection fees for the Metering Facility shall be determined in accordance with applicable City ordinances as such ordinances may be amended from time to time. Any Metering Facility constructed by Rollingwood will be dedicated to Austin for ownership, operation, and maintenance.

6.06. Notification of Commencement of Construction. After all required approvals for construction of the Metering Facility are obtained but prior to commencement of construction, Rollingwood shall provide written notice to the Director of the date on which construction of the facilities is scheduled to commence to allow Austin to assign an inspector.

6.07. As-Built or Record Drawings Upon Completion of Construction. Following completion of construction of Rollingwood Water Facilities and the Metering Facility or any portion thereof, Rollingwood shall provide, at Rollingwood's expense, to the Director as-built drawings or record drawings of each such completed project within 30 days of Rollingwood receiving them. Rollingwood will not be required to create new as-built or record drawings for water and metering facilities that were constructed prior to the effective date of this Agreement but may be required to provide other existing records or information concerning the construction of those facilities.

6.08. Required Rights-of-Way. Rollingwood shall be responsible for obtaining any easements or rights-of-way necessary for the construction of the Metering Facility or for construction of Austin Water Facilities within the wholesale water service area in this agreement. Austin shall be responsible for obtaining any easements or rights-of-way necessary for the construction of Austin Water Facilities outside of the wholesale water service area in this agreement. The form and content of easements for any Metering Facility to be dedicated to Austin under this Agreement shall be subject to review and approval by the Director and the City Attorney of Austin or his designee before final acceptance of such facilities by Austin, which approval will not be unreasonably withheld or delayed.

6.09. Right of Entry. During the term of this Agreement, Austin shall have the right of entry and access at all times to facilities comprising or connected to Rollingwood's Water System for any purpose related to providing wholesale water service hereunder or activities preparatory or incident hereto, to inspect Rollingwood Water System and the Metering Facility, to investigate the source of operational or maintenance problems or for preventative purposes intended to detect, minimize or avert operational or maintenance problems.

6.10. Operation and Maintenance. Austin shall be responsible for operation and maintenance of all Austin Water System and the Metering Facility constructed for the purpose of transporting water to Rollingwood or its customers. Unless otherwise agreed in writing, Rollingwood shall be responsible and totally liable for operation, maintenance, and leakage of water of all Rollingwood Water Facilities constructed for transportation and delivery of water to its retail customers whether within or outside Rollingwood from the City's master meters.

6.11. Option to Participate in Oversizing. Notwithstanding the foregoing, Rollingwood shall provide Austin with at least three (3) months notice of Rollingwood's intent to construct or expand its Rollingwood Water Facilities and, within such period, Austin shall have the option to request the oversizing of same for the benefit of other customers of Austin's regional water system.

6.12. Oversizing Costs. In the event that Austin elects to request and Rollingwood agrees to proceed with the requested oversizing of Rollingwood Water Facilities, Austin and Rollingwood shall, by separate written agreement approved by the respective governing bodies of each party and executed prior to the expenditure of funds therefore, provide for the design, construction, inspection, operation and maintenance, ownership and use of such oversized capital facilities in addition to such other and further matters appertaining thereto as may be of mutual interest. In no event shall Austin's right to ownership and use of the oversized facilities be less than the oversized capacity for which Austin is providing funding as determined by the Director.

ARTICLE VII.
SERVICE AREA AND LIMITATIONS ON SERVICE

7.01. Limitation of Service Area. Rollingwood acknowledges that, as the provider of water service to other properties in this region, Austin must retain the ability to plan, fund and operate Austin Water Facilities needed to serve not only Rollingwood but all other customers of Austin's water system and that the expansion of customer service areas by any customer without the consent of Austin detrimentally affects the capability of Austin to plan, fund and operate its Water System for the benefit of all Austin water customers. Accordingly, the parties agree to the following:

(a) This agreement is for a specific level of wholesale water service for the wholesale service area. Rollingwood may not provide service outside the wholesale water service area without the prior approval of the Austin City Council .

(b) Austin's City Council reserves the right to deny for any reason any or all requests by Rollingwood to expand the level of the wholesale water service under this Agreement or to serve outside the wholesale water service area .

(c) If Rollingwood authorizes and provides water service outside the wholesale water service area, without the approval of Austin, as reflected by an amendment to the 2000 Agreement duly approved by the governing bodies of Austin and Rollingwood, Austin may terminate this agreement, or require Rollingwood to terminate service to the land outside the wholesale water service area.

(d) Rollingwood may not connect any customer that Rollingwood knows provides water service directly or indirectly to another person or entity outside the wholesale water service area. Rollingwood will immediately terminate the service of any such customer once it discovers any such connection.

7.02. Consideration for Wholesale Water Service. Rollingwood acknowledges that Austin has entered into this agreement based in part on Rollingwood's agreement to limit it's water service to the wholesale water service area in this agreement, limit it's monthly average volume of water usage to 1.0 MGD, and adopt and enforce ordinances and a water conservation program that meet or exceed the requirements of Austin and the TNRCC.

7.03. No Delegation of Governmental Authority. The limitations stated herein shall not be construed as a delegation by Rollingwood to Austin of any governmental authority or power but rather shall be construed as a contractual requirement for consent by Austin to the enlargement of Austin's required performance hereunder and a condition precedent to further performance by Austin hereunder.

7.04. Requests for Service Outside Rollingwood. With respect to all land for which service outside Rollingwood and its extraterritorial jurisdiction is formally requested, Rollingwood shall require the petitioner to submit a land use plan covering the land for which service outside Rollingwood and its extraterritorial jurisdiction is requested together with a statement of the engineering requirements for such property at the time of such petition for approval. Rollingwood covenants and agrees to forward to the Director of Austin's Water and Wastewater Utility a true copy of any written or other formal request for service outside of Rollingwood and its extraterritorial jurisdiction within ten (10) business days of receipt thereof by Rollingwood. Upon the receipt thereof, Austin will promptly initiate all reviews thereof required by applicable Austin ordinances, as amended from time to time. Requests for approval of service outside of Rollingwood shall be subject to review and approval by the Austin City Council, Director of Planning and Development, and the Director of Austin's Water and Wastewater Utility.

7.05 Reciprocal Service Covenant. Austin and Rollingwood agree that, upon the request of the other, temporary water service will be provided to retail customers along or adjacent to the corporate limits of the requesting entity until the requesting entity is able to construct its lines and mains necessary to service such customers provided that:

(a) the non-requesting entity has lines and mains within a reasonable distance and is capable of providing such retail service;

(b) the non-requesting entity agrees to provide such retail service on a temporary basis;

(c) provision of such retail service will not result in a need for substantial construction or diminution in retail service to its own customers; and

(d) the non-requesting entity providing temporary retail service may place such limitations on the level and geographic scope of such temporary retail service as is deemed in the best interest of such non-requesting entity;

(e) the customer receiving such retail service agrees to accept the same from the non-requesting entity and pay applicable fees, costs and charges necessary to extend such temporary retail service;

(f) provision of such temporary retail service does not violate applicable law, the provisions of any agreement respecting the provision of utility service to the area or the provisions of any certificate of convenience and public necessity (CCN) respecting utility service area boundaries.

ARTICLE VIII.
TERM AND RENEWALS

8.01. Term of Agreement. This Agreement shall be effective from the date of due execution by the authorized representatives of Austin and Rollingwood and shall continue in effect for a period of thirty (30) years unless earlier terminated in accordance with the provisions hereof.

8.02. Termination. Without prejudice to any provision hereof setting forth terms for automatic expiration, this Agreement may be terminated by Austin in the event of default of any of the provisions in this agreement by Rollingwood by giving thirty six (36) months written notice to Rollingwood. In the event that Austin elects to terminate this Agreement by giving thirty six (36) months written notice, Rollingwood shall exercise reasonable diligence to timely secure an alternative supply of potable water prior to the effective date of such termination. In the event of termination hereunder for any reason, Austin shall not be responsible for any costs and expenses of Rollingwood related, directly or indirectly, to securing alternative water service to Rollingwood.

8.03. Default. In the event that one party believes that the other party is in default of any of the provisions in this agreement, the non-defaulting party will make written demand to cure to the defaulting party and give the defaulting party up to 90 days to cure the default or, if the curative action cannot reasonably be completed within 90 days, the defaulting party will commence the curative action within 90 days and thereafter diligently pursue the curative action to completion. This period must pass before the non-defaulting party may initiate any remedies available to the non-defaulting party due to such default. The non-defaulting party shall mitigate direct or consequential damages arising from any default to the extent reasonably possible under the circumstances. The parties agree that they will use their best efforts to resolve any disputes and may engage in non-binding arbitration or other alternative dispute resolution methods as recommended by the laws of the State of Texas before initiating any lawsuit to enforce their rights under this agreement. Nothing in this agreement shall be construed to limit either parties' right to recover damages or to seek other appropriate curative remedies if a breach of contract action is filed by a non-defaulting party to this agreement.

8.04. Changes in Law Affecting the Rights of Other Party. Austin may terminate this Agreement on thirty (30) days written notice to Rollingwood if, during the tenure of this Agreement, Rollingwood directly sponsors, requests, lobbies for, or secures the adoption of state or federal legislation that is primarily designed to impair, undermine, restrict, eliminate, or otherwise adversely affect the rights of Austin under this Agreement. Rollingwood may terminate this Agreement on thirty (30) days written notice to Austin if, during the tenure of this Agreement, Austin directly sponsors, requests, lobbies for, or secures the adoption of state or federal legislation that is primarily designed to impair, undermine, restrict, eliminate, or otherwise adversely affect the rights of Rollingwood under this Agreement.

Notwithstanding the above, the tender of comments or analyses with regard to proposed legislation or rules of a government agency affecting this Agreement shall not give rise to an ability to terminate this Agreement pursuant to this Section.

In the event that Rollingwood secures adoption of legislation modifying or declaring this Section unlawful for any reason, this Agreement will terminate and expire automatically on the day prior to the effective date of such legislation.

8.05. Renewal. This Agreement may be renewed or extended by mutual agreement of the parties in writing for such additional periods as may be approved by the governing bodies of Rollingwood and Austin. No continuation of water service obligation is expressed or implied by Austin to Rollingwood beyond the term of this agreement.

ARTICLE IX.
PERFORMANCE AND FORCE MAJEURE

9.01. Effect of Force Majeure. In the event that either party is rendered unable by force majeure to carry out any of its obligations under this Agreement, whether in whole or in part, then the obligations of that party, to the extent affected by the force majeure, shall be suspended during the continuance of the inability provided, however, that due diligence is exercised to resume performance at the earliest practicable time. As soon as reasonably possible after the occurrence of the force majeure relied upon to suspend performance, the party whose contractual obligations are affected thereby shall give notice and full particulars of the force majeure to the other party. The cause, as far as possible, shall be remedied with all reasonable diligence. The term "force majeure" includes acts of God, strikes, lockouts or other industrial disturbances, criminal conduct or sabotage, acts of the public enemy, orders of the government of the United States or the State of Texas or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, washouts, droughts, arrests, restraints of government and civil disturbances, explosions, breakage, or accidents to equipment, pipelines, or canals, partial or complete failure of water supply, and any other inability of either party, whether similar to those enumerated or otherwise, that are not within the control of the party claiming their ability and that could not have been avoided by the exercise of due diligence. It is understood and agreed that the settlement of strikes, lockouts and other industrial or labor disturbances shall be entirely within the discretion of the party having the difficulty and that the requirement that any force majeure be remedied with all reasonable dispatch shall not require the settlement of strikes, lockouts or other industrial or labor disturbances by acceding to the demands of the opposing party if the settlement is unfavorable to it in the judgment of the party having the difficulty. Force majeure shall relieve Austin from liability to Rollingwood or any water customer of Rollingwood for failure to provide water service due to an inability covered by this Article. Force majeure shall not relieve Rollingwood of its obligation to make payment to Austin for water service rendered as provided in this Agreement.

ARTICLE X.
GENERAL PROVISIONS

10.01. Notices. Any notice required or permitted to be delivered under this Agreement shall be forwarded via hand-delivery or the United States Postal Service, postage prepaid, to the addresses shown below:

City of Austin
P.O. Box 1088
Austin, Texas 78767-8828
Attn: Director
Water and Wastewater Utility

City of Rollingwood
403 Nixon Drive
Rollingwood, Texas 78746
Attn: Mayor

Each party shall forward to the other within twenty four (24) hours of the filing thereof in the Commission or other court or agency of competent jurisdiction a true copy of any petition, application or other instrument affecting this Agreement, whether directly or indirectly.

10.02. Address Change Procedure. The addresses of the parties shall, until changed as hereinafter provided, be as shown above. The parties shall have the right at any time to change their respective addresses by giving written notice of same to the other party.

10.03. Interlocal Cooperation. Austin and Rollingwood shall cooperate with each other at all times so as to promote the efficient performance of the utility services provided to Rollingwood hereunder. Austin and Rollingwood agree to use a third-party mediation service for any unresolved disputes prior to seeking legal remedies through lawsuits or court actions. This requirement does not preclude the actions available to both parties specifically identified in this contract.

10.04. Provision of Data, Documents. Rollingwood agrees to timely provide to Austin at Rollingwood's expense all requested data, records, plans and specifications, computer tapes, or other documents or information necessary or incidental to the provision of potable water service to Rollingwood under this agreement. Austin agrees to timely provide to Rollingwood at Austin's expense all requested data, records, plans and specifications, computer tapes, or other documents or information necessary or incidental to the provision of potable water service to Rollingwood.

10.05. Provision of Further Documents. Rollingwood and Austin shall execute and deliver such other and further requested legal documents or instruments and perform such other and further acts as are reasonably necessary to effectuate the purposes and intent of this Agreement.

10.06. Severability. The provisions of this Agreement are severable, and if any word, phrase, clause, sentence, paragraph, section, or other part of this Agreement or the application thereof to any person or circumstances shall ever be held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such word, phrase, clause, sentence, paragraph, section, or other part of this Agreement to other persons or circumstances shall not be affected thereby and this Agreement shall be construed as if such invalid or unconstitutional portion had never been contained herein.

10.07. Entire Agreement. This Agreement, including any exhibits attached hereto and made a part hereof by reference for all purposes, constitutes the entire agreement between the parties relative to the subject matter of this Agreement and supersedes all prior or contemporaneous agreements, representations, covenants or warranties, whether oral or in writing, respecting the subject matter hereof.

10.08. Previous Contract. This agreement by the parties supercedes that certain agreement entitled Water Contract, "1968 Water Contract", pursuant to which Austin provided a potable water supply to Rollingwood for its distribution system. Upon the execution of this agreement, the 1968 Water Contract and any and all other previous water service contracts between Austin and Rollingwood, shall be null, void and of no further legal force and effect.

10.09. Compliance with Rules. Rollingwood agrees to file a copy of this agreement with the Executive Director of the Texas Natural Resource Conservation Commission, P.O. Box 13087, Capitol Station, Austin, Texas 78711, it being fully recognized by the parties hereunder that the effectiveness of this contract is dependent upon and subject to compliance with all valid rules, regulations, and applicable laws of the United States of America, the State of Texas, Austin, Rollingwood, or any other governmental body or agency having lawful jurisdiction or any authorized representative or agency of any of them.

10.10. Water Line Breaks. Rollingwood shall notify Austin of any water line breaks inside the wholesale water service area in this agreement. Rollingwood is responsible for timely providing any required notice to Federal, State, and / or local government officials regarding water line breaks.

10.11. Liability. Rollingwood agrees to hold Austin harmless from any and all liability or claims or demands whatsoever for personal injury, property damage, damages to Rollingwood's Water System, or other loss, penalty, or expense arising directly or indirectly from the provision of water service under this agreement, to which Austin may be subjected to by reason of any injury to any person or damage to any property resulting or in any way connected with any and all actions and activities (or failure to act) of Rollingwood under this Agreement. Austin agrees to hold Rollingwood harmless from any and all liability or claims or demands whatsoever for personal injury, property damage, damages to Austin's Water System, or other loss, penalty, or expense arising directly or indirectly from the provision of water service under this agreement, to which Rollingwood may be subjected to by reason of any injury to any person or damage to any property resulting or in any way connected with any and all actions and activities (or failure to act) of Austin under this Agreement. Nothing in this section shall be construed to limit either parties' right to recover damages or to seek other appropriate curative remedies if a breach of contract action is filed by a non-defaulting party to this agreement.

10.12. Amendment. No amendment of this Agreement shall be effective unless and until it is duly approved by the governing bodies of each party and reduced to a writing signed by the authorized representatives of Austin and Rollingwood.

10.13. Independent Contractor. Austin shall have the status of an independent contractor hereunder and shall be solely responsible for the proper direction of its employees hereunder and Austin's employees shall not be considered employees or borrowed servants of Rollingwood for any reason.

10.14. No Third Party Beneficiary. This Agreement shall be construed as an interlocal contract respecting the performance of governmental services and nothing herein shall be construed to confer any right, privilege or benefit on any person or entity not a party hereto or otherwise creates any vested right or third party beneficiary relationship.

10.15. Governing Law. This Agreement shall be construed under the laws of the State of Texas and all obligations of the parties are deemed performable in Travis County, Texas.

10.16. Venue. Venue for any suit arising under this Agreement shall be in Travis County.

10.17. Assignment. Neither party may assign its rights and obligations hereunder without the prior written consent of the other.

10.18. Duplicate Originals. This Agreement may be executed in duplicate originals each of equal dignity.

10.19. Effective Date. This Agreement shall become effective on the date of execution by the authorized representatives of Austin and Rollingwood.

IN WITNESS WHEREOF, the authorized representatives of Austin and Rollingwood have executed this Agreement as of the date(s) set forth below.

APPROVED AS TO FORM:

Assistant City Attorney

CITY OF AUSTIN:

By: Toby Hammett Futrell

Toby Hammett Futrell
Assistant City Manager

Date: 2/3/00

APPROVED AS TO FORM:

Attorney for City of Rollingwood

CITY OF ROLLINGWOOD:

By:

Thom Farrell, Mayor
City of Rollingwood

Date: 1/31/2000

By:

Deets Justice, Alderman
City of Rollingwood

Date: 1/31/2000

THE STATE OF TEXAS)
)
COUNTY OF TRAVIS)

THIS INSTRUMENT is acknowledged before me on this 3rd day of February, 2000, by Toby Hammett Futrell, Assistant City Manager of Austin, Texas, a municipal corporation, on behalf of said municipal corporation.

JOBETH L. PRENTICE
MY COMMISSION EXPIRES
September 18, 2000

Jo Beth L. Prentice
Notary Public, State of Texas

Printed/Typed Name of Notary

My Commission Expires: _____

THE STATE OF TEXAS)
)
COUNTY OF TRAVIS)

THIS INSTRUMENT was acknowledged before me on this 31st day of January, 2000 by Thom Farrell, Mayor of the City of Rollingwood, a municipal corporation, on behalf of said municipal corporation.

JOHN J. CARLTON
Notary Public, State of Texas
My Commission Expires
SEPT. 9, 2002

Notary Public, State of Texas

Printed/Typed Name of Notary

My Commission Expires: _____

THE STATE OF TEXAS)
)
COUNTY OF TRAVIS)

THIS INSTRUMENT was acknowledged before me on this 31st day of January, 2000 by Deets Justice, Alderman of the City of Rollingwood, a municipal corporation, on behalf of said municipal corporation.

JOHN J. CARLTON
Notary Public, State of Texas
My Commission Expires
SEPT. 9, 2002

Notary Public, State of Texas

Printed/Typed Name of Notary

My Commission Expires: _____

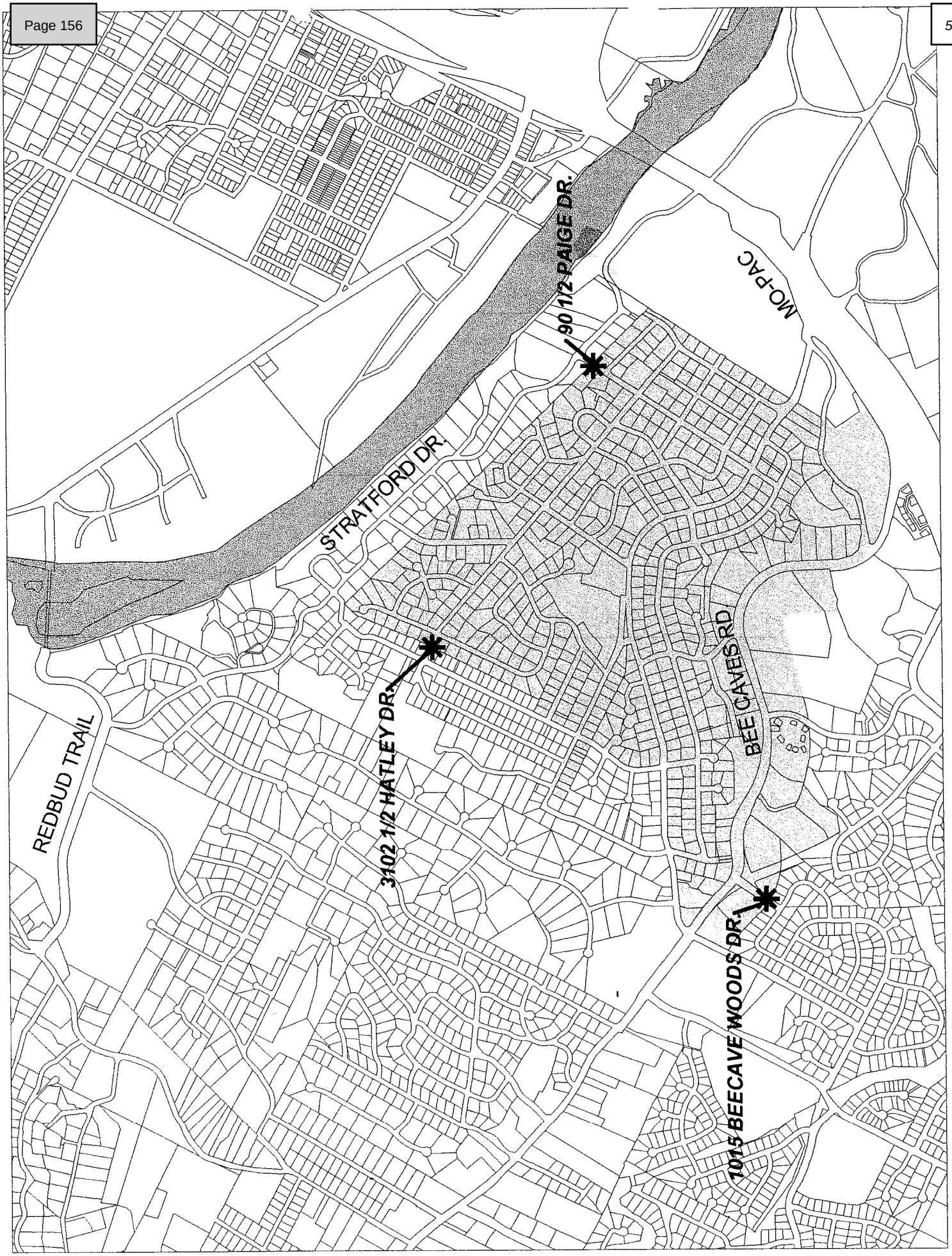

90 1/2 PAIGE DR.
MO-PAC
STRATFORD DR.
BEE CAVES RD.
3102 1/2 HATLEY DR.
REDBUD TRAIL
1015 BEECAVE WOODS DR.

EXHIBIT A

Appendix B: 2000 Water Agreement First Amendment

FIRST AMENDMENT TO AGREEMENT FOR WHOLESALE WATER SERVICE BETWEEN THE CITY OF AUSTIN AND THE CITY OF ROLLINGWOOD

THE STATE OF TEXAS §

COUNTY OF TRAVIS §

This First Amendment to 2000 Agreement for Wholesale Water Service Between the City of Austin and the City of Rollingwood ("First Amendment") is entered into between the City of Austin, a Texas home rule municipality ("Austin") and the City of Rollingwood, a Texas general law municipality ("Rollingwood"), collectively "Parties," to modify certain rights and responsibilities of the Parties under a previous agreement for wholesale wastewater service.

RECITALS

A. Austin and Rollingwood previously entered into a 2000 Agreement for Wholesale Water Service Between the City of Austin, Texas and the City of Rollingwood, Texas ("2000 Water Contract") dated effective February 3, 2000, that is currently in full force and effect, setting forth certain terms and conditions under which Austin agreed to provide water service, on a wholesale basis, to Rollingwood for its distribution system serving retail connections within Rollingwood's corporate boundaries and extraterritorial jurisdiction.

B. Rollingwood and Austin now mutually desire to modify certain rights and responsibilities of the Parties under the 2000 Water Contract as hereinafter set forth;

AGREEMENT

NOW, THEREFORE, for good and valuable consideration, including the mutual agreements, covenants and conditions set forth in this First Amendment to the 2000 Water Contract, Austin and Rollingwood agree as follows:

1. A new section 2.09 is hereby incorporated into the 2000 Water Contract to read as follows:

> **2.09 Provision by Rollingwood of Source for Raw Water.** After the expiration of four (4) years following the Effective Date of this First Amendment, Austin will reexamine its raw water supply and need for additional raw water and, at the option of the Director upon at least twelve (12) months written notice to Rollingwood ("Austin Notice Period"), may require Rollingwood to provide its own source of raw water for Austin to treat and transport to Rollingwood in lieu of and substitution for using Austin's own water rights or contract supply of raw water to treat and provide Water to Rollingwood pursuant to this Agreement.
>
> After the expiration of four (4) years following the Effective Date of this First Amendment, Rollingwood may provide at least twelve (12) months written notice ("Rollingwood Notice Period") to the Director that Rollingwood desires to provide its own source of raw water for Austin to treat and transport to

Rollingwood in lieu of and substitution for Austin using its own water rights or contract supply of water to meet its obligations under this Agreement.

The alternative source of raw water to be obtained by Rollingwood must be surface water from the lower Colorado River located in Travis County, Texas, be accessible to Austin at a point or points of diversion reasonably approved by the Director and, if necessary, the Lower Colorado River Authority, to allow Austin to employ its existing raw water intake facilities for withdrawal of Rollingwood's raw water from the Colorado River without additional expense to Austin. Since Austin will be withdrawing raw water from the Colorado River on behalf of Rollingwood, terms and conditions relating to such raw water supply will be subject to review and approval by the Director in advance of the execution of any agreement between Rollingwood and any third party providing for the extraction of raw water from the Colorado River for the benefit of Rollingwood. The approval by the Director of such request from Rollingwood will not be unreasonably delayed or withheld.

If Rollingwood has not secured an alternative source of raw water on terms reasonably acceptable to Rollingwood and the Director prior to expiration of the Austin Notice Period or Rollingwood Notice Period, as applicable, Austin may terminate this Agreement upon thirty (30) days advance written notice to Rollingwood, whereupon this Agreement will automatically terminate and expire upon the expiration of such thirty (30) day period without further notice and will thereafter be of no further force or effect. In the event of termination of this Agreement pursuant to this Section 2.09, Rollingwood will be solely responsible for all costs associated with securing an alternative source of Water for the Wholesale Water Service Area. If Rollingwood has commenced and is proceeding in reasonable good faith to complete contractual negotiations to secure an alternative source of raw water within the Austin Notice Period or Rollingwood Notice Period, as applicable, but cannot reasonably complete such contractual agreement prior to the expiration of the applicable notice period, and, prior to the expiration of such notice period, Rollingwood makes written request for an extension of the time to obtain an alternative raw water source, as applicable, the Director agrees to extend the Austin Notice Period or Rollingwood Notice Period, as applicable, for a reasonable period, not to exceed one hundred eighty (180) days.

In the event that (a) Rollingwood notifies Austin of its decision to provide its source of raw water for treatment and transportation pursuant to this Agreement and the City approves such request, or (ii) Austin requires Rollingwood to provide its own source of raw water for treatment and transportation by Austin pursuant to this Agreement, Austin will begin using the raw water supplied by or on behalf of Rollingwood in the fiscal year next succeeding the approval by the Director of Rollingwood's arrangements for such alternative raw water supply. In such an event, and prior to the commencement of such succeeding fiscal year, Austin agrees to recompute the then wholesale water rate for the provision of Water to Rollingwood in order to delete Austin's cost of raw water allocable to Rollingwood from the wholesale water rate applicable to Rollingwood.

2. **Defined Terms.** All terms delineated with initial capital letters in this First Amendment that are defined in the 2000 Water Contract have the same meanings in this First Amendment as in the 2000 Water Contract. Other terms have the meanings commonly ascribed to them.

3. **Effect of First Amendment.** Except as specifically provided in this First Amendment, the terms of the 2000 Water Contract continue to govern the rights and obligations of the parties, and all terms of the 2000 Water Contract, as modified by this First Amendment, remain in full force and effect. The 2000 Water Contract is incorporated herein by reference for all purposes. The Parties recognize that this First Amendment is a legally binding document and is enforceable under the laws of the State of Texas. In the event a dispute arises over the meaning or performance of this Agreement, the Parties agree that venue for any lawsuits shall be in Travis County, Texas. The prevailing Party in such a dispute shall be entitled to costs and attorney's fees, in addition to any damages or specific performance.

4. **Multiple Originals.** This First Amendment may be executed in multiple counterparts, each of which will constitute an original.

5. **Effective Date.** This First Amendment will be effective on the date the last party signs.

IN WITNESS WHEREOF, the authorized representatives of Austin and Rollingwood have executed this First Amendment, as authorized by the City Councils of Austin and Rollingwood, on the date(s) indicated below.

CITY OF AUTHORITY

ok JMV

By: _____
Jose E. Canales
Deputy City Manager

Date: 11-29-04

THE STATE OF TEXAS §

COUNTY OF TRAVIS §

THIS INSTRUMENT was acknowledged before me on this 29 day of November, 2004, by Jose E. Canales as Deputy City Manager of the City of Austin, Texas, a municipal corporation, on behalf of said municipal corporation.

SANDRA L. RAMIREZ
NOTARY PUBLIC STATE OF TEXAS
COMMISSION EXPIRES:
JANUARY 23, 2007

_____
Notary Public, State of Texas

CITY OF ROLLINGWOOD

By: _____
Name: Hollis Jefferies
Title: Mayor

Date: 11/17/04

THE STATE OF TEXAS §

COUNTY OF TRAVIS §

THIS INSTRUMENT was acknowledged before me on this 17th day of November, 2004, by Hollis Jefferies as Mayor of the City of Rollingwood, a municipal corporation, on behalf of said municipal corporation.

_____
Notary Public, State of Texas

KIMBERLY S. BECKHAM
Notary Public
STATE OF TEXAS
My Comm. Exp. 08-01-2007

Appendix C: Project Summary Sheets

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: A
Project Name: Hatley/Almarion PRV Replacement

Problem Description

The water model results indicated low pressures along Hatley between Inwood Circle and Wallis Dr.

Proposed Improvements

To eliminate the low pressure areas, the existing PRV located at Hatley and Almarion that is out of service will be repaired. The PRVs at Hatley and Almarion and at Riley and Rollingwood will be set so that the lower pressure zone is fed from the high pressure zone rather than the Riley Master Meter and will increase pressures. The valve located between Ashworth Dr and Wallis Dr will be closed to move Ashworth Dr to the high pressure plane to address low pressure concerns.

