

A RESOLUTION TRANSMITTING THE CAPITAL IMPROVEMENTS ELEMENT AMENDMENT, RELATING TO THE COUNTY'S IMPACT FEE PROGRAM TO THE ATLANTA REGIONAL COMMISSION AND GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

WHEREAS, Rockdale County adopted a Capital Improvements Element and Impact Fee Program as an Amendment to the *Rockdale County Comprehensive Plan*; and

WHEREAS, Rockdale County has prepared a Capital Improvements Element Amendment relating the County's Impact Fee Program; and

WHEREAS, the Capital Improvements Element Amendment, relating to the County's Impact Fee Program was prepared in accordance with the "Development Impact Fee Compliance Requirements" and the "Minimum Planning Standards and Procedures for Local Comprehensive Planning" adopted by the Board of Community Affairs pursuant to the Georgia Planning Act of 1989, and a duly advertised Public Hearing was held on September 24, 2019 at 10:00 A.M. in the Rockdale County Commission Chambers, 901 Main Street, Conyers, Georgia.

BE IT THEREFORE RESOLVED that the Board of Commissioners of Rockdale County does hereby submit the Capital Improvements Amendment, relating to the County's Impact Fee Program, to the Atlanta Regional Commission for Regional and State review, as per the requirements of the Development Impact Fee Compliance Requirements adopted pursuant to the Georgia Planning Act of 1989.

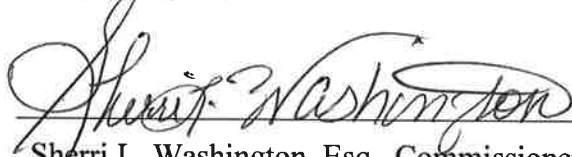
BE IT FURTHER RESOLVED that any resolution in conflict with this resolution is hereby repealed.

This 24th day of September, 2019.

**ROCKDALE COUNTY, GEORGIA
BOARD OF COMMISSIONERS**



Oz Nesbitt, Sr., Chairman



Sherri L. Washington, Esq., Commissioner Post I



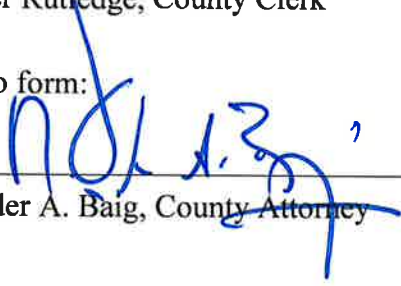
Dr. Doreen Williams, Commissioner Post II

Resolution No. _____

Attest:

By: 

Jennifer Rutledge, County Clerk

Approved as to form:
By: 

M. Qader A. Baig, County Attorney

First reading: _____

Second reading: _____



Capital Improvements Element

Rockdale County Impact Fee Program

Including the following
public facility categories:

Library Services
Fire Protection
Parks and Recreation

DRAFT: 9/10/19

ROSS+associates

urban planning & plan implementation

in association with Hatley Plans LLC



Capital Improvements Element

DRAFT

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Introduction

The purpose of a Capital Improvements Element (CIE) is to establish where and when certain new capital facilities will be provided within a jurisdiction and the extent to which they may be financed through an impact fee program. This Capital Improvements Element addresses Library Services, Fire Protection, and Parks & Recreation.

As required by the Georgia Development Impact Fee Act ("State Act" or "DIFA"), and defined by the Department of Community Affairs in its *Development Impact Fee Compliance Requirements*, the CIE must include the following for each capital facility category for which an impact fee may be charged:

- a **projection of needs** for the planning period of the adopted Comprehensive Plan, which spans 20 years to 2040;
- the designation of **service areas** - the geographic area in which a defined set of public facilities provide service to development within the area;
- the designation of **levels of service** (LOS) - the service level that will be provided;
- a **schedule of improvements** listing impact fee related projects and costs for the planning period of the adopted Comprehensive Plan;
- a description of **funding sources** for the planning period of the adopted Comprehensive Plan.

■ Impact Fees Authorized

Impact fees are a form of revenue allowed by the State, and strictly defined and regulated through State law. Impact fees are authorized in Georgia pursuant to O.C.G.A. §36-71-1 et seq., the *Georgia Development Impact Fee Act* (DIFA), and are administered by the Georgia Department of Community Affairs under Chapter 110-12-2, *Development Impact Fee Compliance Requirements*, of the Georgia Administrative Code.

Under DIFA, the County can collect money from new development based on that development's proportionate share—the 'fair share'—of the cost to provide the facilities needed specifically to serve new development. This includes the categories of Library Services, Fire Protection, and Parks & Recreation. Revenue for such facilities can be produced from new development in two ways: through future taxes paid by the homes and businesses that growth creates, and through an impact fee assessed as new development occurs.

■ Focus of this Document

The CIE focuses on the public facilities that will be needed to meet the service demands of future growth and development while maintaining the County's adopted levels of service enjoyed by residents and businesses in the county today and in the future. The key is that the capital improvement, whether it's land, buildings or long-lived vehicles, must create new capacity within the system to keep pace with the number of future residents and businesses as the county grows. Maintenance and personnel are not eligible for impact fee funding, nor would replacement of deteriorated floor space or a run-down vehicle because, although the replacement is maintaining the level of service, no new capacity is created to serve the needs of new growth.

■ Categories for Assessment of Impact Fees

To assist in paying for the high costs of expanding public facilities and services to meet the needs of projected growth and to ensure that new development pays a reasonable share of the costs of public facilities, Rockdale County is updating its impact fees for Library Services, Fire Protection, and Parks & Recreation. The sections in this CIE provide population and employment forecasts and detailed information regarding the inventory of current facilities, the level of service, and detailed calculations of the impact cost for the specific public facilities.

Introduction

The following table shows the facility categories that are eligible for impact fee funding under Georgia law and that are considered in the CIE. The service area for each public facility category—that is, the geographical area served by the facility category—is also given, along with what the level of service standard, to be established for each facility category, is based.

Table 1: Overview of Impact Fee Program - Facilities

	Library Services	Fire Protection	Parks and Recreation
Eligible Facilities	Library facilities including collection materials	Fire stations and fire apparatus (vehicles)	Park acres, recreation components and trails
Service Area	Countywide	Countywide	Countywide
Level of Service Standard Based on ...	Square footage and number of collection materials per dwelling unit	Square footage and number of vehicles per day-night population	Number of acres, components and trails per dwelling unit
Historic Funding Source(s)	Impact Fees, SPLOST, General Fund, State Grants	Impact Fees, SPLOST and General Fund	Impact Fees, SPLOST and General Fund

Terms used in Table 1:

Eligible Facilities under the State Act are limited to capital items having a life expectancy of at least 10 years, such as land, buildings and other facilities, and major rolling stock (such as fire trucks). Impact fees cannot be used for the maintenance, supplies, personnel salaries, or other operational costs, or for short-term capital items such as computers and furniture. None of these costs are included in the impact fee system.

Service Areas are the geographic areas that the facilities serve, and the areas within which the impact fee can be collected. Monies collected in a service area for a particular type of facility may only be spent for that purpose, and only for projects that serve that service area.

Level of Service Standards are critical to determining new development's fair share of the costs. The same standards must be applied to existing development as well as new to assure that each is paying only for the facilities that serve it. New development cannot be required to pay for facilities at a higher standard than that available to existing residents and businesses, nor to subsidize existing facility deficiencies.

■ **Editorial Conventions**

This CIE observes the following conventions:

- The capitalized word 'County' applies to the government of Rockdale County, the Board of Commissioners or any of its departments or officials, as appropriate to the context. An example is "the County has adopted an impact fee ordinance".
- The lower-case word 'county' refers to the geographical area of Rockdale County, as in "the population of the county has grown".
- The same conventions are applied to the words 'City' and 'city', 'State' and 'state'.
- Single quote marks (' and ') are used to highlight a word or phrase that has a particular meaning or refers to a heading in a table.
- Double quote marks (" and ") are used to set off a word or phrase that is a direct quote taken from another source, such as a passage or requirement copied directly from a law or report.
- Numbers shown on tables are often rounded from the actual calculation of the figures for clarity, but the actual calculated number of decimal points is retained within the table for accuracy and further calculations.

Forecasts

Future growth and development is forecast for Rockdale County over the coming 22 years as the Atlanta Metro Area continues to drive expansion and recovery from the Great Recession takes wing—a process that has already begun.

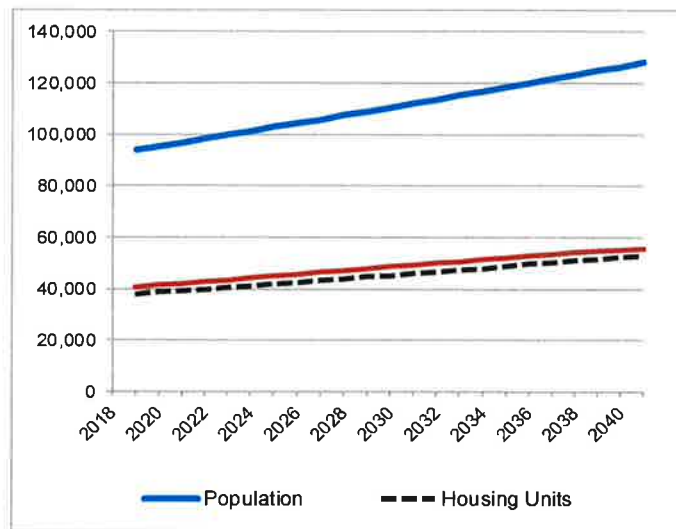
County Projections

Population projections reflect this extensive growth which is expected over the next 22 years in the county. Based on the county’s rebound from the Great Recession and anticipated continuing growth in both the housing market and businesses, the ultimate population forecast for 2040 is more than 128,000 people—an additional 37% of the number of people in the county today. Housing for this future population growth will be accommodated by an increase in all types of housing units, adding well over 40% to the existing housing stock.

Employment in the county will also increase dramatically, adding over 37% to the number of workers here today. The numbers shown in the ‘value-added jobs’ column are private sector, building-occupying employment figures and exclude those that are referred to as ‘non-building related’ jobs. ‘Non-building related’ jobs are those that do not normally require issuance of a building permit, and thus would not be assessed an impact fee. Such jobs include any employment that is considered to be transitory in nature, such as those working on construction sites, or are strictly land-based such as farming and other agricultural workers. In addition, the workers employed by governmental entities (city, county, state and federal) are excluded because governments are exempt from impact fees.

Table 2: Forecasts of Future Growth

Year	Population	Housing Units	Value-Added Jobs
2018	93,785	37,763	40,602
2019	95,250	38,430	41,309
2020	96,715	39,097	41,973
2021	98,254	39,774	42,702
2022	99,793	40,452	43,431
2023	101,332	41,129	44,160
2024	102,871	41,806	44,889
2025	104,410	42,483	45,617
2026	105,949	43,161	46,360
2027	107,488	43,838	47,103
2028	109,027	44,515	47,846
2029	110,566	45,193	48,589
2030	112,106	45,869	49,332
2031	113,706	46,589	50,022
2032	115,306	47,308	50,712
2033	116,906	48,028	51,402
2034	118,506	48,747	52,092
2035	120,106	49,467	52,781
2036	121,706	50,187	53,389
2037	123,306	50,906	53,997
2038	124,906	51,626	54,605
2039	126,506	52,345	55,213
2040	128,103	53,069	55,819



	Population	Housing Units	Value-Added Jobs
2018	93,785	37,763	40,602
2040	128,103	53,069	55,819
Increase	34,318	15,306	15,217
Percent	36.6%	40.5%	37.5%

A much more extensive socioeconomic analysis and description of the growth projections is contained in the Future Growth Appendix.

■ **Service Area Projections**

In Table 3 the service area forecasts are presented for a single countywide service area measured in two ways: countywide housing units (which quantifies Library Services and Parks & Recreation facility demands), and countywide day-night population (for the public safety services category Fire Protection).

The 'day-night population' calculation is a combination of the future population and employment projections shown on Table 2. The use of day-night population in impact cost and impact fee calculations is based upon the clear rational nexus between persons and services demanded on a 24-hour basis.

The day-night population is used to determine Level of Service standards for facilities that serve both the resident population and business employment. The fire department, for instance, protects one's house from fire whether or not anyone is at home, and protects stores and offices whether or not they are open for business. Thus, this 'day-night population' is a measure of the total services demanded of a 24-hour service provider facility and a fair way to allocate the costs of such a facility among all of the beneficiaries.

Table 3: Service Area Forecasts

Year	Housing Units (Library, Parks)	Day-Night Population (Fire)
2018	37,763	134,387
2019	38,430	136,559
2020	39,097	138,688
2021	39,774	140,956
2022	40,452	143,224
2023	41,129	145,492
2024	41,806	147,760
2025	42,483	150,027
2026	43,161	152,309
2027	43,838	154,591
2028	44,515	156,873
2029	45,193	159,155
2030	45,869	161,438
2031	46,549	163,728
2032	47,308	166,018
2033	48,028	168,308
2034	48,747	170,598
2035	49,467	172,887
2036	50,187	175,095
2037	50,906	177,303
2038	51,626	179,511
2039	52,345	181,719
2040	53,069	183,922

**Increase
2018-40 15,306 49,535**

The figures on Table 3 are the figures that will be used in subsequent public facility category chapters for Library Services, Fire Protection, and Parks & Recreation.

For a more detailed description of the methodologies and analytical techniques used to arrive at the forecasts used in the CIE, see the Future Growth Appendix.

Day-Night population is the combination of residents and "value added" employment.

Library Services

■ Introduction

The Conyers-Rockdale County Library System provides library services through a single library facility, the Nancy Guinn Memorial Library. This library is operated and maintained by financial contributions from the State of Georgia and Rockdale County. The library provides services to all residents of Rockdale County through a variety of information and materials, facilities and programs. The library serves all persons on an equal basis in meeting their educational, recreational, civic, economic and spiritual needs.

Demand for library facilities is almost exclusively related to the county's resident population. Businesses make some use of public libraries for research purposes, but the use is incidental compared to that of the families and individuals who live in the county. Thus, a library services system impact fee is limited to future residential growth.

The library facility in Rockdale has a floor area of 49,000 square feet and currently contains 116,720 collection materials.

■ Service Area

Materials, facilities and services of the Rockdale County library system are equally available to the county's population. The entire county is therefore considered a single service district for library services. An improvement in any part of the county increases service to all parts of the county to some extent.



■ Level of Service

The year 2019 Level of Service (LOS) is determined by an inventory of the existing library facility and collection materials, as shown in Table 4.

Table 4: Inventory of Library Facilities

Facility	Gross Floor Area in Square Feet	Collection Materials
Nancy Guinn Memorial Library	49,000	116,720

Level of service calculations, shown in Table 5 below, determine that the library provides approximately three collection materials and 1.3 square feet of library space per dwelling unit to serve the current population.

Table 5: Current Level of Service Calculation

Facility	Current Service Population	Current Level of Service
Existing Square Feet	Number of Housing Units (2018)	Square Feet of Floor Area per Housing Unit
49,000	37,763	1.2976
Existing Collection Materials	Number of Housing Units (2018)	Collection Materials per Housing Unit
116,720	37,763	3.0909



■ **Forecasts for Service Area**

Table 6: Future Demand Calculation

Current Level of Service	Service Population Growth	New Growth Demand
Square Feet of Floor Area per Housing Unit	Number of New Housing Units (2018-40)	Square Feet of New Floor Area Needed
1.2976	15,306	19,861
Collection Materials per Housing Unit	Number of New Housing Units (2018-40)	Collection Materials Needed
3.0909	15,306	47,309

Future Demand

The County adopted a Level of Service for library facilities based on the current floor area of facility space, and the current number of collection materials, per dwelling unit.

In Table 6, the Level of Service figures are used to calculate future demand in square feet and collection materials between 2018 and 2040. The additional number

of forecasted dwelling units to the year 2040 is multiplied by the Level of Service to produce the future demand figures. Future growth will demand almost 20,000 additional square feet of library space by the year 2040 in order to maintain the current Level of Service for all county residents, both existing and future. In the same way, a net increase of over 47,000 collection materials will need to be added.

Table 7 presents the expected facility demand in an annual format. The table shows a future project roughly in pace with the anticipated growth in dwelling units (assuming that construction of a new library branch should begin when about one-half the service demand is reached).

Library Services

Alternately, an expansion of the current library could be considered, and/or several smaller new branch libraries in various locations around the county. In whatever future configuration, it is the addition of 19,861 square feet that is impact fee eligible.

Table 7: Future Library Facility Projects

Year	New Dwelling Units	Running Total: SF Demanded	Project	Square Footage
2018	0			
2019	667	865		
2020	667	1,730		
2021	677	2,608		
2022	678	3,488		
2023	677	4,366		
2024	677	5,244		
2025	677	6,122		
2026	678	7,002		
2027	677	7,880		
2028	677	8,758		
2029	678	9,638	New Branch Library	19,861
2030	676	10,515		
2031	720	11,449		
2032	719	12,382		
2033	720	13,316		
2034	719	14,249		
2035	720	15,183		
2036	720	16,117		
2037	719	17,050		
2038	720	17,984		
2039	719	18,917		
2040	724	19,856		
Total	15,306			19,861

Table 8 presents the figures for collection material demand. Materials demanded by new growth are calculated in the first columns by multiplying the Level of Service standard (from Table 6) times the net new dwelling units each year (from Table 2). Thus the 'New Materials Needed (annual)' column represents the number of materials that must be purchased in order to meet new growth's demand in each year. The 'Running Total' column shows the accumulated number of new collection materials that will meet the needs of future residential growth in the county.

However, the Library System discards a few of its collection materials each year as they become worn out, disfigured, broken or out of date. To maintain the collection, these materials need to be replaced with new materials. Since these materials replenish the overall collection, the responsibility for these replacements falls to the current residents and not to new growth.

Over the past several years the discard rate has averaged 2.5 % of all materials in the collection. As the collection grows in the future, this discard rate will continue relative to the new materials being acquired. By including the discarded materials for replacement each year, the resulting 'total materials needed (annual)' column reflects the total number of volumes required annually to maintain the LOS once these non-impact fee eligible volumes are discarded. Thus, the new materials that will be needed each year will meet both the demand of new growth and the replenishment of the current collection. A total of 48,491 collection materials will need to be purchased to maintain the Level of Service for new and existing development and to account for discarded volumes.

Table 8: Future Collection Materials Needed

Year	New Growth Demand			Plus Discarded Materials	Total Materials Needed (annual)
	New Dwelling Units	New Materials Needed (annual)	Running Total		
2018	0	0			
2019	667	2,062	2,062	52	2,113
2020	667	2,062	4,123	52	2,113
2021	677	2,093	6,216	52	2,145
2022	678	2,096	8,311	52	2,148
2023	677	2,093	10,404	52	2,145
2024	677	2,093	12,496	52	2,145
2025	677	2,093	14,589	52	2,145
2026	678	2,096	16,684	52	2,148
2027	677	2,093	18,777	52	2,145
2028	677	2,093	20,869	52	2,145
2029	678	2,096	22,965	52	2,148
2030	676	2,089	25,054	52	2,142
2031	720	2,225	27,280	56	2,281
2032	719	2,222	29,502	56	2,278
2033	720	2,225	31,728	56	2,281
2034	719	2,222	33,950	56	2,278
2035	720	2,225	36,175	56	2,281
2036	720	2,225	38,401	56	2,281
2037	719	2,222	40,623	56	2,278
2038	720	2,225	42,849	56	2,281
2039	719	2,222	45,071	56	2,278
2040	724	2,238	47,309	56	2,294
Total	15,306	47,309		1,183	48,491

Note: Discard rate = 2.5%

Library Services

■ Future Costs

New Library Space

The building floor area needed to serve new growth identified in Table 7 is used to calculate the future cost to meet service demand, as shown in Table 9. The costs are shown in current dollars, and then adjusted to reflect the Net Present Value based on the year in which the expenditure is anticipated. For facility construction, the estimated current cost of construction is adjusted using the BCI (building construction cost index), and then reduced by the Discount Rate to determine the Net Present Value.

Table 9: Facility Costs to Meet Future Demand

Year	Project	Square Footage	Cost (2019 Dollars)*	% for New Growth	Total New Growth Cost (NPV)**
2026	New Branch Library	19,861	\$ 8,323,745	100%	\$ 9,051,862
Total		19,861	\$ 8,323,745	100%	\$ 9,051,862

* Project cost based on \$419.10 per square foot, *Green Building Square Foot Costbook*, 2018 Edition, published by BNI Building News.

** Net Present Value = 2019 cost estimate inflated to target year using the Building Cost Index (BCI), reduced to NPV using the Discount Rate.

New Collection Materials

The average cost of a collection material is based on the overall value of all of the materials in the current collection. The inventory of the current collection is shown on Table 10: the total number of materials, the total value of all materials and the average cost to acquire a volume. Overall, the system's collection of 116,720 materials has a current (replacement) value of slightly over \$2,400,000. Dividing one by the other, the average per volume in the collection is almost \$21.

Table 10: Value of Collection Materials – 2019

Number of Volumes in Collection*	Total Value	Average Per Volume
116,720	\$ 2,418,554.28	\$ 20.72

* Books, audio-books, CDs, DVDx, reading kits, magazines, and maps



The new collection materials needed to serve new growth and to

offset the discard rate, identified on Table 8, are used to calculate the future cost to meet service demand, as shown in Table 11.

This average cost-per-volume from Table 10 is used in Table 11 to calculate the total cost each year to acquire the needed number of materials (from Table 8). The costs are shown in current dollars, and then adjusted to reflect the Net Present Value based on the year in which the expenditure is anticipated. For the acquisition of collection materials, the current cost is adjusted to reflect the CPI (consumer price index) inflation factor, and then reduced by the Net Discount Rate to determine the Net Present Value.

In Table 11, the number of collection materials needed each year is taken from Table 8. The total cost each year (in current 2019 dollars) is produced by multiplying the number of collection materials times the average per-volume cost calculated in Table 10. The percentage of the cost attributable to new growth in each year is based on the percentage of total volumes demanded that are attributable to new growth's demand (i.e., excluding the volumes needed to replace the discarded volumes).

This 'New Growth Cost (2019 \$)' is converted to Net Present Value as described above, using the CPI inflation rate to the future year indicated, and then reducing that figure using the Net Discount Rate back to present value of the future cost.

Table 11: Collection Material Costs to Meet Future Demand

Year	Total Materials Needed (annual)	Total Cost (2019 Dollars)*	% for New Growth	New Growth Share (2019 \$)	Net Present Value
2019	2,113	\$ 43,786.38	97.56%	\$ 42,718.42	\$ 42,718.42
2020	2,113	\$ 43,786.38	97.56%	\$ 42,718.42	\$ 43,279.23
2021	2,145	\$ 44,442.85	97.56%	\$ 43,358.88	\$ 44,504.78
2022	2,148	\$ 44,508.50	97.56%	\$ 43,422.92	\$ 45,155.63
2023	2,145	\$ 44,442.85	97.56%	\$ 43,358.88	\$ 45,680.97
2024	2,145	\$ 44,442.85	97.56%	\$ 43,358.88	\$ 46,280.66
2025	2,145	\$ 44,442.85	97.56%	\$ 43,358.88	\$ 46,888.24
2026	2,148	\$ 44,508.50	97.56%	\$ 43,422.92	\$ 47,573.95
2027	2,145	\$ 44,442.85	97.56%	\$ 43,358.88	\$ 48,127.41
2028	2,145	\$ 44,442.85	97.56%	\$ 43,358.88	\$ 48,759.23
2029	2,148	\$ 44,508.50	97.56%	\$ 43,422.92	\$ 49,472.30
2030	2,142	\$ 44,377.20	97.56%	\$ 43,294.83	\$ 49,973.92
2031	2,281	\$ 47,265.66	97.56%	\$ 46,112.84	\$ 53,925.42
2032	2,278	\$ 47,200.01	97.56%	\$ 46,048.79	\$ 54,557.47
2033	2,281	\$ 47,265.66	97.56%	\$ 46,112.84	\$ 55,350.58
2034	2,278	\$ 47,200.01	97.56%	\$ 46,048.79	\$ 55,999.33
2035	2,281	\$ 47,265.66	97.56%	\$ 46,112.84	\$ 56,813.40
2036	2,281	\$ 47,265.66	97.56%	\$ 46,112.84	\$ 57,559.24
2037	2,278	\$ 47,200.01	97.56%	\$ 46,048.79	\$ 58,233.88
2038	2,281	\$ 47,265.66	97.56%	\$ 46,112.84	\$ 59,080.44
2039	2,278	\$ 47,200.01	97.56%	\$ 46,048.79	\$ 59,772.90
2040	2,294	\$ 47,528.25	97.56%	\$ 46,369.02	\$ 60,978.73
Total	48,491	\$ 1,004,789.12		\$ 980,282.09	\$ 1,130,686.11

Fire Protection

■ Introduction

Fire protection is provided by the County through its Fire-Rescue Department. The capital value of fire protection is based upon fire stations, administrative and training spaces, and fire apparatus. Fire protection in the county is provided through nine fire stations, headquarters space, a fire training facility, and a fleet of fire apparatus and vehicles having a life of at least 10 years. The Fire-Rescue Department also administers emergency management services, which include E-911 communications and associated facilities in the form of a 911 dispatch center and public safety radio towers.

As shown in Table 12, the Fire-Rescue Department currently provides services to the entire county through facilities with a combined square footage of 70,275 utilizing a total of 25 fire apparatus, 20 support vehicles, and three radio towers. In addition, Table 12 lists system improvements that are proposed to serve the growing county for the next 20 years to 2040. The County plans to add five stations and a fire training center, and to relocate and expand the 911 dispatch center and two of the existing fire stations. Seventeen new fire apparatus vehicles will be added to properly equip recently added stations and to serve future facilities. Ten smaller support vehicles will be added to the inventory, as well as one radio tower to expand communications coverage.

Table 12: Fire Protection System Inventory & Improvements

Existing System Type		Square Feet or # Vehicles	Planned System Improvement		Square Feet or # Vehicles*
Facilities			Facilities		
Station 1	1831 Conyers Road	8,476	Station 5 - Relocation		5,648
Station 2	778 Bell Road	8,000	Station 8 - Relocation		4,380
Station 3	2450 Old Salem Road	8,000	Station 10 - New Facility		10,500
Station 4	3601 Union Church Road	2,400	Station 11 - New Facility		8,000
Station 5	2100 Hightower Trail	2,552	Station 12 - New Facility		8,000
Station 6	2681 Hurst Road	8,127	Station 13 - New Facility		8,000
Station 7/HQ	1496 Rockbridge Road	11,310	Station 14 - New Facility		8,000
Station 8	1164 Scott Street	6,120	911 Dispatch Center - Relocation		324
Station 9	2009 Walker Road	8,414	Fire Training Center - New Facility		4,500
911 Dispatch Center	2120 Farmer Road	3,176			
Training Annex	2150 Iris Drive	3,700			
	Total Existing Square Footage	70,275		Total Planned Square Footage	57,352
Fire Apparatus*			Fire Apparatus**		
	Pumper	15	Pumper		11
	Aerial Truck	2	Aerial Truck		3
	Brush Engine	1	Rescue Squad (heavy)		1
	Brush Truck (skid unit)	2	Hazmat Unit		1
	Rescue Squad (heavy)	2	Trail ATV (Fire & Rescue)		1
	Hazmat Unit	1			
	Dive Support Unit	1			
	Trail ATV (Fire & Rescue)	1			
	Total Existing Fire Apparatus	25		Total Planned Fire Apparatus	17
Support Vehicles*			Support Vehicles**		
	Administrative Vehicles	14	Administrative Vehicles		6
	Field Vehicles	6	Field Vehicles		4
	Total Existing Support Vehicles	20		Total Planned Support Vehicles	10
Public Safety Radio Towers			Public Safety Radio Towers		
	4700 Union Church Road	1		Total Planned Public Safety Radio Towers	1
	2259 Smyrna Road	1			
	3751 Miller Bottom	1			
	Total Public Safety Radio Towers	3			
Total Existing System			Total Planned System Improvements		
	Total Existing Floor Area	70,275		Total Planned Floor Area	57,352
	Total Existing Fire Apparatus	25		Total Planned Fire Apparatus	17
	Total Existing Support Vehicles	20		Total Planned Support Vehicles	10
	Total Existing Public Safety Radio Towers	3		Total Planned Public Safety Radio Towers	1
Total Existing and Future System					
	Total Floor Area	127,627		Total Fire Apparatus	42
	Total Fire Apparatus	42		Total Support Vehicles	30
	Total Support Vehicles	30		Total Public Safety Radio Towers	4
	Total Public Safety Radio Towers	4			

* Vehicles having a service life of 10 years or more.