CIP Priority

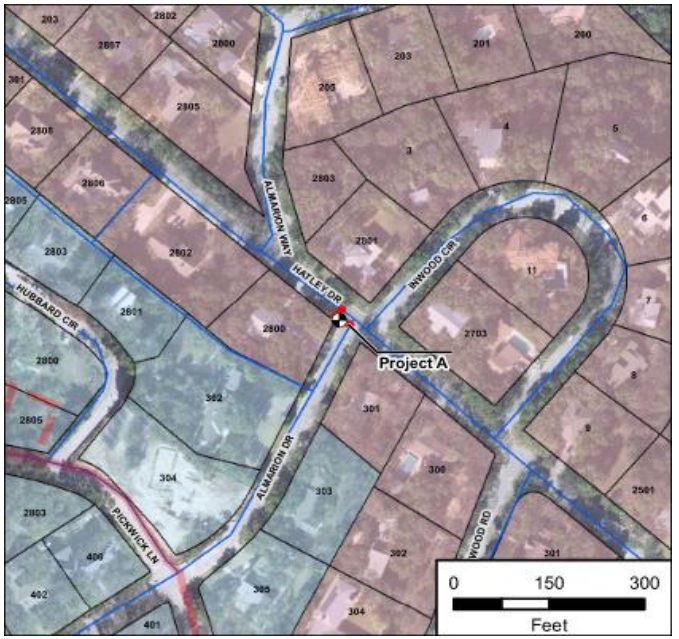
High

Project Costs

Engineering & Survey:	$	5,000
Construction:	$	32,000
Other:		
Total:	**$**	**37,000**
Conceptual Cost Range:		< $100k
Estimated Construction Duration:		1 Month

Assumptions

Project Map



CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: B
Project Name: Vance & Vale St Water Improvements

Problem Description

History of repeated main breaks on older 4" waterline. During most recent repair, the City found that this line is improperly bedded with insufficient cover above the pipe, and the PVC material does not meet industry standards for a water main.

Proposed Improvements

Upsizing undersized 4-inch pipe to typical 8-inch PVC. The limits of the proposed pipe are along Vance Rd and Vale St between Riley Rd to Rollingwood Dr, and continuing along Rollingwood Dr to Timberline Dr. Additionally, abandoning the backyard easement 2-inch pipeline that is located between Farley Tr and Riley Rd. This line has been confirmed active by the City.

CIP Priority

High

Project Costs

Engineering & Survey:	$ 167,000
Construction:	$ 1,108,000
Other:	
Total:	**$ 1,275,000**
Conceptual Cost Range:	$1M - $1.5M
Estimated Construction Duration:	6 Months

Assumptions

- It is assumed that the City wishes to abandon the backyard easement water mains.

Project Map

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: C
Project Name: Inwood Rd Interconnect

Problem Description

Two of the main waterlines for the City cross at the Inwood Rd and Rollingwood Rd intersection, however they were never tied in. Additionally, the existing system showed fire flow concerns along Inwood Rd.

Proposed Improvements

Connecting the Existing 8-inch water main within Rollingwood Dr to the existing 6-inch water main within Inwood Rd to provide a better connected and looped system, thus reducing headlosses during fire flow events.

CIP Priority

High

Project Costs

Engineering & Survey:	$	9,000
Construction:	$	56,000
Other:		
Total:	**$**	**65,000**
Conceptual Cost Range:		< $100k
Estimated Construction Duration:		2 Months

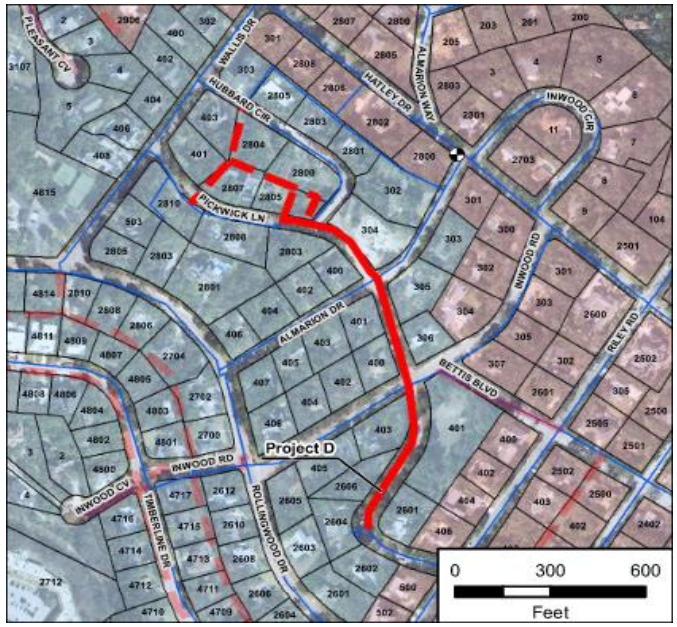
Assumptions

Project Map

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: D
Project Name: Pickwick Dr Fire Flow Improvements

Project Map & Photo



Problem Description

The existing water system model results show that from Pickwick Ln from Wallis Dr to Riley Rd there is not enough flow to satisfy fire flow constraints.

Proposed Improvements

Install 8-inch PVC pipe from Riley Rd to the existing 6-inch PVC at Hubbard Circle. This will include new pipe between Almarion Dr and Inwood Rd. During construction, the backyard easement water mains will be abandoned and the services relocated to water mains located within the roadways,

CIP Priority

High

Project Costs

Engineering & Survey:	$ 94,000
Construction:	$ 624,000
Other:	
Total:	**$ 718,000**
Conceptual Cost Range:	$500k - $750k
Estimated Construction Duration:	12 Months

Assumptions

- It is assumed that the City wishes to abandon the backyard easement water mains.

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: E
Project Name: Bettis Blvd Fire Improvements

Problem Description

There is not enough flow at the pressure plane boundary due to the 4-inch pipe between Hatley and Bettis Blvd.

Proposed Improvements

The proposed installation of 8-inch PVC along Bettis Blvd between Riley Rd and Inwood Rd will provide a better connected and looped water system. This will provide additional flow for fire flow events throughout the lower pressure plane system.

CIP Priority

High

Project Costs

Engineering & Survey:	$	25,000
Construction:	$	164,000
Other:		
Total:	**$**	**189,000**
Conceptual Cost Range:		$150k - $200k
Estimated Construction Duration:		6 Months

Assumptions

Project Map

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: F
Project Name: Park Hills Dr/Laura Ln Fire Improvements

Problem Description

The model results show a significant lack of fire flow coverage for the northern neighborhood of the City.

Proposed Improvements

Upsizing the existing 6-inch mains within Park Hill Dr and Laura Ln to an 8-inch PVC water main will provide the additional fire flow needs for the area.

CIP Priority

High

Project Costs

Engineering & Survey:	$ 98,000
Construction:	$ 653,000
Other:	
Total:	**$ 751,000**
Conceptual Cost Range:	$750k - $1M
Estimated Construction Duration:	6 Months

Assumptions

Project Map

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: G
Project Name: Gentry Dr Fire Improvements

Problem Description

The water model results show that the two fire hydrants located along Gentry Dr between Ridgewood Rd and Brady Ln do not receive enouh flow to satisfy a fire flow requirements

Proposed Improvements

Upsizing the existing 6-inch line with an 8-inch PVC line from Ridgewood Dr to the end of the Rollingwood water system will provide enough flow for the existing fire hydrants.

CIP Priority

High

Project Costs

Engineering & Survey:	$ 31,000
Construction:	$ 201,000
Other:	
Total:	**$ 232,000**
Conceptual Cost Range:	$200k - $250k
Estimated Construction Duration:	6 Months

Assumptions

Project Map

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: H
Project Name: Inwood Cove Fire Improvements

Problem Description

The water model results show that the small water main within the Inwood Cove cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

High

Project Costs

Engineering & Survey:	$ 14,000
Construction:	$ 91,000
Other:	
Total:	**$ 105,000**
Conceptual Cost Range:	$100k - $150k
Estimated Construction Duration:	6 Months

Assumptions

- It is assumed that the City wishes to abandon the backyard easement water mains.

Project Map

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: I
Project Name: Jeffrey Cove Fire Improvements

Problem Description

The water model results show that the small water main within the Jeffrey Cove cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

High

Project Costs

Engineering & Survey:	$	14,000
Construction:	$	91,000
Other:		
Total:	**$**	**105,000**
Conceptual Cost Range:		$100k - $150k
Estimated Construction Duration:		6 Months

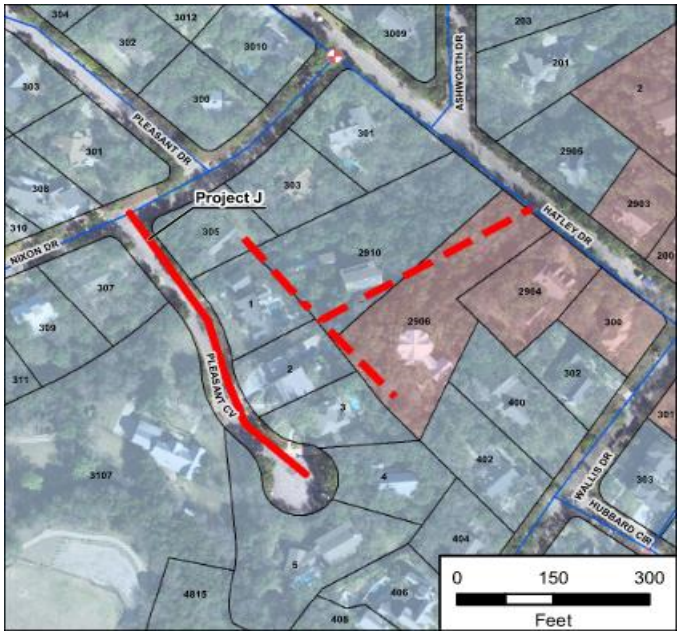
Assumptions

Project Map

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: J
Project Name: Pleasant Cove Fire Improvements

Project Map



Problem Description

The water model results show that the small water main within the Pleasant Cove cul-de-sac does not have enough flow to meet the fire flow design requirements for the existing fire hydrant on the line.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements. Additionally, there are several backyard lines that are proposed to be abandoned and have the services relocated to the new mains.

CIP Priority

High

Project Costs

Engineering & Survey:	$	35,000
Construction:	$	233,000
Other:		
Total:	**$**	**268,000**
Conceptual Cost Range:		$250k - $500k
Estimated Construction Duration:		6 Months

Assumptions

- It is assumed that the City wishes to abandon the backyard easement water mains.

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: K
Project Name: S. Crest Dr Fire Improvements

Problem Description

The water model results show that the small water main within the S. Crest Dr cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

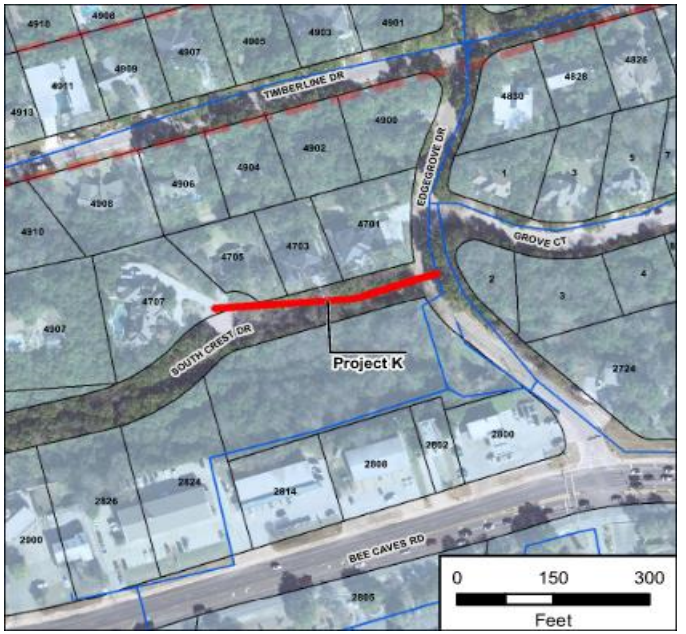
High

Project Costs

Engineering & Survey:	$	22,000
Construction:	$	145,000
Other:		
Total:	**$**	**167,000**
Conceptual Cost Range:		$150k - $200k
Estimated Construction Duration:		6 Months

Assumptions

Project Map



CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: L
Project Name: Westgate Circle Fire Improvements

Problem Description

The water model results show that the small water main within the Westgate Circle cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

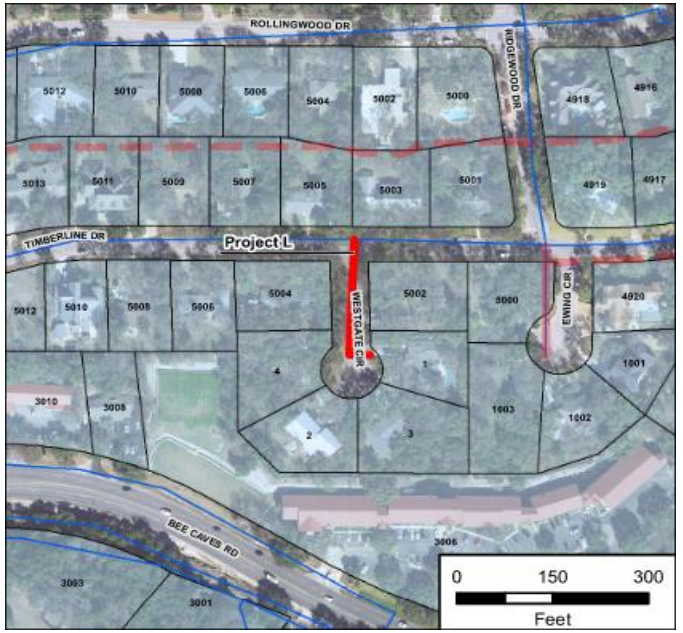
High

Project Costs

Engineering & Survey:	$	14,000
Construction:	$	91,000
Other:		
Total:	**$**	**105,000**
Conceptual Cost Range:		$100k - $150k
Estimated Construction Duration:		6 Months

Assumptions

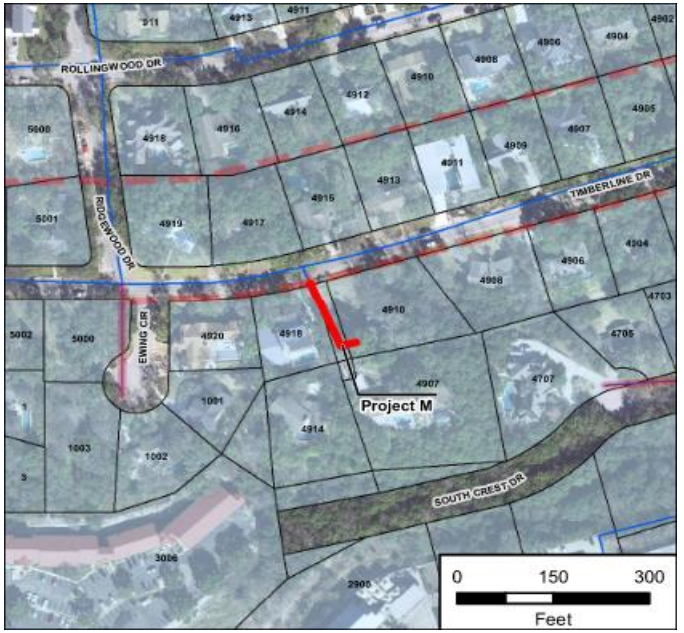
Project Map



CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: M
Project Name: Ewing Easement Main Fire Improvements

Project Map



Problem Description

The water model results show that the small water main within the Ewing Easement does not have enough flow to meet the fire flow design requirements. There are currently two homes served off the line, and the homes are set away from the

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

High

Project Costs

Engineering & Survey:	$	11,000
Construction:	$	73,000
Other:		
Total:	**$**	**84,000**
Conceptual Cost Range:		< $100k
Estimated Construction Duration:		6 Months

Assumptions

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: N
Project Name: Timberline Ridge Fire Improvements

Problem Description

The water model results show that the small water main within the Timberline Ridge cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

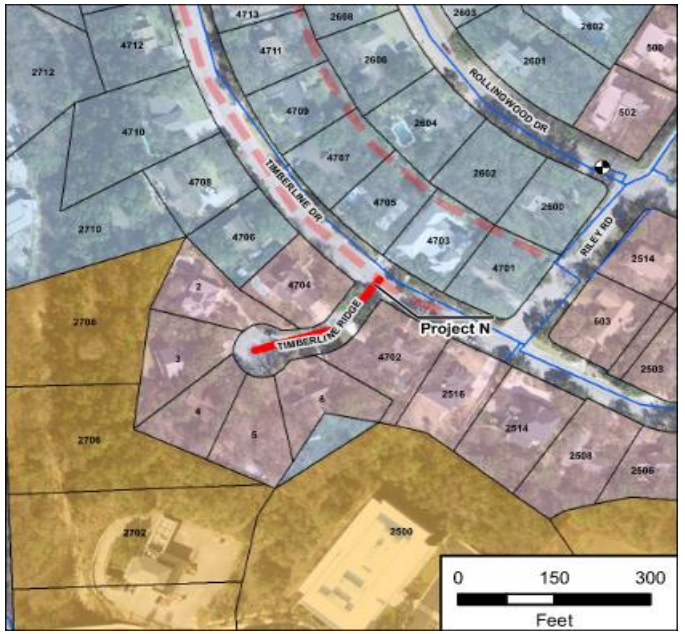
High

Project Costs

Engineering & Survey:	$	14,000
Construction:	$	91,000
Other:		
Total:	**$**	**105,000**
Conceptual Cost Range:		$100k - $150k
Estimated Construction Duration:		6 Months

Assumptions

Project Map



CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: O
Project Name: Abandonment Projects

Problem Description

The current existing water system utilizes a 6-inch water main located in a backyard easement between Timberline Rd and Rollingwood Dr. Additionally, there is an existing 4-inch water main located within Timeberline Dr that is not necessary. The City has expressed a desire to abandon these lines and relocate the existing services.

Proposed Improvements

Abandon approximately 10,000 linear feet of existing water main and relocate existing services that are currently fed from the mains to existing water mains located within the roadways.

CIP Ranking

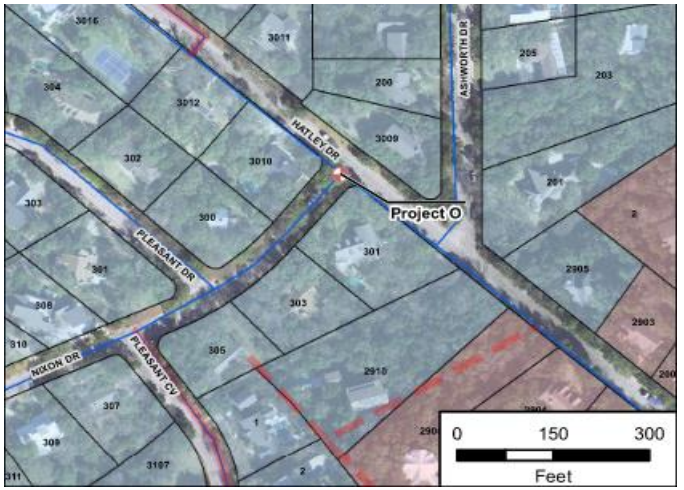
Low

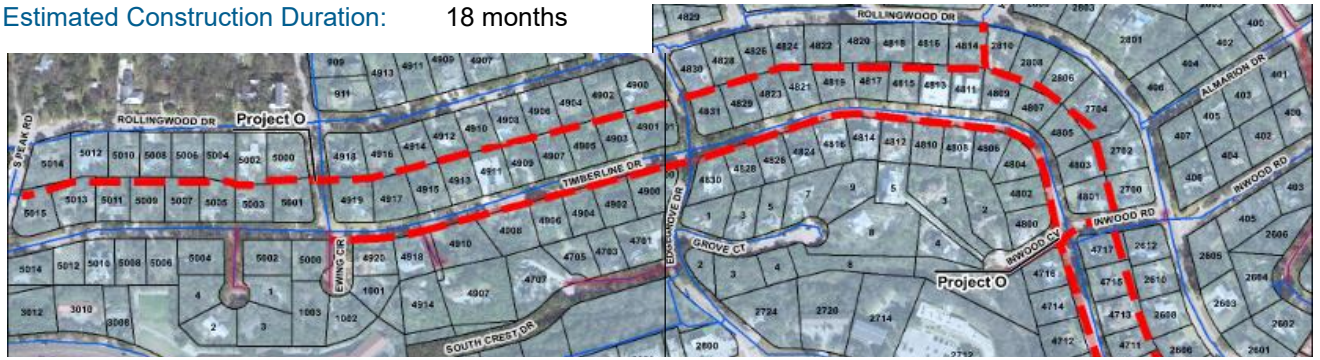
Project Costs

Engineering & Survey:	$ 65,000
Construction:	$ 429,000
Other:	
Total:	**$ 494,000**

Conceptual Cost Range: $250k - $500k
Estimated Construction Duration: 18 months

Project Map





Assumptions

- It is assumed that the City wishes to move forward with this project. This project is not required for functionality of the water system as a whole, but for operational ease.

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: P
Project Name: Town Centre PRV

Problem Description

The water model results indicated high pressures at the Town Centre.

Proposed Improvements

To eliminate high pressures at Town Centre, a new PRV is proposed to be installed on the 12-inch water main that is within Bee Cave Rd. The PRV will solely serve the Town Centre.

CIP Priority

Low

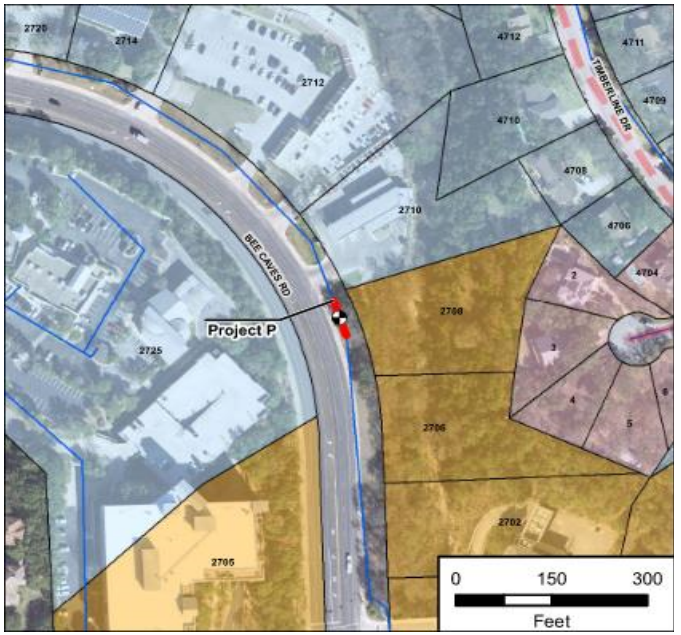
Project Costs

Engineering & Survey:	$	15,000
Construction:	$	97,000
Other:		
Total:	**$**	**112,000**
Conceptual Cost Range:		$100k - $150k
Estimated Construction Duration:		2 Months

Assumptions

-It is assumed that the buildings at the Rollingwood Town Centre do not currently have individual PRV's on their water service. If the properties do have individual PRV's, this project is not required.

Project Map



CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: Q
Project Name: Brett Cove Fire Improvements

Problem Description

The water model results show that the small water main within the Brett Cove cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

Low

Project Costs

Engineering & Survey:	$ 22,000
Construction:	$ 145,000
Other:	
Total:	**$ 167,000**
Conceptual Cost Range:	$150k - $200k
Estimated Construction Duration:	6 Months

Project Map

Assumptions

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: R
Project Name: Ewing Circle Fire Improvements

Problem Description

The water model results show that the small water main within the Ewing Circle cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

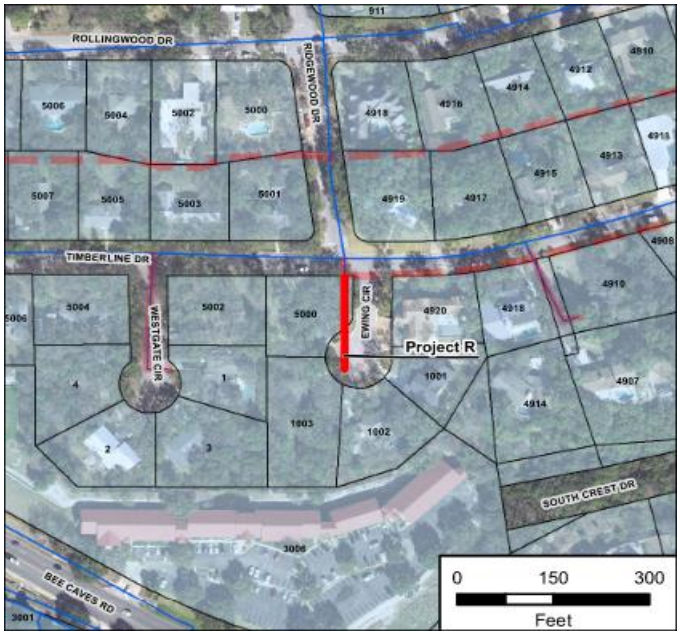
Low

Project Costs

Engineering & Survey:	$	14,000
Construction:	$	91,000
Other:		
Total:	**$**	**105,000**
Conceptual Cost Range:		$100k - $150k
Estimated Construction Duration:		6 Months

Assumptions

Project Map



CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: S
Project Name: Michele Circle Fire Improvements

Project Map

Problem Description

The water model results show that the small water main within the Michele Circle cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

Low

Project Costs

Engineering & Survey:	$	11,000
Construction:	$	73,000
Other:		
Total:	**$**	**84,000**
Conceptual Cost Range:		< $100k
Estimated Construction Duration:		6 Months

Assumptions

CITY OF ROLLINGWOOD
WATER IMPROVEMENTS PLAN
COST SUMMARY

Project ID: T
Project Name: Kristy Dr Fire Improvements

Problem Description

The water model results show that the small water main within the Kristy Dr cul-de-sac does not have enough flow to meet the fire flow design requirements.

Proposed Improvements

Upsizing the existing line with an 8-inch PVC line will provide enough flow to meet fire flow requirements.

CIP Priority

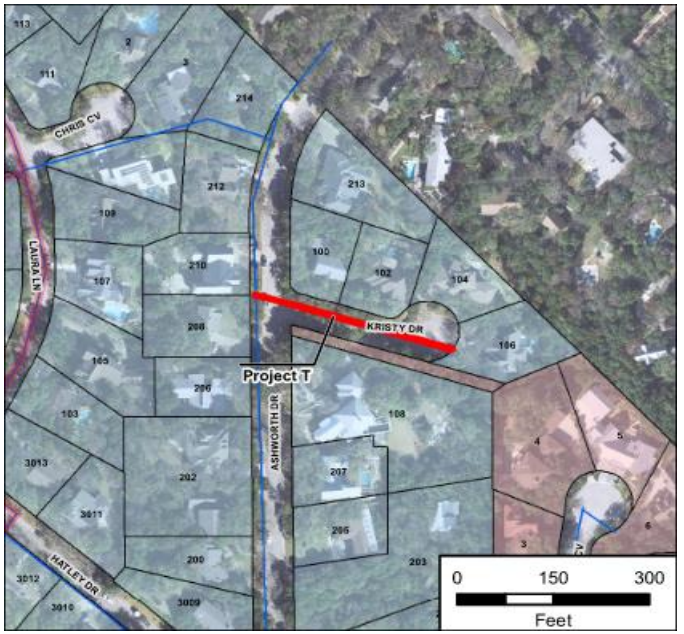
Low

Project Costs

Engineering & Survey:	$	20,000
Construction:	$	128,000
Other:		.
Total:	**$**	**148,000**
Conceptual Cost Range:		$100k - $150k
Estimated Construction Duration:		6 Months

Assumptions

Project Map



Appendix D: Project Cost Estimates

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-A	**Hatley/Almarion PRV Replacement**				
1	PRV REPAIR AND ADJUSTMENTS	EA	1	$ 25,000	$ 25,000
SUBTOTAL					$ 25,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 2,000
	CONTINGENCY (15%)				$ 5,000
	ENGINEERING (15%)				$ 5,000
TOTAL					$ 37,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-B	**Vance & Vale St Water Improvements**				
1	PIPELINE ABANDONMENT	LF	650	$ 25	$ 17,000
2	8" PVC PIPE, COMPLETE AND IN PLACE	LF	3000	$ 300	$ 900,000
SUBTOTAL					$ 917,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 46,000
	CONTINGENCY (15%)				$ 145,000
	ENGINEERING (15%)				$ 167,000
TOTAL					$ 1,275,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-C	**Inwood Rd Interconnect**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	100	$ 300	$ 30,000
2	PIPELINE INTERCONNECT	EA	1	$ 15,000	$ 15,000
SUBTOTAL					$ 45,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 3,000
	CONTINGENCY (15%)				$ 8,000
	ENGINEERING (15%)				$ 9,000
TOTAL					$ 65,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-D	**Pickwick Dr Fire Flow Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	1500	$ 300	$ 450,000
2	PIPELINE ABANDONMENT	LF	2100	$ 25	$ 53,000
3	SERVICE RELOCATES	EA	5	$ 2,500	$ 13,000
SUBTOTAL					$ 516,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 26,000
	CONTINGENCY (15%)				$ 82,000
	ENGINEERING (15%)				$ 94,000
TOTAL					$ 718,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-E	**Bettis Blvd Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	450	$ 300	$ 135,000
SUBTOTAL					$ 135,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 7,000
	CONTINGENCY (15%)				$ 22,000
	ENGINEERING (15%)				$ 25,000
TOTAL					$ 189,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-F	**Park Hills Dr/Laura Ln Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	1800	$ 300	$ 540,000
SUBTOTAL					$ 540,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 27,000
	CONTINGENCY (15%)				$ 86,000
	ENGINEERING (15%)				$ 98,000
TOTAL					$ 751,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-G	**Gentry Dr Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	550	$ 300	$ 165,000
SUBTOTAL					$ 165,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 9,000
	CONTINGENCY (15%)				$ 27,000
	ENGINEERING (15%)				$ 31,000
TOTAL					$ 232,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-H	**Inwood Cove Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	250	$ 300	$ 75,000
SUBTOTAL					$ 75,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 4,000
	CONTINGENCY (15%)				$ 12,000
	ENGINEERING (15%)				$ 14,000
TOTAL					$ 105,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-I	**Jeffrey Cove Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	250	$ 300	$ 75,000
SUBTOTAL					$ 75,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 4,000
	CONTINGENCY (15%)				$ 12,000
	ENGINEERING (15%)				$ 14,000
TOTAL					$ 105,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-J	**Pleasant Cove Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	550	$ 300	$ 165,000
2	PIPELINE ABANDONMENT	LF	750	$ 25	$ 19,000
3	SERVICE RELOCATES	EA	3	$ 2,500	$ 8,000
SUBTOTAL					$ 192,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 10,000
	CONTINGENCY (15%)				$ 31,000
	ENGINEERING (15%)				$ 35,000
TOTAL					$ 268,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-K	**S. Crest Dr Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	400	$ 300	$ 120,000
SUBTOTAL					$ 120,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 6,000
	CONTINGENCY (15%)				$ 19,000
	ENGINEERING (15%)				$ 22,000
TOTAL					$ 167,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-L	**Westgate Circle Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	250	$ 300	$ 75,000
SUBTOTAL					$ 75,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 4,000
	CONTINGENCY (15%)				$ 12,000
	ENGINEERING (15%)				$ 14,000
TOTAL					$ 105,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-M	**Ewing Easement Main Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	200	$ 300	$ 60,000
SUBTOTAL					$ 60,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 3,000
	CONTINGENCY (15%)				$ 10,000
	ENGINEERING (15%)				$ 11,000
TOTAL					$ 84,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-N	**Timberline Ridge Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	250	$ 300	$ 75,000
SUBTOTAL					$ 75,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 4,000
	CONTINGENCY (15%)				$ 12,000
	ENGINEERING (15%)				$ 14,000
TOTAL					$ 105,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-O	**Abandonment Projects**				
1	PRV ABANDONMENT	EA	1	$ 5,000	$ 5,000
2	PIPELINE ABANDONMENT	LF	10000	$ 25	$ 250,000
3	SERVICE RELOCATES	EA	40	$ 2,500	$ 100,000
SUBTOTAL					$ 355,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 18,000
	CONTINGENCY (15%)				$ 56,000
	ENGINEERING (15%)				$ 65,000
TOTAL					$ 494,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-P	**Town Centre PRV**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	100	$ 300	$ 30,000
2	PRV	EA	1	$ 50,000	$ 50,000
SUBTOTAL					$ 80,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 4,000
	CONTINGENCY (15%)				$ 13,000
	ENGINEERING (15%)				$ 15,000
TOTAL					$ 112,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-Q	**Brett Cove Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	400	$ 300	$ 120,000
SUBTOTAL					$ 120,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 6,000
	CONTINGENCY (15%)				$ 19,000
	ENGINEERING (15%)				$ 22,000
TOTAL					$ 167,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-R	**Ewing Circle Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	250	$ 300	$ 75,000
SUBTOTAL					$ 75,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 4,000
	CONTINGENCY (15%)				$ 12,000
	ENGINEERING (15%)				$ 14,000
TOTAL					$ 105,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-S	**Michele Circle Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	200	$ 300	$ 60,000
SUBTOTAL					$ 60,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 3,000
	CONTINGENCY (15%)				$ 10,000
	ENGINEERING (15%)				$ 11,000
TOTAL					$ 84,000