* Square footage shown for the relocation projects excludes the area in the existing stations that will be replaced.

** Vehicles having a service life of 10 years or more.

■ **Service Area**

The Fire-Rescue Department operates as a coordinated system, with each station backing up the other stations in the system. The backing up of another station is not a rare event; it is the essence of good fire protection planning. All stations do not serve the same types of land uses, nor do they all have the same apparatus. It is the strategic placement of personnel and equipment that is the backbone of good fire protection. Any new station would relieve some of the demand on the other stations. Since the stations would continue to operate as 'backups' to the other stations, everyone in the county would benefit by the construction of the new station since it would reduce the 'backup' times the station nearest to them would be less available. For these reasons the entire county is considered a single service area for the provision of fire protection because all residents and employees within this area have equal access to the benefits of the program.

■ **Level of Service and Forecasts for Service Area**

The Level of Service (LOS) for fire protection in Rockdale County is measured in terms of the number of square feet of facility space, the number of fire apparatus and supporting vehicles, and public safety radio towers, per day/night population in the service area. Day/night population is used as a measure in that fire protection is a 24-hour service provided continuously to both residences and businesses in the service area.



Table 13 presents the calculation of LOS for the current Fire-Rescue inventory, as well as the demand for future facilities to serve new growth and development for the 'current' LOS.

Table 13: Current Level of Service and Future Demand Calculations

Facility	Service Population	Level of Service	Level of Service	Future Population	New Growth Demand*
Existing Square Feet	2018 Day/Night Population	Square Feet per 2018 Day/Night Population	Square Feet per 2018 Day/Night Population	Day/Night Population Increase (2018-40)	Net New Square Feet Demanded
70,275	134,387	0.522930	0.5229	49,535	25,903
Existing Fire Apparatus	2018 Day/Night Population	Fire Apparatus per 2018 Day/Night Population	Fire Apparatus per 2018 Day/Night Population	Day/Night Population Increase (2018-40)	Net New Apparatus Demanded
25	134,387	0.000186	0.000186	49,535	9.21
Existing Support Vehicles	2018 Day/Night Population	Support Vehicles per 2018 Day/Night Population	Support Vehicles per 2018 Day/Night Population	Day/Night Population Increase (2018-40)	Net New Support Vehicles Demanded
20	134,387	0.000149	0.0001	49,535	7.00
Existing Public Safety Radio Towers	2018 Day/Night Population	Radio Towers per 2018 Day/Night Population	Radio Towers per 2018 Day/Night Population	Day/Night Population Increase (2018-40)	Net New Radio Towers Demanded
3	134,387	0.000022	0.000022	49,535	1.11

* System improvements are 100% impact fee eligible to the whole number (a tenth fire apparatus is 21% eligible for impact fee funds, and a second public safety radio tower would be 11% impact fee eligible).

Fire Protection

As shown previously in Table 12, a total of 127,627 square feet of space is proposed to provide full service in the county to residents and businesses now and in the future. This square footage includes existing facility space, the increase in floor area of existing facilities that are relocated, and new facility space. If the LOS based on the existing system – as shown in Table 13 – is used to determine new growth demand, a shortfall in space serving the current day/night population is revealed: 25,903 sf is needed to serve future growth and development (45.2% of the total 57,352 sf that is proposed to be added), leaving over half (54.8%) to be funded by the existing tax base.

Table 14 presents the calculation of Level of Service for the system as proposed to serve the county for the next 20 years. Using this future LOS, funding is fairly apportioned between current residents and businesses *and* new growth and development. As a result, the portion of the new space requiring funding from the existing tax base falls to 40.1%. For this reason, Level of Service figures based on the *future* day/night population are recommended as the adopted LOS.

■ **Table 14: Future Level of Service (2040) and Future Demand Calculations**

Facility	Service Population	Level of Service	Level of Service	Future Population	New Growth Demand*
Future System: Floor Area	2040 Day/Night Population	Square Feet per 2040 Day/Night Population	Square Feet per 2040 Day/Night Population	Day/Night Population Increase (2018-40)	Net New Square Feet Demanded
127,627	183,922	0.693919	0.693919	49,535	34,373
Future System: Fire Apparatus	2040 Day/Night Population	Apparatus per 2040 Day/Night Population	Apparatus per 2040 Day/Night Population	Day/Night Population Increase (2018-40)	Net New Apparatus Demanded*
42	183,922	0.000228	0.000228	49,535	11.31
Future System: Support Vehicles	2040 Day/Night Population	Support Vehicles per 2040 Day/Night Population	Support Vehicles per 2040 Day/Night Population	Day/Night Population Increase (2018-40)	Net New Support Vehicles Demanded
30	183,922	0.000163	0.000163	49,535	8.00
Future System: Public Safety Radio Towers	2040 Day/Night Population	Radio Towers per 2040 Day/Night Population	Radio Towers per 2040 Day/Night Population	Day/Night Population Increase (2018-40)	Net New Radio Towers Demanded*
4	183,922	0.000022	0.000022	49,535	1.08

* System improvements are 100% impact fee eligible to the whole number (a twelfth fire apparatus is 31% eligible for impact fee funds, and a second public safety radio tower is 8% impact fee eligible).

Note that, because only 'whole' vehicles and public safety radio towers can be purchased, more new fire apparatus and towers would need to be added to the inventory than are technically demanded by new growth—10 new fire trucks and 2 towers to meet the current LOS calculations in Table 13, and 12 new fire apparatus and 2 towers to meet the demands for the future system (see Table 14). Most of these vehicles and towers would be 100% eligible for impact fee funding; portions would be partially eligible for impact fee funding, as noted in Table 13 and Table 14. Any additional vehicle or

tower would exceed the number needed to meet future demand and is thus is not eligible for impact fee funding.

Future Costs

This Section examines both the total cost of the increased facility floor area and the number of vehicles and public safety radio towers needed to provide the proposed fire system of the future, and the extent to which these costs are impact fee eligible. Vehicle types in *italics* indicate support vehicles, as opposed to fire apparatus.

Table 15: Future System Improvement Costs

Year	Facilities			Vehicles			Public Safety Radio Towers	
	Facility	Square Feet	2019 Cost	Type	Number	2019 Cost	Number	2019 Cost
2019		-	\$ -	Pumper	1	\$ 550,000	2019	\$ -
		-	-	<i>Field Vehicle</i>	1	45,000		-
2020		-	-	Pumper	1	550,000	2020	-
		-	-	Tower Ladder	1	1,300,000		-
		-	-	Trail ATV	1	35,000		-
		-	-	<i>Admin Vehicle</i>	3	120,000		-
2021	Station 10	10,500	1,850,000	Pumper	1	550,000	2021	1,000,000
	911 Center Relocation**	324	201,600	Quint Ladder	1	1,000,000		-
	Training Ctr.	4,500	1,900,000	<i>Admin Vehicle</i>	1	40,000		-
	Station 5 Relocation**	5,648	1,378,200	Pumper	1	550,000		-
2022		-	-	Haz Mat Unit	1	100,000	2022	-
		-	-	Dive Support Unit	1	160,000		-
		-	-	<i>Admin Vehicle</i>	2	80,000		-
2023	Station 11	8,000	2,000,000	Pumper	2	1,100,000	2023	-
		-	-	<i>Field Vehicle</i>	1	45,000		-
		-	-		-	-		-
2024	Station 12	8,000	2,000,000	Pumper	2	1,100,000	2024	-
		-	-	<i>Field Vehicle</i>	1	45,000		-
2025	Station 8 Relocation**	4,380	1,252,680	Pumper	1	550,000	2025	-
		-	-	Rescue Squad	1	800,000		-
		-	-	<i>Field Vehicle</i>	1	45,000		-
2026		-	-		-	-	2026	-
2027		-	-		-	-	2027	-
2028	Station 13	8,000	2,000,000	Pumper	1	550,000	2028	-
2029		-	-		-	-	2029	-
2030	Station 14	8,000	2,000,000	Pumper	1	550,000	2030	-
2031		-	-	Tower Ladder	1	1,300,000	2031	-
2032		-	-		-	-	2032	-
2033		-	-		-	-	2033	-
2034		-	-		-	-	2034	-
2035		-	-		-	-	2035	-
2036		-	-		-	-	2036	-
2037		-	-		-	-	2037	-
2038		-	-		-	-	2038	-
2039		-	-		-	-	2039	-
2040		-	-		-	-	2040	-

* All costs provided by the Rockdale County Fire Department.

** Square footage excludes the area in the existing facilities that will be replaced. Costs (rounded) are based on per unit cost for the entire relocation project.

Fire Protection

The system improvements on Table 15 are based on the County's desire to increase fire protection services in a balanced way to appropriately serve all residents and businesses in the county in 2040. The proposed system improvements are listed on Table 12, and are 'scheduled' for construction or acquisition in the appropriate years (in order to enable Net Present Value calculations based on the 2019 cost estimates shown).

The total cost figures from Table 15 are then converted to 'impact fee eligible' costs (in 2019 dollars) on Table 16 based on the percentage that each improvement is impact fee eligible. As noted above, 11 of the fire trucks are 100% eligible under the adopted LOS, and the twelfth is 31.17% impact fee eligible. The remaining 5 trucks proposed in the future system are not impact fee eligible and require alternate funding sources. Similarly, a majority of support vehicles (8) are 100% impact fee eligible, but 2 are not impact fee eligible. All of the square feet in facility projects through 2023 are impact fee eligible, leaving the cost of the proposed Station 12 at 67.5% impact fee eligible and the three building projects in the years 2025, 2028 and 2030 at 0% impact fee eligible and requiring alternate funding sources. Although a second public safety radio tower would be eligible for some impact fee funding (8%), only one – at 100% impact fee eligible – is proposed to be added to the County's inventory. These calculations are shown on Table 16.

Table 16: Impact Fee Cost Calculations

Year	Costs in 2019 Dollars						New Growth Cost (2019 \$)	Net Present Value*
	Facility Costs	% Impact Fee Eligible	Vehicle Costs	% Impact Fee Eligible	Radio Tower Costs	% Impact Fee Eligible		
2019	\$ -		\$ 550,000	100%	\$ -		\$ 550,000	\$ 550,000
	\$ -		\$ 45,000	100%	\$ -		\$ 45,000	\$ 45,000
	\$ -		\$ 550,000	100%	\$ -		\$ 550,000	\$ 557,220
2020	\$ -		\$ 1,300,000	100%	\$ -		\$ 1,300,000	\$ 1,317,086
	\$ -		\$ 35,000	100%	\$ -		\$ 35,000	\$ 35,459
	\$ -		\$ 120,000	100%	\$ -		\$ 120,000	\$ 121,575
2021	\$ 1,850,000	100%	\$ 550,000	100%	\$ 1,000,000	100%	\$ 3,400,000	\$ 3,483,645
	\$ 201,600	100%	\$ 1,000,000	100%	\$ -		\$ 1,201,600	\$ 1,232,917
	\$ 1,900,000	100%	\$ 40,000	100%	\$ -		\$ 1,940,000	\$ 1,987,130
	\$ 1,378,200	100%	\$ 550,000	100%	\$ -		\$ 1,928,200	\$ 2,000,579
2022	\$ -		\$ 100,000	100%	\$ -		\$ 100,000	\$ 103,990
	\$ -		\$ 160,000	100%	\$ -		\$ 160,000	\$ 166,385
	\$ -		\$ 80,000	100%	\$ -		\$ 80,000	\$ 83,192
	\$ 2,000,000	100%	\$ 1,100,000	100%	\$ -		\$ 3,100,000	\$ 3,257,082
2023	\$ -		\$ 45,000	100%	\$ -		\$ 45,000	\$ 47,410
	\$ -		\$ -		\$ -		\$ -	\$ -
2024	\$ 2,000,000	67.51%	\$ 1,100,000	100%	\$ -		\$ 2,450,250	\$ 2,607,724
	\$ -		\$ 45,000	0%	\$ -		\$ -	\$ -
	\$ 1,252,680	0%	\$ 550,000	31.17%	\$ -		\$ 171,434	\$ 185,388
2025	\$ -		\$ 800,000	0%	\$ -		\$ -	\$ -
	\$ -		\$ 45,000	0%	\$ -		\$ -	\$ -
2026	\$ -		\$ -		\$ -		\$ -	\$ -
2027	\$ -		\$ -		\$ -		\$ -	\$ -
2028	\$ 2,000,000	0%	\$ 550,000	0%	\$ -		\$ -	\$ -
2029	\$ -		\$ -		\$ -		\$ -	\$ -
2030	\$ 2,000,000	0%	\$ 550,000	0%	\$ -		\$ -	\$ -
2031	\$ -		\$ 1,300,000	0%	\$ -		\$ -	\$ -
2032	\$ -		\$ -		\$ -		\$ -	\$ -
2033	\$ -		\$ -		\$ -		\$ -	\$ -
2034	\$ -		\$ -		\$ -		\$ -	\$ -
2035	\$ -		\$ -		\$ -		\$ -	\$ -
2036	\$ -		\$ -		\$ -		\$ -	\$ -
2037	\$ -		\$ -		\$ -		\$ -	\$ -
2038	\$ -		\$ -		\$ -		\$ -	\$ -
2039	\$ -		\$ -		\$ -		\$ -	\$ -
2040	\$ -		\$ -		\$ -		\$ -	\$ -
Totals	\$ 14,582,480		\$ 11,165,000		\$ 1,000,000		\$ 17,176,484	\$ 17,781,763

* Net Present Value = 2019 cost estimates inflated to target year using the ENR Building Cost Index (BCI) for fire stations and radio tower costs and the Consumer Price Index (CPI) for vehicles, reduced to NPV using Discount Rate.

The Net Present Value of the cost estimates for new fire stations and radio towers are calculated by increasing the current (2019) estimated construction costs using the Engineering News Record's 10-year average building cost inflation (BCI) rate, and then discounting this future amount back using the Net Discount Rate. For non-construction improvements (fire vehicles), the currently estimated costs are inflated to their target years using the 10-year average CPI and then reduced using the Net Discount Rate to produce the Net Present Value.

Parks and Recreation

■ Introduction

Public recreational opportunities are available in Rockdale County through a number of parks facilities and programs operated by the County. Demand for recreational facilities is almost exclusively related to the county's resident population. Businesses make some incidental use of public parks for office events, company softball leagues, etc., but the use is minimal compared to that of the families and individuals who live in the county. Thus, the parks and recreation impact fee is limited to future residential growth.

■ Service Area

Parks and recreational facilities are made available to the county's population without regard to the political jurisdiction within which the resident lives. In addition, the facilities are provided equally to all residents, and often used on the basis of the programs available, as opposed to proximity of the facility. For instance, children active in the little leagues play games at various locations throughout the county, based on scheduling rather than geography. Other programs are located only at certain centralized facilities, to which any Rockdale County resident can come. As a general rule, parks facilities are located throughout the county, and future facilities will continue to be located around the county so that all residents will have recreational opportunities available on an equal basis. Thus, the entire county is considered a single service area for parks & recreation.

■ Level of Service

The determination of Level of Service (LOS) standards begins with an inventory of existing County facilities, which is shown on Table 17. The inventory includes recreation components the County does not currently have in its recreation system but plans to add in accordance with recommendations in its *Parks and Recreation Master Plan* (May 2019 Draft). These currently show as "0" below.

Table 17: Current Inventory of Park and Recreation Components

Recreation Component	Current Inventory*
Amphitheater	1
Aquatics Community Center	0
Basketball Court (outdoor)	11
Boating Facilities**	1
Disc Golf Course	0
Dog Park	0
Gymnasium	2
Multi-Purpose Field**	11
Nature Center	0
Pavilion/Shelter	27
Pickleball	2
Playground	15
Restroom Facility	19
Skate Park	0
Special Event/Banquet Center	0
Splash Pad	1
Tennis Court	24
Trail Head	3
Trail System (paved, in miles)	20
Volleyball (outdoor)	0

*A component with "0" indicates the County plans to add it to its recreation inventory.

** Includes kayak launches.

*** Includes football, soccer, lacrosse fields.

Established Level of Service

The Level of Service standards in Table 18 are based on the total number of recreation components anticipated to serve local needs through 2040, as identified in the *Parks and Recreation Master Plan*. The LOS is expressed in terms of the total number of existing and future residents each facility should serve in order to meet future demand.

Accordingly, Table 18 provides the Level of Service in park facilities per 2040 population, converts this to the LOS per the number of housing units to be occupied by that population, and then expresses the Level of Service per housing unit (since impact fees are assessed per housing unit when building permits are issued, not population).

To determine the LOS, the number of people to be served by each component through 2040 is calculated using the current inventory for the component divided into the 2040 population.

Table 18: Level of Service Calculations

Component Type	Established Level of Service*	Level of Service per "X" Housing Units**	Level of Service per Each Housing Unit***
Amphitheater	1 per 64,052 Population =	1 per 26,535 Housing Units =	0.000038 for each Housing Unit
Aquatics Community Center	1 per 128,103 Population =	1 per 53,069 Housing Units =	0.000019 for each Housing Unit
Basketball Court (outdoor)	1 per 7,117 Population =	1 per 2,948 Housing Units =	0.000339 for each Housing Unit
Boating Facilities	1 per 32,026 Population =	1 per 13,267 Housing Units =	0.000075 for each Housing Unit
Disc Golf Course	1 per 128,103 Population =	1 per 53,069 Housing Units =	0.000019 for each Housing Unit
Dog Park	1 per 42,701 Population =	1 per 17,690 Housing Units =	0.000057 for each Housing Unit
Gymnasium	1 per 42,701 Population =	1 per 17,690 Housing Units =	0.000057 for each Housing Unit
Multi-Purpose Field	1 per 9,150 Population =	1 per 3,791 Housing Units =	0.000264 for each Housing Unit
Nature Center	1 per 128,103 Population =	1 per 53,069 Housing Units =	0.000019 for each Housing Unit
Pavilion/Shelter	1 per 3,285 Population =	1 per 1,361 Housing Units =	0.000735 for each Housing Unit
Pickleball	1 per 42,701 Population =	1 per 17,690 Housing Units =	0.000057 for each Housing Unit
Playground	1 per 6,742 Population =	1 per 2,793 Housing Units =	0.000358 for each Housing Unit
Restroom Facility	1 per 4,417 Population =	1 per 1,830 Housing Units =	0.000546 for each Housing Unit
Skate Park	1 per 128,103 Population =	1 per 53,069 Housing Units =	0.000019 for each Housing Unit
Special Event/Banquet Center	1 per 128,103 Population =	1 per 53,069 Housing Units =	0.000019 for each Housing Unit
Splash Pad	1 per 42,701 Population =	1 per 17,690 Housing Units =	0.000057 for each Housing Unit
Tennis Court	1 per 3,371 Population =	1 per 1,397 Housing Units =	0.000716 for each Housing Unit
Trail Head	1 per 18,300 Population =	1 per 7,581 Housing Units =	0.000132 for each Housing Unit
Trail System (paved, in miles)	1 per 3,660 Population =	2 per 1,516 Housing Units =	0.000660 for each Housing Unit
Volleyball (outdoor)	1 per 42,701 Population =	2 per 17,690 Housing Units =	0.000057 for each Housing Unit

* LOS is based on the number of each that are anticipated to serve local needs through 2040.

** Converted using average population per housing unit in 2040.

*** "1" divided by the number of housing units for each component under 'Level of Service per "X" Housing Units' column.

By way of example, the established LOS for basketball courts is 1 court per 7,117 people. That number—7,117—is divided by the forecasted 2040 average household size to convert 'people' into 'housing units'. The result is the converted standard of 1 court per 2,948 housing units. By dividing the component (1) by the number of housing units it needs to serve results in the portion of a basketball court needed to serve 1 housing unit (0.000339) through 2040.

The standards used in this CIE provide greater clarity to future parks and recreation component development in terms of the County's current activities and planned improvements.

■ Forecasts for Service Area

Future Demand

As discussed above, the Level of Service standards used in this CIE are based on future facility needs established in the County's *Parks and Recreation Master Plan*. The table below applies the LOS calculations to determine the facilities needed to meet the demand created by the existing residents of the county as well as the future demand for recreation components that will be generated by new growth and development.



Table 19: Existing and Future Demand (Parks)

Component Type	LOS Per Housing Unit	Existing Demand (2018)*	New Growth Demand (2018-2040)**
Amphitheater	0.000038	1.42	0.58
Aquatics Community Center	0.000019	0.71	0.29
Basketball Court (outdoor)	0.000339	12.81	5.19
Boating Facilities	0.000075	2.85	1.15
Disc Golf Course	0.000019	0.71	0.29
Dog Park	0.000057	2.13	0.87
Gymnasium	0.000057	2.13	0.87
Multi-Purpose Field	0.000264	9.96	4.04
Nature Center	0.000019	0.71	0.29
Pavilion/Shelter	0.000735	27.75	11.25
Pickleball	0.000057	2.13	0.87
Playground	0.000358	13.52	5.48
Restroom Facility	0.000546	20.64	8.36
Skate Park	0.000019	0.71	0.29
Special Event/Banquet Center	0.000019	0.71	0.29
Splash Pad	0.000057	2.13	0.87
Tennis Court	0.000716	27.04	10.96
Trail Head	0.000132	4.98	2.02
Trail System	0.000660	24.91	10.09
Volleyball (outdoor)	0.000057	2.13	0.87

* 2018 Housing Units = 37,763

** New Units (2018-2040) = 15,306

The current number of housing units (37,763) is multiplied by the LOS standard to determine the existing demand of today's population. The increase in housing units between 2018 and 2040 (15,306 - see Table 2) is multiplied by the same LOS to produce the future demand created by future growth.

Impact Fee Eligibility

New recreation components are eligible for impact fee funding only to the extent that the improvements are needed to specifically serve new growth and development, and only at the Level of Service applicable countywide. Table 20 shows the number of new recreation components that are needed to satisfy needs of the county's future residents, and the extent to which fulfillment of those needs will serve future growth demand.

The table begins with the current inventory of recreation components, and the 'existing demand' for those components to meet the needs of the current (2018) population based on the applicable Level of Service standards (shown on Table 18).



Table 20: Future Park Facility Impact Fee Eligibility

Component Type	Current Inventory	Existing Demand	Excess or (Shortfall)	New Growth Demand	Net Total Needed	% Impact Fee Eligible
Amphitheater	1	1.42	(0.42)	0.58	1.00	57.68%
Aquatics Community Center	0	0.71	(0.71)	0.29	1.00	28.84%
Basketball Court (outdoor)	11	12.81	(1.81)	5.19	7.00	74.16%
Boating Facilities	1	2.85	(1.85)	1.15	3.00	38.46%
Disc Golf Course	0	0.71	(0.71)	0.29	1.00	28.84%
Dog Park	0	2.13	(2.13)	0.87	3.00	28.84%
Gymnasium	2	2.13	(0.13)	0.87	1.00	86.53%
Multi-Purpose Field	11	9.96	1.04	4.04	3.00	100.00%
Nature Center	0	0.71	(0.71)	0.29	1.00	28.84%
Pavilion/Shelter	27	27.75	(0.75)	11.25	12.00	93.74%
Pickleball	2	2.13	(0.13)	0.87	1.00	86.53%
Playground	15	13.52	1.48	5.48	4.00	100.00%
Restroom Facility	19	20.64	(1.64)	8.36	10.00	83.64%
Skate Park	0	0.71	(0.71)	0.29	1.00	28.84%
Special Event/Banquet Center	0	0.71	(0.71)	0.29	1.00	28.84%
Splash Pad	1	2.13	(1.13)	0.87	2.00	43.26%
Tennis Court	24	27.04	(3.04)	10.96	14.00	78.28%
Trail Head	3	4.98	(1.98)	2.02	4.00	50.47%
Trail System	20.00	24.91	(4.91)	10.09	15.00	67.30%
Volleyball (outdoor)	0	2.13	(2.13)	0.87	3.00	28.84%

The 'Excess or (Shortfall)' column compares the existing demand to the current inventory for each recreation component. If an 'excess' were to exist, that would mean that more components (or portions of components) exist than are needed to meet the demands of the current population, and those 'excesses' would create capacity to meet the recreational needs of future growth. This is the case for two components in Rockdale County—multi-purpose fields and playgrounds.

Conversely, a 'shortfall' indicates that there are not enough components (or portions of components) to meet the recreational needs of the current population based on the Level of Service standard (e.g., amphitheater, aquatic community center, basketball courts, etc.).

The column on Table 20, labeled 'New Growth Demand', shows the total demand for recreation components specifically to meet future growth needs (from Table 19). The 'Net Total Needed' column shows all existing and future needs combined. The current 'shortfall' that exists for most recreation components is added to new growth's facility needs to bring the current population up to the current Level of Service required to be available to all—both current and future residents.

The '% Impact Fee Eligible' column shows the percentage of each new facility that is eligible for impact fee funding. With the exception of multi-purpose fields and playgrounds, recreation facilities are only partially eligible for impact fee funding. Tennis courts, for example, are 78.28% impact fee eligible. This percentage equates to the portion of needed tennis courts (14) that are demanded by new growth alone (10.96), calculated by dividing '10.96' by '14'. The remaining 21.72% is needed to satisfy existing demand due to the 'shortfall' in the County's inventory of tennis courts based on the LOS standard.

Parks and Recreation

■ Future Costs

Table 21 is a listing of the future capital project costs to provide the additional recreation components needed to attain or address the applicable Level of Service standards.

Costs are based on cost estimates provided in the *Parks and Recreation Master Plan* for all recreation components. All of these 2019 figures in the 'Net Cost per Unit' column are then increased to the gross cost to account for mobilization, fees and contingency (25%)—a figure also taken from the Master Plan.