ITEM	DESCRIPTION	UNITS	QTY	UNIT COST	TOTAL COST
CIP-T	**Kristy Dr Fire Improvements**				
1	8" PVC PIPE, COMPLETE AND IN PLACE	LF	350	$ 300	$ 105,000
SUBTOTAL					$ 105,000
	MOBILIZATION (5% OF SUBTOTAL)				$ 6,000
	CONTINGENCY (15%)				$ 17,000
	ENGINEERING (15%)				$ 20,000
TOTAL					$ 148,000

City of Rollingwood
Needs Assessment & Facilities Master Plan

ROLLINGWOOD TEXAS

FINAL REPORT

April 5,2019

BRINKLEY SARGENT WIGINTON ARCHITECTS

1005 East Saint Elmo Road, Building 8
Austin, Texas 78745
512.610.4700

ACKNOWLEDGEMENTS

Special thanks for their cooperation and time is extended to all City Staff members who participated in the process of this report. Those particularly engaged in the study are listed below:

City of Rollingwood

Amber Lewis	City Administrator
Robyn Ryan	City Secretary
Michael Alexander, P.E.	Planning & Development
Kimberley Wood	Court Clerk
Robby Chapman	Presiding Judge
Kristal Pompa	Interim Chief
Abel Campos	Finance Manager
Jackie Bob Wright	Director of Public Works

Rollingwood City Council

Michael Dyson	Mayor
Gavin Massingill	Alderman and Mayor Pro Tem
Sara Hutson	Alderwoman
Buck Shapiro	Alderman
Amy Pattillo	Alderwoman
Wendi Hundley	Alderwoman
Roxanne McKee	Former Mayor

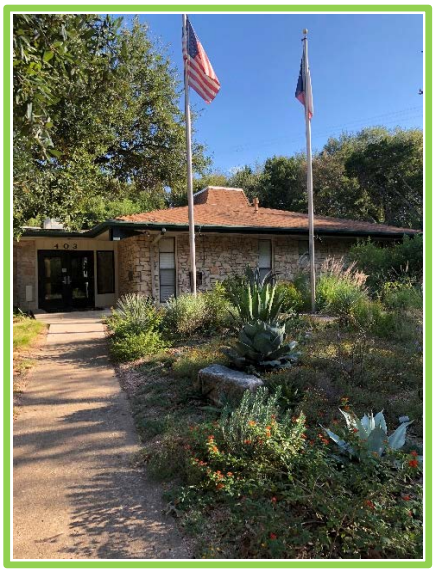
Brinkley Sargent Wiginton Architects

Don Greer, AIA	Principal / Project Manager
Denny Boles, AIA	Principal

TABLE OF CONTENTS

1 – EXECUTIVE SUMMARY

The key role of municipal governments is to provide essential and quality-of-life services to the citizens they serve. Examples of essential services include public safety (police and courts) and public works (road repair, drainage and utilities). Quality-of-life services may include the provision for open spaces, playgrounds, and cultural and recreational opportunities for residents of all ages. A city must continually monitor how well they are providing those services to offer a better place to live, work and play for its citizens. The purpose of this Needs Assessment and Facilities Master Plan is to assist in the planning of facilities that allow for this high level of service to continue and to improve in the City of Rollingwood.



Brinkley Sargent Wiginton Architects, in cooperation with the City of Rollingwood, performed a thorough evaluation of the short- and long-range facility needs for both City Hall and the police department. This report presents an analysis of existing facility and surrounding site conditions and integrates projected space needs. The result is a master plan that allows Rollingwood officials to make informed, creative and cost-effective decisions when addressing their current and future municipal building needs.

The City of Rollingwood and its departments are presently operating in a shared-use building constructed in 1974, when fewer than 800 residents lived within the city limits. Over the past 45 years, the population has nearly doubled — to 1,562 — and the need to provide continued services and support staff for residents is evident. Despite multiple renovations and additions to City Hall, the space shortage has evolved into an acute problem. About 18 months ago, the police department was relocated to a trailer near City Hall, precipitated by space constraints combined with drainage and mold issues in a specific section of the building. Additionally, the City Hall is showing its age and is nearing the end of its ability to efficiently house the various city departments, prompting the need to weigh continued investment in a 45-year-old structure against other options.

This Needs Assessment & Facilities Master Plan identifies and reviews future staffing and spatial needs within city departments, with the purpose of developing a strategy for meeting those needs in a combined facility that houses both city management and police department operations. As part of the process, participating staff members were encouraged to share their visions of an ideal workplace environment without being influenced by existing constraints of current space.

Among the City of Rollingwood's early objectives was maintaining the building on its original site, Lot 'A,' and strengthening its connection with City Park. This is an indication of the City's commitment to enhancing the quality-of-life for its residents and allows for the opportunity of the council chambers/courtroom to function as an after-hours community room available to residents. The design team's scope of work included analysis of the existing City Hall to determine how the original building could be utilized moving forward and the evaluation of advantages and disadvantages of adding on to

the existing building or constructing a new one. Several test scenarios were developed involving the two planning options, and they were vetted with key staff. The appendices of this report include two separate estimates of probable cost and two proposed site planning diagrams for the City Council's consideration.

Although the City of Rollingwood's population has doubled in the past half-century, it has experienced minimal population growth in recent years. This is a trend that is expected to continue for the foreseeable future. As a result, minimal staff growth for city departments is anticipated. Relatively few positions were added in this report's section on staffing projections. Some staff positions, such as planning and development and utilities billing, are currently being outsourced and it is represented this way in the space program documents. However, the final decision regarding future staffing expectations and space needs can be determined when the actual design phase begins. It is standard procedure in a carefully planned project to include a program-verification phase before initiating architectural design. This allows for consideration of any items or philosophies on governance that may have changed since the study was completed. In the case of any additions, the increased square footage for these functions and the costs associated with them will need to be determined.

The development of this Needs Assessment and Facilities Master Plan for the City of Rollingwood is the result of its civic leaders' recognition of the need for a long-range facility needs assessment to ensure the City not only will maintain but also improve its high level of service to residents. Furthermore, this document is intended to establish a process for the coordinated development of a new city/police facility based on budgets, projected spatial needs, conceptual site plans, and construction cost estimates. The included documentation with appendices provide all the supporting documentation used in the study's findings.

SPACE NEEDS

Required spatial needs and site issues were developed over a series of meetings with city staff members, as well as three City Council presentations. The final square footage needs for a new combined city/police facility are as follows:

City Hall	Net	5,893 SF
Police	Net	1,783 SF
Gross Total Bldg.		8,436 SF (includes building circulation, exterior walls, mech. systems, etc.)

PARKING NEEDS

The police department requires 14 parking spaces, six of which are to be secure spaces. Secure spaces are typically fenced off and protected by a gate to protect the vehicles and their contents. The higher-than-current count takes into consideration anticipated changes in shift schedules for officers. City Hall parking will be shared onsite, utilizing existing spaces and additional markings for parallel parking on the adjacent street. Expanding parking options near City Hall was not a popular option among staff, because it would encroach on available parking at City Park. Additionally, the consensus is that the public works department's storage yard be relocated away from the existing city/police building, as greater materials access and better screening processes can be found at locations outside of Lot 'A.'

SITE ISSUES

Keeping the building footprint and any new site work to a minimum is critical to this project. The building is located in the Edwards Aquifer recharge zone, and regulatory requirements for treatment of water runoff is required. These regulations were not in place when the original building was constructed, and it therefore retains grandfathered allowances for existing conditions. However, any new impervious cover for the building or site will require water quality treatment. Maximum impervious coverage for a site zoned GI (Governmental and Institutional District) is limited to 50 percent, which is approximately 21,800 square feet of the site in question. Currently, the impervious cover is about 14,800 square feet, leaving roughly 7,000 square feet available for new impervious cover.

A second site issue that must be managed is the storm drainage coming off the adjacent hillside and moving across the property. The proposed budget includes a line item for a combined stone wall and internal/external drainage path that can divert this water to a proper outfall. Early discussions regarding the project suggested the possibility of utilizing this wall to facilitate a stair and ramp system to travel from the upper lot to the lower lot; that structural component is not included in the current budget.

BUDGET & SCHEDULE

Braun & Butler, an Austin, Texas-based general contractor, worked with Brinkley Sargent Wiginton Architects to develop construction cost estimates based on similar past projects. Two potential bond election dates are under consideration, with November 2019 being the preferred one and the basis for project estimates. That date also would provide enough time to consider other city-related needs for possible inclusion on the ballot.

Here is the proposed schedule, based on projected passage of the November 2019 bond:

Design Phase Start	January 2020
Construction Start	January 2021
Occupancy	March 2022 (1A), October 2021 (2A)

Total Development Budget – *Option 1A*	**$ 4,967,289**
Total Development Budget – *Option 2A*	**$ 4,916,217**

2 – PLANNING CONTEXT

PLANNING HORIZON

This study is a review of the long-term requirements for the City Hall and Police facility needs for the City of Rollingwood, Texas. At the time of this study, the City's population census estimated the population to be 1,562 residents and annual growth 1.1% the last four years. It was determined that this study would consider the staff and space needs at milestone years of 2018, 2023, 2038 and 2038 and use a steady 1,562 as the population.

2018	2023	2028	2038
1,562	**1,562**	**1,562**	**1,562**

STAFFING PROJECTIONS

Developing staff projections is a crucial component of a successful Needs Assessment. Projections of staff requirements were made using past history, present staffing and anticipated growth of staff (based on the departments' desired level of service to the community).

The organizational charts shown below list not only the current staffing for 2018, but it also outlines the planned additional staff as the milestone years are reached.

TOTAL STAFF PROJECTIONS

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood

Total Staff Comparison				
Year	**2018**	**2023**	**2028**	**2038**
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Appointed Commissions & Boards				
Judge				
Prosecutors				
Mayor	1	1	1	1
City Administrator	1	1	1	1
City Secretary	1	1	1	1
City Attorney				
Court Clerk	1	1	1	1
Financial Department	1	1	1	1
Utility Billing	0	0	0	0
Accounting				
Payroll				
Treasury				
Police Department	10	11	11	11
Police Operations				
Code Enforcement				
Support Services				
Public Works Department	3	4	4	4
Planning & Operations	0	1	1	1
General Services				
Maintenance				
Total	18	21	21	21
Staff Per Capita	11.5	13.4	13.4	13.4

STAFF PROJECTIONS CONT.

Mayor

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Mayor	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

City Secretary

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
City Secretary	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

City Administration

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
City Administrator	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

Municipal Court

Year	2018	2023	2028	2038
Population	1562	1562	1562	**1562**

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Clerk of Court	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

STAFF PROJECTIONS CONT.

Finance Department

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Finance Manager	1	1	1	1
Total	1	1	1	1
Staff Per Capita	0.6	0.6	0.6	0.6

Police Department

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Chief of Police	1	1	1	1
Lieutenant	1	1	1	1
Sergeant	1	1	1	1
Corporal	2	2	2	2
Officer	2	2	2	2
Reserve	2	2	2	2
Detective	1	2	2	2
Total	10	11	11	11
Staff Per Capita	6.4	7.0	7.0	7.0

Public Works Department

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Public Works Director	1	1	1	1
Operator	2	3	3	3
Total	3	4	4	4
Staff Per Capita	1.9	2.6	2.6	2.6

STAFF PROJECTIONS CONT.

Planning & Development

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Planner	0	1	1	1
Admin./ Planner	0	0	0	0
Inspector/ Bldg. Office	0	0	0	0
Total	0	1	1	1
Staff Per Capita	0.0	0.6	0.6	0.6

Utility Billing

Year	2018	2023	2028	2038
Population	1562	1562	1562	1562

Staff	Current	5 Yr. staff	10 Yr. staff	20 Yr. staff
Utility Billing Clerk	0	0	0	0
Total	0	0	0	0
Staff Per Capita	0.0	0.0	0.0	0.0

3 – SITE PLANNING

PARKING

A significant impact on site planning is staff parking, City owned vehicles (secure), and visitor's vehicles. The chart below is a summary of the maximum number of parking spaces needed for police only which was the requirements of the study. The existing public parking for court visitors also serving the City Council meeting visitor's alternate evening.

Police Parking 2038	
Public	0
Staff	8
Town/Secure	6
Total	**14**

To determine the necessary parking spaces for the Police department, a typical 24-hour work day and parking needs for a new facility was estimated. The chart on the following page illustrates the expected arrival and departure times for each staff member. The important aspect to this chart is to account for the overlap of staffs at shift change.

POLICE PARKING

Rollingwood Police Parking 2038

Non-Take Home Policy

Shift Times

DEPARTMENT	Staff	12 am		2 am		4 am		6 am		8 am		10 am		12 pm		2 pm		4 pm		6 pm		8 pm		10 pm		Note
PUBLIC PARKING																										A
Police Visitors																										
covered by Town Hall parking																										
Total Public Cars										0	0	0	0	0	0	**0**	0	0	0	0	0	0				
STAFF/PERSONAL CARS																										B
Administration																										
Chief of Police	1									1	1	1	1	1	1	1	1	1								
Lieutenant	1									1	1	1	1	1	1	1	1	1								
Sergeant	1									1	1	1	1	1	1	1	1	1								
Patrol																										
Corporal	2																									
Day Shift							1	1	1	1	1	1	1	1	1	1	1	1	1	1						C
Evening Shift		1	1	1											1	1	1	1	1	1	1	1	1	1	1	C
Officer	2																									
Day Shift								1	1	1	1	1	1	1	1	1	1	1								
Night Shift		1	1	1	1	1	1	1										1	1	1	1	1	1	1	1	C
Reserve	2																									
Evening Shift		1	1												1	1	1	1	1	1	1	1	1	1	1	
Future Officer	1																									
Night Shift (assumed)		1	1	1	1	1	1												1	1	1	1	1	1	D	
Investigation																										
Detective	1									1	1	1	1	1	1	1	1	1								E
Total Staff Cars		4	4	3	2	2	3	3	2	6	6	6	6	6	7	**8**	8	8	5	5	4	4	4	4	4	
CITY CARS/SECURE																										
Chief of Police	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	F
Patrol																										
Current Vehicles for All Shifts	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Future Vehicles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Miscellaneous Police																										
Marked/Patrol Pool Car																										
Flex vehicle/vacation																										
Trailers																										
Other Equipment	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	G
Crime Scene Vehicle																										
Seized Vehicle																										
Trailer (small/single axle)																										
Trailer (large/double axle)																										
Total City Cars	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	**6**	6	6	6	6	6	

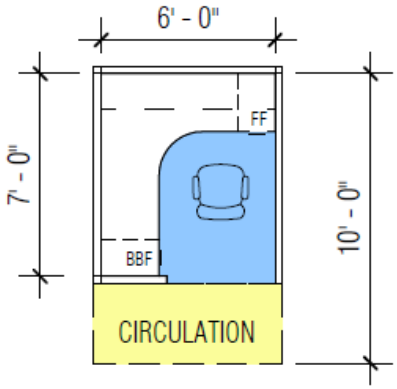
Notes:

A	covered by City Hall
B	One hour accounted before AND after every shift
C	1 vehicle added 1 hour before + after shift for staff fluctuation
D	Discuss Future Officer shift coverage
E	Detective shift assumed 8am-5pm
F	Requested 4 Covered Spaces (5 for future?)
G	Full space not needed, Kawasaki Mule

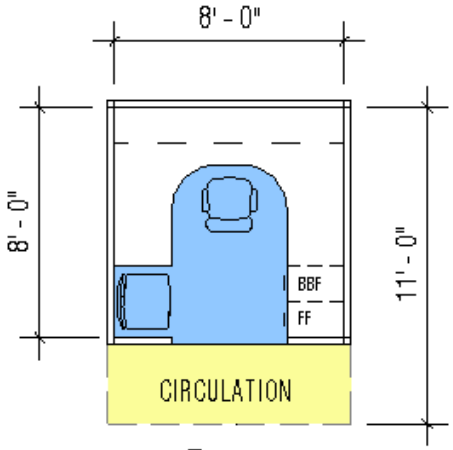
4 – SPATIAL DIAGRAMS

The following pages illustrate the spatial requirements determined through meetings with staff. The sketches reflect needed space to provide efficient, functional spaces and correspond with notations in the facility program, shown in Section 5. These diagrams or sketches will be referred to under the column labeled 'Space Code' on each department sheet of that section.

Workstations

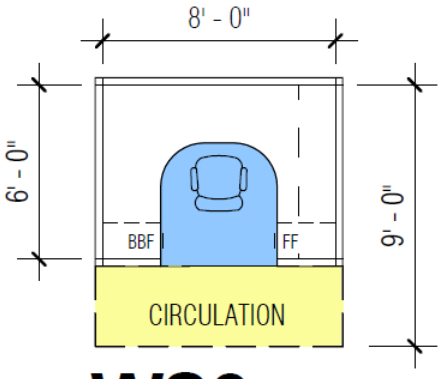


WS2
WORK STATION
42 SF ACTUAL
60 SF WITH CIRCULATION



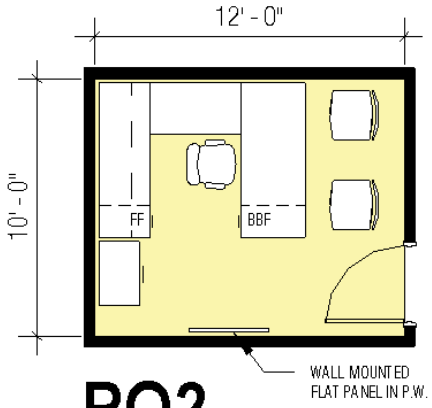
WS5
WORK STATION
64 SF ACTUAL
88 SF WITH CIRCULATION

NOTE GUEST CHAIR IS OPTIONAL.
TRANSACTION TOP IS OPTIONAL.



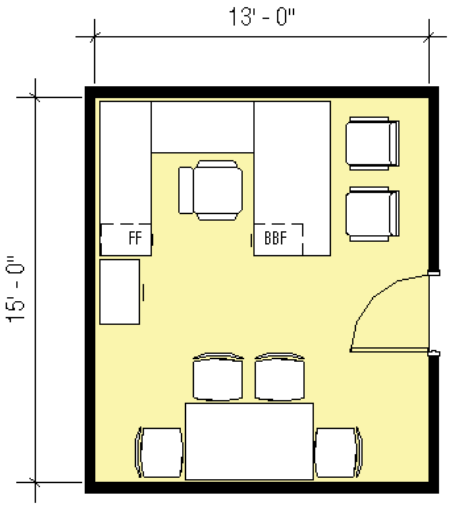
WS3
WORK STATION
48 SF ACTUAL
72 SF WITH CIRCULATION

Private Offices



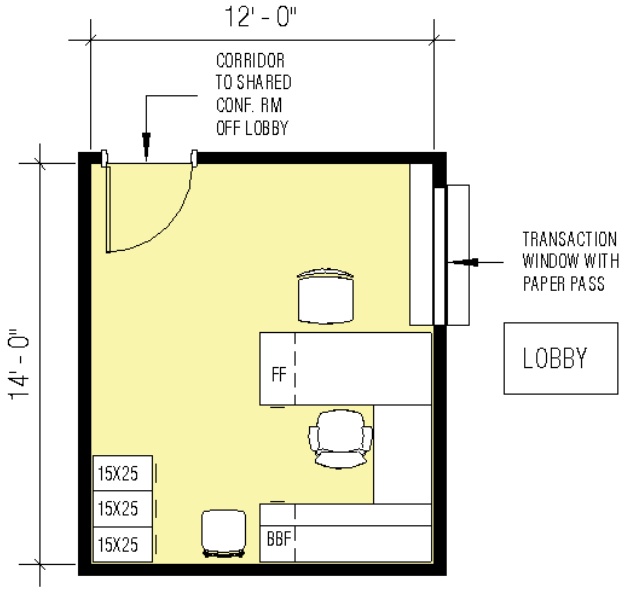
PO2

PRIVATE OFFICE
120 SF



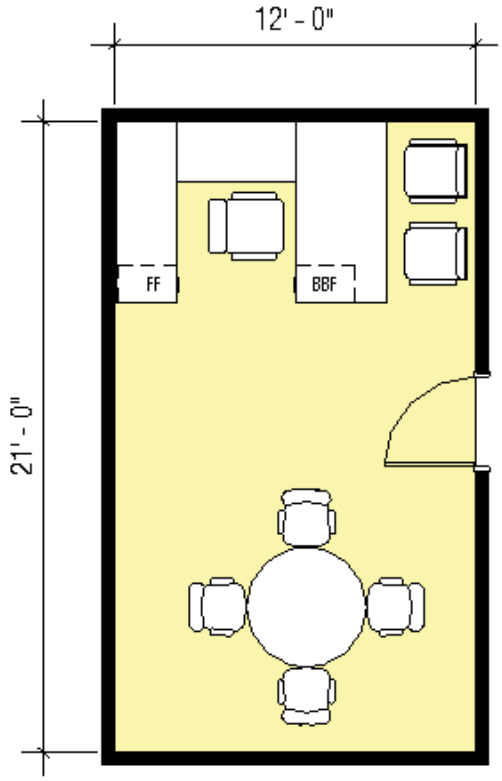
PO4

PRIVATE OFFICE
195 SF



PO4.3

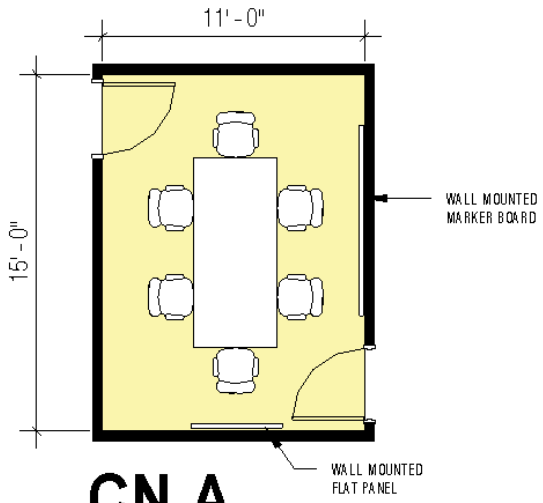
PRIVATE OFFICE
252 SF



PO4.5

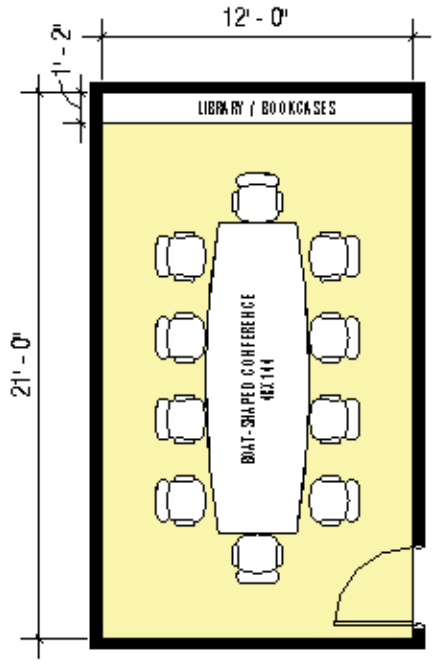
PRIVATE OFFICE
252 SF

City Hall / Shared Spaces



CN A

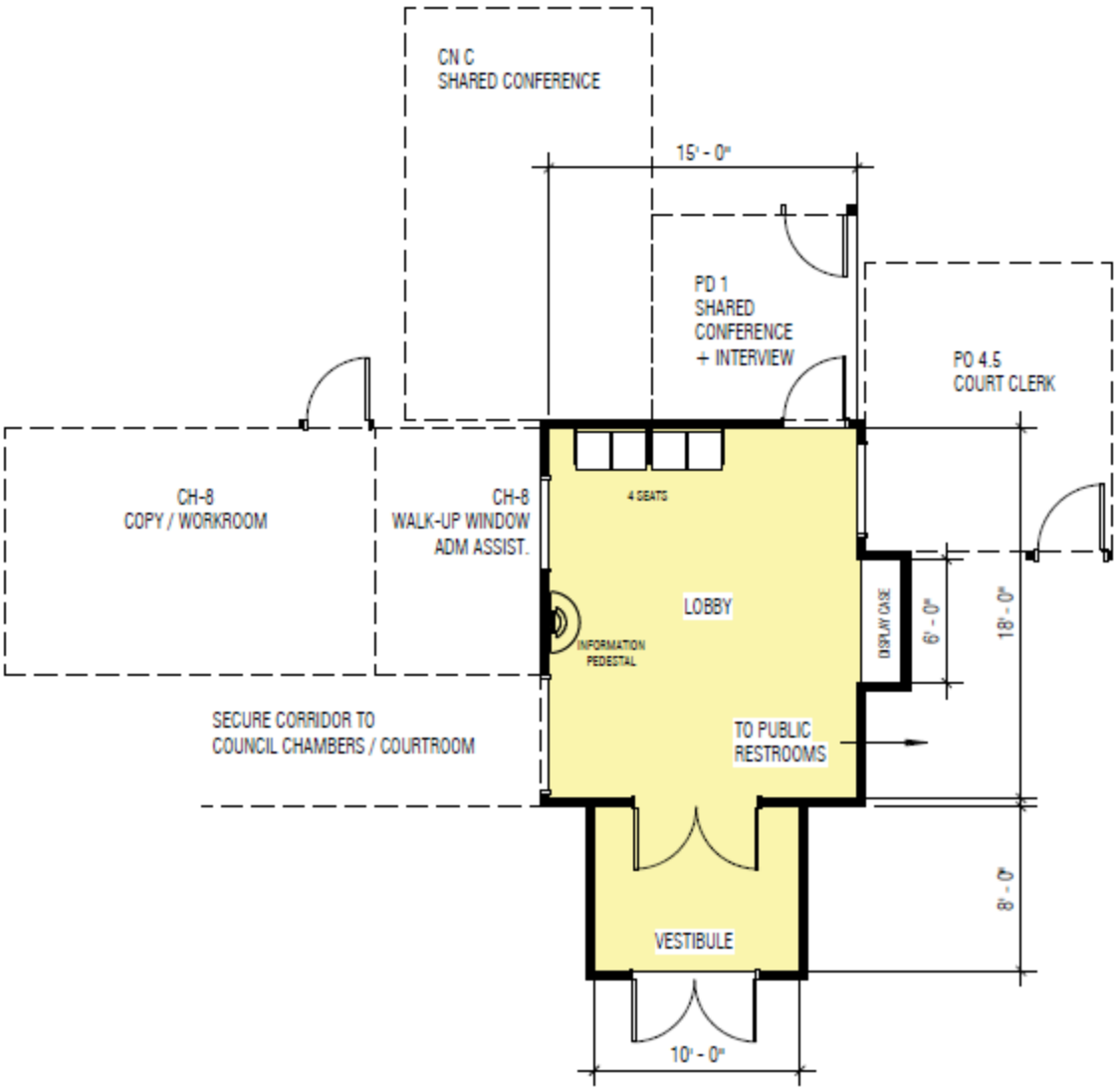
CONFERENCE (6)
165 SF



CN C

CONFERENCE (10)
LIBRARY BOOKCASE AREA (18 SF)
252 SF

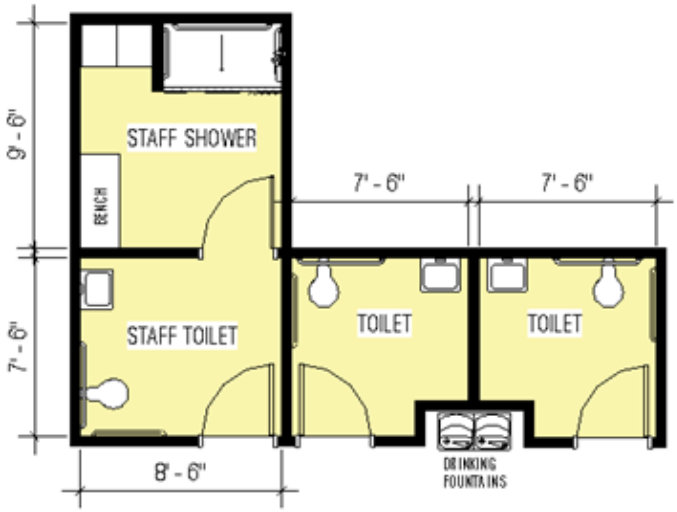
City Hall / Shared Spaces



CH-1

LOBBY
(SEATING FOR 4)
DISPLAY CASE (12 SF)
270 SF

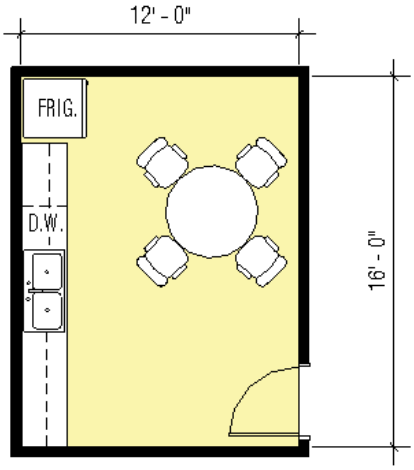
City Hall / Shared Spaces



CH-5

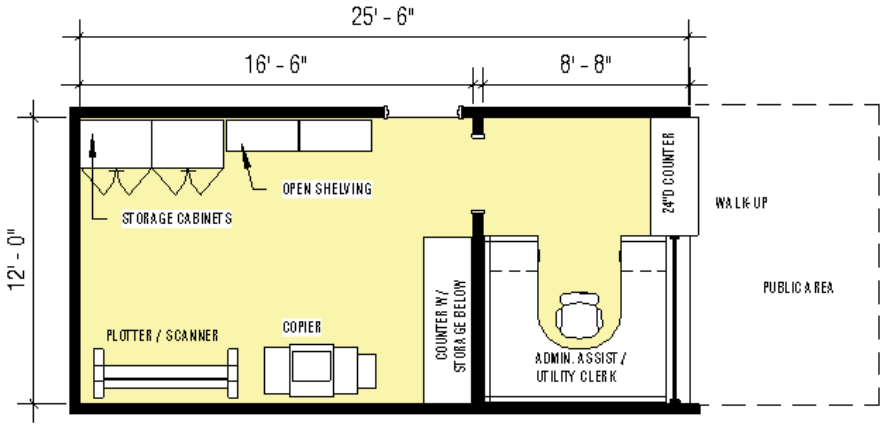
PUBLIC RESTROOMS
112 SF

STAFF SHWR/ TOILET
145 SF



CH-12

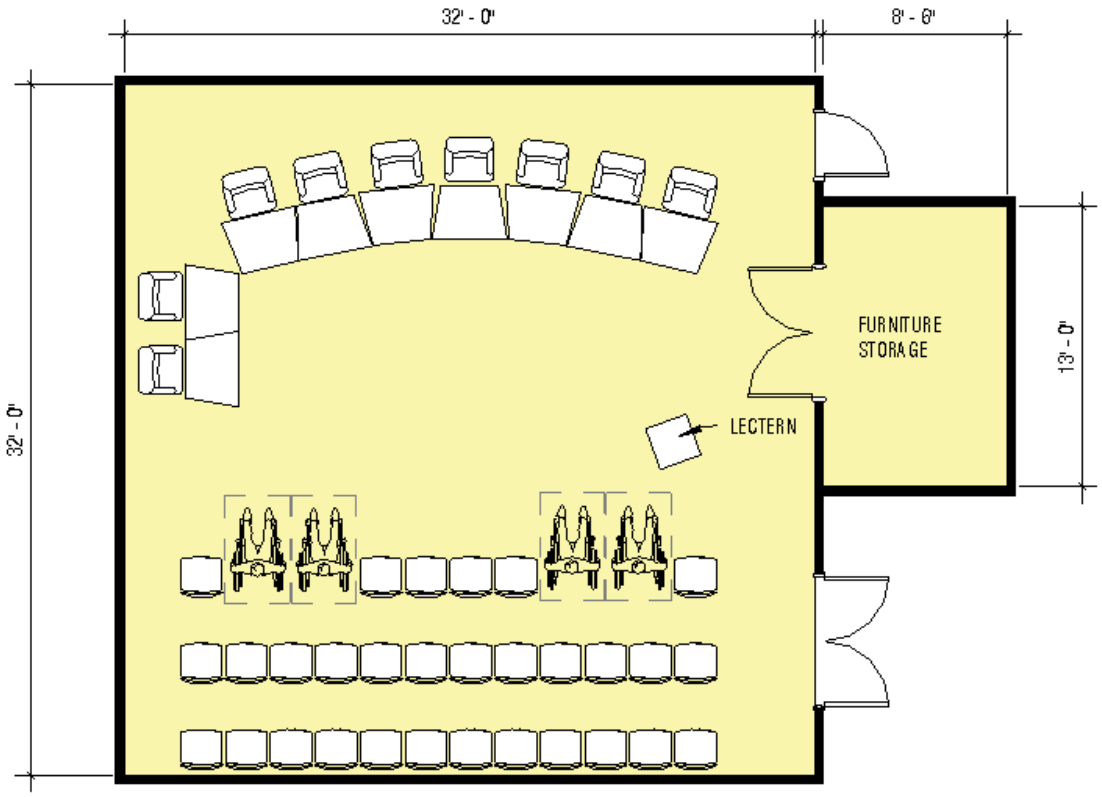
BREAKROOM
192 SF
(SEATING CAPACITY - 4)