Table 21: Future Costs to Meet Future Demand for Parks and Recreation

Component Type	Total Needed	Net Cost Per Unit*	Gross Cost Per Unit**	Total Cost (2019)	% Impact Fee Eligible	New Growth Share (2019)	Net Present Value***
Amphitheater	1	\$ 1,000,000	\$ 1,250,000	\$ 1,250,000	57.68%	\$ 721,042	\$ 795,370
Aquatics Community Center	1	\$ 13,500,000	\$ 16,875,000	\$ 16,875,000	28.84%	\$ 4,867,036	\$ 5,229,751
Basketball Court (outdoor)	7						
<i>See subcomponents:</i>							
Basketball court in new park	6	\$ 71,670	\$ 89,588	\$ 627,113	74.16%	\$ 465,094	\$ 513,038
Basketball court in existing park	1	\$ 17,500	\$ 21,875	\$ 21,875	74.16%	\$ 16,223	\$ 17,896
Boating Facilities	3	\$ 1,155,000	\$ 1,443,750	\$ 4,331,250	38.46%	\$ 1,665,608	\$ 1,837,306
Disc Golf Course	1	\$ 150,000	\$ 187,500	\$ 187,500	28.84%	\$ 54,078	\$ 59,653
Dog Park	3	\$ 200,000	\$ 250,000	\$ 750,000	28.84%	\$ 216,313	\$ 238,611
Gymnasium	1	\$ 3,045,000	\$ 3,806,250	\$ 3,806,250	86.53%	\$ 3,293,361	\$ 3,538,798
Multi-Purpose Field	3	\$ 916,670	\$ 1,145,838	\$ 3,437,513	100.00%	\$ 3,437,513	\$ 3,791,865
Nature Center	1	\$ 75,000	\$ 93,750	\$ 93,750	28.84%	\$ 27,039	\$ 29,054
Pavilion/Shelter	12						
<i>See subcomponents:</i>							
Small pavilion	9	\$ 62,780	\$ 78,475	\$ 706,275	93.74%	\$ 662,031	\$ 730,275
Large pavilion	3	\$ 550,000	\$ 687,500	\$ 2,062,500	93.74%	\$ 1,933,295	\$ 2,132,587
Pickleball	1	\$ 35,000	\$ 43,750	\$ 43,750	86.53%	\$ 37,855	\$ 41,757
Playground	4	\$ 287,500	\$ 359,375	\$ 1,437,500	100.00%	\$ 1,437,500	\$ 1,585,683
Restroom Facility	10	\$ 172,500	\$ 215,625	\$ 2,156,250	83.64%	\$ 1,803,507	\$ 1,937,913
Skate Park	1	\$ 1,500,000	\$ 1,875,000	\$ 1,875,000	28.84%	\$ 540,782	\$ 596,528
Special Event/Banquet Center	1	\$ 1,305,000	\$ 1,631,250	\$ 1,631,250	86.53%	\$ 1,411,441	\$ 1,556,938
Splash Pad	2	\$ 1,000,000	\$ 1,250,000	\$ 2,500,000	43.26%	\$ 1,081,564	\$ 1,193,056
Tennis Court	14	\$ 150,000	\$ 187,500	\$ 2,625,000	78.28%	\$ 2,054,971	\$ 2,266,806
Trail Head	4	\$ 375,000	\$ 468,750	\$ 1,875,000	50.47%	\$ 946,368	\$ 1,043,924
Trail System	15	\$ 1,000,000	\$ 1,250,000	\$ 18,750,000	67.30%	\$ 12,618,242	\$ 13,918,982
Volleyball (outdoor)	3	\$ 41,670	\$ 52,088	\$ 156,263	28.84%	\$ 45,069	\$ 49,715
				Totals \$	\$ 67,199,038	\$ 39,335,932	\$ 43,105,506

* Source: Rockdale County Parks and Recreation Master Plan (May 2019 Draft)

** Includes mobilization, fees, and contingency at 25% (based on Parks and Recreation Master Plan cost estimate calculations).

*** Construction dates vary. NPV based on CCI or BCI as appropriate, in an average construction year of 2025.

The 2019 figures in the 'Total Needed' column are drawn from the 'Total Needed' column in Table 20. These totals, multiplied by the 2019 per unit costs, establish the total cost in current dollars for each recreation component. These 'Total Cost (2019)' figures on the Table are converted to 'New Growth Share' dollars based on the percentage that each improvement is impact fee eligible (also from Table 20).

The Net Present Value of new growth's share of the cost for each component is calculated as follows:

Based on the pace of construction proposed in the Parks and Recreation Master Plan, an 'average' year of 2025 is used for Net Present Value calculations—some improvements will occur earlier for less money, and some later at greater cost. All will average out.

To calculate the Net Present Value (NPV) of the impact fee eligible cost estimate for the construction of the recreation components, the NPVs are calculated by increasing the current (2019) estimated costs using Engineering News Record's (ENR) 10-year average building cost inflation (BCI) rate for buildings (such as gymnasiums) and the 10-year average CPI rate for all other projects. All project costs are then reduced to current NPV dollars using the Net Discount Rate.

Community Work Program

Community Work Program

The following impact fee funded projects are contained in this Capital Improvements Element and amend the Community Work Program contained in the Rockdale County Comprehensive Plan. The listing includes the year 2019 to account for projects anticipated to begin prior to 2020.

5-Year Work Program: Impact Fee Eligible Projects

Category	Action/Item	2019	2020	2021	2022	2023	2024	Responsible Party	Cost Estimate	Funding Source	Notes
Library Services	Collection Materials Purchase	✓	✓	✓	✓	✓	✓	Conyers-Rockdale Library System Board	\$267,620	97.56% Impact Fees; 2.44% Local Taxation Sources*	On-going annual purchases
Fire Protection	Pumper Truck	✓						Rockdale County Fire-Rescue Department	\$550,000	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Field Vehicle	✓						Rockdale County Fire-Rescue Department	\$45,000	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Pumper Truck		✓					Rockdale County Fire-Rescue Department	\$557,220	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Tower Ladder Truck		✓					Rockdale County Fire-Rescue Department	\$1,317,066	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Trail ATV		✓					Rockdale County Fire-Rescue Department	\$35,459	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	3 Administrative Vehicles		✓					Rockdale County Fire-Rescue Department	\$121,575	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Station 10			✓				Rockdale County Fire-Rescue Department	\$1,894,860	100% Impact Fees, and/or SPLOST	

Community Work Program

Category	Action/Item	2019	2020	2021	2022	2023	2024	Responsible Party	Cost Estimate	Funding Source	Notes
Fire Protection	Pumper Truck			✓				Rockdale County Fire-Rescue Department	\$564,536	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Public Safety Radio Tower			✓				Rockdale County Fire-Rescue Department	\$1,024,248	100% Impact Fees, and/or SPLOST	
Fire Protection	911 Center Relocation			✓				Rockdale County Fire-Rescue Department	\$206,489	100% Impact Fees, and/or SPLOST	Cost addresses the increase in area (square footage) between the existing and new facilities; "replacement" square footage will be funded with SPLOST
Fire Protection	Quint Ladder Truck			✓				Rockdale County Fire-Rescue Department	\$1,026,428	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Training Center			✓				Rockdale County Fire-Rescue Department	\$1,946,071	100% Impact Fees, and/or SPLOST	
Fire Protection	Administrative Vehicle			✓				Rockdale County Fire-Rescue Department	\$41,057	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Station 5 Relocation				✓			Rockdale County Fire-Rescue Department	\$1,428,632	100% Impact Fees, and/or SPLOST	Cost addresses the increase in area (square footage) between the existing and new facilities; "replacement" square footage will be funded with SPLOST
Fire Protection	Pumper Truck				✓			Rockdale County Fire-Rescue Department	\$571,947	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Haz Mat Unit				✓			Rockdale County Fire-Rescue Department	\$103,990	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Dive Support unit				✓			Rockdale County Fire-Rescue Department	\$166,385	100% Impact Fees, and/or SPLOST and/or General Fund	

Community Work Program

Category	Action/Item	2019	2020	2021	2022	2023	2024	Responsible Party	Cost Estimate	Funding Source	Notes
Fire Protection	2 Administrative Vehicles				✓			Rockdale County Fire-Rescue Department	\$83,192	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Station 11					✓		Rockdale County Fire-Rescue Department	\$2,098,171	100% Impact Fees, and/or SPLOST	
Fire Protection	2 Pumper Trucks					✓		Rockdale County Fire-Rescue Department	\$1,158,911	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Field Vehicle					✓		Rockdale County Fire-Rescue Department	\$47,410	100% Impact Fees, and/or SPLOST and/or General Fund	
Fire Protection	Station 12						✓	Rockdale County Fire-Rescue Department	\$1,433,600	Max. 67.5% Impact Fees, Min. 32.5% SPLOST and/or General Fund	
Fire Protection	2 Pumper Trucks						✓	Rockdale County Fire-Rescue Department	\$1,174,125	100% Impact Fees, and/or SPLOST and/or General Fund	
Parks and Recreation	Black Shoals Restroom Facility	✓	✓					Rockdale County Recreation and Maintenance Dept.	\$215,625	Max. 83.64% Impact Fees, Min. 16.36% SPLOST	Project may begin in 2019
Parks and Recreation	C. E. Steele Skate Park					✓		Rockdale County Recreation and Maintenance Dept.	\$1,875,000	Max. 28.84% Impact Fees, Min. 71.16% SPLOST	
	Costley Mill Park improvements:										
Parks and Recreation	Special Event/Banquet Facility	✓	✓					Rockdale County Recreation and Maintenance Dept.	\$1,631,250	Max. 86.53% Impact Fees, Min. 13.47% SPLOST	Project may begin in 2019
	2 Volleyball Courts	✓	✓						\$104,176	Max. 28.84% Impact Fees, Min. 71.16% SPLOST	Project may begin in 2019
	Nature Center	✓	✓						\$93,750	Max. 28.84% Impact Fees, Min. 71.16% SPLOST	Project may begin in 2019

Community Work Program

Category	Action/Item	2019	2020	2021	2022	2023	2024	Responsible Party	Cost Estimate	Funding Source	Notes
Parks and Recreation	De Castro Trailhead Restroom Facility	✓	✓					Rockdale County Recreation and Maintenance Dept.	\$215,625	Max. 83.64% Impact Fees, Min. 16.36% SPLOST	Project may begin in 2019
Parks and Recreation	Johnson Park Gymnasium	✓	✓					Rockdale County Recreation and Maintenance Dept.	\$3,806,250	Max. 86.53% Impact Fees, Min. 13.47% SPLOST	Project may begin in 2019
Lorraine Park improvements:											
Parks and Recreation	Restroom facility	✓	✓					Rockdale County Recreation and Maintenance Dept.	\$215,625	Max. 83.64% Impact Fees, Min. 16.36% SPLOST	Project may begin in 2019
	Playground	✓	✓						\$359,375	100% Impact Fees, and/or SPLOST	Project may begin in 2019
	Small pavilion	✓	✓						\$78,475	Max. 93.74% Impact Fees, Min. 6.26% SPLOST	Project may begin in 2019
Parks and Recreation	Milstead Park Restroom Facility		✓					Rockdale County Recreation and Maintenance Dept.	\$215,625	Max. 83.64% Impact Fees, Min. 16.36% SPLOST	
Pine Log Park improvements:											
Parks and Recreation	Outdoor basketball court	✓	✓					Rockdale County Recreation and Maintenance Dept.	\$21,875	Max. 74.16% Impact Fees, Min. 25.84% SPLOST	Project may begin in 2019
	Dog park	✓	✓						\$250,000	Max. 28.84% Impact Fees, Min. 71.16% SPLOST	Project may begin in 2019
Parks and Recreation	Richardson Park Dog Park			✓				Rockdale County Recreation and Maintenance Dept.	\$250,000	Max. 28.84% Impact Fees, Min. 71.16% SPLOST	
Parks and Recreation	Rockdale Tennis Center Pickleball Court	✓	✓					Rockdale County Recreation and Maintenance Dept.	\$43,750	Max. 86.53% Impact Fees, Min. 13.47% SPLOST	Project may begin in 2019

Community Work Program

Category	Action/Item	2019	2020	2021	2022	2023	2024	Responsible Party	Cost Estimate	Funding Source	Notes
	Southeastern County Park 2 components:										
Parks and Recreation	2 basketball courts						✓	Rockdale County Recreation and Maintenance Dept.	\$179,176	Max. 74.16% Impact Fees, Min. 25.84% SPLOST	
	1 multi-purpose field						✓		\$1,145,838	100% Impact Fees, and/or SPLOST	
	Splash Pad						✓		\$1,250,000	Max. 43.26% Impact Fees, Min. 56.74% SPLOST	
	Playground						✓		\$359,375	100% Impact Fees, and/or SPLOST	
	1 large pavilion						✓		\$687,500	Max. 93.74% Impact Fees, Min. 6.26% SPLOST	
	3 small pavilions						✓		\$235,425	Max. 93.74% Impact Fees, Min. 6.26% SPLOST	
	2 restroom facilities						✓		\$431,250	Max. 83.64% Impact Fees, Min. 16.36% SPLOST	
Parks and Recreation	Blueway Boating Facility (canoe/kayak launch)						✓	Rockdale County Recreation and Maintenance Dept.	\$1,443,750	Max. 38.46% Impact Fees, Min. 61.54% SPLOST	
Parks and Recreation	3 miles of trail system				✓			Rockdale County Recreation and Maintenance Dept.	\$3,750,000	Max. 67.3% Impact Fees, Min. 32.7% SPLOST	
Parks and Recreation	1 trail head				✓			Rockdale County Recreation and Maintenance Dept.	\$468,750	Max. 50.47% Impact Fees, Min. 49.53% SPLOST	

* Local Taxation Sources include but are not limited to the County General Fund, the Capital Projects Fund or other County taxation sources, as determined during the annual budget adoption process, or separate funds of the Conyers-Rockdale Library System.

Appendix: Glossary

The following terms are used in this CIE. Where possible, the definitions are taken directly from the Georgia Development Impact Fee Act.

Capital improvement: an improvement with a useful life of 10 years or more, by new construction or other action, which increases the service capacity of a public facility.

Capital improvements element: a component of a comprehensive plan adopted pursuant to Chapter 70 of the Development Impact Fee Act which sets out projected needs for system improvements during a planning horizon established in the comprehensive plan, a schedule of capital improvements that will meet the anticipated need for system improvements, and a description of anticipated funding sources for each required improvement.

Development: any construction or expansion of a building, structure, or use, any change in use of a building or structure, or any change in the use of land, any of which creates additional demand and need for public facilities.

Development impact fee: a payment of money imposed upon development as a condition of development approval to pay for a proportionate share of the cost of system improvements needed to serve new growth and development.

Eligible facilities: capital improvements in one of the following categories:

(A) Water supply production, treatment, and distribution facilities;

(B) Waste-water collection, treatment, and disposal facilities;

(C) Roads, streets, and bridges, including rights of way, traffic signals, landscaping, and any local components of state or federal highways;

(D) Storm-water collection, retention, detention, treatment, and disposal facilities, flood control facilities, and bank and shore protection and enhancement improvements;

(E) Parks, open space, and recreation areas and related facilities;

(F) Public safety facilities, including police, fire, emergency medical, and rescue facilities; and

(G) Libraries and related facilities.

Impact Cost: the proportionate share of capital improvements costs to provide service to new growth, less any applicable credits.

Impact Fee: the impact cost plus surcharges for program administration and recoupment of the cost to prepare the Capital Improvements Element.