CH-8

DOCUMENT/WORKROOM
216 SF
ADMIN ASSIST.
103 SF
SUITE TOTAL 319 SF

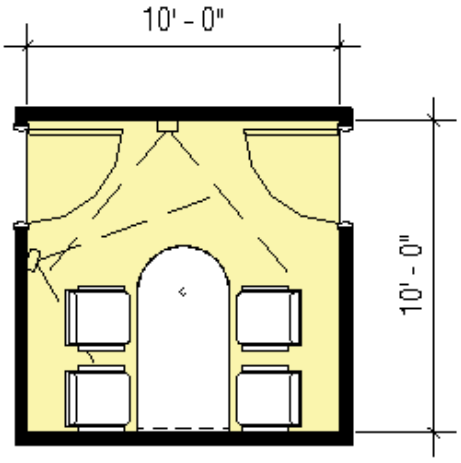
Council Chambers/ Courtroom



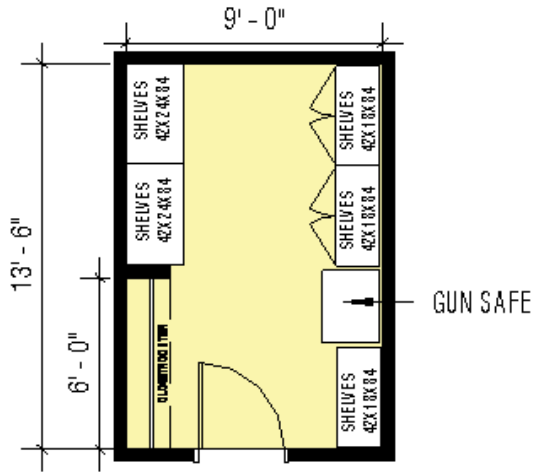
CH-16

COUNCIL CHAMBERS /COURT SETUP
(30) +(4) WHEELCHAIR ACCESSIBLE
1,024 SF
TOTAL WITH STORAGE (104 SF)
1,128 SF

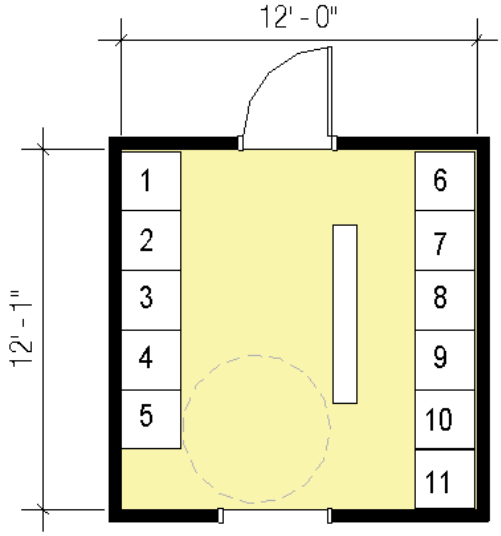
Police Department Spaces



PD-1
INTERVIEW ROOM
100 SF

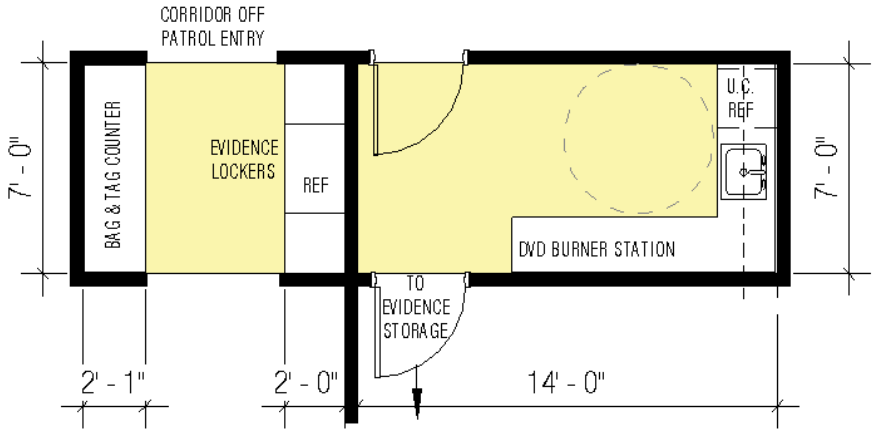


PD-2
STORAGE
122 SF



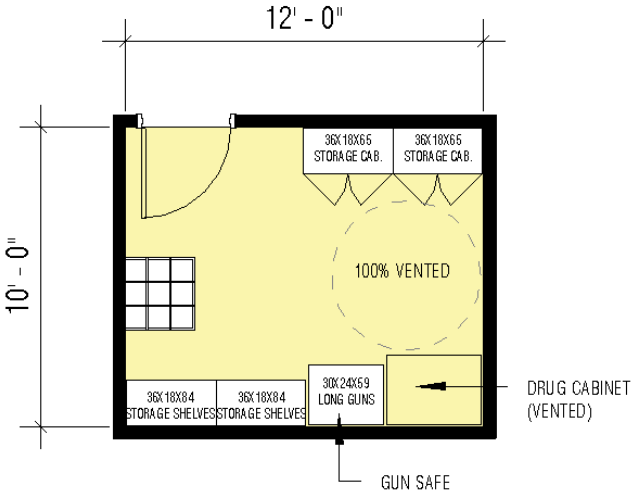
PD-3
PATROL LOCKERS
144 SF

Police Department Spaces



PD-5

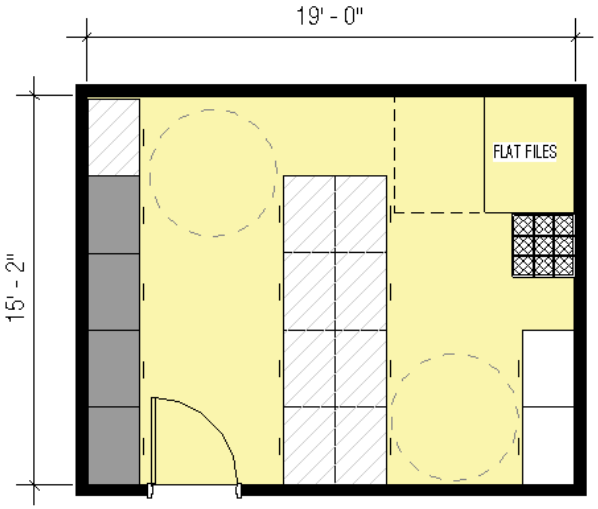
EVIDENCE BAG & TAG / LOCKERS
112 SF



PD-6

EVIDENCE STORAGE
120 SF

Department Shared Records Storage



RS11

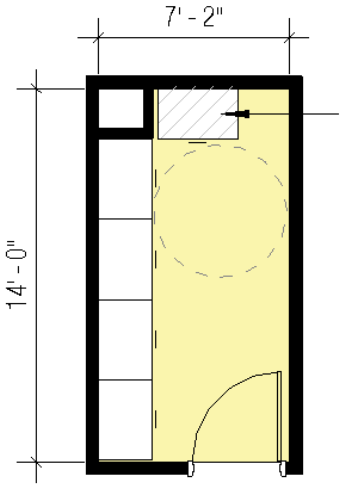
RECORDS
288 SF

FINANCE RECORDS

CITY SECRETARY RECORDS

PUBLIC WORKS RECORDS

4-DRAWER LATERAL FILES SHOWN (36WX24DX55H)



RS12

POLICE RECORDS
100 SF

5 – CITY HALL AND POLICE SPACE NEEDS

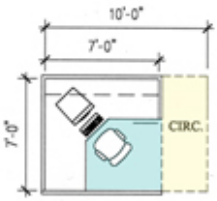
This section will focus on the City Hall and Police Department's facility space needs. As part of the meetings with City Staff, consideration for adjacencies, function and proper size of each element/space were discussed, with the agreed upon sizes and quantities shown on the final program charts.

Explanation of Circulation Factors

The ***Circulation Area*** is the portion of the Gross (Total) Area, whether or not enclosed by partitions, which are required for physical access to some subdivisions of space.

Systems Office Furniture (Work Stations) Circulation:

Contrary to popular perception, systems office furniture does not take up significantly less space. What they do allow is flexibility of that space. A certain amount of area is added to these systems before the department circulation to allow for adequate access to each of the workstations. The drawing at right shows an example of this added area, shaded yellow.



Gross Circulation:

This is a calculation of the space needed to travel to and within the department and the thickness of walls. It is a percentage of the Gross square footage (i.e. the subtotal and the circulation together). This number is calculated (using 25% as an example) by taking the subtotal and dividing it by (100-25) then multiplying by 25. This gives you a number that is 25% of the Gross square footage. [(Subtotal/75) x 25= gross circulation] This circulation number varies depending on the makeup of the department.

Gross Circulation Sample
(Subtotal/75) x 25 = gross circulation

Exterior Wall/ Mechanical/Circulation Factor:

After each department is added together to form a component (i.e. Patrol, Court, and Finance) then each component has a building envelope and mechanical factor added to it. This number covers the area needed for exterior walls and mechanical systems and circulation between components.

Explanation of Department Tables

The table shown below serves as a legend to understanding the tables shown for each department in the pages to follow. Note: This legend may not directly apply to the Summary Table.

City Hall Needs Assessment

City Department

Requirements Data Sheet	Current	Future Space Needs				Projected 2030 Requirements		
Item Description	Staff	Space Code	Note Code	Unit Size	Unit Area	Staff	No.of Spcs	Total Area
Department Name								
Waiting (5)					120		1	120
Public Carrel (2)				9x9	81		1	81
Admin Assistant		WS4		7x8	80	1	1	80
Director	1	PO3		12x12	144	1	1	144
Assistant Director	1	PO2		10x12	120	1	1	120
Clerk		WS4		7x8	80	2	2	160
Conference (6)				11x15	165		1	165
Files				9x10	90		1	90
(4+2) 4-drawer lateral files								
Work/Copy/Coffee				10x12	120		1	120
Supply Room				9x10	90		1	90
Net Subtotal	2					5		1,170
26% Gross Circulation								411
Total Gross Sq. Footage								1,581
Total Area	2					5		1,581

( ) Peak Users to be Accommodated

1. Description of space or personnel space.
2. Current staffing numbers.
3. Space code identifies spaces listed in space standards section.
4. Unit size describes physical size of space.
5. Unit area per space or personnel housed within space.
6. Hallmark year (2030) for staff projections.
7. Number of spaces required (i.e. One conference room is provided).
8. Total area equals unit area times the number of spaces to develop total area.
9. Reflects walls/circulation as described on previous page.

The study process began with planning for the long range department needs, for at least 20 years in the future. After an initial calculation was made on April 4, 2018, typical review and revisions were made to trim some square footage. On subsequent days, May 2nd and 8th, additional modifications were made to reduce the square footage further. We continued to reduce square footage June 7th and July 13th resulting in the totals shown in this report.

The following pages contain department tables for each distinct area / department for the planned facility. A summary of all areas concludes this section.

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood	**TOTAL BUILDING**
Revised from 8-22-2018 meeting	*Total building SF - 8,436 SF*
Revised from 7-13-2018 meeting	*Total building SF - 8,490 SF*
Revised from 6-07-2018 email	*Total building SF - 8,378 SF*
Revised from 5-09-2018 meeting	*Total building SF - 7,921 SF*
Revised from 5-2-18 meeting	*Total building SF - 8,947 SF*
Initial meeting 4-04-2018	*Total building SF - 12,697 SF*

	2018	2028		2038		
Space Description	Staff	Staff	Total Space	Staff	Total Space	Notes:
Administration	4	4	969	4	969	
Court Clerk	1	1	224	1	224	
Financial Department	1	1	544	1	544	
Utility Billing						Remain out sourced
Police Department	10	11	1,783	11	1,783	
Public Works Department	3	4	240	4	240	
Planning & Operations	-	1	160	1	160	Future position
Public Lobby		-	649	-	649	
Council Chambers			1,327		1,327	*circulation factor adjust*
Building Support			1,780		1,780	*circulation factor adjust*
Net Subtotal	19		7,676		7,676	
9% Mech/Bldg. Circ. Factor			759		759	
Total Facilities Master Plan		**22**	**8,436**	**22**	**8,436**	*circulation factor adjust*

Current usable City Hall (3,015 SF) + old police department (665 SF) + new police trailer (765 SF) = 4,445 SF

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood — **Public Lobby & Council Chambers**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}	{c}		{b}	{c}		
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Public Lobby and Adjacent Spaces													*Voting Booths in Council Chamber*
Vestibule		0			8X10	80		1	80		1	80	
Util.B. secure drop box													*Confirm w/ Owner*
Conference / Interview Room		0	PD 1		9x10	90		1	90		1	90	*Shared conference room*
Lobby Waiting (4)		114	CH 1		15X18	270		1	270		1	270	*Sound attenuation walls*
Court Waiting				A									*part of Lobby*
Admin. Asst. / Recept.			CH8	B	12X8.6	103							*Refer to Admin*
Court Clerk window access				A									*part of Lobby*
Public Access / Kiosk				A									*part of Lobby*
Display case					2X8								*part of Lobby*
Drinking Fountains					5x3	15		1			1		*Refer CH5*
Public Toilets		122	CH 5	Z	15x7.5	112		1	112		1	112	*(1-male, 1-female)*
Work / Copy counter			CH8		12X16.5	198							*Refer Shared Bldg. Support*
Net Subtotal									552			552	
15% Gross Circ. Factor									97			97	*circulation factor adjusted*
Subtotal Gross Area [square footage]								**5**	**649**		**5**	**649**	
Council Chambers/Courtroom		1026	CH16		32X32	1,024		1	1024		1	1024	
~~*Sound/Security Vestibule*~~					8X10	80			0			0	
Council Chambers/Court :													
Council Dais (8)				S									*Dais not raised*
~~Court Well~~													
Audience Seating (34 + 4 disabled)													
Furniture Storage + A/V		0			8X13	104		1	104		1	104	
Voting Booths Area (4 x per yr.)													
Public Conf/Prosecutor		0	PD 1	F									*Shared conference*
Pre-Council/Conf-10/Jury		0	CN C		12X21	252							*Shared conference*
Coffee bar													*Confirmed*
Council/Staff/Jury Toilets					8x7	56							*Shared Bldg. Support*
Net Subtotal							0		1128	0		1128	
15% Gross Circ. Factor									199			199	*circulation factor adjusted*
Subtotal Gross Area [square footage]							0	2	**1,327**	0	2	**1,327**	
Total Gross Area [square footage]							0	7	**1,976**	0	7	**1,976**	

Typical Formula is a x b = c

Notes:

A. Subset space is part of Lobby square footage

B. Walk-up counters for Administrative Assistant; 24"D counter w/glass partition between public and staff

F. Small Conference Room 4-5 seating capacity. City Attorney and Prosecutor to share - off Lobby with 2nd door to staff
Shared with City Prosecutor evenings / once a month. City is discussing an every other month option.

S. ~~Option for raised dais 18"- 21" layout.~~ The current size of existing Council / Court Room is 1012 SF
Confirmed seating count at dais City Adm., Mayor, 5 Alderman, City Attny (4/27/2018)

Z. Building Code requirements for Assembly Area /Council Chambers (1-male, 1-female) at 15 net load factor [best case] and Business Occupancy at 100 gross per Table 1004.1.2 max. floor area per occupant. (1-male & 1-female) one each on 1st floor

City of Rollingwood — Administration

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}		{b}	{c}		{b}	{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Mayor	1	0	PO4.5	H	21x12	252	1	1	252	1	1	252	
City Administrator	1	160	PO4.5	E	21x12	252	1	1	252	1	1	252	
f City Secretary	1	130	PO2	D, I	12x10	120	1	1	120	1	1	120	*reduced*
Admin. Assistant / Utility Clerk	1	0	CH8	C, F, B	12x8.6	103	1	1	103	1	1	103	*Public Lobby*
Shared / Support Space													
Large Conference Space	-	0	CN C	A	21X12	252							*Shared Bldg. Support*
Walk up counter@ workstations	-	0	CH8	G	12x8.6	103							*Public Lobby*
File Room	-	80		M	15.2x19	288							*Shared files: Records & Finance*
Net Subtotal	4						4		727	4		727	
25% Gross Circ. Factor									242			242	
Total Gross Area [square footage]							**4**		**969**	**4**		**969**	

Typical Formula is a x b = c

Notes:

A. Large shared Conference Room - 10 seating capacity. Shared conference room available to all dept./ Admin. to schedule.
Library / Archive permanent records available for public access on 18" deep bookcase along one wall.
B. Receptionist and Court Clerk to be cross- trained functions. Existing Receptionist answers citizen questions, functions as utility clerk, handles water billing, cash.
C. Receptionist and Court Clerk to be sit down height, printer access, paper pass, bullet resistant surround speaker glass at Court Clerk, and bullet resistant wall on Lobby side.
D. Boxes brought from Iron Mtn. need 12 ft. of counter for research with laterals underneath - *needs layout space location to sort files.*
E. Office layout with L-desk against wall with door so visitors can't see monitor.
F. Acts as Receptionist for Bldg.
G. Receptionist provides support to Utility Clerk position (currently outsourced) and will occupy the walk up counter when resident comes in to pay bill.
H. Mayor near City Administrator
I. Keep current desk & bookcase
M. Files accessed by City Secretary and PW Director. Lockable files in lockable room (fire rated) adjacent to Finance Manager
Wyndburg painting - locate

Lateral file cabinet = (36"w x 24" d); Upright file cabinet = (18"w x 22"d)
J. Active files
Meeting Minutes
Existing Files: (1) existing upright unit at (4) drawers (18"w x 22"d)
File growth: (1) existing upright unit at (4) drawers + (4) drawers for growth (100%) = (8) drawers upright [convert to (1) 4-drawer lateral]
(fire rated file cabinets w permenant records. Fire rated room is an option.)
City Council Meeting Files & Packets
Existing Files: (1) existing 4-drawer lateral
File growth: (1) existing 4-drawer lateral with no growth = (4) drawers
(keep up to 4-years on site due to citizen requests)
(agenda management computer system 3-yrs of records on line)
Admin. Publications/ misc.
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (1) drawer for growth (100%) = (2) drawers
Contract Files
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (1) drawer for growth (100%) = (2) drawers
(required to keep 5 years)

Budget & Audit Files
(20 years of files: FEMA, CAMPO, governance - 2nd drawer Freedom of Information Act, keep 1-yr)
Existing Files: (2) existing drawer in lateral file
File growth: (2) existing drawer in lateral file + (2) drawer for growth (100%) = (2) drawers

ADMIN CONT.

Historical Documents
(20 years of files: pavillion plans, park commission)
Existing Files: (1.5) existing drawer in lateral file
File growth: (1.5) existing drawer in lateral file + (1) drawer for growth (33%) = (2.5) drawers
(Utility commission)
Existing Files: (0.5) existing drawer in lateral file
File growth: (0.5) existing drawer in lateral file + (1) drawer for growth (150%) = (1.5) drawers
(Planning & Zoning)
Existing Files: (1.5) existing drawer in lateral file
File growth: (1.5) existing drawer in lateral file + (.5) drawer for growth (33%) = (2) drawers
(Board of Adjustment)
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (1) drawer for growth (100%) = (2) drawers

2-Drawer Lateral - Exgt. 36"w x 24" d
(20 years of files: water/ seewer, resident's complaints, AWR - water company, water reports)
Existing Files: (2) existing drawer in lateral file
File growth: (2) existing drawer in lateral file + (2) drawer for growth (100%) = (4) drawers

Address Files - Bldg. & Development 1955
(Perm. Files, ordinances, proclaimations 1-Hr. Fire Rated Room + Elevated prevent water damage)
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (1) drawer for growth (100%) = (2) drawers

Record Retention
One binder for each department of what is sent to Iron Mountain
Existing Files: (1) existing drawer in lateral file
File growth: (1) existing drawer in lateral file + (0) drawer for growth (0%) = (1) drawers

Address - residential & Commercial *(will go digital)*
Existing Files: (6) existing drawer in lateral file
File growth: (6) existing drawer in lateral file + (0) drawer for growth (0%) = (6) drawers

Building and Development PUDS
(PUD (3),street, striping (1)- staff records accessed daily)
Existing Files: (4) existing drawer in lateral file
File growth: (4) existing drawer in lateral file + (2) drawer for growth (50%) = (6) drawers

Permits
[Permits (1), personal, oaths of office, training (1)]
Existing Files: (2) existing upright unit at (2) drawers
File growth: (2) existing upright unit + (0) drawer for growth (0%) = (1) 22" d upright convert to lateral = .5 lateral

2-Drawer Lateral - Exgt. 36"w x 24" d
(in storage clo.)

30 -Tubes 31" ht. x 4" dia

5-drawer Flat File - 54" w x 42" deep *(need scanning)*
(20-25 items in each drawer)

need to find a location in building

Water conservation pamplets in Lobby

3-Drawer Lateral - Exgt. 38"w x 24" d *Fire-rated*
[Historical records (1)-drawer]
(electrical extension cords (1)- drawer)
19x19 printer & shredder
Recept. - 6 shelf binders 4' w x 6'-6" ht.
(Library - 2nd shelf, 5 shelves archive)

Bookcase in office (keep)
Iron Mountain Notes
Pull 5-7 boxes per month- City Sec.
Archive files stored at Iron Mountain. Deliver and Pick up next day.
Approx. 300 boxes at Iron Mount.

City of Rollingwood — Municipal Court

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Court Clerk	1	81	PO4.3	L	12x14	168	1	1	168	1	1	168	*critical files kept in office*
City Attorney	-	0		F			-						
Prosecutor	-	0											*Share conference room*
Support Space													
Municipal Court				R									*Courtroom*
Net Subtotal	1								168			168	
25% Gross Circ. Factor									56			56	
Total Gross Area [square footage]							**1**		**224**	**1**		**224**	

Typical Formula is a x b = c

Notes:

F. Small Conference Room 4-5 seating capacity. City Attorney and Prosecutor to share - off Lobby with 2nd exit door
City Prosecutor evenings / once a month. City is discussing an every other month option. Not a court of record.
Can also be used during day for Clerk side conversations and Police soft Interview.

L. Counter built-in at transaction window. (high enough that visitor can't jump over)
speak around glass and bullet resistant glass. All 4 walls to be bullet resistant and impact resistant.
Office to have table where judge can meet with clerk (work area, not conference) Ablility to spread out & secure information.
Ability to pull down shades (at transaction window) when Judge visiting, or as needed

R. Reference Administration Department for Municipal Court (share with Council Chamber)

J. Active files (No laterals -Preferred 4-drawer upright files) (18"w x 22"d)
9" x 12" folder - case files; in fire proof file cabinet
Existing Files: (1) existing upright unit at (4) drawers
File growth: (1) existing upright unit at (4) drawers + (2) drawers for growth (50%) = (6) drawers upright
(Growth to include Financials, State reports, Juror records + stored boxes in Storage room*)
Existing Files: (1) existing upright unit at (4) drawers
File growth: (1) existing upright unit at (4) drawers + (2) drawers for growth (50%) = (6) drawers upright
(dockets & warrants - need separting)
Total (3) 4-drawer upright cabinets
May keep bookcase in current office
New Court clerk hasn't gone through all files - final count pending
currently closed cases in banker boxes
warrants 2012-2013 in office
tickets up to 8 yrs
overnight deposits - exterior secure drop box?
State reports keep for 2 years
dockets what Judge sees kept for 2 yrs.
Financials kept for 2 yrs.
Juvenile records
Jurors records
Other banker boxes in storage closet to go through with Judge 10 ft. linear full ht.*

City of Rollingwood — **Finance Department**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Finance Manager	1		PO2		12x10	120	1	1	120	1	1	120	
											-		
Support Space													
Conference Room		0	CN C	A	12X21	252			-			-	*Shared Bldg. Support*
File Room			RS 11	M	15.2x19	288		1	288		1	288	
Lateral files - (4) 4-dwr x 36" wide													
Net Subtotal	1								408			408	
25% Gross Circ. Factor									136			136	
Total Gross Area [square footage]							**1**		**544**	**1**		**544**	

Typical Formula is a x b = c

Notes:

A. Large shared Conference Room- 12 seating capacity. Shared conference room available to all dept./ Admin. to schedule.
Library / Archive permanent records available for public access on 18" deep bookcase along one wall.

M. Files accessed by City Secretary and PW Director. Lockable files in lockable room (fire rated) adjacent to Finance Manager

J. Active files (convert to 36" wide lateral 4- Drawer)
(1) year of current years records and (1) year of previous years records in office
15"w x 22"d Existing upright files

Vendor Files
Existing Files: (2) existing drawer
File growth: (2) extg. dwrs + (2) dwrs. for growth (100%)= (4) drawers

Receivables / Misc.
Existing Files: (1) extg. drawer
File growth: (1) extg. dwrs + (1) dwrs for growth (50%) = (2) drawers

Bond Issue
Existing Files: (1) extg. drawer
File growth: (1) extg. dwrs + (1) dwrs for growth (100%) = (2) drawers

Cash Deposits
Existing Files: (2) extg. drawer
File growth: (2) extg. dwrs + (2) dwrs for growth (100%) = (4) drawers
(keep previoius year on site)

Payroll & General Vouchers
Existing Files: (1) 4- dwrs upright
File growth: (4) extg. dwrs + (2) dwrs for growth (50%) = (6) drawers
(State Taxes, unclaimed property, invest., workers comp, utilities)

Voucher & Bank Reconcilliations
Existing Files: (1) existing drawer
File growth: (1) extg. dwrs + (1) dwrs for growth (100%) = (2) drawers

Payroll Records
Existing Files: (1) existing drawer
File growth: (1) extg. dwr + (1) dwr for growth (100%) = (2) drawers

Health Insur. & Prop. Insur.
Existing Files: (2) existing desk drawers
File growth: (2) extg. dwrs + (2) dwrs for growth (100%) = (4) dwrs
(4 year period)

Finance Bookcase convert to Lateral file
Existing Files: 1099 = (1) drawer, physical audits = 1 drawer (2-3 yrs kept), current year budget= (1) drawer
File growth: (3) drawers
(6 shelf bookcase - binders remain)

Total Active Files = 29 drawers at 22" = (638" linear)
Growth = (4) lateral 4-drawer

City of Rollingwood — Police Department

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}		{b}	{c}		{b}	{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Chief of Police	1		PO 4		15X13	195	1	1	195	1	1	195	
Lieutenant	1		PO2		10x12	120	1	1	120	1	1	120	
Sergeant	1		WS5		8x8	88	1	1	88	1	1	88	*download video for Court, IT extra server*
Corporal	2		WS5		8x8	88	2	1	88	2	1	88	
Officer	2		WS5		8x8	88	2	1	88	2	1	88	
Reserve	2		WS3		8x6	72	2	1	72	2	1	72	
Detective	1		WS5		8x8	88	2	1	88	2	1	88	
Support Space													
Conference Room (sm)*		0	CN A	F	11x15	165							*deleted Case Conf. /lockable*
Records Room		0	RS 12	J, V	7.2X14	100		1	100		1	100	*lockable*
(4) 4-drawer 36 w lateral files													
Interview Room		0	PD 1		10X10	100							*Shared conf. rm. at Lobby*
Break room													*move to Shared Bldg. Support*
Storage - supplies w gun locker		0	PD 2		9x13.5	122		1	122		1	122	*Confirm content, uniforms*
IT Room (3 racks)		0	CH-11		9x10	90							*move to Shared Bldg. Support*
Patrol Lockers		0	PD 3	U	12X12	144		1	144		1	144	*Patrol Lockers*
Evidence Processing/ Evid. Lockers		0	PD 5		7X16	112		1	112		1	112	*Evidence Lockers in Suite. DVD burner station in*
Evidence Storage w/ gun locker		0	PD 6		10X12	120		1	120		1	120	*Evidence Processing*
Net Subtotal	10								1,337			1,337	
25% Gross Circ. Factor									446			446	
Total Gross Area [square footage]							**11**		**1,783**	**11**		**1,783**	

Typical Formula is a x b = c

Notes:

F. Small Conference Room 4-5 seating capacity. Confirm shared or dedicated
One off of Lobby for Court Clerk side conversations is shared with City Staff.

Fa. Option 2. Not ideal to use table in Chief's Office since meetings, debrief need space.
At times needs to leave confidencial paperwork out and ability to lock and leave.
PD 1 - Confirm need to record in Interview room -dedicated or shared

Conference Room

*Neighborhood comes in to discuss the 5k route and blocking intersections
*Plus once a week debriefing meetings

Currently file cabinets for case files are in Chief's office (3 extg.)

J. Active files (convert to 36" wide lateral rawers)
15"w x 22"d Existing uprights

Training Files (permenant)
Existing Files: (2) existing drawer
File growth: (2) extg. dwrs + (2) dwrs. for growth (100%)= (4) drawers

Employee Records / Internal Affairs
Existing Files: (2) extg. desk drawer
File growth: (2) extg. dwrs + (1) dwrs for growth (50%) = (3) drawers

(Qty. 3) 4-drawer upright in Chief's Office
Existing Files: (12) extg. drawer
File growth: (12) extg. dwrs + (6) dwrs for growth (50%) = (18) drawers

The plan is to go digital as much as possible
Total Active Files = 25 drawers at 22" = (550" linear) at 36"= (4) 4-drawer laterals

POLICE CONT.

U. Patrol needs spare uniform at work for change of clothes. Patrol Lockers located as you walk into Police Area. 2x2 with charging station inside
Qty. 9 + reserve = 10 lockers
Kevlar vest drying / hanging station (air); Lockers hold weapons, long guns, boot shelf, gym bag/ hanging 'go bag', spare uniform,
Kevlar vests wash at home periodically, but air out station would be used.

V. Record Room - Records Room for additional case files combined with Chief's records

No support staff
No finger prints, all done downtown
No temporary holding
No registering of sex offenders
No Armory - provide storage closet for supplies to clean & repair guns
No internal fitness currently on site
Juvenile - No Holding. get back to parents.

Changing of shift A & B-
Use pass through book - debrief in morning, write in log book. Can use a conference room or in WS area

Evidence Processing
No pass-thru locker for evidence. Use one-sided lockers in secure room
Evidence Processing - needs bag & tag (one-sided lockable lockers) Keep drugs separated and ventilated.
Need secure locker with valuables in secure room w safe.
DVD burner in or adjacent to Evidence Processing area. Should be accessible to everyone, not in locked room
Processing evidence once every 3 days- Greg. Provide work surface with ability to process evidence. Then write report back at desk.
photograph evidence
seized evidence like recovered stolen lawn mower is stored in Jackie Bobs fenced area
238 pieces of evidence in locker.
Need camera on door

Cubicals (WS)
Officers & Detectives individual case management files in lockable assigned file drawers at WS.
'You catch'm you take'm" - case files at each WS cubical
Each officer has 3 drawers; with shift A & B overlapping, each WS has 2 box, box file and 2 file file = 8 drawers
Sergeant performs evaluations - needs guest chair. There are privacy issues.

*May share copier **but** some sensitive material should not be sent to shared copier. Better to have desk top in patrol area.*
Patrol officers are not sitting at their desks. Approximately 1- hour working case file at desk
Large detail map of Rollingwood on wall either in conference or Workstation area

Lockers
Patrol lockers are different. Refer to note 'U' above
In storm event, Police stay overnight. During ACL - 1 officer worked 20 hours straight.
Use card reader for locker access in patrol

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood — **Public Works Department**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Public Works Director	1	81	PO2	O, M	10X12	120	1	1	120	1	1	120	
Operators	2	0	WS2	W, S	6x7	60	3	1	60	3	1	60	
Support Space													
Small Conference Space		0	CN A	N	11X15	165							*Shared Bldg. Support*
(2) 3-drawer lateral file cabinets													
Net Subtotal	3								180			180	
25% Gross Circ. Factor									60			60	
Total Gross Area [square footage]							**4**		**240**	**4**		**240**	

Typical Formula is a x b = c

Notes:
M. Files accessed by City Secretary and PW Director. Lockable files in Lockable room adjacent to Finance Manager
O. Large monitor on wall for viewing water lines on map.
J. Active files (36" wide units. drawers)

TCEQ / AWR Files
Existing Files: (1) existing 4-drawer lateral
File growth: (1) existing 4-drawer lateral + (2) drawer for growth (50%) = (6) drawers
(5-years of records; paid to keep water & waste water files)

Upright - Workshop
Existing Files: (1) existing upright unit at (4) drawers
File growth: (1) existing upright unit at (4) drawers - used for brass fittings, tools, drills

Lockable Storage tool space
10'-8" L x 5' w existing size - expand to 10'x10'

Storage Yard with barn - Approximate size 80 x 30
selling chipper and trailer
Location for dirt, base and haul off needed
Will be acquiring new dump bed trailer to keep dirt on
partial enclosure protects generator
Skaggs riding lawn mower in barn
If provide pole barn, could remove barn
Monday & Thursday recycle days - pick up at curb
Austin City Limits trailer - no parking sign
TDS contracts for rocks
Location for backhoe / front end loader in yard
Rigid evidence locker located in garage currently
Freezer - ICE for Public Works crew located in garage
Storage for large bottled waters for cooler currently located in garage
Woman's Club plastic storage bins currently located in garage

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood — **Planning and Development**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}		{c}	{b}		{c}	
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Staff Offices & Workstations													
Planner Inspector	-	0	PO2		10X12	120	1	1	120	1	1	120	Future FTE added back
Admin. Support	-	0											Future FTE deleted
Support Space													
Medium Conference Space		0											
Copy / Workroom		0											
Net Subtotal	-								120			120	
25% Gross Circ. Factor									40			40	
Total Gross Area [square footage]									**160**			**160**	

Typical Formula is a x b = c

FTE = full-time equivalent (employee)

Facilities Master Plan and Municipal Campus Plan

City of Rollingwood — **Utility Billing**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038		
						{a}	{b}		{c}	{b}		{c}
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space
Staff Offices & Workstations												
Clerk		0										
Support Space												
Medium Conference Space		0										
Walk up counter@ workstations	-	0										
Net Subtotal	-											
25% Gross Circ. Factor												
Total Gross Area [square footage]									-			

Typical Formula is a x b = c

Notes:
currently will remain out sourced

City of Rollingwood — **Shared Building Support**

Revised from 8-22-2018 meeting
Revised from 7-13-2018 meeting
Revised from 6-07-2018 email
Revised from 5-09-2018 meeting
Revised from 5-2-18 meeting

Required Spaces			Future Space Needs				2028			2038			
						{a}	{b}	{c}		{b}	{c}		
Space Description	2018 Staff	Current Room size	Space Code	Note Code	Unit Size	Unit Area NSF	Qty. of Staff	Qty. of Space	Total Space	Qty. of Staff	Qty. of Space	Total Space	
Shared Building Support													
Central Custodial / Storage		0		Y	9x10	90		1	90		1	90	
Electrical					9X9	81		1	81		1	81	
Mechanical Room					8x10	80		1	80		1	80	*split with Equipment platform*
waterheater													
Sprinkler/ riser													
I.T. (3 racks ea) City & Police separate		18	CH 11		9x10	90		2	180		2	180	*split room with chain link fence*
Building Material Storage		0			10x10	100		1	100		1	100	
Janitor Closet		9			5x7	35		1	35		1	35	
Shared Staff Support													
Breakroom (1-table, 4 -chairs)		75	CH 12		12X16	192		1	192		1	192	*Adjacent to Community Room*
Copy / Workroom		0	CH 8	Ca, P, X	12x16.5	198		1	198		1	198	*Centrally located*
Toilets		122	CH 5		15x7.5	112		2	224		2	224	*(1-male + 1-female) 112 SF ea.; 1st & 2nd floors*
Staff Shower (1)		0	CH5.3	T	9.5x8.5	81		1	81		1	81	*1-Unisex shower off restroom*
Shared Conference (seating for 10)			CN C	N	21X12	252		1	252		1	252	*Projector*
Net Subtotal									1,513			1,513	
15% Gross Circ. Factor									267			267	*circulation factor adjusted*
Total Gross Area [square footage]	-						-		**1,780**	-		**1,780**	

Typical Formula is a x b = c

Notes:

A. Large shared Conference Room- 10 seating capacity.(Rev. 5/3/2018) Shared conference room available to all dept./ Admin. to schedule.
Library / Archive permanent records available for public access on 18" deep bookcase along one wall.
Library to be part of main conference room with community functions

Ca. Confirm Copy/ Workroom is for all City staff. Some individual desktop copiers for Court Clerk & Police
Provide shelving & cabinets for paper goods storage / office supplies. Currently in storage closet.

~~N. Small shared Conference Room- 6 seating capacity. Public Works, Planning and Utility Billing to share~~ (Rev. 5-2-2018)

P. Provide space for large format plotter / scanner (Used by Planning Dept.)

T. Showers - currently officers dress in restroom before shift and change again after shift using gym bag (Rev. 5-9-2018) delete shower, 7-18-2018 Add shower back
~~Showers to be accessible to everyone. PW, Police + City Staff. Adjacent lockers for changing - bring clothes into shower. No assigned lockers~~.
(1-male, 1-female, 1- unisex)

W. Police required to have separate server from City

X. Mail Distribution center

Y. Jackie Bob request cabinet doors for supplies

6 – PROJECT BUDGET OPTIONS & CONCEPTUAL SITE PLAN

OPTION 1A – Addition and Renovation of Existing City Hall

Schedule Milestone Dates

The following budget is based on hallmark dates for the design and construction process as indicated:

Bond Election	November 2019
Start of Design Phase	January 2020
Construction Start	January 2021
Occupancy	March 2022

Total Development Budget = $4,967,289

The following page shows the total development budget including Notes reflecting cost assumptions for this option, which is based upon a detailed analysis. Project budgeting was performed by utilizing a local, Austin General Contractor, Braun & Butler Construction, to develop construction costs and Brinkley Sargent Wiginton Architects providing the additional Project Costs estimates based on past and similar projects. The detailed construction estimate by Braun & Butler in included in Appendix 3.

Rollingwood City Hall and Police Facility

Option #1A - Addition and Renovation to Existing City Hall - November 2019 Bond Election

Project Budget - Brinkley Sargent Wiginton Architects

November 28, 2018

	11/20/2018	11/28/2018		
Land Acquisition	0	0		Note A
Total	**0**	**0**		
Testing Services				
Site Environmental Assessment	0	0		Note B
Geotechnical Report	8,000	8,000		
Materials Testing	12,700	12,700		Note C
Total	**20,700**	**20,700**		
Construction				
New City Hall and Police Facility	3,171,889	3,171,889		Note D
Demolish Existing Structure	0	0		Note E
Public Works Yard	0	0		Note E
Site Development/Parking	0	0		Note E
Site Landscape	0	0		Note E
Site Fence/Gates	0	0		Note E
On-Site Water Retention	0	0		Note E
Security Systems	0	0		Note E
I.T. Infrastructure	33,200	33,200		Note F
Covered Parking	0	0		Note A
Police Equipment/Lockers	12,000	12,000		
Emergency Generator	25,000	25,000		Note G
LEED Enhancements	0	0		Note A
Construction Contingency	0	0		Note E
Design Contingency	200,000	200,000		Note H
Sub-Total	3,442,089	3,442,089		
Inflation	522,400	522,400		Note J
Total	**3,964,489**	**3,964,489**		Note K
FF&E				
Furniture	184,700	184,700		Note L
Exercise Equipment	0	0		Note A
Telephones	13,900	13,900		Note M
A/V Equipment	30,000	30,000		Note N
Total	**228,600**	**228,600**		
City Budgets				
Art Budget	0	0		Note A
Site Survey/Platting	0	0		Note O
Construction Manager at Risk Pre-Const.	7,500	7,500		
Building Environmental Assessment	0	0		Note P
Off-Site Utility Development	0	0		Note P
Moving Costs	0	24,000		Note T
IT Equipment Relocation	15,000	5,000		Note T
Temporary Office Space	92,000	92,000		Note R
Communication Tower	0	0		Note A
Computers	0	0		Note B
Off-Site Fiber to Site	0	0		Note B
Owner Contingency	39,600	39,600		Note S
Total	**154,100**	**168,100**		
Professional Services				
Site Submittal Process	8,000	8,000		
TCEQ Submittal Process	2,000	2,000		
Architectural, Structural and MEP Eng. Basic Services	396,400	396,400		
Extended CA Services (Phased Project)	33,500	33,500		
Civil Engineering (On-Site)	54,000	54,000		
Water Quality Pond Design	7,000	7,000		
Public Works Area	1,000	1,000		
Civil Engineering (Off-Site)	0	0		Note B
Civil Engineering Site Survey	0	0		Note B
Civil Off-Site Drainage Survey	0	0		Note B
Landscape Design	15,000	15,000		
Audio/Visual/Acoustical Consulting	15,000	15,000		
Commissioning	13,000	13,000		
TAAS Consultant	2,500	2,500		
Technology/Security Consultants	18,000	18,000		
Interior Design/Furniture Selection	32,800	0		Note Q
Exercise Equipment Procurement	0	0		Note A
LEED Consultation	0	0		Note A
Record Drawings	8,000	8,000		
Cost Estimating	8,000	0		Note U
Reimbursable Costs	12,000	12,000		
Total	**626,200**	**585,400**		
Total Project Cost	**4,994,089**	**4,967,289**		

Notes:

Note A: Not required
Note B: To be determined
Note C: 8,436 s.f. @ approximately $1.50/s.f.
Note D: Refer to Exhibit A
November 2018 construction budget
Note E: Incorporated into construction budget
Refer to Exhibit A
Note F: 6,647 s.f. @ approximately $5/s.f.
Note G: Use of existing emergency to be verified
Note H: Contingency for design scope modifications
and/or discovered items due to existing cond
Note J: Inflation assumptions (15.2%):
2018 - .6% (December)
2019 - 7%
2020 - 5.8% (through October)
Note K: Assumed schedule:
November 2019 Bond Election
January 2020 Begin Design
October 2020 Project Bids
January 2021 Construction Begins
March 2022 Owner Move-In
Note L: Furniture assumptions:
- Furniture install January 2022
- Assumes all new furniture
- Assumes re-use of existing files and shelvin
Note M: 8,436 s.f. @ $1.65/s.f.
Note N: Assumed AV scope of work:
- Lobby
- Multi-Purpose Room
- Large Conference Room
- Small Conference Room
Note O: Survey previously provided by City.
Platting not required.
Note P: Unknown at this time
Note Q: Provided by City
Note R: - 48' x 64' mobile home (double wide)
- $20,000 setup cost
- $4,000/month over 16 months
- $500/month for utilities over 16 months
Note S: 1% of construction budget
Note T: Cost estimated by City
Note U: CMAR project delivery anticipated

OPTION 2A – Demolish Existing Facility and Provide All New Construction

Schedule Milestone Dates

The following budget is based on hallmark dates for the design and construction process as indicated:

Bond Election	November 2019
Start of Design Phase	January 2020
Construction Start	January 2021
Occupancy	October 2021

Total Development Budget = $4,916,217

The following page shows the total development budget including Notes reflecting cost assumptions for this option, which is based upon a detailed analysis. Project budgeting was performed by utilizing a local, Austin General Contractor, Braun & Butler Construction, to develop construction costs and Brinkley Sargent Wiginton Architects providing the additional Project Costs estimates based on past and similar projects. The detailed construction estimate by Braun & Butler in included in Appendix 3.

Rollingwood City Hall and Police Facility

Option #2A - Demolish Existing Facility and Provide All New Construction - November 2019 Bond Election

Project Budget - Brinkley Sargent Wiginton Architects

November 28, 2018

	11/20/2018	11/28/2018		
Land Acquisition	0	0		Note A
Total	**0**	**0**		
Testing Services				
Site Environmental Assessment	0	0		Note B
Geotechnical Report	8,000	8,000		
Materials Testing	12,700	12,700		Note C
Total	**20,700**	**20,700**		
Construction				
New City Hall and Police Facility	3,170,317	3,170,317		Note D
Demolish Existing Structure	0	0		Note E
Public Works Yard	0	0		Note E
Site Development/Parking	0	0		Note E
Site Landscape	0	0		Note E
Site Fence/Gates	0	0		Note E
On-Site Water Retention	0	0		Note E
Security Systems	0	0		Note E
I.T. Infrastructure	42,200	42,200		Note F
Covered Parking	0	0		Note A
Police Equipment/Lockers	12,000	12,000		
Emergency Generator	25,000	25,000		Note G
LEED Enhancements	0	0		Note A
Construction Contingency	0	0		Note E
Design Contingency	200,000	200,000		Note H
Sub-Total	3,449,517	3,449,517		
Inflation	523,500	523,500		Note J
Total	**3,973,017**	**3,973,017**		Note K
FF&E				
Furniture	177,600	177,600		Note L
Exercise Equipment	0	0		Note A
Telephones	13,900	13,900		Note M
A/V Equipment	30,000	30,000		Note N
Total	**221,500**	**221,500**		
City Budgets				
Art Budget	0	0		Note A
Site Survey/Platting	0	0		Note O
Construction Manager at Risk Pre-Const.	7,500	7,500		
Building Environmental Assessment	0	0		Note P
Off-Site Utility Development	0	0		Note P
Moving Costs	0	24,000		Note T
IT Equipment Relocation	15,000	5,000		Note T
Temporary Office Space	74,000	74,000		Note R
Communication Tower	0	0		Note A
Computers	0	0		Note B
Off-Site Fiber to Site	0	0		Note B
Owner Contingency	39,700	39,700		Note S
Total	**136,200**	**150,200**		
Professional Services				
Site Submittal Process	8,000	8,000		
TCEQ Submittal Process	2,000	2,000		
Architectural, Structural and MEP Eng. Basic Services	397,300	397,300		
Civil Engineering (On-Site)	54,000	54,000		
Water Quality Pond Design	7,000	7,000		
Public Works Area	1,000	1,000		
Civil Engineering (Off-Site)	0	0		Note B
Civil Engineering Site Survey	0	0		Note B
Civil Off-Site Drainage Survey	0	0		Note B
Landscape Design	15,000	15,000		
Audio/Visual/Acoustical Consulting	15,000	15,000		
Commissioning	13,000	13,000		
TAAS Consultant	2,500	2,500		
Technology/Security Consultants	18,000	18,000		
Interior Design/Furniture Selection	32,100	0		Note Q
Exercise Equipment Procurement	0	0		Note A
LEED Consultation	0	0		Note A
Record Drawings	8,000	8,000		
Cost Estimating	8,000	0		Note U
Reimbursable Costs	10,000	10,000		
Total	**590,900**	**550,800**		
Total Project Cost	**4,942,317**	**4,916,217**		

Notes:

Note A: Not required
Note B: To be determined
Note C: 8,436 s.f. @ approximately $1.50/s.f.
Note D: Refer to Exhibit A
October 2018 construction budget
Note E: Incorporated into construction budget
Refer to Exhibit A
Note F: 8,436 s.f. @ approximately $5/s.f.
Note G: Use of existing emergency to be verified
Note H: Contingency for design scope modifications
and/or discovered items due to existing conditions
Note J: Inflation assumptions (15.2%):
2018 - .6% (and December)
2019 - 7%
2020 - 5.8% (through October)
Note K: Assumed schedule:

November 2019	Bond Election
January 2020	Begin Design
October 2020	Project Bids
January 2021	Construction Begins
October 2021	Owner Move-In

Note L: Furniture assumptions:
- Furniture install July 2021
- Assumes all new furniture
- Assumes re-use of existing files and shelving

Note M: 8,436 s.f. @ $1.65/s.f.
Note N: Assumed AV scope of work:
- Lobby
- Multi-Purpose Room
- Large Conference Room
- Small Conference Room

Note O: Survey previously provided by City.
Platting not required.
Note P: Unknown at this time
Note Q: Provided by City
Note R: - 48' x 64' mobile home (double wide)
- $20,000 setup cost
- $4,000/month over 12 months
- $500/month for utilities over 12 months

Note S: 1% of construction budget
Note T: Cost estimated by City
Note U: CMAR project deliver anticipated

EXECUTIVE SUMMARY

A. The following Mechanical, Electrical and Plumbing Assessment Report is for Rollingwood City Hall located at 403 Nixon Drive, Rollingwood, Texas. The original building was built in 1975 to house City Hall, a small shop and a two-bay garage for fire trucks. A new two-bay garage was added in 1977 for Police vehicles. The Police garage was later converted into the Police Station in the 2005 renovation. ADA remodel of restrooms with additional air conditioning was done in 2012 along with replacing the air conditioning unit for the Council Chambers. Although the Council Chamber's HVAC system was replaced in 2012 it does not have enough capacity during peak load conditions and will need to be investigated further. The HVAC system in the ADA Restroom and Office area has exterior exposed ductwork located on the roof from a 2005 renovation. This is going to be a future maintenance issue and is not efficient. An alternate solution should be investigated in the new project. The converted Police area is served by three (3) window units which should not be reused. Because of it's original use, this area does not have adequate space above the ceiling to provide appropriate long-term, accessible and modifiable services for a Police Facility. All existing MEP items in this area are not reusable. New HVAC systems will need to replace existing to meet current code requirements and accommodate new building layout and space requirements.

B. The plumbing systems were upgraded in 2012, however, the service distribution piping is original. Tempered water requirements at hand wash sinks may need to be modified to meet current code requirements and will require further investigation. Condition of 1975 piping is unknown.

C. The main electric service is currently fed overhead from a pole mounted transformer and will need to be redone to provide adequate electric service for new project requirements. New service may be overhead or underground as dictated by new layout and utility company requirements. All space lighting, emergency lighting, exit lighting and controls will need to be replaced to meet current 2015 IECC Energy Code requirements. We would also suggest installation of a new fire sprinkler system and fire alarm system in the new facility. Reference Assessment Report for more detailed information.

ASSESSMENT REPORT

A. The existing HVAC system consists of the following:

1. Council Chambers: The HVAC system consists of a 5-ton D-X split system unit which is ducted over the ceiling of offices to sidewall grilles in sidewall of main meeting room. The exterior condensing unit is located near the main service panel. Reference Photo 'A1'. The system was replaced in 2012 and the ductwork was changed to sheet metal ductwork in 2017 due to poor condition of original ductwork. The space is reported to be too hot in the summer and too cold in the winter. This implies system is not adequately sized for current use and conditions. Also outside ventilation air does not meet current code requirements. Systems will need to be upgraded to meet new project and code requirements if building is renovated. Some of the newer existing equipment may be able to be reused depending upon new project requirements and equipment condition.

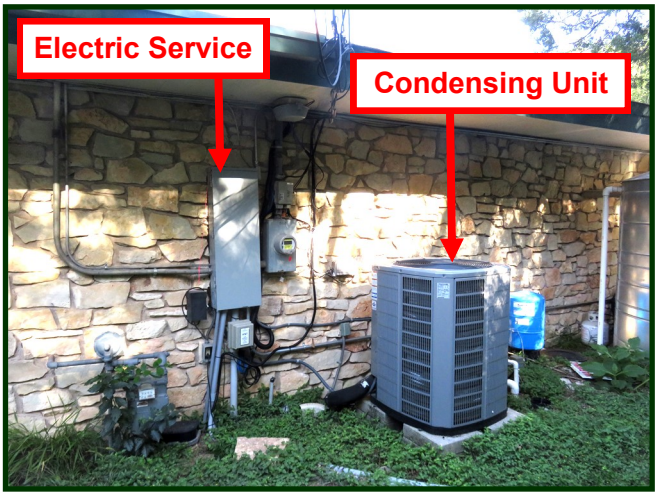


Photo A1

2. Restroom / Offices: The HVAC system was added in 2012 and consists of a rooftop unit with exposed exterior ductwork run on the roof. Reference Photo 'A2'. This was done due to limited space above the ceiling. Exposed ductwork will become a maintenance issue and is not energy efficient for the system. Recommend investigating another solution for the mechanical system in this area.

Photo A2

3. Police/Office Areas: This area is conditioned by three (3) window units. The space was converted from a parking garage for police vehicles to the Police Department in 2005-2006. Reference Photos 'A3' and 'A4'. Mold was found in this area in 2017 and the Police Department was relocated to a portable building nearby. The space is currently empty. Area surrounding the structure also has drainage issues. There has been water intrusion issues in this portion of the building. Currently a temporary berm has been installed to divert water from getting into area. Reference Photos 'A5' and 'A6'.

Photo A3

Photo A4

A3 - Continued

Photo A5

Photo A6

B. The existing electrical system condition and recommendation are indicated below:

1. Building electric service is fed from the local utility company from an overhead transformer to an exterior main panel (120/240V / 1 Phase / 200 Amp / Residential Style). Reference Photos 'B1' and 'B2'. The panel has a 200 amp main breaker. The electric service will need to be upgraded to handle new project electrical requirements.

Photo B1

Photo B2

2. There is a 7500 watt generator located on the exterior near the rain water collection tank to handle minimal emergency requirements during an outage (couple of receptacles for computers and some lights). Reference Photos 'B3' and 'B4'. Suggest evaluating emergency requirements for new project to see if generator is large enough. Also suggest circuiting all emergency circuits from a new emergency panel. These requirements will need to be carefully evaluated with the City to insure all critical items are considered.

Photo B3

Photo B4

3. Lighting in entire facility, including Council Chambers, will need to be upgraded to meet energy code requirements for control and efficiency. All emergency and exit light will also need to be upgraded to meet code requirements. New LED exterior lighting should be installed for safety. New lighting controls will be used for scheduling of exterior fixtures to minimize light trespass onto adjoining property.

4. Recommend a new code compliant fire alarm system be installed.

LEGEND

- Existing Council Chamber / Court Room 1,789 SF
- One-Story Lobby and Programmed Block support spaces 1,111 SF
- Two-Story City Hall Addition
  2,768 SF stacked floors / 5,536 SF Total
- Public Works Yard - Approx. 1670 SF

Areas include circulation factors

NIXON DRIVE (60' R.O.W.)

GENTRY DRIVE (60' R.O.W.)

HATLEY PARK SUBDIVISION

LOT A
COMMUNITY PLAZA
BK. 68, PG. 17
P.R.T.C.TX.

PARKING LOT

Parking (9)

Parallel Parking (9)

Parking (12)

Parking (18)

Parking (20)

Public Entry

Staff Entry

Water Quality Pond (potentially relocated within NE section of Rollingwood Park)

P.W. Shed to move

Retaining Wall

Patio

Retaining Wall

Public Works Yard

5' P.U.E.

CONC.

WOOD, ROCK AND METAL PAVILION

CONC. DRAINAGE STRUCTURE

ROCK STAIRS

WOOD STAIRS

METAL CISTERN

ROCK WALL

DRAINAGE

SWK

C&G

Option 1A

Renovate existing Council / Court Room and add balance of program functions in new additions

Site layout based on waiver from detention approval

BRINKLEY SARGENT WIGINTON ARCHITECTS

LEGEND

- Level 1 Council Chambers/ Court/ Community Rm. 1,458 SF
- Two-Story Lobby w/ Programmed Block Support spaces 1,111 SF
- Two-Story City Hall Addition 2,933 SF stacked floors / 5,866 SF Total
- Public Works Yard - Approx. 1670 SF

Areas include circulation factors

NIXON DRIVE (60' R.O.W.)

GENTRY DRIVE (60' R.O.W.)

HATLEY PARK SUBDIVISION

Parallel Parking (9)

Public Entry

Parking (18)

Water Quality Pond (potentially relocated within NE section of Rollingwood Park)

P.W. Shed to move

Staff Entry

Retaining Wall

Patio

Retaining Wall

Public Works Yard

Parking (12)

Parking (18)

Parking (20)

LOT A

5' P.U.E.

CONC. DRAINAGE STRUCTURE

ROCK STAIRS

METAL CISTERN

WOOD, ROCK AND METAL PAVILION

CONC.