Level of service: a measure of the relationship between service capacity and service demand for public facilities in terms of demand to capacity ratios or the comfort and convenience of use or service of public facilities or both.

Project improvements: site improvements and facilities that are planned and designed to provide service for a particular development project and that are necessary for the use and convenience of the occupants or users of the project and are not system improvements. The character of the improvement shall control a determination of whether an improvement is a project improvement or system improvement and the physical location of the improvement on site or off site shall not be considered determinative of whether an improvement is a project improvement or a system improvement. If an improvement or facility provides or will provide more than incidental service or facilities capacity to persons other than users or occupants of a particular project, the improvement or facility

Community Work Program

is a system improvement and shall not be considered a project improvement. No improvement or facility included in a plan for public facilities approved by the governing body of the municipality or county shall be considered a project improvement.

Proportionate share: means that portion of the cost of system improvements which is reasonably related to the service demands and needs of the project.

Rational Nexus: the clear and fair relationship between fees charged and services provided.

Service area: a geographic area defined by a municipality, county, or intergovernmental agreement in which a defined set of public facilities provide service to development within the area. Service areas in Rockdale may be designated on the basis of sound planning or engineering principles or both.

System improvement costs: costs incurred to provide additional public facilities capacity needed to serve new growth and development for planning, design and engineering related thereto, including the cost of constructing or reconstructing system improvements or facility expansions, including but not limited to the construction contract price, surveying and engineering fees, related land acquisition costs (including land purchases, court awards and costs, attorneys' fees, and expert witness fees), and expenses incurred for qualified staff or any qualified engineer, planner, architect, landscape architect, or financial consultant for preparing or updating the capital improvement element, and administrative costs, provided that such administrative costs shall not exceed 3 percent of the total amount of the costs. Projected interest charges and other finance costs may be included if the impact fees are to be used for the payment of principal and interest on bonds, notes, or other financial obligations issued by or on behalf of the municipality or county to finance the capital improvements element but such costs do not include routine and periodic maintenance expenditures, personnel training, and other operating costs.

System improvements: capital improvements that are public facilities and are designed to provide service to the community at large, in contrast to "project improvements."

Appendix: Future Growth

In order to accurately calculate the demand for future services for Rockdale County, new growth and development must be quantified in future projections. These projections include forecasts for population, households, housing units, and employment to the year 2040. These projections provide the base-line conditions from which the current (2018) Level of Service calculations are produced.

■ Types of Projections

Accurate projections of population, households, housing units, and employment are important in that:

- Population data and forecasts are used to establish current and future demand for services where the Level of Service (LOS) standards are per capita based.
- Household data and forecasts are used to forecast future growth in the number of housing units.
- Housing unit data and forecasts relate to certain service demands that are household based, such as parks, and are used to calculate impact costs when the cost is assessed when a building permit is issued. The number of households—defined as *occupied* housing units—is always smaller than the supply of available housing units. Over time, however, each housing unit is expected to become occupied by a household, even though the unit may become vacant during future re-sales or turnovers.
- Employment forecasts are refined to reflect 'value added' employment figures. This reflects an exclusion of jobs considered to be transitory or non-site specific in nature, and thus not requiring building permits to operate (i.e., are not assessed impact fees), as well as governmental uses that are not subject to impact fees.

'Value added' employment data is combined with population data to produce what is known as the 'day-night population.' These figures represent the total number of persons receiving services, both in their homes and in their businesses, to produce an accurate picture of the total number of persons that rely on certain 24-hour services, such as fire protection.

The projections used for each public facility category are the countywide forecasts because each of the public facility categories—library services, fire protection and parks & recreation—are delivered by the County throughout the county.

Appendix: Future Growth

■ Population Forecasts

Population projections reflect the growth that is expected over the next 22 years. Based on the county's rebound from the Great Recession and anticipated continuing growth in the housing market, the future is bright for Rockdale County.

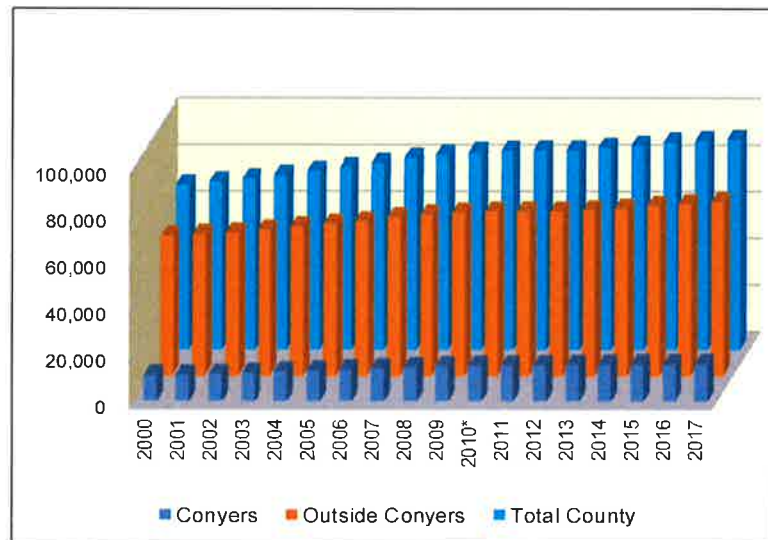
Historic Population Growth

Every year, the US Census Bureau estimates the population in each county and city between decennial censuses (e.g., 2000 and 2010). After a decennial census, the Bureau revises the annual estimates based on the actual Census count. Unlike the decennial censuses, which are 'as of' April 1, the estimates are 'as of' July 1 of each year.

The following table and graph show the annual Census estimates for Rockdale County and the City of Conyers between the 2000 Census and the latest reported year—2017. The figures for the portion of the county outside Conyers reflect the city figures subtracted from the countywide figures.

Table A-1: Annual Census Population Estimates - 2000-2017

	Conyers	Outside Conyers	Total County
2000	11,188	59,536	70,724
2001	11,526	60,349	71,875
2002	11,904	61,254	73,158
2003	12,357	62,503	74,860
2004	12,800	63,777	76,577
2005	13,232	64,854	78,086
2006	13,705	66,206	79,911
2007	14,246	67,900	82,146
2008	14,638	68,920	83,558
2009	14,989	69,636	84,625
2010*	15,247	70,126	85,373
2011	15,314	70,189	85,503
2012	15,370	70,186	85,556
2013	15,554	71,064	86,618
2014	15,679	71,737	87,416
2015	15,861	72,826	88,687
2016	15,931	73,444	89,375
2017	16,015	74,297	90,312



* Revised by Census Bureau in 2017

Note: All data as of July 1 of each year. 2000 and 2010 differ from Decennial Census counts, which were as of April 1.

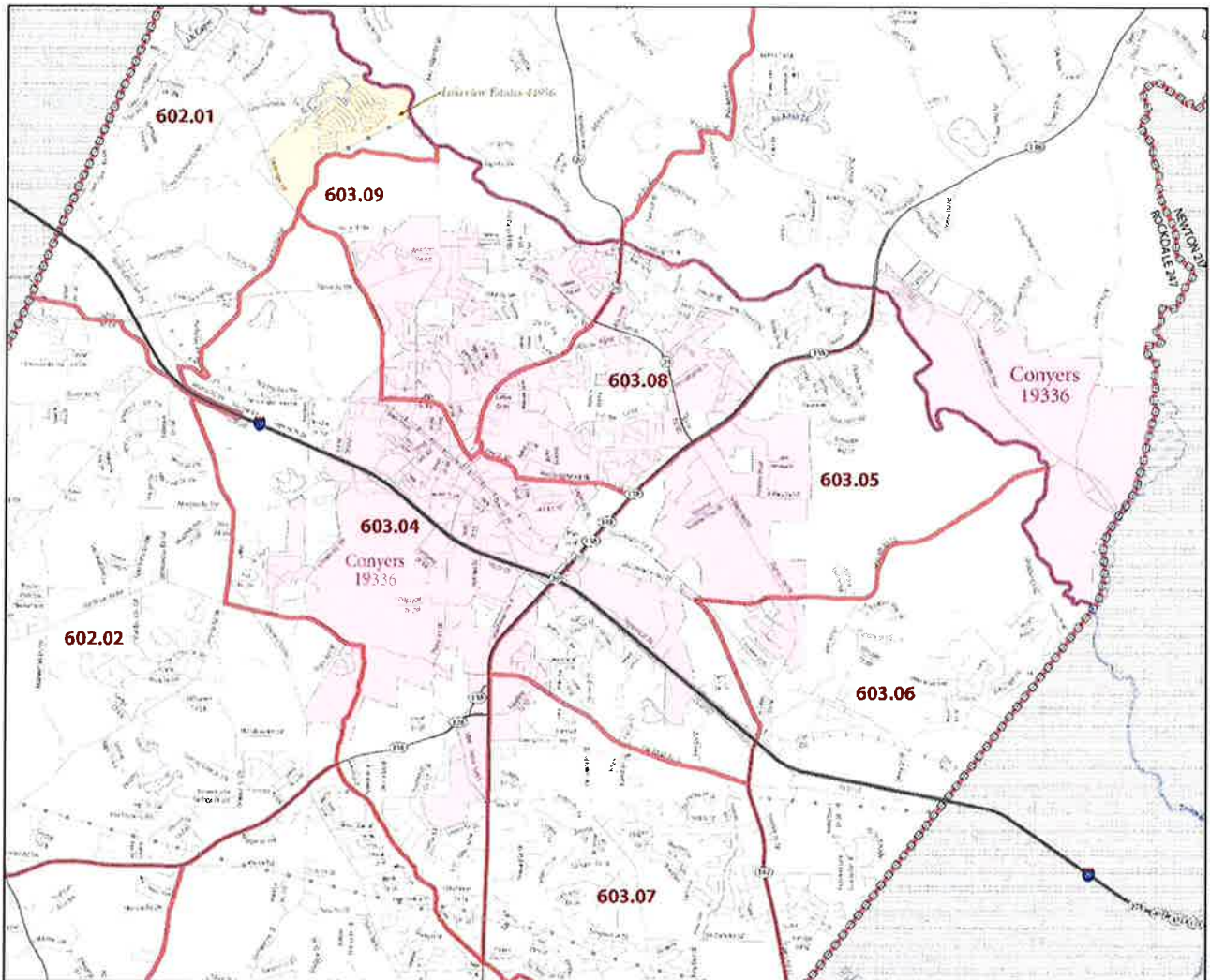
Sources: For 2010 to 2017: Census Annual Estimates Program, US Bureau of the Census. For 2000 to 2009: Intercensal Estimates 2000-2010, US Bureau of the Census.

A 'swoon' in population increases during the Great Recession years is evident in the graph, and will be seen much more strongly in building permit activity (discussed later starting on page 35).

Future Population

The Atlanta Regional Commission, as part of its preparation of *The Atlanta Region's Plan* adopted in 2016, prepared forecasts for Rockdale County as a whole and for each Census Tract within the county. There were no forecasts for the City of Conyers *per se*; only for each of the Census Tracts within the county.

The map below shows the county's Census Tracts in which the City of Conyers (the shaded area) is located, and shows that its city limits do not coincide with any of the Census Tract boundaries.



The city is primarily located in parts of four Census Tracts—603.04, 603.05, 603.08 and 603.09. To arrive at an estimate of Conyers' future growth, the ARC population figures were totaled for the four Census Tracts, and the total population of 23,878 shown for 2015 (ARC's base year) was compared to the 2015 population for the city estimated by the Census Bureau (15,861). The Census estimate amounted to 66.43% of the total for the four Census Tracts (the Conyers CTs). This percentage was then applied to the Conyers CT totals for ARC's benchmark years (2020, 2030 and 2040) to establish a future population projection for the city.

To arrive at population forecasts for each year to 2040, the numbers for Conyers and the county as a whole were interpolated between the benchmark years on a straight-line method. The difference between the forecasts for the city and the county as a whole yield the 'Outside Conyers' population figures for the unincorporated county area for each year.

Appendix: Future Growth

Overall, Rockdale County is projected to add more than 34,300 residents by 2040, a 36.6% increase over its 2018 population, while Conyers is projected to add almost 4,100 residents, a 24.8% increase. Growth outside of Conyers is forecast to increase the population of that area by more than 30,200, a 39.1% increase.

The following table presents the forecast for population for each year from 2018 to 2040¹ and also provides a forecast for households over the same period.

Table A-2: ARC Population and Household Projections

	Total Population			Total Households		
	Conyers*	Outside Conyers	Total County	Conyers*	Outside Conyers	Total County
2015	15,861	73,529	89,390	6,043	26,114	32,157
2016	16,057	74,798	90,855	6,136	26,620	32,756
2017	16,253	76,067	92,320	6,229	27,126	33,355
2018	16,449	77,336	93,785	6,322	27,632	33,954
2019	16,645	78,605	95,250	6,415	28,138	34,553
2020	16,841	79,874	96,715	6,510	28,643	35,153
2021	17,023	81,231	98,254	6,594	29,168	35,762
2022	17,205	82,588	99,793	6,678	29,693	36,371
2023	17,387	83,945	101,332	6,762	30,218	36,980
2024	17,569	85,302	102,871	6,846	30,743	37,589
2025	17,751	86,659	104,410	6,930	31,268	38,198
2026	17,933	88,016	105,949	7,014	31,793	38,807
2027	18,115	89,373	107,488	7,098	32,318	39,416
2028	18,297	90,730	109,027	7,182	32,843	40,025
2029	18,479	92,087	110,566	7,266	33,368	40,634
2030	18,660	93,446	112,106	7,352	33,890	41,242
2031	18,846	94,859	113,706	7,440	34,450	41,889
2032	19,032	96,272	115,306	7,528	35,010	42,536
2033	19,218	97,685	116,906	7,616	35,570	43,183
2034	19,404	99,098	118,506	7,704	36,130	43,830
2035	19,590	100,511	120,106	7,792	36,690	44,477
2036	19,776	101,924	121,706	7,880	37,250	45,124
2037	19,962	103,337	123,306	7,968	37,810	45,771
2038	20,148	104,750	124,906	8,056	38,370	46,418
2039	20,334	106,163	126,506	8,144	38,930	47,065
2040	20,523	107,580	128,103	8,229	39,487	47,716
Increase 2018-40	4,074	30,244	34,318	1,907	11,855	13,762

* ARC 'Conyers CT' totals adjusted to 2015 Census estimate for the city.