SWK

C&G

DRAINAGE

ROCK WALL

Option 2A

All program functions in new additions

Site layout based on waiver from detention approval

BRINKLEY SARGENT WIGINTON ARCHITECTS

Job Name: Rollingwood City Hall

Date: 11/21/2018

Braun & Butler Construction

Option 1

		Mhrs	Qty	Unit	Miscellaneous UP	Miscellaneous Amount	Labor UP	Labor Amount	Material UP	Material Amount	Total
0	**Project Information**										0
	Building (SF)		**8436**	sf							0
	Paving (SY)			sy							0
	Project Duration		424	days							0
											0
1	**General Conditions**										0
	Project Manager		63	wk			1,000	63000			63,000
	Truck Expense		63	wk			150	9450			9,450
	Superintendent		63	wk			2,100	132300			132,300
	Truck Expense		63	wk			350	22050			22,050
	Preconstruction		1	wk			1,700	1700			1,700
	Interim Cleanup Labor		756	mhrs			28	21168			21,168
	Project Office Clerical Support		63	wk			350	22050			22,050
											0
	Mobilization / Demobilization		1	ls	3,500	3,500					3,500
	Job Office / Furniture / Supplies		14	mo	600	8,400					8,400
	Chemical Toilet		14	mo	150	2,100					2,100
	Drinking Water		14	mo	100	1,400					1,400
	Dumpster Service		18	ea	600	10,800					10,800
	Storage Trailer			mo	300	0					0
	Job Office Temporary Utilities		14	mo	100	1,400					1,400
	Telephone / Fax / Radio		14	mo	275	3,850					3,850
	Computer Service		14	mo	150	2,100					2,100
											0
	Rentals		1	ls	1,500	1,500					1,500
	Plan Reproduction		1	ls	500	500					500
	Close Out Documents		1	ls	1,500	1,500					1,500
											0
	Allowances										0
	contractor's contingency		1	ls		200,000					200,000
	monument sign allowance		1	ls		18,000					18,000
	public works yard allowance		1	ls		100,000					100,000
											0
2	Site Work					97,000					97,000
	temp meter & usage		1	ls		2,500					2,500
2.05	Asphalt Paving - included above		711	sy		0					0
											0
2.10	Striping / Traffic Signage		1	ls		2,800					2,800
											0
2.15	Permanent Fence- dumpster gates					2,500					2,500
											0
2.20	Termite Treatment		8,436	sf	0	2,953					2,953
											0
2.25	Landscape					44,000					44,000
											0
2.30	Irrigation					13,300					13,300
											0
2.35	Demolition- existing building / misc. site		2,000	sf	8	16,000					16,000
											0
2.90	Erosion Controls		1	ls		5,500					5,500
											0
2.91	Site Utilities					65,000					65,000
											0
2.92	Water Quality Structures- small		1	ls		75,000					75,000
											0
2.93	retaining wall - large cut stone wall		3,240	sf	26	84,240					84,240

											0
3.0	Building Concrete Turnkey		6,647	sf	22	146,234					146,234
											0
4	Masonry		4,564	sf	24	109,536					109,536
											0
5.15	Miscellaneous Steel					7,500					7,500
											0
6	Rough Carpentry					0		2200		2450	4,650
											0
6.01	Wood Framing		6,647	sf	19	125,628					125,628
											0
6.20	Millwork		allowance			165,000					165,000
											0
7	Dampproofing		7,824	sf	2.65	20,734					20,734
											0
7.10	Flashing		1	ls		6,800					6,800
											0
7.20	Joint Sealers		1	ls		3,800					3,800
											0
7.25	Fire Stopping		1	ls		2,340					2,340
											0
7.30	Roofing		8,436	sf	12	101,232					101,232
											0
7.50	Insulation		8,436	sf	4	35,431					35,431
											0
8	Hollow Metal Doors / Frames										0
	3070 frame	60	55	ea			35	2100	350	19,250	21,350
	3070 doors	15	5	ea			35	525	275	1,375	1,900
											0
8.10	Wood Doors										0
	wood doors	120	50	ea			35	4200	275	13,750	17,950
											0
8.20	Hardware - by allowance	120	55	sets			35	4200	650	35,750	39,950
	knox box	1	1	ea			35	35		350	385
											0
8.30	Glass / Glazing		8,436	sf	12.65	106,736					106,736
											0
9.00	Metal Framing / Drywall		8,436	sf	7	83,500					83,500
											0
9.05	Acoustical Ceiling		8,436	sf	3	29,104					29,104
											0
9.10	Ceramic Tile		1	ls		24,500					24,500
	wall tile restrooms										0
	floor tile restrooms										0
											0
9.15	Lath / Plaster		3,260	sf	10	32,600					32,600
											0
9.20	Carpet / VCT / Base		8,436	sf	3.4	28,682					28,682
											0
9.25	Tape / Float / Texture / Paint		8,436	ssf	5	42,180					42,180
											0
10.15	Toilet Accessories		20	ea	175	3,500					3,500
											0
10.35	Building Signage room signage only	8	50	ea		0	35	280	115	5750	6,030
											0
10.90	FEC	8	4	ea		0	35	280	200	800	1,080
											0
12.90	Window Treatments		allowance			4,500					4,500
											0
14.90	Elevator		1	ea		55,000					55,000
											0
15	Fire Suppression		12,654	sf	2.35	29,737					29,737
											0

15.10	Plumbing		60	fixtures	1380	82,800					82,800
											0
15.20	HVAC		8,436	sf	34.65	292,307					292,307
											0
16	Electrical		8,436	sf	26.25	221,445					221,445
											0
16.10	Communications- by owner					0					0
											0
16.20	Electronic Safety / Security		8,436	sf	5	42,180					42,180
											0
16.30	Fire Alarm		8,436	sf	2.75	23,199					23,199
											0
	Regulatory Requirements										0
	plan review fee- by owner if required			ls							0
	building permit fee- by owner if required			ls							0
	capital recovery fee- by owner if required			ls							0
	other permit fees - by owner if required			ls							0
	TCEQ appilcation / plan		1	ls	1500	1,500					1,500
	TCEQ Edward's WPAP Fee		1	ls	3000	3,000					3,000
	TCEQ inspections		10	mo	400	4,000					4,000
											0
	Project Specific Requirements										0
	registered surveyor		40	hr	125	5,000					5,000
	site safety inspections		1	ls		3,750		4500			8,250
	temporary fence		500	lf	2	2,500					2,500
	temporary gates		3	ea	350	1,050					1,050
	project final clean		8,436	sf	0.45	3,796					3,796
											0
	Project Insurance		1	ls		25,934					25,934
											0
	SUBTOTAL					2,642,579		290,038		79,475	3,012,092
	CM Fee		4.20%								126,508
	Sales tax on Material		0.00%								0
	Sales tax on Total		0.00%								0
	Total Before Bond										3,138,600
	Bond Cost (yes=1)		1								33,289
	SUMMARY TOTAL										**3,171,889**

Job Name: Rollingwood City Hall

Date: 11/21/2018

Braun & Butler Construction

Option 2

		Mhrs	Qty	Unit	Miscellaneous UP	Miscellaneous Amount	Labor UP	Labor Amount	Material UP	Material Amount	Total
0	**Project Information**										0
	Building (SF)		**8436**	sf							0
	Paving (SY)			sy							0
	Project Duration		273	days							0
											0
1	**General Conditions**										0
	Project Manager		41	wk			1,000	41000			41,000
	Truck Expense		41	wk			150	6150			6,150
	Superintendent		41	wk			2,100	86100			86,100
	Truck Expense		41	wk			350	14350			14,350
	Preconstruction		1	wk			1,700	1700			1,700
	Interim Cleanup Labor		492	mhrs			28	13776			13,776
	Project Office Clerical Support		41	wk			350	14350			14,350
											0
	Mobilization / Demobilization		1	ls	3,500	3,500					3,500
	Job Office / Furniture / Supplies		9	mo	600	5,400					5,400
	Chemical Toilet		9	mo	150	1,350					1,350
	Drinking Water		9	mo	100	900					900
	Dumpster Service		18	ea	600	10,800					10,800
	Job Office Temporary Utilities		9	mo	100	900					900
	Telephone / Fax / Radio		9	mo	275	2,475					2,475
	Computer Service		9	mo	150	1,350					1,350
	Rentals		1	ls	1,500	1,500					1,500
	Plan Reproduction		1	ls	500	500					500
	Close Out Documents		1	ls	1,500	1,500					1,500
											0
	Allowances										0
	contractor's contingency		1	ls		200,000					200,000
	monument sign allowance		1	ls		18,000					18,000
	public works yard allowance		1	ls		100,000					100,000
											0
2	Site Work					108,000					108,000
	temp meter & usage		1	ls		2,500					2,500
2.05	Asphalt Paving - included above		711	sy		0					0
											0
2.10	Striping / Traffic Signage		1	ls		2,800					2,800
											0
2.15	Permanent Fence- dumpster gates					2,500					2,500
											0
2.20	Termite Treatment		8,436	sf	0	2,953					2,953
											0
2.25	Landscape					44,000					44,000
											0
2.30	Irrigation					13,300					13,300
											0
2.35	Demolition- existing building / misc. site		2,000	sf	16	32,000					32,000
											0
2.90	Erosion Controls		1	ls		5,500					5,500
											0
2.91	Site Utilities					65,000					65,000
											0
2.92	Water Quality Structures- small		1	ls		75,000					75,000
											0
2.93	retaining wall - large cut stone wall		3,240	sf	26	84,240					84,240

											0
3.0	Building Concrete Turnkey		8,436	sf	22	185,592					185,592
											0
4	Masonry		4,564	sf	24	109,536					109,536
											0
5.15	Miscellaneous Steel					7,500					7,500
											0
6	Rough Carpentry					0		2200		2450	4,650
											0
6.01	Wood Framing		8,436	sf	19	159,440					159,440
											0
6.20	Millwork		allowance			165,000					165,000
											0
7	Dampproofing		7,824	sf	2.65	20,734					20,734
											0
7.10	Flashing		1	ls		6,800					6,800
											0
7.20	Joint Sealers		1	ls		3,800					3,800
											0
7.25	Fire Stopping		1	ls		2,340					2,340
											0
7.30	Roofing		8,436	sf	12	101,232					101,232
											0
7.50	Insulation		8,436	sf	4	35,431					35,431
											0
8	Hollow Metal Doors / Frames										0
	3070 frame	60	55	ea			35	2100	350	19,250	21,350
	3070 doors	15	5	ea			35	525	275	1,375	1,900
											0
8.10	Wood Doors										0
	wood doors	120	50	ea			35	4200	275	13,750	17,950
											0
8.20	Hardware - by allowance	120	55	sets			35	4200	650	35,750	39,950
	knox box	1	1	ea			35	35		350	385
											0
8.30	Glass / Glazing		8,436	sf	12.65	106,736					106,736
											0
9.00	Metal Framing / Drywall		8,436	sf	7	83,500					83,500
											0
9.05	Acoustical Ceiling		8,436	sf	3	29,104					29,104
											0
9.10	Ceramic Tile		1	ls		24,500					24,500
	wall tile restrooms										0
	floor tile restrooms										0
											0
9.15	Lath / Plaster		3,260	sf	10	32,600					32,600
											0
9.20	Carpet / VCT / Base		8,436	sf	3.4	28,682					28,682
											0
9.25	Tape / Float / Texture / Paint		8,436	ssf	5	42,180					42,180
											0
10.15	Toilet Accessories		20	ea	175	3,500					3,500
											0
10.35	Building Signage room signage only	8	50	ea		0	35	280	115	5750	6,030
											0
10.90	FEC	8	4	ea		0	35	280	200	800	1,080
											0
12.90	Window Treatments		allowance			4,500					4,500
											0
14.90	Elevator		1	ea		55,000					55,000
											0

15	Fire Suppression		12,654	sf	2.35	29,737					29,737
											0
15.10	Plumbing		60	fixtures	1380	82,800					82,800
											0
15.20	HVAC		8,436	sf	34.65	292,307					292,307
											0
16	Electrical		8,436	sf	26.25	221,445					221,445
											0
16.10	Communications- by owner					0					0
											0
16.20	Electronic Safety / Security		8,436	sf	5	42,180					42,180
											0
											0
16.30	Fire Alarm		8,436	sf	2.75	23,199					23,199
											0
	Regulatory Requirements										0
	plan review fee- by owner			ls							0
	building permit fee- by owner if required			ls							0
	capital recovery fee- by owner if req'd			ls							0
	other permit fees- by owner if req'd			ls							0
	TCEQ appilcation / plan		1	ls	1500	1,500					1,500
	TCEQ Edward's WPAP Fee		1	ls	3000	3,000					3,000
	TCEQ inspections		10	mo	400	4,000					4,000
											0
	Project Specific Requirements										0
	registered surveyor		40	hr	125	5,000					5,000
	site safety inspections		1	ls		3,750		4500			8,250
	temporary fence		500	lf	2	2,500					2,500
	temporary gates		3	ea	350	1,050					1,050
	project final clean		8,436	sf	0.45	3,796					3,796
											0
	Project Insurance		1	ls		25,500					25,500
											0
	SUBTOTAL					2,735,440		195,746		79,475	3,010,661
	CM Fee		4.20%								126,448
	Sales tax on Material		0.00%								0
	Sales tax on Total		0.00%								0
	Total Before Bond										3,137,109
	Bond Cost (yes=1)		1								33,278
	SUMMARY TOTAL										**3,170,387**

Needs Assessment and Site Master Plan

Update 11.28.2018

City of ROLLINGWOOD Texas

BRINKLEY SARGENT WIGINTON ARCHITECTS

Steps of the Process

1. Inventory of Facilities
   - Architectural condition
   - Mechanical Electrical and Plumbing review of existing conditions
   - Site constraints / opportunities
   - Regulatory agencies and development requirements
   - Maintenance issues
2. Needs Assessment (20 year / Build out)
3. Development Strategy Options for Building / Site
4. Facility Master Plan / Project Budget
5. Final Report

Building Program Status – Decisions from 7/18/2018 Council Mtg.

- Confirm size of building program approx. 8,500 SF
- Confirm direction for use of Council / Court Chamber
  - Current size or larger? Current size +
  - Opportunity for community use? Yes
  - Fixed alderman tables or mobile? Open to flexible / No dais
- Preference for Option 1, 2 or 3 for continuation of Study Process (Pick 2)
  - Option 2 / Retain original Council structure and connect to a new two story addition
  - Option 3 / New two story building
- Incorporate stormwater solutions into overall design

Site Issues

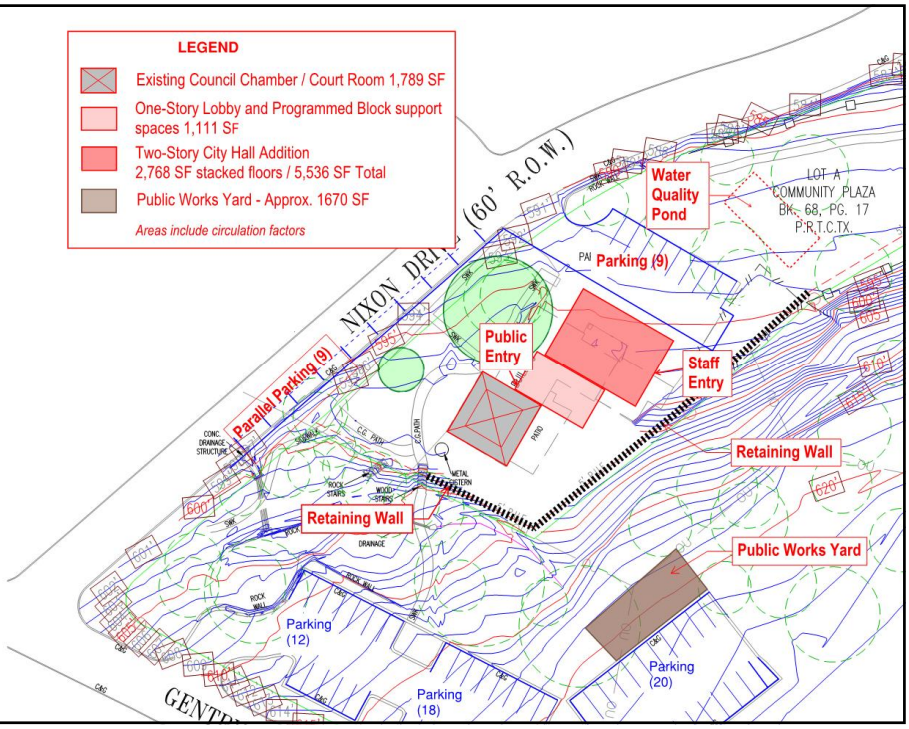
- Site drainage from hillside
- On Edwards Aquifer Recharge Zone
- Limited building pad / parking

- Municipal project is not eligible for 20% rule on water quality exemption - No TCEQ benefit in platting City Hall Lot with Upper lot. We will have to provide Water Quality treatment for any new impervious cover placed after March 21, 1990.
- Maximum impervious coverage for GUI Zoning on City Hall Lot is 50% (21,822 SF) - Current impervious coverage on City Hall Lot is approximately 34% (14,820 SF) – 7,002 SF available for new work.
- Retaining wall along City Hall Lot back property line is a good location for a stormwater diversion element – rear setback for GUI is 30' so Rollingwood would have to grant themselves a easement for stormwater management.

Building Program Status – 9.6.2018 Decisions

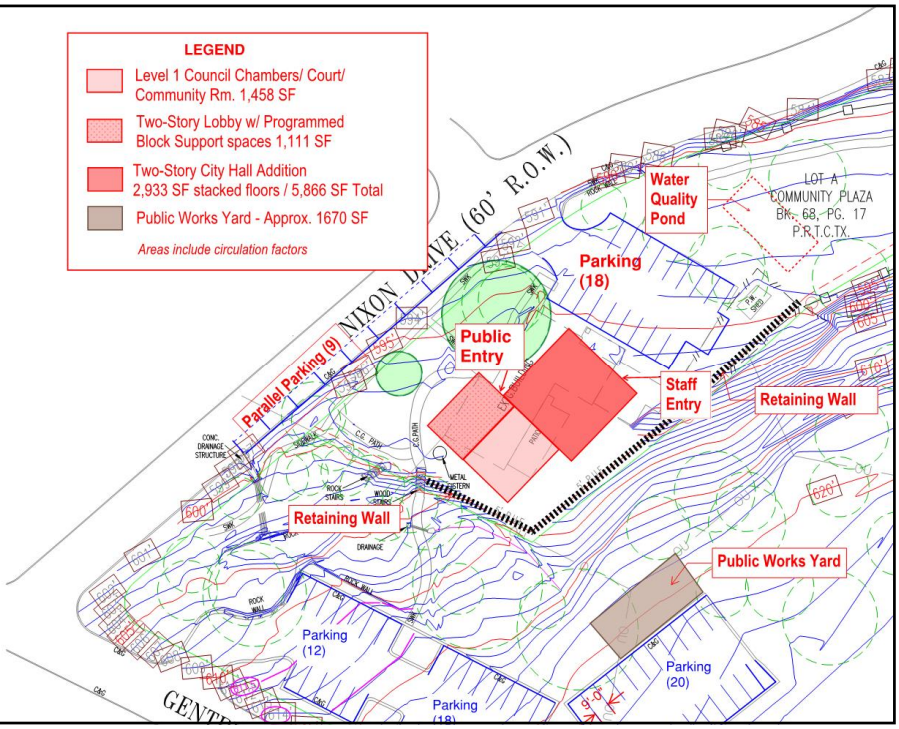
- Rollingwood's position on granting an easement for stormwater diversion treatment within rear 30' setback / granting an easement for building within rear 30' setback
  (agreeable to both easement grants)
- In Option 2 (all new building) preference for the Council / Court / Community room location:
  - Front of the City Hall - visible from street / adjacent to water-wise garden
  - Back of the City Hall – more private / open to rear courtyard
    (Selected 1A and 2A – Price with outside General Contractor)
- Preference for location of Public Works yard:
  - Improved at current location
  - Adjacent to parking at upper level *(preferred)*
  - At end of drive at upper level (North)

Option 1A – Renovate existing Council structure and add two story addition

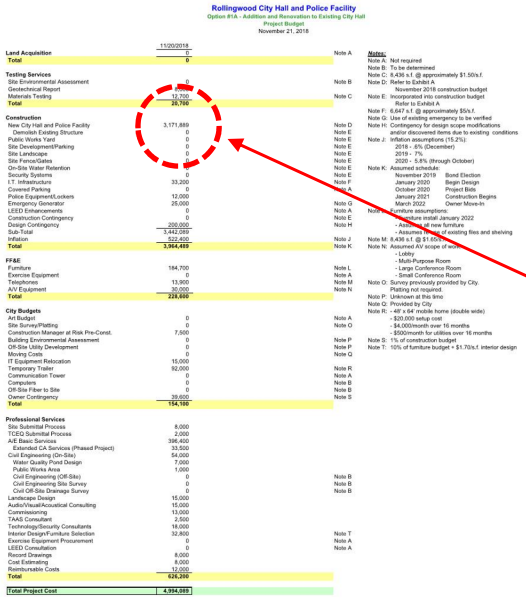


Option 2A -

New two story building with Council / Court / Community Room to the back



Comprehensive Budgeting



Rollingwood City Hall and Police Facility
Option #1A - Addition and Renovation to Existing City Hall
Project Budget
November 21, 2018

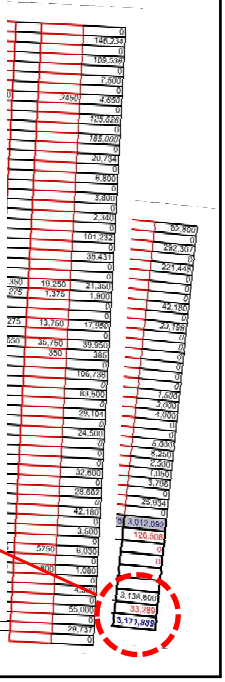
	11/20/2018	
Land Acquisition	0	Note A
Total	**0**	
Testing Services		
Site Environmental Assessment	0	Note B
Geotechnical Report	8,000	
Materials Testing	12,700	Note C
Total	**20,700**	
Construction		
New City Hall and Police Facility	3,171,889	Note D
Demolish Existing Structure	0	Note E
Public Works Yard	0	Note E
Site Development/Parking	0	Note E
Site Landscape	0	Note E
Site Fences/Gates	0	Note E
On-Site Water Retention	0	Note E
Security Systems	0	Note F
I.T. Infrastructure	33,200	Note F
Covered Parking	0	Note F
Police Equipment/Lockers	12,000	
Emergency Generator	25,000	Note G
LEED Enhancements	0	Note A
Construction Contingency	0	Note E
Design Contingency	200,000	Note H
Sub-Total	3,442,089	
Inflation	522,400	Note J
Total	**3,964,489**	Note K
FF&E		
Furniture	184,700	Note L
Exercise Equipment	0	Note A
Telephones	13,900	Note M
A/V Equipment	30,000	Note N
Total	**228,600**	
City Budgets		
Art Budget	0	Note A
Site Survey/Platting	0	Note O
Construction Manager at Risk Pre-Const.	7,500	
Building Environmental Assessment	0	Note P
Off-Site Utility Development	0	Note P
Moving Costs	0	Note Q
IT Equipment Relocation	15,000	
Temporary Trailer	92,000	Note R
Communication Tower	0	Note A
Computers	0	Note B
Off-Site Fiber to Site	0	Note B
Owner Contingency	39,600	Note S
Total	**154,100**	
Professional Services		
Site Submittal Process	8,000	
TCEQ Submittal Process	2,000	
A/E Basic Services	396,400	
Extended CA Services (Phased Project)	33,500	
Civil Engineering (On-Site)	54,000	
Water Quality Pond Design	7,000	
Public Works Area	1,000	
Civil Engineering (Off-Site)	0	Note B
Civil Engineering Site Survey	0	Note B
Civil Off-Site Drainage Survey	0	Note B
Landscape Design	15,000	
Audio/Visual/Accoustical Consulting	15,000	
Commissioning	13,000	
TAAS Consultant	2,500	
Technology/Security Consultants	16,000	
Interior Design/Furniture Selection	32,800	Note T
Exercise Equipment Procurement	0	Note A
LEED Consultation	0	Note A
Record Drawings	8,000	
Cost Estimating	8,000	
Reimbursable Costs	12,000	
Total	**626,200**	
Total Project Cost	**4,994,000**	

Notes:
Note A: Not required
Note B: To be determined
Note C: 8,436 s.f. @ approximately $1.50/s.f.
Note D: Refer to Exhibit A
November 2018 construction budget
Note E: Incorporated into construction budget
Refer to Exhibit A
Note F: 6,647 s.f. @ approximately $5/s.f.
Note G: Use of existing emergency to be verified
Note H: Contingency for design scope modifications and/or discovered items due to existing conditions
Note J: Inflation assumptions (15.2%):
2018 - .6% (December)
2019 - 3%
2020 - 5.8% (through October)
Note K: Assumed schedule:
November 2018 Bond Election
January 2020 Begin Design
October 2020 Project Bids
January 2021 Construction Begins
March 2022 Owner Move-In
Note L: Furniture assumptions:
- Replace/re-install January 2022
- Assumed all new furniture
- Assume re-use of existing files and shelving
Note M: 8,436 s.f. @ $1.60/s.f.
Note N: Assumed AV scope of work:
- Lobby
- Multi-Purpose Room
- Large Conference Room
- Small Conference Room
Note O: Survey previously provided by City.
Platting not required.
Note P: Unknown at this time
Note Q: Provided by City
Note R: - 48' x 64' mobile home (double wide)
- $20,000 setup cost
- $4,000/month over 16 months
- $500/month for utilities over 16 months
Note S: 1% of construction budget
Note T: 10% of furniture budget + $1.70/s.f. interior design

Braun & Butler Construction

Job Name: Rollingwood City Hall
Date: 11/21/2018
Option 1

		Mhrs	Qty	Unit	Miscellaneous UP	Miscellaneous Amount	Labor UP	Labor Amount	Material UP	Material Amount	Total
0	**Project Information**										0
	Building (SF)		8436	sf							0
	Paving (SY)			sy							0
	Project Duration		424	days							0
1	**General Conditions**										0
	Project Manager		63	wk			1,000	63000			63,000
	Truck Expense		63	wk			150	9450			9,450
	Superintendent		63	wk			2,100	132300			132,300
	Truck Expense		63	wk			350	22050			22,050
	Preconstruction		1	wk			1,700	1700			1,700
	Interim Cleanup Labor		756	mhrs			28	21168			21,168
	Project Office Clerical Support		63	wk			350	22050			22,050
											0
	Mobilization / Demobilization		1	ls	3,500	3,500					3,500
	Job Office / Furniture / Supplies		14	mo	600	8,400					8,400
	Chemical Toilet		14	mo	150	2,100					2,100
	Drinking Water		14	mo	100	1,400					1,400
	Dumpster Service		18	ea	600	10,800					10,800
	Storage Trailer			mo	300	0					0
	Job Office Temporary Utilities		14	mo	100	1,400					1,400
	Telephone / Fax / Radio		14	mo	275	3,850					3,850
	Computer Service		14	mo	150	2,100					2,100
											0
	Rentals		1	ls	1,500	1,500					1,500
	Plan Reproduction		1	ls	500	500					500
	Close Out Documents		1	ls	1,500	1,500					1,500
											0
	Allowances										0
	Contractor's contingency		1	ls		200,000					200,000
	monument sign allowance		1	ls		18,000					18,000
	public works yard allowance		1	ls		100,000					100,000
											0
2	Site Work					97,000					97,000
	temp meter & usage		1	ls		2,500					2,500
2.05	Asphalt Paving - included above		711	sy		0					0
											0
2.10	Striping / Traffic Signage		1	ls		2,800					2,800
											0
2.15	Permanent Fence- dumpster gates					2,500					2,500
											0
2.20	Termite Treatment		8,436	sf	0	2,953					2,953
											0
2.25	Landscape					44,000					44,000
											0
2.30	Irrigation					13,300					13,300
											0
2.35	Demolition- existing building / misc. site		2,000	sf	8	16,000					16,000
											0
2.60	Erosion Controls		1	ls		5,500					5,500
											0
2.61	Site Utilities					65,000					65,000
											0
2.62	Water Quality Structures- small		1	ls		75,000					75,000
											0
2.63	retaining wall - large cut stone wall		3,240	sf	26	84,240					84,240



Option 1A/2A Budget Detail

Testing Services – geotechnical engineering, materials testing during construction
Construction Costs – building construction cost, IT infrastructure, police equipment, emergency generator and design contingency
Fixtures, Furn. and Equip. – furniture, telephones and A/V equipment
City Budgets – CMAR preconstruction fee, IT equip, relocation, communication tower and owner contingency
Professional Services – site submittal process, TCEQ submittal, A/E basic services (arch, structural and MEP engineering), civil engineering inc. water quality pond and public works area, landscape arch., A/V consulting, commissioning, TAAS consultant, technology / security consultant, interior design, record dwgs., estimating and reimbursables

Bottom Line

Option 1A (Nov / 2019 Bond)

Testing Services	$20,700
Construction Costs	$3,964,489
Fixtures, Furn. and Equip.	$228,600
City Budgets	$168,100
Professional Services	$585,400
	$4,967,289

Option 2A (Nov / 2019 Bond)

Testing Services	$20,700
Construction Costs	$3,973,017
Fixtures, Furn. and Equip.	$221,500
City Budgets	$150,200
Professional Services	$550,800
	$4,916,217

Option 1A (May / 2019 Bond)

Testing Services	$20,700
Construction Costs	$3,812,589
Fixtures, Furn. and Equip.	$225,800
City Budgets	$166,600
Professional Services	$568,900
	$4,794,589

Option 2A (May / 2019 Bond)

Testing Services	$20,700
Construction Costs	$3,820,817
Fixtures, Furn. and Equip.	$212,700
City Budgets	$148,700
Professional Services	$535,600
	$4,738,517

City Hall / Public Safety Building Space Requirements

Administration

Offices:

1. Mayor
2. City Administrator + small conference table
3. City Secretary
4. Finance Director
5. Development Services Manager
6. Court Clerk (public facing window)

Work Stations:

1. Receptionist/Assistant to the City Administrator (public facing window)
2. Utility Billing Manager (public facing window)

Rooms:

1. Staff Restrooms
2. Lobby Space for Citizens and Visitors
3. Public Restrooms

Parking:

1. Approx. 12 Spaces

Public Works

Offices:

1. Public Works Director
2. Office with one work station and small meeting table

Yard:

1. Yard for Material Storage
2. Shed

Parking:

1. Approx. 5 Spaces

Separate Police Space

Offices:

1. Chief of Police
2. Assistant Chief of Police
3. Sergeant
4. Corporals (only 1 shared office needed since they work opposite days)

Rooms:

1. Interview room
2. Secure file room
3. Secure server room
4. Secure storage (weapons, radios, and equipment)
5. Large storage (need not be air conditioned) bicycles, vehicle equipment, large items
6. Secure evidence room with separate ventilation system and small processing area
7. Locker/changing room

Work stations:

1. Administrative Assistant/Receptionist
2. 2 spaces for Patrol Officers and 2 computers
3. Detective
4. Lobby space for citizens and visitors

Parking:

1. Approx. 10 spaces

Space that can be shared with City Hall

1. Large multipurpose conference/training/ briefing room
2. Kitchen /break room with sufficient seating for numerous employees to eat lunch at once
3. Rest Rooms (not shared with general public)
4. Shower facilities.

Council Member Brown:

Please provide the resulting estimated Rollingwood tax rate and the associated % increase to the current Rollingwood tax rate assuming bond issues in the amounts of $5M, $8M, $10M, and $12M, for the term of years that US Cap Advisors would recommend for the bonds, and with the debt service restructure that US Cap Advisors would recommend. And if there are any other variables needed, I am happy to trust their judgment on it. If they could also address timing of and interest rates on the sale/issuance in the current market, that would also be great.

See tax rate analysis to be provided.

See attached page 1 of the Tax Rate Notice, and chart at the bottom that I have marked up. Please ask US Capital Advisors if they could add three columns to this chart, to show for each debt issue: remaining balance, term (meaning when principal will be extinguished using existing payment/interest schedule) and the current interest rate.

See attached Current Year DS Spreadsheet.

Council Member Robinson:

What is our current credit rating?

Standard & Poor's Rating Services: 'AA' with a stable outlook (see attached report)

Would we be issuing General Obligation bonds? Since the water projects are tied to the RW's water utility service, would you advise using Revenue Bond instead? Why or Why not?

The decision of which debt instrument to issue is a decision for Council. Revenue Bonds could be issued to fund the utility system improvements, however Revenue Bonds are more expensive to issue as compared to tax-backed debt. Revenue Bonds typically have a lower bond rating (likely would be around A+ for Rollingwood) as compared to tax-backed debt and, therefore, would likely receive higher interest rates. Furthermore there are often bond covenants that would make these less efficient than tax-backed debt (e.g. reserve fund requirement, rate covenant, additional bonds test). However there are issuers who make the decision to fund all utility improvements through a revenue bond issuance.

Would we be issuing term bonds with sinking fund payments?

We would offer the bonds for sale as serial maturities; however it is possible that an investor who offers to purchase the City's bonds would designate some maturities as term bonds for pricing purposes. Regardless, any term bonds would still be paid by the City as though they were serial bonds (i.e. the City would make semi-annual interest and annual principal payments).

What would be the target coupon rate for these bonds?

Depending on the final term of the bonds, we conservatively estimate an average interest rate in the range of 4.0-4.5%. However, investors would be invited to bid their own coupon and yield structure for pricing purposes.

Would interest payments be due annually, semi-annually?

Interest payments would be due on a semi-annual basis, 2/1 and 8/1 of every year, and principal would be due on an annual basis on 8/1 of every year. This is in keeping with the payment schedule on the City's outstanding debt.

Please describe how the pricing these bonds would work? Would we be selling at par value?
In the current market we expect that the bonds would be sold at a net premium to the City.
Would these bonds be callable?
In the current market, a 9-year call feature is common and we would specify a 9-year call unless otherwise instructed by the City. It is possible to request a shorter call feature for the City's bonds, but that could have an adverse impact on the City's borrowing rate. The City should weigh the flexibility of a shorter call feature against having a higher borrowing rate.
I'm assuming we considering uninsured bonds? Can you talk to the difference between insured and uninsured bonds? And is there anything here we should consider?
We expect that these bonds would be purchased by an investor without insurance. Bond insurance is considered a credit enhancement, and it is the investor's decision whether or not to purchase insurance on some or all maturities. The two major bond insurance providers currently maintain a rating through S&P of AA, which is equivalent to the City's bond rating. Therefore we do not expect that bond insurance would be of interest to any investor.
Can you show us what the current yield curve looks like?
Attached yield curve estimated as of 8-3-22
What term length do you recommend we should we be considering for these bonds? 15 year, 20 year, longer?
I am reticent to recommend a term for the City's bond issuance since this depends on many factors outside of our scope of expertise. The term should be appropriate to the useful life of the improvements and should result in debt service affordable to the City. For example, a new city hall might reasonably be expected to last for at least 30 years, and so a 20-30 year financing term might be appropriate. Furthermore if the City's engineers expect waterlines to last at least 30 years, then that also might be a reasonable financing term. However if drainage improvements are expected to only last 20 years before maintenance is required, a shorter term might be more prudent. It is possible to structure the bond issuance so that the portion of debt attributable to shorter-lived assets is paid off more rapidly than the portion of debt attributable to longer-lived assets.
I'm assuming these would be fixed-rate bonds, correct?
Once sold, the annual debt service payments would be fixed and would not be variable.
Can you provide charts (or table) showing what our debt service would look like over time if we issue either 5.3 million or 17 million in new bonds?
See tax rate analysis to be provided.
Can you talk to the amortization schedule for these bonds? Are there alternative schedules we could/should consider? We have some bonds coming due in the next year or two. If we wanted to keep our debt service relatively flat, how could be do that?
It is possible to some extent to defer some principal payments toward the back end to "shape around" existing debt service to minimize the impact on the tax rate. However, my understanding is that the City must retire every year a minimum of 2% of the total principal amount of the issuance. The City's existing debt payment drops off by about $310,000 from 2027-2028, so it could be possible to use this drop off to manage the tax rate, depending on the final borrowing amount. Of course, deferring principal does increase the overall interest paid over the life of the debt.

A common amortization structure is level debt service in which the annual payments are all relatively equal. Another structure is level principal (or declining) in which the same amount of principal is retired every year which results in lower annual payments every year since the principal is more aggressively retired. The upfront payments would be larger as compared to level debt service, but it results in lower interest charges and a declining I&S tax rate (unless additional debt is issued).

Can you calculate what the average homeowner will pay annually to support servicing this new debt in both cases above?

See tax rate analysis to be provided.

What would the I&S rate and Total Tax Rate need to be to support this new debt? What is the percentage increase for current tax rates?

See tax rate analysis to be provided.

Can you provide us with some analysis of our current debt ratios and how these would be impacted by this additional debt? Specifically, I'm interested in these ratios:

1) debt ratio, 2) debt per capita ratio, 3) collection ratio, and 4) coverage ratio.

See attached. Note that coverage ratio typically applies when cities issue Revenue Bonds, and this is a measure of, for example, the utility system's net revenues as a ratio of the annual debt service. I expect that Rollingwood levies taxes to collect revenues to just cover its annual tax-backed debt service by a factor of 1.0 with perhaps some additional "cushion".

How do these ratios compare to other municipalities? Are we better, worse, same?

See attached list of S&P AA rated cities in Texas with outstanding debt, debt per capita, and debt per assessed valuation. While Rollingwood does rank in the top with respect to debt per capita, it falls in the middle of the pack in terms of debt per AV. Also refer to the most recent rating report from S&P, page 5, section discussing 'Weak debt and contingent liability profile'. While this is the City's weakest point from a credit perspective, it is also one of the credit factors that carries the least weight in determining the City's bond rating. Most important in the credit analysis is the economy and the City's management practices and procedures. The City can mitigate, to some extent, its debt profile by paying debt for utility improvements with utility revenues. It is a bit of a double-edged sword since Rollingwood is land-locked with limited potential for population growth, but it still has infrastructure needs, and rating agencies like to see issuers who take proactive steps to address capital projects.

AA yield curve 8-3-22

MMD	YEAR	Coupon	AA non BQ	Coupon	AA BQ
1.49	2023	5	1.79	5	1.79
1.61	2024	5	1.91	5	1.91
1.65	2025	5	1.95	5	1.95
1.73	2026	5	2.03	5	2.03
1.76	2027	5	2.06	5	2.06
1.91	2028	5	2.26	5	2.21
1.99	2029	5	2.39	5	2.39
2.05	2030	5	2.50	5	2.50
2.13	2031	5	2.63	5	2.63
2.18	2032	5	2.73	5	2.68
2.29	2033	5	2.89	5	2.84
2.37	2034	5	3.02	5	2.97
2.43	2035	5	3.08	5	3.03
2.47	2036	5	3.12	5	3.07
2.50	2037	5	3.15	5	3.10
2.54	2038	5	3.19	5	3.14
2.58	2039	5	3.23	5	3.18
2.62	2040	5	3.27	5	3.22
2.69	2041	5	3.34	5	3.29
2.71	2042	5	3.36	5	3.31
2.73	2043	5	3.38	5	3.33
2.75	2044	5	3.40	5	3.35
2.77	2045	5	3.42	5	3.37
2.79	2046	5	3.44	5	3.39
2.80	2047	5	3.45	5	3.40
2.81	2048	5	3.46	5	3.41
2.82	2049	5	3.47	5	3.42
2.83	2050	5	3.48	5	3.43
2.84	2051	5	3.49	5	3.44
2.85	2052	5	4.05	4	4.05

MMD: Municipal Market Data AAA as of 8-3-22

Bank Qualified yields (<$10 mm issued in calendar year)

Non-BQ yields >$10 mm issued in a calendar year

City of Rollingwood, Texas

Profile of Outstanding Debt for FYE 9/30/2023

Series	Remaining Principal*	Term	Coupon Range	Principal Payment	Interest Payment	Total Payment
General Obligation Bonds, Taxable Series 2012A	305,000	2023	2.70%	305,000	8,235	313,235
General Obligation Bonds, Series 2014	1,925,000	2034	3.0-4.0%	135,000	64,350	199,350
General Obligation Refunding Bonds, Series 2019	9,040,000	2039	3.0-4.0%	115,000	295,250	410,250
Tax Notes, Series 2020	1,500,000	2027	1.55-1.75%	290,000	24,775	314,775

**Remaining principal balance prior to 2023 payment*

Debt Profile	
AV	$ 1,196,611,702
Est. Population	1,467
Outstanding Principal	$ 13,595,000
Debt as % of AV	1.14%
Debt per capita	$ 9,267
Tax Collection %	
Tax Year	
2014	99.6%
2015	99.9%
2016	99.7%
2017	99.6%
2018	99.7%

Source: MAC of Texas

S&P AA Cities in Texas

Report Name	County	Outstanding Debt	Population	Debt per Capita	Net Debt Per AV	Sand P
Euless, City of (General Obligation Debt)	Tarrant	$ 61,435,000	685,434	$ 90	$ 0.54	AA
Humble, City of (General Obligation Debt)	Harris	2,435,000	16,795	145	-	AA
Richland Hills, City of (General Obligation Debt)	Tarrant	25,145,000	70,622	356	2.35	AA
Dickinson, City of (General Obligation Debt)	Galveston	7,575,000	20,847	363	0.64	AA
Fredericksburg, City of (General Obligation Debt)	Gillespie	5,160,000	10,875	474	0.31	AA
Fate, City of (General Obligation Debt)	Rockwall	30,575,000	57,065	536	1.42	AA
Duncanville, City of (General Obligation Debt)	Dallas	20,460,000	37,817	541	0.64	AA
Leon Valley, City of (General Obligation Debt)	Bexar	7,115,000	12,387	574	0.41	AA
Alvarado, City of (General Obligation Debt)	Johnson	14,032,000	20,887	672	2.32	AA
Wichita Falls, City of (General Obligation Debt)	Wichita	78,425,000	105,664	742	0.28	AA
Victoria, City of (General Obligation Debt)	Victoria	51,010,000	67,078	760	1.17	AA
Helotes, City of (General Obligation Debt)	Bexar	6,880,000	9,030	762	0.58	AA
Brownsville, City of (General Obligation Debt)	Cameron	176,456,000	188,306	937	2.29	AA
Fort Worth, City of (General Obligation Debt)	Tarrant	908,665,000	958,692	948	0.93	AA
Pantego, Town of (General Obligation Debt)	Tarrant	2,465,000	2,568	960	0.87	AA
Laredo, City of (General Obligation Debt)	Webb	277,700,000	267,396	1,039	0.95	AA
Lakeside, Town of (Tarrant Co) (General Obligation Debt)	Tarrant	1,780,000	1,649	1,079	-	AA
Snyder, City of (General Obligation Debt)	Scurry	12,730,000	11,438	1,113	-	AA
Pasadena, City of (General Obligation Debt)	Harris	177,255,000	151,950	1,167	0.70	AA
Alvin, City of (General Obligation Debt)	Brazoria	32,780,000	26,891	1,219	1.35	AA
Wylie, City of (General Obligation Debt)	Collin	71,460,000	56,700	1,260	1.10	AA
Hallsville, City of (General Obligation Debt)	Harrison	5,610,000	4,344	1,291	2.09	AA
Nederland, City of (General Obligation Debt)	Jefferson	22,410,000	17,301	1,295	0.94	AA
Windcrest, City of (General Obligation Debt)	Bexar	7,600,000	5,865	1,296	1.10	AA
Harker Heights, City of (General Obligation Debt)	Bell	44,335,000	33,975	1,305	1.38	AA
San Angelo, City of (General Obligation Debt)	Tom Green	141,220,000	103,989	1,358	0.84	AA
Houston, City of (General Obligation Debt)	Harris	3,163,795,000	2,325,350	1,361	1.22	AA
DeSoto, City of (General Obligation Debt)	Dallas	76,660,000	56,145	1,365	1.28	AA
Azle, City of (General Obligation Debt)	Tarrant	19,455,000	13,450	1,446	0.91	AA
Cleburne, City of (General Obligation Debt)	Johnson	48,105,000	33,092	1,454	0.08	AA
Mesquite, City of (General Obligation Debt)	Dallas	219,935,000	150,108	1,465	2.02	AA
Corpus Christi, City of (General Obligation Debt)	Nueces	492,155,000	334,834	1,470	1.79	AA
Hurst, City of (General Obligation Debt)	Tarrant	59,690,000	38,910	1,534	0.94	AA
Kilgore, City of (General Obligation Debt)	Gregg	23,495,000	14,962	1,570	0.11	AA
Watauga, City of (General Obligation Debt)	Tarrant	38,825,000	24,409	1,591	1.23	AA
Midland, City of (General Obligation Debt)	Midland	247,000,000	153,768	1,606	0.78	AA
Cibolo, City of (General Obligation Debt)	Guadalupe	54,135,000	33,433	1,619	1.60	AA
Weatherford, City of (General Obligation Debt)	Parker	63,150,000	38,722	1,631	1.13	AA
Castle Hills, City of (General Obligation Debt)	Bexar	7,255,000	3,978	1,824	0.39	AA
Baytown, City of (General Obligation Debt)	Harris	181,025,000	94,081	1,924	1.83	AA

Report Name	County	Outstanding Debt	Population	Debt per Capita	Net Debt Per AV	Sand P
Longview, City of (General Obligation Debt)	Gregg	161,025,000	82,951	1,941	1.84	AA
Cedar Hill, City of (General Obligation Debt)	Dallas	105,055,000	53,922	1,948	1.38	AA
Hickory Creek, Town of (General Obligation Debt)	Denton	9,595,000	4,718	2,034	1.62	AA
Dalworthington Gardens, City of (General Obligation Debt)	Tarrant	5,090,000	2,344	2,172	1.25	AA
Sherman, City of (General Obligation Debt)	Grayson	101,615,000	46,040	2,207	2.21	AA
Copperas Cove, City of (General Obligation Debt)	Coryell	80,535,000	35,307	2,281	2.60	AA
El Paso, City of (General Obligation Debt)	El Paso	1,602,355,000	685,434	2,338	3.73	AA
Portland, City of (General Obligation Debt)	San Patricio	48,235,000	20,383	2,366	3.23	AA
New Braunfels, City of (General Obligation Debt)	Comal	241,695,000	101,637	2,378	2.11	AA
Kerrville, City of (General Obligation Debt)	Kerr	57,985,000	24,278	2,388	0.52	AA
Red Oak, City of (General Obligation Debt)	Ellis	36,333,000	14,155	2,567	1.59	AA
Seabrook, City of (General Obligation Debt)	Harris	35,045,694	13,618	2,573	2.14	AA
Selma, City of (General Obligation Debt)	Bexar	28,480,000	10,952	2,600	1.22	AA
Corinth, City of (General Obligation Debt)	Denton	59,085,000	22,437	2,633	1.93	AA
Bedford, City of (General Obligation Debt)	Tarrant	133,000,000	50,083	2,656	1.36	AA
Burleson, City of (General Obligation Debt)	Johnson	127,825,000	47,641	2,683	1.53	AA
La Vernia, City of (General Obligation Debt)	Wilson	2,938,000	1,077	2,728	0.50	AA
Bryan, City of (General Obligation Debt)	Brazos	248,380,000	90,653	2,740	2.27	AA
Galveston, City of (General Obligation Debt)	Galveston	144,210,000	50,546	2,853	0.77	AA
Southside Place, City of (General Obligation Debt)	Harris	5,315,000	1,835	2,896	0.79	AA
Saginaw, City of (General Obligation Debt)	Tarrant	73,405,000	25,312	2,900	1.99	AA
Westworth Village, City of (General Obligation Debt)	Tarrant	7,866,000	2,585	3,043	2.37	AA
Pearland, City of (General Obligation Debt)	Brazoria	415,695,000	125,568	3,311	2.66	AA
Northlake, Town of (General Obligation Debt)	Denton	31,590,000	9,500	3,325	2.09	AA
Leander, City of (General Obligation Debt)	Williamson	203,440,000	59,202	3,436	1.56	AA
Haslet, City of (General Obligation Debt)	Tarrant	7,206,000	2,065	3,490	0.25	AA
Sunnyvale, Town of (General Obligation Debt)	Dallas	24,520,000	6,841	3,584	1.37	AA
Seguin, City of (General Obligation Debt)	Guadalupe	119,460,000	31,072	3,845	3.82	AA
Lago Vista, City of (General Obligation Debt)	Travis	29,325,000	7,556	3,881	2.80	AA
Sanger, City of (General Obligation Debt)	Denton	37,720,000	9,368	4,026	0.14	AA
Oak Ridge North, City of (General Obligation Debt)	Montgomery	12,920,000	3,151	4,100	3.38	AA
Roanoke, City of (General Obligation Debt)	Denton	40,750,000	9,850	4,137	1.24	AA
Montgomery, City of (General Obligation Debt)	Montgomery	8,355,000	1,948	4,289	0.51	AA
Temple, City of (General Obligation Debt)	Bell	376,380,000	86,854	4,333	3.38	AA
Hudson Oaks, City of (General Obligation Debt)	Parker	12,250,000	2,623	4,670	-	AA
Waxahachie, City of (General Obligation Debt)	Ellis	197,590,000	41,281	4,786	1.56	AA
Pflugerville, City of (General Obligation Debt)	Travis	333,010,000	69,004	4,826	2.79	AA
Aledo, City of (General Obligation Debt)	Parker	33,255,000	5,657	5,879	1.11	AA
San Marcos, City of (General Obligation Debt)	Hays	400,955,000	66,952	5,989	1.74	AA
Buda, City of (General Obligation Debt)	Hays	148,560,000	18,907	7,857	2.40	AA
Hill Country Village, City of (General Obligation Debt)	Bexar	7,540,000	942	8,004	-	AA
Bastrop, City of (General Obligation Debt)	Bastrop	74,120,000	9,154	8,097	1.45	AA

Report Name	County	Outstanding Debt	Population	Debt per Capita	Net Debt Per AV	Sand P
Willow Park, City of (General Obligation Debt)	Parker	52,215,000	6,330	8,249	2.12	AA
Rollingwood, City of (General Obligation Debt)	Travis	13,595,000	1,467	9,267	1.43	AA
Celina, City of (General Obligation Debt)	Collin	279,030,000	28,025	9,956	3.35	AA
Granbury, City of (General Obligation Debt)	Hood	123,245,000	11,870	10,383	1.99	AA
Jarrell, City of (General Obligation Debt)	Williamson	32,685,000	2,318	14,101	0.85	AA
Morgan's Point, City of (General Obligation Debt)	Harris	10,045,000	273	36,795	1.86	AA

Source: Municipal Advisory Council of Texas

Summary:

Rollingwood, Texas; General Obligation

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Table Of Contents

Summary:

Rollingwood, Texas; General Obligation

Credit Profile		
US$9.095 mil GO rfdg bnds ser 2019 dtd 06/01/2019 due 09/30/2045		
Long Term Rating	AA/Stable	New
Rollingwood GO		
Long Term Rating	AA/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'AA' rating to Rollingwood, Texas' series 2019 general obligation (GO) refunding bonds. At the same time, S&P Global Ratings affirmed its 'AA' rating on the city's previously issued GO debt. The outlook is stable.

The bonds are secured from the receipts of a continuing, direct annual ad valorem tax levied, within the limits prescribed by law, against all taxable property within the city. Article XI, Section 4, of the Texas Constitution is applicable to the city, and limits its maximum ad valorem tax rate to $1.50 per $100 assessed valuation for all city purposes. Based on the application of our criteria, titled "Issue Credit Ratings Linked To U.S. Public Finance Obligors' Creditworthiness," (published Jan. 22, 2018, on RatingsDirect), the ad valorem taxes are not levied on a narrower or distinctly different tax base, and there are no limitations on the fungibility of resources available for the payment of debt service. Therefore, we view the limited-tax GO debt pledge on par with our view of the city's general creditworthiness.

Bond proceeds will be used to refund the city's series 2012B bonds to generate interest savings.

Rollingwood is characterized by its exceptionally strong income levels and robust market values, which are further supported by the city's proximity to Austin's growing metropolis. At the same time, the city operates on a small budget, and any unexpected costs can pressure it, as has been the case over the last three years, resulting in reserve drawdowns. The new management team is proactively taking steps to plan for the future in identifying and pursuing new revenue sources while at the same time, assessing emerging environmental and IT risks, but lacks formal policies and procedures at this point. Although further drawdowns on reserves resulting from lack of planning to levels we consider nominally low could pressure the rating, the city's extremely strong local tax base provides it with the ability to raise necessary revenues to maintain credit quality.

The 'AA' rating reflects our opinion of the city's:

- Very strong economy, with access to the Austin-Round Rock broad and diverse metropolitan statistical area (MSA);
- Adequate management, with standard financial policies and practices under our Financial Management Assessment (FMA) methodology;

- Adequate budgetary performance, with an operating deficit in the general fund but an operating surplus at the total governmental fund level;
- Very strong budgetary flexibility, with an available fund balance in fiscal 2018 of 33% of operating expenditures;
- Very strong liquidity, with total government available cash at 78.3% of total governmental fund expenditures and 13.9x governmental debt service, and access to external liquidity we consider strong;
- Weak debt and contingent liability position, with debt service carrying charges at 5.7% of expenditures and net direct debt that is 380.8% of total governmental fund revenue, but low overall net debt at less than 3% of market value; and
- Strong institutional framework score.

Very strong economy

We consider Rollingwood's economy very strong. The city, with an estimated population of 1,513, is a 0.7-square-mile landlocked community in Travis County, approximately 10 miles southwest of Austin off of MOPAC Expressway (Loop 1). It is in the Austin-Round Rock MSA, which we consider to be broad and diverse. The city has a projected per capita effective buying income of 255% of the national level, which we view as extremely high and a positive credit factor and per capita market value of $641,561. Overall, market value grew by 9.2% over the past year to $970.7 million in 2019. The county unemployment rate was 3.0% in 2017.

Rollingwood's population has grown to just over 1,500 residents who have access to Austin's broad and diverse economy. The city is currently undergoing residential development and is also optimizing the advantages of its commercial district through the development of an office building, which the city reports is almost entirely pre-leased. Given the exceptional income levels and the high property values (which approach $1 billion), we do not anticipate any material changes to the city's economic fundamentals over the next two years.

Adequate management

We view the city's management as adequate, with standard financial policies and practices under our FMA methodology, indicating the finance department maintains adequate policies in some, but not all, key areas.

When crafting budget assumptions, officials use five years of historical data, tracking the tax base as well as revenue and expenditure trends. The city has a formal budget review policy in place for amendments, and there is also a quarterly budget review meeting with the mayor and city council, who receive monthly budget-to-actual reports.

Rollingwood does not have a capital improvement plan (CIP) in place, but it has hired a third party to produce a five-year plan to identify future projects, costs, and potential funding sources, which will be ready in June 2019. These include the potential sale and conversion of a building from a nonprofit organization to a hotel, as well as infrastructure improvements and retail development in the adjacent park, in partnership with the city of Austin and the U.S. Corp of Engineers. The purpose of this will include developing a boundary as one of several preventative measures against more frequent flooding, which occurs in the city given the exposed topography, as well as new potential revenue sources. It should be noted that while the absence of a formal CIP is not commensurate with a better assessment, we acknowledge that the city does address emerging risks, as demonstrated by the consideration of environmental factors in its planning, as well as attempts to safeguard the city--and the police department in particular--against cyber attacks

in the previous budget round through staff training, regular data backups to the cloud, outsourcing IT oversight to a third party, and ensuring that the insurance policy covers against financial losses due to cyber attacks.

The city currently does not have a formal long-term financial plan, investment policy, or a debt management policy. An informal reserve policy requires the maintenance of three months of expenditures in general fund reserves, which the city has exceeded over the last three fiscal years.

Adequate budgetary performance

Rollingwood's budgetary performance is adequate, in our opinion. The city had deficit operating results in the general fund of negative 21% of expenditures, but a surplus result across all governmental funds of 37.3% in fiscal 2018.

In our view, given the relative size of the city's budget, modest changes tend to have a pronounced effect as expressed on a percentage basis. Rollingwood has had three years of deficits as a result of unbudgeted capital expenditures. Despite improvements in tax collections, the 2018 deficit primarily reflected a $428,000 expense regarding the relocation of water lines off private property.

The city's primary revenue sources include property taxes (43% of general fund revenues), sales taxes (26%), and licenses and fees (14%). Property and sales tax revenue have demonstrated consistent growth in recent years, and management believes this trend will continue in tandem with economic growth.

The city adopted a balanced budget for 2019, and year-to-date results indicate that revenue and expenditures are on target; officials expect to end the year with a slight surplus. Given these projections, we anticipate that budgetary performance should remain at least stable over the two-year horizon. However, given the relatively small size of the annual budget, small variations in revenue and expenditures can drastically affect performance. Continued unexpected expenditures and an inability to make intrayear corrections to address potential shortfalls could pressure the rating.

Very strong budgetary flexibility

Rollingwood's budgetary flexibility is very strong, in our view, with an available fund balance in fiscal 2018 of 33% of operating expenditures, or $748,000.

The city maintained relatively strong fund balances in fiscal years 2016 and 2017 until the unexpected drawdown in fiscal 2018 due to the water line relocation. The city advises it does not plan to continue drawing down on fund balances, which remain above the nominally low levels, despite being close to our $500,000 negative adjustment level.

We believe that unforeseen expenditures could pressure the city's budgetary flexibility and thus our overall view of its credit quality. However, based on its track record of maintaining at least adequate performance over a longer time and adherence to its informal reserve requirements, we anticipate that the city should be able to maintain its strong flexibility on a percentage basis.

Very strong liquidity

In our opinion, Rollingwood's liquidity is very strong, with total government available cash at 78.3% of total governmental fund expenditures and 13.9x governmental debt service in 2018. In our view, the city has strong access to external liquidity if necessary.

The city's strong access to external liquidity is demonstrated through its access to the market and issuance of GO and

revenue bonds over the past 10 years.

Currently, all of Rollingwood's investments comply with Texas statutes and the city's investment policy. At fiscal year-end 2018, its investments consisted of certificates of deposit and TexPool, a state investment pool, which we do not consider aggressive. The city does not have any privately placed debt.

Weak debt and contingent liability profile

In our view, Rollingwood's debt and contingent liability profile is weak. Total governmental fund debt service is 5.7% of total governmental fund expenditures, and net direct debt is 380.8% of total governmental fund revenue. Overall net debt is low at 2.2% of market value, which is, in our view, a positive credit factor.

Rollingwood's net direct debt totals $12.6 million. Debt partially supported through the city's enterprise fund has been adjusted in our calculations. The city has no authorized but unissued bonds, and officials have no plans to issue any new-money debt over the next two years, although this may change on review of the new CIP in June 2019, which could become a constraining factor.

Rollingwood's combined required pension and actual other postemployment benefit (OPEB) contributions totaled 3.9% of total governmental fund expenditures in 2018. The city made its full annual required pension contribution in 2018.

The city made its full annual required pension contribution in 2018. It contributes to a nontraditional, joint contributory, hybrid defined-benefit pension plan administered by the Texas Municipal Retirement System (TMRS). Under state law governing the TMRS, an actuary determines the contribution rate annually. Assuming a 6.75% discount rate, the city recorded a net pension asset of $30,892 as of Dec. 31, 2017, the most recent actuarial valuation date. The plan reported a funded ratio of 98.6%. We do not believe the city's pension obligations present material risk given the conservative plan assumptions and the expectation that it will continue to fully fund the actuarially determined contribution amounts.

The city also participates in the cost-sharing, multiple-employer defined-benefit group-term life insurance plan operated by TMRS known as the Supplemental Death Benefits Fund. It contributes to the plan at a contractually required rate as determined by an annual actuarial valuation. The rate is equal to the cost of providing one-year term life insurance. In fiscal 2018, the city contributed $1,862 to the plan, equal to its annual required contribution. It may terminate coverage and discontinue participation in the Supplemental Death Benefits Fund by adopting an ordinance before Nov. 1 of each calendar year. We do not anticipate pension and OPEB costs becoming a budgetary challenge for the city during the next two years.

Strong institutional framework

The institutional framework score for Texas municipalities is strong.

Outlook

The stable outlook reflects our opinion that Rollingwood's local economy will continue to provide sufficient revenues for its operations. It further reflects our view that despite recent use of reserves, levels remain very strong as a percentage of the city's budget, despite being relatively small on a nominal basis. Therefore, we do not expect to

change the rating during the two-year outlook period.

Upside scenario

We could raise the rating if the city were to experience improved budgetary performance over the longer term, in combination with a sustained improvement in operating performance that increases reserves levels in line with those of higher-rated peers, particularly if supported by formalized policies and practices.

Downside scenario

If the city were to face budgetary pressures, either operational or capital related, or management were to continue drawing down on available reserves to levels we consider nominally low, without a plan to restore them, we could lower the rating.

Related Research

- S&P Public Finance Local GO Criteria: How We Adjust Data For Analytic Consistency, Sept. 12, 2013
- Incorporating GASB 67 And 68: Evaluating Pension/OPEB Obligations Under Standard & Poor's U.S. Local Government GO Criteria, Sept. 2, 2015

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CITY OF ROLLINGWOOD, TEXAS

NOVEMBER 8, 2022 BOND ELECTION

SCHEDULE OF EVENTS

AUGUST						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Date	**Event**
Wed., August 10	First day for City Council to adopt an ordinance calling a bond election (the "Election Ordinance").(1)
Mon., August 22	Deadline for City Council to adopt the Election Ordinance.(1)
Fri., September 9	Deadline for City to deliver Notice of Election to the County Clerk and Voter Registrar in each county in which the City is located.(2)
Sun., October 9	First day to publish Notice of Election (in English and Spanish) in a newspaper of general circulation published in the City. Notice must be published on the same day in each of two consecutive weeks, with the first publication occurring not less than 14 days before Election Day.(3)

Date	Event
Tues., October 18	Deadline for posting Notice of Election on the website of each County in which the City is located. If any such County does not maintain a website, the City must post the Notice of Election on the bulletin board used for giving notice of meetings of the City Council. The Notice of Election must remain posted through Election Day.(4) Deadline for posting Election Ordinance (in English and Spanish) (i) in three (3) public places within the boundaries of the City; (ii) at City Hall; and (iii) on the City's website (together with the Notice of Election, the contents of the proposition(s), and any sample ballots for the Election). The Election Ordinance and other postings must remain posted through Election Day.(5) Deadline for posting Voter Information Document (if not included within the Election Ordinance) (i) on the City's website and (ii) in three (3) public places within the boundaries of the City. Such postings must remain in place through Election Day.(6) Once the Notice of Election has been posted on the City's website and on the website of each County in which the City is located, the City should provide Orrick with the applicable web addresses (URLs). To the extent not included within other website postings, deadline for the City to post the date of the Election, the location of each polling place, and each measure on the ballot.(6)
Mon., October 24	First day to vote early by personal appearance.(7) Election Ordinance and Voter Information Document (if not included in the Election Ordinance) must be posted (in English and Spanish) in a prominent location at each polling place during early voting period.(6)(8)
Tues., October 25	Deadline for first publication (in English and Spanish) Notice of Election in a newspaper of general circulation published in the City.(3) Notice must be published on the same day for two consecutive weeks, with the first publication occurring not less than 14 days before Election Day.(3)
Fri., November 4	Last day to vote early by personal appearance, unless voter is covered by an emergency provision.(7)
Tues., November 8 Election Day	Polls open from 7:00 a.m. to 7:00 p.m.(9) Election Ordinance and Voter Information Document (if not included in the Election Ordinance) must be posted in a prominent location at each polling place.(6)(8)
Wed., November 9	Earliest day for the filing of an Election contest.(10)
Fri., November 11	Earliest day for City Council to canvass the Election (but only if provisional ballots and ballots mailed from outside United States have been counted).(11)
Tues., November 22	Last day for City Council to canvass the Election.(11) The City must post the following as soon as practicable on its website: (1) the results of the Election; (2) the total number of votes cast; (3) the total number

	of votes cast for the proposition(s); (4) the total number of votes cast by personal appearance on Election Day; (5) the total number of votes cast by personal appearance or mail during the early voting period; and (6) the total number of counted and uncounted provisional ballots cast. The posting must be accessible without having to make more than two selections or view more than two network locations after accessing the home page of the City.(12)
Sun., December 11 to Thurs., December 22	Last day for the filing of an Election contest is 30 days after canvassing.(10)
Sun., September 8, 2024	Voted ballots may be destroyed if no contest filed, and no criminal investigation or proceeding in connection with the Election is pending.(13)

ENDNOTES*

1. Not earlier than the 90th day before Election Day and not later than the 78th day before Election Day. Sec. 1251.003(c), Texas Government Code; Sec. 3.005(a) and (c).
2. Not later than the 60th day before Election Day. Sec 4.008.
3. Not earlier than the 30th day or later than the 10th day before Election Day. Sec. 3.009, 4.003(a) and 4.004. Notice must be published on the same day for two consecutive weeks, with the first publication occurring not less than 14 days before Election Day. Sec. 1251.003(d)(2) and (e), Texas Government Code.
4. Not later than the 21st day before Election Day. Sec. 4.003(b) and 4.004.
5. During the 21 days before the election, the Election Ordinance must be displayed on the City's website "prominently and together with the notice of the election, the contents of the proposition, and any sample ballot prepared for the election." Sec. 4.003(f)(3). Not later than the 21st day before Election Day, the Election Ordinance must be posted in three public places in the boundaries of the City. Sec. 4.003(f)(2).
   NEW LAW (H.B. 440, 86th Regular Session): Requires that "any sample ballot prepared for the election" be included in the website postings required under Sec. 4.003(f)(3).
6. **NEW LAW (H.B. 477, 86th Regular Session):** Requires a political subdivision with at least 250 registered voters to prepare a Voter Information Document with the information described by Sec. 1251.052(b), Texas Government Code. The political subdivision shall post the Voter Information Document in the same manner required for the Election Ordinance under Sec. 4.003(f). The political subdivision may include the Voter Information Document in the Election Ordinance. Sec. 1251.052(b), Texas Government Code.
   NEW LAW (S.B. 1116, 87th Regular Session): Not later than the 21st day before election day, a city that holds an election and maintains an Internet website shall post on the public Internet website for the city: (1) the date of the next election; (2) the location of each polling place; (3) each candidate for an elected office on the ballot; and (4) each measure on the ballot.
7. For an election held on the uniform election date in November, the period for early voting by personal appearance begins on the 17th day before Election Day and continues through the 4th day before Election Day. Because the 17th day before Election Day falls on a Saturday, the first day for early voting by personal appearance moves to the next business day. Sec. 85.001(a) and Sec. 85.001(c).
8. The Election Ordinance must be posted in a prominent location at each polling place on Election Day and during early voting by personal appearance. Sec. 4.003(f)(1).
9. Sec. 41.031.
10. Not earlier than the day after Election Day or later than the 30th day after the date the official result of the contested Election is determined. Sec. 233.006.
11. Not later than the 14th day after Election Day and not earlier than the later of (i) the third day after Election Day, (2) the date provisional ballots are counted, or (3) the date ballots received from outside the United States are counted. Secs. 65.051 and 67.003.
12. **NEW LAW (S.B. 1116, 87th Regular Session).**
13. Twenty-two months after Election Day. Sec. 66.058; Sec. 1.013.