Note: Figures between highlighted ARC base years are interpolated.

¹ 2015 is shown on the table for consistency with ARC's forecast years.

Future Households

The forecasts for the number of households in the county as a whole, the City of Conyers and the area outside the city follow the same methodology as used for population. The number of households are taken directly from ARC for the four benchmark years (2015, 2020, 2030 and 2040), and intervening year figures are interpolated between them on a straight-line basis.

The total number of households in the Conyers CTs was reduced by the same percentage as was used for the population figures for the city, and projections for the years between the benchmark years were interpolated on a straight-line basis. Again, the forecasts for the county outside Conyers were derived by subtracting the city figures from the total county figures.

This results in a forecast of almost 13,800 new households in the county as a whole, almost 11,900 of which would be located in the unincorporated area (a 42.9% increase) and more than 1,900 would be located within the City of Conyers (a 30.2% increase).

■ Housing Forecasts

Projecting new growth and development in terms of housing units is important because residential impact fees are assessed when building permits are issued for new units. Level of Service calculations for library services and parks & recreation facilities are based on the number of housing units served and to be served, while impact fees for fire protection assessed for residential growth are also based on housing unit permits.

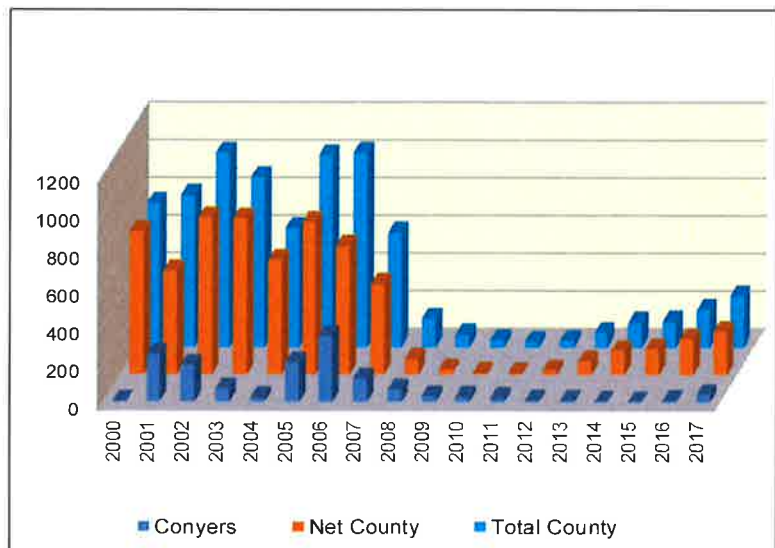
Historic Housing Growth

Preceding the collapse of the housing market in 2008, leading to the Great Recession (declared in December of 2008), housing construction in both the City of Conyers and the county as a whole was robust. The Recession had a profound impact on new housing construction, and has begun to rebound starting in the past 3-4 years.

The table and graph below show the total number of housing units authorized by building permits by the city and the county (i.e., 'outside Conyers') each year between 2000 and 2017, as reported to the Census Bureau. The total of those issued by the two jurisdictions is shown as the 'total county' figures.

Table A-3a: Housing Units Issued Building Permits - 2000-2017

	Conyers	Outside Conyers	Total County
2000	4	762	766
2001	257	550	807
2002	197	836	1,033
2003	72	831	903
2004	25	608	633
2005	210	811	1,021
2006	350	684	1,034
2007	126	482	608
2008	68	86	154
2009	35	32	67
2010	29	11	40
2011	23	7	30
2012	9	27	36
2013	9	72	81
2014	5	128	133
2015	2	136	138
2016	9	191	200
2017	43	233	276



Source: US Bureau of the Census, *Building Permits Survey* program as reported by cities and counties.

Appendix: Future Growth

In the years leading up to the Great Recession (2000-2007), permits issued by Conyers totaled 1,241 housing units, but have totaled only 232 since (2008-2017). For Rockdale County, the figures were 5,564 (2000-2007) and 923 (2008-2017). Of all housing permits issued by each jurisdiction between 2000 and 2017, 84.2% were issued by the City prior to the Great Recession, as were 85.8% of the total issued by the County. As illustrated on the graph, housing construction began to rebound in the unincorporated area in 2013, and has increased each year since, while the rebound in the City has only just begun.

Future Housing Growth

A 'household' represents an occupied housing unit (i.e., the definition of an occupied housing unit is one in which a household lives). The projected increases in households are shown on Table A-2.

Table A-3b: Total Housing Units

	Conyers	Outside Conyers	Total County
2015	7,032	28,733	35,765
2016	7,140	29,291	36,431
2017	7,248	29,849	37,097
2018	7,356	30,407	37,763
2019	7,464	30,966	38,430
2020	7,575	31,522	39,097
2021	7,673	32,101	39,774
2022	7,770	32,682	40,452
2023	7,868	33,261	41,129
2024	7,966	33,840	41,806
2025	8,064	34,419	42,483
2026	8,161	35,000	43,161
2027	8,259	35,579	43,838
2028	8,357	36,158	44,515
2029	8,455	36,738	45,193
2030	8,555	37,314	45,869
2031	8,657	37,932	46,589
2032	8,760	38,548	47,308
2033	8,862	39,166	48,028
2034	8,964	39,783	48,747
2035	9,067	40,400	49,467
2036	9,169	41,018	50,187
2037	9,272	41,634	50,906
2038	9,374	42,252	51,626
2039	9,476	42,869	52,345
2040	9,575	43,494	53,069
Increase 2018-40	2,219	13,087	15,306

To arrive at the total number of housing units, vacant units must be added to the number of occupied units. This was determined by using a 'vacancy rate' based on the proportion of vacant units to total units for the last data point available—the *American Community Survey* published for 2016 by the Census Bureau. Dividing the number of occupied units by the vacancy rate produces the total number of housing units.

These forecasts result in a 40.5% increase in housing units in Rockdale County between 2018 and 2040, reflecting a 30.2% increase in Conyers and a 43.0% increase in the unincorporated area.

Number of housing units based on the number of households plus vacant units at the percentages reported in the 2016 American Community Survey:

% Vacant	14.06%	9.15%	10.09%
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■ Employment Forecasts

The table below shows the forecasts for employment growth countywide in Rockdale County, from 2018 to 2040. The employment figures for Rockdale County are based on forecasts published by Woods & Poole Economics in their latest (2018) *Georgia State Profile*, which includes a data book for every county in the state.

Woods & Poole counts jobs, not just employed people, which captures people holding two or more jobs, self-employed sole proprietors, part-time workers, and vacant but available positions. This gives a more complete picture than the forecasts prepared by the Atlanta Region Commission, which counts only the number of **people** that are employed, not the total number of **jobs** available.

Table A-4: County-wide Employment

	2010	2015	2018	2019	2020	2025	2030	2035	2040
Total Employment	41,969	47,671	50,453	51,313	52,097	56,270	60,486	64,393	67,881
Farm Employment	121	132	147	147	148	151	152	152	153
Forestry, Fishing	117	71	74	74	74	78	83	87	92
Mining	56	31	30	30	31	33	35	37	39
Construction	3,438	4,198	4,683	4,797	4,878	5,233	5,595	5,942	6,295
Total Non-Building	3,732	4,432	4,934	5,048	5,131	5,495	5,865	6,218	6,579
Federal Civilian	133	104	113	113	114	114	115	115	115
Federal Military	275	249	246	247	247	248	248	249	250
State & Local Government	4,269	4,348	4,558	4,596	4,632	4,796	4,926	5,030	5,118
Total Government	4,677	4,701	4,917	4,956	4,993	5,158	5,289	5,394	5,483
Utilities	113	113	119	120	121	128	134	140	146
Manufacturing	3,777	5,552	4,837	4,846	4,838	4,863	4,886	4,903	4,913
Wholesale Trade	1,223	1,572	1,646	1,655	1,659	1,668	1,672	1,668	1,653
Retail Trade	4,939	5,451	6,162	6,297	6,401	6,923	7,420	7,892	8,322
Transportation & Warehousing	1,885	1,531	1,574	1,584	1,598	1,632	1,677	1,722	1,759
Information	849	1,261	1,153	1,160	1,166	1,199	1,231	1,262	1,293
Finance & Insurance	1,478	1,745	1,939	2,014	2,087	2,463	2,868	3,305	3,779
Real Estate	1,596	1,752	2,033	2,054	2,072	2,263	2,458	2,667	2,893
Professional & Technical Services	2,294	2,028	1,986	1,998	2,011	2,075	2,139	2,202	2,264
Management of Companies	121	76	99	100	100	102	104	105	106
Administrative & Waste Services	3,379	4,050	4,151	4,210	4,270	4,578	4,896	5,217	5,535
Educational Services	579	716	803	833	863	1,029	1,216	1,423	1,651
Health Care & Social Assistance	4,550	4,980	5,683	5,904	6,136	7,425	8,809	9,982	10,788
Arts, Entertainment & Recreation	711	693	685	688	691	708	724	739	751
Accommodation & Food Services	3,396	3,712	4,143	4,156	4,170	4,279	4,344	4,357	4,364
Other Private Services	2,670	3,306	3,589	3,690	3,790	4,282	4,754	5,197	5,602
Total Value-Added	33,560	38,538	40,602	41,309	41,973	45,617	49,332	52,781	55,819

Source: Woods & Poole Economics, Inc., 2018 Georgia Data Book.

Calculating the number of jobs available within the City of Conyers is considerably more complicated than was the case for population, households and housing units.

Appendix: Future Growth

The following table shows the employment figures for the county as a whole (the Woods & Poole figures) and the totals for the four 'Conyers CTs' totaled from the ARC forecast data. The percent of each of the CT totals of the 'County Total' figures is also shown, which will be a basis for further calculations.

Table A-5: Employment - Rockdale County W&P and Conyers CTs

	2015			2020			2030			2040		
	County Total	Conyers CTs	Conyers Percent	County Total	Conyers CTs	Conyers Percent	County Total	Conyers CTs	Conyers Percent	County Total	Conyers CTs	Conyers Percent
Total Employment	47,671	27,160	57.0%	52,097	29,671	57.0%	60,486	33,266	55.0%	67,881	36,236	53.4%
Farm Employment	203	30	14.8%	222	31	14.0%	162	31	20.4%	245	25	10.2%
Forestry, Fishing												
Mining	31	15	48.4%	31	17	54.8%	35	40	114.3%	39	60	153.8%
Construction	4,198	1,219	29.0%	4,878	1,600	32.8%	5,595	1,870	33.4%	6,295	2,300	36.5%
Total Non-Building	4,229	1,264	29.9%	5,131	1,648	32.1%	6,666	1,941	33.1%	6,579	2,386	36.3%
Federal Civilian												
Federal Military												
State & Local Government												
Total Government	4,701	1,867	39.7%	4,993	1,990	39.9%	6,289	2,429	45.9%	6,483	2,703	49.3%
Utilities	113	59	52.2%	121	61	50.4%	134	65	48.5%	146	68	46.6%
Manufacturing	5,552	3,184	57.3%	4,838	3,285	67.9%	4,886	3,395	69.5%	4,913	3,451	70.2%
Wholesale Trade	1,572	1,371	87.2%	1,659	1,497	90.2%	1,672	1,616	96.7%	1,653	1,689	102.2%
Retail Trade	5,451	3,469	63.6%	6,401	3,741	58.4%	7,420	4,328	58.3%	8,322	4,690	56.4%
Transportation & Warehousing	1,531	972	63.5%	1,598	1,015	63.5%	1,677	1,040	62.0%	1,759	1,128	64.1%
Information	1,261	594	47.1%	1,166	610	52.3%	1,231	616	50.0%	1,293	623	48.2%
Finance & Insurance	1,745	1,386	79.4%	2,087	1,497	71.7%	2,868	1,597	55.7%	3,779	1,650	43.7%
Real Estate	1,752	1,444	82.4%	2,072	1,597	77.1%	2,458	1,868	76.0%	2,893	2,092	72.3%
Professional & Technical Services	2,028	1,068	52.7%	2,011	1,187	59.0%	2,139	1,301	60.8%	2,264	1,470	64.9%
Management of Companies	76	337	443.4%	100	346	346.0%	104	352	338.5%	106	362	341.5%
Administrative & Waste Services	4,050	1,538	38.0%	4,270	1,682	39.4%	4,896	1,879	38.4%	5,535	2,153	38.9%
Educational Services	716	1,338	186.9%	863	1,545	179.0%	1,216	2,011	165.4%	1,651	2,209	133.8%
Health Care & Social Assistance	4,980	3,313	66.5%	6,136	3,642	59.4%	8,909	3,895	44.2%	10,788	4,250	39.4%
Arts, Entertainment & Recreation	693	405	58.4%	691	449	65.0%	724	497	68.8%	751	539	71.8%
Accommodation & Food Services	3,712	2,772	74.7%	4,170	3,099	74.3%	4,344	3,601	82.9%	4,364	3,903	89.4%
Other Private Services	3,306	779	23.6%	3,790	780	20.6%	4,754	824	17.3%	5,602	871	15.5%
Total Value-Added	38,638	24,029	62.4%	41,973	26,033	62.0%	49,332	28,886	58.6%	55,819	31,148	55.8%

This table converts the 'Conyers CT' percentages to the percentages that will be used to calculate the number of jobs within the City of Conyers itself. The 'Conyers CT Percents' are taken from the previous table. Multipliers are then calculated for each benchmark year reflecting the progression of growth reflected in the CT figures. The 'Conyers City Adjustment Percent' is based on the percentage of employment in the City as a percentage of total county employment in 2010—the last year such data was reported by the Census—which is distributed against the 'Conyers CT Multipliers' to produce the 'Conyers City Multipliers'.

Table A-6: Conyers CT Percentages Converted to City of Conyers

	Conyers CT Percents				Conyers CT Multipliers				Conyers City Adjusted Percent	Conyers City Multipliers			
	2015	2020	2030	2040	2015	2020	2030	2040		2015	2020	2030	2040
Total Employment	57.0%	57.0%	63.8%	53.4%	1.00000	0.99964	1.12039	0.93695	41.6%	41.6%	41.6%	46.6%	38.9%
Farm Employment													
Forestry, Fishing	14.8%	14.0%	13.2%	10.2%	0.49444	0.43476	0.39860	0.28148	10.8%	10.8%	10.2%	9.6%	7.4%
Mining	48.4%	54.8%	114.3%	153.8%	1.61890	1.70739	3.45330	4.24383	35.3%	35.3%	40.0%	83.4%	112.2%
Construction	29.0%	32.8%	33.4%	36.5%	0.97152	1.02123	1.00991	1.00787	21.2%	21.2%	23.9%	24.4%	26.7%
Total Non-Building	29.9%	32.1%	33.1%	36.3%	1.00000	1.07460	1.10726	1.21288	21.8%	21.8%	23.4%	24.1%	26.4%
Federal Civilian													
Federal Military													
State & Local Government													
Total Government	39.7%	39.9%	45.9%	49.3%	1.00000	1.00355	1.15638	1.24129	29.0%	29.0%	29.1%	33.5%	36.0%
Utilities	52.2%	50.4%	48.5%	46.6%	0.83739	0.81281	0.82845	0.83466	38.1%	38.1%	36.8%	35.4%	34.0%
Manufacturing	57.3%	67.9%	69.5%	70.2%	0.91977	1.09475	1.18670	1.25878	41.8%	41.8%	49.5%	50.7%	51.3%
Wholesale Trade	87.2%	90.2%	96.7%	102.2%	1.39874	1.45486	1.65067	1.83109	63.6%	63.6%	65.8%	70.5%	74.6%
Retail Trade	63.6%	58.4%	58.3%	56.4%	1.02066	0.94229	0.99618	1.00994	46.4%	46.4%	42.6%	42.6%	41.1%
Transportation & Warehousing	63.5%	63.5%	62.0%	64.1%	1.01823	1.02408	1.05915	1.14920	46.3%	46.3%	46.3%	45.2%	46.8%
Information	47.1%	52.3%	50.0%	48.2%	0.75548	0.84348	0.85483	0.86346	34.4%	34.4%	38.2%	36.5%	35.2%
Finance & Insurance	79.4%	71.7%	55.7%	43.7%	1.27386	1.15650	0.95100	0.78245	58.0%	58.0%	52.3%	40.6%	31.9%
Real Estate	82.4%	77.1%	76.0%	72.3%	1.32188	1.24268	1.29793	1.29588	60.1%	60.1%	56.2%	55.4%	52.8%
Professional & Technical Services	52.7%	59.0%	60.8%	64.9%	0.84461	0.95167	1.03878	1.16357	38.4%	38.4%	43.1%	44.4%	47.4%
Management of Companies	443.4%	346.0%	338.5%	341.5%	7.11164	5.57856	5.78050	6.12004	323.5%	323.5%	252.4%	246.9%	249.2%
Administrative & Waste Services	38.0%	39.4%	38.4%	38.9%	0.80905	0.83510	0.65545	0.69707	27.7%	27.7%	28.7%	28.0%	28.4%
Educational Services	188.9%	179.0%	165.4%	133.8%	2.99707	2.88645	2.82446	2.39773	136.3%	136.3%	130.6%	120.7%	97.6%
Health Care & Social Assistance	66.5%	59.4%	44.2%	39.4%	1.06695	0.95697	0.75516	0.70599	48.5%	48.5%	43.3%	32.3%	28.7%
Arts, Entertainment & Recreation	58.4%	65.0%	68.6%	71.8%	0.93729	1.04764	1.17240	1.28618	42.6%	42.6%	47.4%	50.1%	52.4%
Accommodation & Food Services	74.7%	74.3%	82.9%	89.4%	1.19767	1.19821	1.41576	1.60275	54.5%	54.5%	54.2%	60.5%	65.3%
Other Private Services	23.6%	20.6%	17.3%	15.5%	0.37791	0.33182	0.29602	0.27863	17.2%	17.2%	15.0%	12.6%	11.3%
Total Value-Added	62.4%	62.0%	68.6%	56.8%	1.00000	0.99474	0.93907	0.89496	45.5%	45.5%	45.3%	42.7%	40.7%

Appendix: Future Growth

Lastly, the 'Conyers City Multipliers' from the previous table are applied to the 'County Total' figures for each benchmark year to calculate employment within the City of Conyers relative to countywide employment in the future.

Table A-7: Rockdale County and City of Conyers Employment

	2015			2020			2030			2040		
	County Total	City of Conyers	Conyers Percent	County Total	City of Conyers	Conyers Percent	County Total	City of Conyers	Conyers Percent	County Total	City of Conyers	Conyers Percent
Total Employment	47,671	19,816	41.6%	52,097	21,656	41.6%	52,097	21,649	41.6%	67,881	31,616	46.6%
Farm Employment	203	22	10.8%	222	24	10.8%	235	24	10.2%	245	24	9.6%
Forestry, Fishing												
Mining	31	11	35.3%	31	11	35.3%	35	14	40.0%	39	33	83.4%
Construction	4,198	889	21.2%	4,878	1,033	21.2%	5,595	1,339	23.9%	6,295	1,535	24.4%
Total Non-Building	4,229	5,129	121.3%	5,131	1,119	21.8%	5,865	1,374	23.4%	6,679	1,689	24.1%
Federal Civilian												
Federal Military												
State & Local Government												
Total Government	4,701	5,836	124.1%	4,993	1,447	29.0%	5,289	1,638	29.1%	5,483	1,837	33.6%
Utilities	113	43	38.1%	121	46	38.1%	134	49	36.8%	146	52	35.4%
Manufacturing	5,552	2,323	41.8%	4,838	2,024	41.8%	4,886	2,421	49.5%	4,913	2,491	50.7%
Wholesale Trade	1,572	1,000	63.6%	1,659	1,056	63.6%	1,672	1,101	65.8%	1,653	1,166	70.5%
Retail Trade	5,451	2,531	46.4%	6,401	2,972	46.4%	7,420	3,164	42.6%	8,322	3,542	42.6%
Transportation & Warehousing	1,531	709	46.3%	1,598	740	46.3%	1,677	777	46.3%	1,759	796	45.2%
Information	1,261	433	34.4%	1,166	401	34.4%	1,231	470	38.2%	1,293	472	36.5%
Finance & Insurance	1,745	1,011	58.0%	2,087	1,209	58.0%	2,868	1,501	52.3%	3,779	1,535	40.6%
Real Estate	1,752	1,054	60.1%	2,072	1,246	60.1%	2,458	1,382	56.2%	2,893	1,604	55.4%
Professional & Technical Services	2,028	779	38.4%	2,011	773	38.4%	2,139	921	43.1%	2,264	1,005	44.4%
Management of Companies	76	246	323.5%	100	324	323.5%	104	263	252.4%	106	262	246.9%
Administrative & Waste Services	4,050	1,122	27.7%	4,270	1,183	27.7%	4,896	1,407	28.7%	5,535	1,550	28.0%
Educational Services	716	976	136.3%	863	1,177	136.3%	1,216	1,588	130.6%	1,651	1,992	120.7%
Health Care & Social Assistance	4,980	2,417	48.5%	6,136	2,978	48.5%	8,809	3,815	43.3%	10,788	3,480	32.3%
Arts, Entertainment & Recreation	693	295	42.6%	691	295	42.6%	724	343	47.4%	751	376	50.1%
Accommodation & Food Services	3,712	2,023	54.5%	4,170	2,272	54.5%	4,344	2,355	54.2%	4,364	2,639	60.5%
Other Private Services	3,306	568	17.2%	3,790	652	17.2%	4,754	714	15.0%	5,602	708	12.6%
Total Value-Added	38,538	34,490	89.6%	41,973	19,095	45.5%	49,332	22,324	45.3%	55,819	23,846	42.7%

Table A-8: Summary - Countywide Employment

	Total Employment	Non-Building Related	Government	Value-Added Employment
2010	41,969	3,732	4,677	33,560
2018	50,453	4,934	4,917	40,602
2019	51,313	5,048	4,956	41,309
2020	52,097	5,131	4,993	41,973
2025	56,270	5,495	5,158	45,617
2030	60,486	5,865	5,289	49,332
2035	64,393	6,218	5,394	52,781
2040	67,881	6,579	5,483	55,819
Increase 2018-40	17,428	1,645	566	15,217

Source: Woods & Poole Economics, Inc., 2018 Georgia Data Book.

The previous table above grouped employment in the various land use types into three categories: non-building uses, government, and 'value-added' land uses.

The tables on this page take the employment figures from that table for the county as a whole, the City of Conyers and the unincorporated area, summarized by benchmark year, for each of the three categories.

Table A-9: Summary - Conyers Employment

	Total Employment	Non-Building Related	Government	Value-Added Employment
2010	14,925			
2018	20,916	1,090	1,416	18,409
2019	21,282	1,146	1,434	18,702
2020	21,649	1,202	1,452	18,994
2025	22,956	1,309	1,612	20,035
2030	24,263	1,416	1,772	21,075
2035	25,351	1,578	1,872	21,901
2040	26,438	1,740	1,972	22,726
Increase 2018-40	5,522	650	556	4,317

'Non-building related' jobs are those that do not normally require issuance of a building permit, and thus would not be assessed an impact fee. Such jobs include any employment that is considered to be transitory in nature, such as those working on construction sites or are strictly land-based such as farming and other agricultural workers.

The tables also show the number of workers projected to be employed by governmental entities (city, county, state and federal) and are exempt from local taxation, whether a building is to be constructed or not.

Table A-10: Summary - Employment Outside Conyers

	Total Employment	Non-Building Related	Government	Value-Added Employment
2010	27,044			
2018	29,537	3,844	3,501	22,193
2019	30,031	3,902	3,522	22,607
2020	30,448	3,929	3,541	22,979
2025	33,314	4,186	3,546	25,582
2030	36,223	4,449	3,517	28,257
2035	39,042	4,640	3,522	30,880
2040	41,443	4,839	3,511	33,093
Increase 2018-40	11,906	995	10	10,900

The last columns on the tables show the 'value-added employment' jobs. Such jobs represent growth in businesses and other nonresidential uses (such as non-profits and institutions) that would increase demand for public services and would therefore be subject to impact fees.

Table A-11: Value-Added Employment

	Conyers	Outside Conyers	Total County
2018	18,409	22,193	40,602
2019	18,702	22,607	41,309
2020	18,994	22,979	41,973
2021	19,202	23,500	42,702
2022	19,410	24,021	43,431
2023	19,618	24,542	44,160
2024	19,826	25,063	44,889
2025	20,035	25,582	45,617
2026	20,243	26,117	46,360
2027	20,451	26,652	47,103
2028	20,659	27,187	47,846
2029	20,867	27,722	48,589
2030	21,075	28,257	49,332
2031	21,240	28,782	50,022
2032	21,405	29,307	50,712
2033	21,570	29,832	51,402
2034	21,735	30,357	52,092
2035	21,901	30,880	52,781
2036	22,066	31,323	53,389
2037	22,231	31,766	53,997
2038	22,396	32,209	54,605
2039	22,561	32,652	55,213
2040	22,726	33,093	55,819
Increase 2018-40	4,317	10,900	15,217

Finally, the 'value-added' employment figures from the previous three tables are summarized by political jurisdiction and benchmark year on Table A-11.

The data are expanded to show forecast estimates for every year between 2018 and 2040 by interpolating the intervening years between the highlighted benchmarks on a straight-line basis.

For impact fee purposes, however, the 2018-2040 increases are the key figures to consider.

Intervening years interpolated between highlighted base years.

■ Service Area Projections

The entire county is a single service area because all Rockdale County services being considered for impact fee funding serve all residents and business in the county, whether in the unincorporated area or within the City of Conyers.

As explained in the text of this document, impact fees for the library services and the parks & recreation facilities are paid exclusively by residential uses. Thus, the housing unit count and projections presented in this Appendix form the basis for those impact fee calculations.

Table A-12: Service Area Projections

	Library and Parks	Fire Protection Services		
	Housing Units	Population	Value-Added Employment	Day-Night Population
2018	37,763	93,785	40,602	134,387
2019	38,430	95,250	41,309	136,559
2020	39,097	96,715	41,973	138,688
2021	39,774	98,254	42,702	140,956
2022	40,452	99,793	43,431	143,224
2023	41,129	101,332	44,160	145,492
2024	41,806	102,871	44,889	147,760
2025	42,483	104,410	45,617	150,027
2026	43,161	105,949	46,360	152,309
2027	43,838	107,488	47,103	154,591
2028	44,515	109,027	47,846	156,873
2029	45,193	110,566	48,589	159,155
2030	45,869	112,106	49,332	161,438
2031	46,546	113,645	50,075	163,720
2032	47,223	115,184	50,818	166,002
2033	47,900	116,723	51,561	168,284
2034	48,577	118,262	52,304	170,566
2035	49,254	119,801	53,047	172,848
2036	49,931	121,340	53,790	175,130
2037	50,608	122,879	54,533	177,412
2038	51,285	124,418	55,276	179,694
2039	51,962	125,957	56,019	181,976
2040	52,639	127,496	56,762	184,258
Increase 2018-40	15,306	34,318	15,217	49,535

For the fire protection category, the 24-hour service population—called the ‘day-night’ population—is used for overall Level of Service calculations. The day-night population is used to determine Level of Service standards for facilities that serve both the resident population and business employment. The fire department, for instance, protects one’s house from fire whether or not they are at home, and protects stores and offices whether or not they are open for business. Thus, this ‘day-night’ population is a measure of the total services demanded of a 24-hour service provider facility and a fair way to allocate the costs of such a facility among all of the beneficiaries.

Impact fees in the fire protection category are assessed on a per-housing unit basis for residential development and, for nonresidential uses, on the basis of floor area (in square feet), hotel rooms, acreage, or other appropriate factor reflecting the employment characteristics of the particular use.