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* All statutory citations are to the Texas Election Code, unless otherwise stated.

** If the last day for performance of an act is a Saturday, Sunday or legal holiday, the last day for performance is moved to the next regular business day. Sec. 1.006.

OVERVIEW OF THE BOND ELECTION PROCESS

Prepared for the City of Rollingwood

April 2022

orrick

Overview of the Bond Election Process

PLANNING

Work with Constituents - Develop, Endorse and Recommend Bond Package

Board Calls Bond Election

Publish Notice of Election

Disseminate Voter Education/ Informational Materials

Hold Informational Meetings To Explain the Plan

VOTE

Assemble Financing Team

Prepare/Review Facility Master Plan

When is a Bond Election required?

Election Required

- Bonds issued by municipalities that are payable from ad valorem taxes

No Election Required

- Utility System Revenue Bonds
- Certificates of Obligation
- Contractual Obligations
- Tax Notes

General Information about Bond Elections

Parties Involved

- Governmental Entity/Issuer
- Financial Advisor
- Bond Counsel
- Other
  - Election Consultant(s)
  - Election Administrator
- Voters

Role of Bond Counsel – Election Matters

- Hired by and represents the City
- Assist with planning and calling the bond election
- Draft all election documents
- Provide detailed instructions for posting and publication requirements
- Advise and assist with election strategies
- Review informational materials
- Preclear proposition(s) with Attorney General's Office

Legal Authority for a Bond Election

Legal Authority for Governmental Entities to Issue Tax Bonds

- Home-rule Cities:
  - Article XI, Section 5 of the Texas Constitution
  - State Statutes
  - City's Charter
- General Law Cities:
  - Article XI, Section 4 of the Texas Constitution
  - State Statutes

Authorized Purposes for Tax Bonds

- Permanent public improvements and other public purposes

Calling the Bond Election

Generally, a bond election must be held on a Uniform Election Date - first Saturday in May or first Tuesday after the first Monday in November

Council adopts an ordinance calling a bond election containing:

- Proposition(s) and Ballot Language
- Precincts
- Election Day Polling Places
- Early Voting dates, hours and locations
- Other important information

Calling the Election - Propositions

- Each purpose requires a separate proposition
- General prohibition against logrolling – cannot combine multiple purposes into a single proposition
  - Exception – common project designed to support more than one governmental purpose (e.g., common building designed to support more than one municipal purpose – administrative offices and police station)

Important Dates for November 8, 2022 Bond Election

Date	Event
Mid-May*	Finalize purposes
Mid-June*	Finalize preferred grouping of purposes/projects to be presented in each measure to voters; Orrick seeks Texas AG pre-clearance, if necessary
Wed., Aug. 10	First day for City Council to adopt election ordinance
Mon., Aug. 22	Last day for City Council to adopt election ordinance
Mon., Oct. 24	Early voting begins
Tues., Nov. 8	**Election Day**
Fri., Nov. 11 – Tues., Nov. 22	Window to canvass the election

*Recommended timeline to ensure City can meet deadline to adopt election ordinance.

Calling the Bond Election

Posting and Publishing Requirements

- Post the Notice
  - City's bulletin board
  - City's website
- Publish the Notice
  - Newspaper of general circulation published in the City
- Post the Election Ordinance
  - Each polling place
  - 3 public places in the City
  - City Hall
  - City's website
- Post and publish in English and Spanish
- Bond Counsel will provide documents (in English and Spanish) and detailed instructions

Voter Outreach and Education

City Informs Community About Purpose(s) of the Bonds

- Provide factual information only (no advocacy)
- Prepare, print and distribute factual voter education materials
- Schedule and hold community engagement meetings to present factual information to the community

Post-Election Issues

Canvassing Window: November 11, 2022 – November 22, 2022

Election Contest Period: Ends 30 days after canvassing

Bonds cannot be issued until after the election contest period has ended

Questions?

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Jerry practices in the public law area. With a focus in public finance, he serves as bond counsel or underwriters' counsel in tax-exempt bond transactions. Jerry has been active in traditional bond financings for governmental entities such as school districts, cities, counties and special-purpose districts, advising them on general obligation, ad valorem tax-secured financings and special or limited obligation financings, such as utility system revenue-secured financings, conduit financings, financings for state agencies and financings for entities authorized to act on behalf of the State of Texas and its political subdivisions, including tax and revenue anticipation and general obligation and special-purpose facility revenue financings.

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Ben is a public law attorney who focuses his practice on public finance. He has served as bond counsel, underwriter's counsel and disclosure counsel on virtually every type of public finance transaction. Throughout his career, he has worked on more than 100 public finance transactions with an aggregate par value of approximately $15 billion. Ben also counsels utility districts, municipal management districts, cities, economic development corporations, tax increment reinvestment zones and other governmental entities on general matters. In addition, he has substantial experience with economic development matters, and advises both developers and governmental entities in the negotiation of agreements relating to the construction of public infrastructure/developer reimbursement and economic incentives.

ORDINANCE NO. _____

AN ORDINANCE CALLING A BOND ELECTION TO BE HELD WITHIN THE CITY OF ROLLINGWOOD, TEXAS; MAKING PROVISIONS FOR THE CONDUCT AND THE GIVING OF NOTICE OF THE ELECTION; AND CONTAINING OTHER PROVISIONS RELATED THERETO

STATE OF TEXAS §
COUNTY OF TRAVIS §
CITY OF ROLLINGWOOD §

WHEREAS, the City Council (the "City Council") of the City of Rollingwood, Texas (the "City") is authorized and has determined to call an election to submit propositions to voters in the City to determine whether the City Council shall be authorized to issue bonds of the City in the amounts and for the purposes hereinafter set forth; and

WHEREAS, the City will enter into one or more Election Agreements (collectively, the "Election Agreement") with Travis County, Texas (the "County"), by and through the county election officer (the "Administrator"), and possibly other political subdivisions, in accordance with the laws of the State of Texas (the "State") and applicable federal law; and

WHEREAS, the City Council finds and declares that the meeting at which this Ordinance is considered is open to the public, and that the public notice of the time, place and purpose of the meeting was given, as required by Chapter 551, Texas Government Code, as amended;

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

Section 1. Findings. The statements contained in the preamble of this Ordinance are true and correct and are hereby adopted as findings of fact and as a part of the operative provisions hereof.

Section 2. Election Ordered; Date; Propositions. An election (the "Election") shall be held for and within the City on Tuesday, November 8, 2022 ("Election Day"), in accordance with the Texas Election Code (the "Code") and other applicable law. At the Election, the following propositions (the "Propositions") shall be submitted to the qualified voters of the City in accordance with law:

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION A

Shall the City Council of the City of Rollingwood, Texas (the "City") be authorized to issue bonds, in one or more series, in a principal amount not to exceed $[_____] maturing serially or otherwise over a period of years (not to exceed the lesser of 40 years or the maximum prescribed by law) and bearing interest at such rate or rates (fixed, floating, variable or otherwise), not to exceed the respective limits prescribed by law at the time of issuance, as shall be determined within the discretion of the City Council at the time of issuance, and to levy, impose and pledge a tax upon all taxable property in the City sufficient to pay the interest

on the bonds, and to provide a sinking fund for the payment of the bonds as they mature, for the purpose of making permanent public improvements, to wit: constructing, acquiring, improving, renovating, expanding, developing and equipping waterworks system facilities and improvements, including fire flow improvements and acquiring lands and rights-of way for such purposes, and all matters incident or necessary thereto?

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION B

Shall the City Council of the City of Rollingwood, Texas (the "City") be authorized to issue bonds, in one or more series, in a principal amount not to exceed $[_____] maturing serially or otherwise over a period of years (not to exceed the lesser of 40 years or the maximum prescribed by law) and bearing interest at such rate or rates (fixed, floating, variable or otherwise), not to exceed the respective limits prescribed by law at the time of issuance, as shall be determined within the discretion of the City Council at the time of issuance, and to levy, impose and pledge a tax upon all taxable property in the City sufficient to pay the interest on the bonds, and to provide a sinking fund for the payment of the bonds as they mature, for the purpose of making permanent public improvements, to wit: constructing, acquiring, improving, renovating, expanding, developing and equipping drainage improvements and facilities at various locations within the City, including acquiring lands and rights-of-way for such purposes, and all matters necessary or incident related thereto?

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION C

Shall the City Council of the City of Rollingwood, Texas (the "City") be authorized to issue bonds, in one or more series, in a principal amount not to exceed $[_____] maturing serially or otherwise over a period of years (not to exceed the lesser of 40 years or the maximum prescribed by law) and bearing interest at such rate or rates (fixed, floating, variable or otherwise), not to exceed the respective limits prescribed by law at the time of issuance, as shall be determined within the discretion of the City Council at the time of issuance, and to levy, impose and pledge a tax upon all taxable property in the City sufficient to pay the interest on the bonds, and to provide a sinking fund for the payment of the bonds as they mature, for the purpose of making permanent public improvements, to wit: constructing, acquiring, improving, renovating, expanding, developing and equipping a combined City Hall and Public Safety Building and related infrastructure?

Section 3. Official Ballots. The official ballots for the Election shall be prepared in accordance with and conform to the requirements of the Code so as to permit the electors to vote "FOR" or "AGAINST" the aforesaid Propositions which shall be set forth on the ballots substantially in the following form:

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION A

[ ] FOR	)	The issuance of bonds in the amount of $[_____] and the imposition of taxes sufficient to pay the principal of and interest on the bonds for waterworks system facilities and improvements, including fire flow improvements and acquiring lands and rights-of way for such purposes, and all matters incident or necessary thereto.
[ ] AGAINST	)	

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION B

[ ] FOR	)	The issuance of bonds in the amount of $[_____] and the imposition of taxes sufficient to pay the principal of and interest on the bonds for drainage improvements and facilities at various locations within the City, including acquiring lands and rights-of-way for such purposes, and all matters necessary or incident related thereto.
[ ] AGAINST	)	

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION C

[ ] FOR	)	The issuance of bonds in the amount of $[_____] and the imposition of taxes sufficient to pay the principal of and interest on the bonds a combined City Hall and Public Safety Building and related infrastructure.
[ ] AGAINST	)	

Section 4. Persons Qualified to Vote. All resident, qualified electors of the City shall be eligible to vote at the Election.

Section 5. Election Precincts, Voting Locations and Voting Hours on Election Day. Except as otherwise provided herein, the boundaries and territories of the County election precincts that are wholly or partially within the territorial boundaries of the City are hereby designated as the voting precincts of the City for the Election and the precinct numbers for the City's election precincts shall be the corresponding County precinct number of each precinct. The Election Day polling places shall be as shown in Exhibit A to this Ordinance. Exhibit A shall be modified to reflect any alterations or changes in or additions to polling places required to conform to the Code or the Election Agreement or as directed by the Administrator. On Election Day the polls shall be open from 7:00 a.m. to 7:00 p.m.

Section 6. Early Voting Locations, Dates and Times. Early voting by personal appearance for all election precincts shall be held at the locations, at the times and on the days set forth in Exhibit B, or at such other locations as hereafter may be designated by the Administrator. Exhibit B shall be modified to reflect any alterations or changes in or additions to early voting polling places or times for early voting required to conform to the Code or the Election Agreement or as directed by the Administrator.

The Administrator is hereby designated as the Early Voting Clerk. The Administrator's contact information/delivery addresses for applications for ballots to be voted by mail and other matters related to the Election is as follows:

Rebecca Guerrero
Official Mailing Address: Travis County Clerk
PO Box 149325
Austin, TX 78714-9325
Physical Address: Travis County Elections Division
5501 Airport Boulevard
Austin, TX 78751-1410
E-mail Address: elections@traviscountytx.gov (general)
ebbm@traviscountytx.gov (ballots by mail)
Phone Number: (512) 854-4996
Fax Number: (512) 854-3969
Website Address: https://countyclerk.traviscountytx.gov/elections.html

Section 7. Appointment of Election Officers. Prior to the Election Day, the election judges, alternate judges, clerks and other personnel necessary for conducting the Election will be appointed by the Administrator, and the election judges and alternate judges may be changed and the polling places may be combined for some precincts, pursuant to decisions of the Administrator. The Administrator shall also be responsible for establishing the central counting station for the ballots cast in such election and appointing the personnel necessary for such station. The City Council hereby authorizes each of the Mayor, City Administrator, Director of Finance, City Secretary and/or any of their designees (collectively, the "Authorized Representatives") to appoint any such other officials not designated herein or appointed by the Administrator as are necessary and appropriate to conduct the Election in accordance with the Code.

Section 8. Notice of Election. Notice of the Election shall be given in the manner required by the Code and other applicable law. The City's website may be accessed at the following address: https://www.rollingwoodtx.gov/. To the extent required by law, notice of the Election shall include such address.

Section 9. Bilingual Election Materials. All notices, instructions, and ballots pertaining to the Election shall be furnished to voters in both English and Spanish and persons capable of acting as translators in both English and Spanish shall be made available to assist Spanish language speaking voters in understanding and participating in the election process.

Section 10. Conduct of Election. The Election shall be conducted by election officers, including the precinct judges and alternate judges or clerks appointed by the Administrator or the Authorized Representatives, in accordance with the Election Agreements, the Code and the Constitution and laws of the State and the United States of America. The Authorized Representatives are authorized to enter into, execute and deliver one or more Election Agreements, in accordance with applicable provisions of the Code. The terms and provisions of each Election Agreement are hereby incorporated into this Ordinance. To the extent of any conflict between this Ordinance and an Election Agreement, the terms and provisions of the Election Agreement shall prevail, and the Authorized Representatives are authorized to make such corrections, changes,

revisions and modifications to this Ordinance, including the exhibits hereto, as are deemed necessary or appropriate to conform to the Election Agreement, to comply with applicable State and federal law and to carry out the intent of the City Council, as evidenced by this Ordinance. The Administrator shall be responsible for establishing the central counting station for the ballots cast in the Election and appointing the personnel necessary for such station.

Section 11. Necessary Actions. The Mayor and City Council of the City, in consultation with the City's attorney and bond counsel are hereby authorized and directed to take any and all actions necessary to comply with the provisions of the Code and the Federal Voting Rights Act in carrying out and conducting the Election, whether or not expressly authorized herein.

Section 12. Mandatory Disclosure of Information.

(a) Pursuant to Section 3.009, Texas Election Code: (i) the proposition language that will appear on the ballot is set forth in Section 3 of this Ordinance, (ii) the purposes for which the bonds are to be authorized are set forth in Section 2 of this Ordinance, (iii) the principal amount of bonds to be authorized is set forth in Section 2 of this Ordinance, (iv) if the issuance of bonds is authorized by voters, taxes sufficient, without limit as to rate or amount, to pay the principal of and interest on the bonds and the costs of any credit agreements may be imposed, as set forth in Section 2 of this Ordinance, (v) bonds authorized pursuant to this Ordinance may be issued to mature over a specified number of years not to exceed the lesser of 40 years or the maximum number of years authorized by law and bearing interest at the rate or rates (not to exceed 15%), as authorized by law and determined by the City Council, (vi) as of the date of the adoption of this Ordinance, the aggregate amount of outstanding principal of the City's debt obligations is $[___], and the aggregate amount of outstanding interest on the City's debt obligations is $[___] and (vii) the City's ad valorem debt service tax rate as of the date of adoption of this Ordinance is $[___] per $100 of taxable property.

(b) Based upon market conditions as of the date of this Ordinance, the maximum interest rate for any series of the bonds is estimated to be [___]%. Such estimated maximum interest rate is provided as a matter of information but is not a limitation on the interest rate at which the bonds, or any series thereof, may be sold. In addition, the estimate contained in this subsection (b) is (i) based on certain assumptions (including assumptions concerning prevailing market and economic conditions at the time(s) of issuance of the bonds) and derived from projections obtained from the City's financial advisor, (ii) subject to change to the extent that actual facts, circumstances and conditions prevailing at the time that the bonds are issued differ from such assumptions and projections, (iii) provided solely in satisfaction of the requirements of Section 3.009, Texas Election Code, and for no other purpose, without any assurance that such projections will be realized, and (iv) not intended to give rise to a contract with voters or limit the authority of the City Council to issue bonds in accordance with the Propositions submitted by this Ordinance.

Section 13. Severability. If for any reason any section, paragraph, subdivision, clause, phrase, word, or provision of this Ordinance shall be held invalid or unconstitutional by final judgment of a court of competent jurisdiction, it shall not affect any other section, paragraph, subdivision, clause, phrase, word, or provision of this Ordinance, for it is the definite intent of the

City Council that every section, paragraph, subdivision, clause, phrase, work, or provision hereof be given full force and effect for its purpose.

Section 14. Effective Date. Pursuant to the provisions of Section 1201.028, Texas Government Code, this Ordinance shall be effective immediately upon adoption.

[*Signature page follows.*]

PASSED AND APPROVED this _____, 2022.

_____
Gavin Massingill, Mayor
City of Rollingwood, Texas

ATTEST:

_____
Desiree Adair, City Secretary
City of Rollingwood, Texas

(SEAL)

EXHIBIT A

ELECTION DAY POLLING LOCATIONS
(Between the hours of 7:00 a.m. and 7:00 p.m.)

[To be inserted once provided by Travis County]

EXHIBIT B

EARLY VOTING POLLING LOCATIONS AND TIMES

[To be inserted once provided by Travis County]

EXHIBIT C

VOTER INFORMATION DOCUMENT

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION A

[ ] FOR	)	The issuance of bonds in the amount of $[_____] and the imposition of taxes sufficient to pay the principal of and interest on the bonds for waterworks system facilities and improvements, including fire flow improvements and acquiring lands and rights-of way for such purposes, and all matters incident or necessary thereto.
[ ] AGAINST	)	

1. Principal of the debt obligations to be authorized	**$**[_____]
2. Estimated interest for the debt obligations to be authorized	**$**[_____]
3. Estimated combined principal and interest required to pay on time and in full the debt obligations to be authorized	**$**[_____]
4. Principal of all outstanding debt obligations of the City*	**$**[_____]
5. Estimated remaining interest on all outstanding debt obligations of the City*	**$**[_____]
6. Estimated combined principal and interest required to pay on time and in full all outstanding debt obligations of the City*	**$**[_____]
7. Estimated maximum annual increase in the amount of taxes that would be imposed on a residence homestead in the City with an appraised value of $100,000 to repay the debt obligations to be authorized, if approved, based upon assumptions made by the governing body of the City	**$**[_____]
8. Other information that the City considers relevant or necessary to explain the foregoing information	**See major assumptions listed below.**

* As of the date of adoption of the City's Bond Election Ordinance.

Major assumptions for statements above, including statement 7:

(1) Assumed amortization of the City's debt obligations, including outstanding debt obligations and the proposed debt obligations: [___].

(2) Assumed changes in estimated future appraised values within the City: [___].

(3) Assumed interest rate on the debt obligations to be issued: [___]%.

(4) Assumes that the City will not grant any optional homestead or other property tax exemptions.

(5) Assumes homestead will not qualify for idiosyncratic exemptions, including, but not limited to, the state-mandated homestead exemption for disabled veterans and their families, surviving spouses of members of the armed services killed in action and surviving spouses of first responders killed or fatally wounded in the line of duty.

(6) Assumes that applicable law will not change to provide for mandatory property tax exemptions or property tax freezes that are not available under current law.

(7) Assumes municipal bond insurance will [not] be obtained for the proposed debt obligations.

(8) As required by Section 1251.052, Texas Government Code, this Voter Information Document has been prepared for the proposition set forth in this Voter Information Document (the "Proposition"), which is being submitted to voters pursuant to an Ordinance Calling a Bond Election to be Held Within the City of Rollingwood, Texas; Making Provisions for the Conduct and the Giving of Notice of the Election; and Containing Other Provisions Related Thereto (the "Bond Election Ordinance"). In addition to the Proposition, one or more other propositions will be submitted to voters pursuant to the Bond Election Ordinance (collectively, the Proposition and the other proposition(s) being referred to herein as the "Propositions"). The estimated maximum annual increase in the amount of taxes that would be imposed on a residence homestead in the City with an appraised value of $100,000 to repay the debt obligations to be authorized pursuant to the Propositions, if all Propositions are approved, based upon the assumptions made by the governing body of the City in each of the respective voter information documents prepared for each of the Propositions, is $[_____].

The estimates contained in this Voter Information Document are (i) based on certain assumptions (including the major assumptions listed above and assumptions concerning prevailing market and economic conditions at the time(s) of issuance of the bonds) and derived from projections obtained from the City's financial advisor, (ii) subject to change to the extent that actual facts, circumstances and conditions prevailing at the time that the bonds are issued differ from such assumptions and projections, (iii) provided solely in satisfaction of the requirements of Section 1251.052, Texas Government Code, and for no other purpose, without any assurance that such projections will be realized, and (iv) not intended to (and expressly do not) give rise to a contract with voters or limit the authority of the City to issue bonds in accordance with the Propositions submitted by the City's Bond Election Ordinance.

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION B

[ ] FOR	)	The issuance of bonds in the amount of $[_____] and the imposition of taxes sufficient to pay the principal of and interest on the bonds for drainage improvements and facilities at various locations within the City, including acquiring lands and rights-of-way for such purposes, and all matters necessary or incident related thereto.
[ ] AGAINST	)	

1. Principal of the debt obligations to be authorized	**$**[_____]
2. Estimated interest for the debt obligations to be authorized	**$**[_____]
3. Estimated combined principal and interest required to pay on time and in full the debt obligations to be authorized	**$**[_____]
4. Principal of all outstanding debt obligations of the City*	**$**[_____]
5. Estimated remaining interest on all outstanding debt obligations of the City*	**$**[_____]
6. Estimated combined principal and interest required to pay on time and in full all outstanding debt obligations of the City*	**$**[_____]
7. Estimated maximum annual increase in the amount of taxes that would be imposed on a residence homestead in the City with an appraised value of $100,000 to repay the debt obligations to be authorized, if approved, based upon assumptions made by the governing body of the City	**$**[_____]
8. Other information that the City considers relevant or necessary to explain the foregoing information	**See major assumptions listed below.**

* As of the date of adoption of the City's Bond Election Ordinance.

Major assumptions for statements above, including statement 7:

(1) Assumed amortization of the City's debt obligations, including outstanding debt obligations and the proposed debt obligations: [___].

(2) Assumed changes in estimated future appraised values within the City: [___].

(3) Assumed interest rate on the debt obligations to be issued: [___]%.

(4) Assumes that the City will not grant any optional homestead or other property tax exemptions.

(5) Assumes homestead will not qualify for idiosyncratic exemptions, including, but not limited to, the state-mandated homestead exemption for disabled veterans and their families, surviving spouses of members of the armed services killed in action and surviving spouses of first responders killed or fatally wounded in the line of duty.

(6) Assumes that applicable law will not change to provide for mandatory property tax exemptions or property tax freezes that are not available under current law.

(7) Assumes municipal bond insurance will [not] be obtained for the proposed debt obligations.

(8) As required by Section 1251.052, Texas Government Code, this Voter Information Document has been prepared for the proposition set forth in this Voter Information Document (the "Proposition"), which is being submitted to voters pursuant to an Ordinance Calling a Bond Election to be Held Within the City of Rollingwood, Texas; Making Provisions for the Conduct and the Giving of Notice of the Election; and Containing Other Provisions Related Thereto (the "Bond Election Ordinance"). In addition to the Proposition, one or more other propositions will be submitted to voters pursuant to the Bond Election Ordinance (collectively, the Proposition and the other proposition(s) being referred to herein as the "Propositions"). The estimated maximum annual increase in the amount of taxes that would be imposed on a residence homestead in the City with an appraised value of $100,000 to repay the debt obligations to be authorized pursuant to the Propositions, if all Propositions are approved, based upon the assumptions made by the governing body of the City in each of the respective voter information documents prepared for each of the Propositions, is $[_____].

The estimates contained in this Voter Information Document are (i) based on certain assumptions (including the major assumptions listed above and assumptions concerning prevailing market and economic conditions at the time(s) of issuance of the bonds) and derived from projections obtained from the City's financial advisor, (ii) subject to change to the extent that actual facts, circumstances and conditions prevailing at the time that the bonds are issued differ from such assumptions and projections, (iii) provided solely in satisfaction of the requirements of Section 1251.052, Texas Government Code, and for no other purpose, without any assurance that such projections will be realized, and (iv) not intended to (and expressly do not) give rise to a contract with voters or limit the authority of the City to issue bonds in accordance with the Propositions submitted by the City's Bond Election Ordinance.

CITY OF ROLLINGWOOD, TEXAS - PROPOSITION C

[ ] FOR	)	The issuance of bonds in the amount of $[_____] and the imposition of taxes sufficient to pay the principal of and interest on the bonds for a combined City Hall and Public Safety Building and related infrastructure.
[ ] AGAINST	)	

1. Principal of the debt obligations to be authorized	**$**[_____]
2. Estimated interest for the debt obligations to be authorized	**$**[_____]
3. Estimated combined principal and interest required to pay on time and in full the debt obligations to be authorized	**$**[_____]
4. Principal of all outstanding debt obligations of the City*	**$**[_____]
5. Estimated remaining interest on all outstanding debt obligations of the City*	**$**[_____]
6. Estimated combined principal and interest required to pay on time and in full all outstanding debt obligations of the City*	**$**[_____]
7. Estimated maximum annual increase in the amount of taxes that would be imposed on a residence homestead in the City with an appraised value of $100,000 to repay the debt obligations to be authorized, if approved, based upon assumptions made by the governing body of the City	**$**[_____]
8. Other information that the City considers relevant or necessary to explain the foregoing information	**See major assumptions listed below.**

* As of the date of adoption of the City's Bond Election Ordinance.

Major assumptions for statements above, including statement 7:

(1) Assumed amortization of the City's debt obligations, including outstanding debt obligations and the proposed debt obligations: [___].

(2) Assumed changes in estimated future appraised values within the City: [___].

(3) Assumed interest rate on the debt obligations to be issued: [___]%.

(4) Assumes that the City will not grant any optional homestead or other property tax exemptions.

(5) Assumes homestead will not qualify for idiosyncratic exemptions, including, but not limited to, the state-mandated homestead exemption for disabled veterans and their families, surviving spouses of members of the armed services killed in action and surviving spouses of first responders killed or fatally wounded in the line of duty.

(6) Assumes that applicable law will not change to provide for mandatory property tax exemptions or property tax freezes that are not available under current law.

(7) Assumes municipal bond insurance will [not] be obtained for the proposed debt obligations.

(8) As required by Section 1251.052, Texas Government Code, this Voter Information Document has been prepared for the proposition set forth in this Voter Information Document (the "Proposition"), which is being submitted to voters pursuant to an Ordinance Calling a Bond Election to be Held Within the City of Rollingwood, Texas; Making Provisions for the Conduct and the Giving of Notice of the Election; and Containing Other Provisions Related Thereto (the "Bond Election Ordinance"). In addition to the Proposition, one or more other propositions will be submitted to voters pursuant to the Bond Election Ordinance (collectively, the Proposition and the other proposition(s) being referred to herein as the "Propositions"). The estimated maximum annual increase in the amount of taxes that would be imposed on a residence homestead in the City with an appraised value of $100,000 to repay the debt obligations to be authorized pursuant to the Propositions, if all Propositions are approved, based upon the assumptions made by the governing body of the City in each of the respective voter information documents prepared for each of the Propositions, is $[_____].

The estimates contained in this Voter Information Document are (i) based on certain assumptions (including the major assumptions listed above and assumptions concerning prevailing market and economic conditions at the time(s) of issuance of the bonds) and derived from projections obtained from the City's financial advisor, (ii) subject to change to the extent that actual facts, circumstances and conditions prevailing at the time that the bonds are issued differ from such assumptions and projections, (iii) provided solely in satisfaction of the requirements of Section 1251.052, Texas Government Code, and for no other purpose, without any assurance that such projections will be realized, and (iv) not intended to (and expressly do not) give rise to a contract with voters or limit the authority of the City to issue bonds in accordance with the Propositions submitted by the City's Bond Election Ordinance.