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MEMORANDUM

Department of Building and Planning

DATE: June 5, 2019

TO: Yocelyn Galiano, ICMA-CM, LEED-GA
Village Manager

FROM: Stephen R. Olmsted, AICP, LEED-GA
Planning Director

RE: Tischler Bise - Impact Fee Study

Since the Village of Pinecrest incorporated as a municipality in 1996, it has adopted impact fees to pay for a portion of the costs of Police, Parks and Recreation, Stormwater Drainage, Municipal Facilities, and Potable Water infrastructure and facilities necessary to support new growth and development occurring in the community.

In November 2018, the Village hired Tischler Bise, Inc. to complete an evaluation of existing impact fees, and to make recommendations regarding adjustments to the fee schedule based on a study of current demographic trends, growth and development that is projected to occur, and an evaluation of necessary capital expenditures.

Tischler Bise has completed an analysis of the Village's current Police, Parks and Recreation, Municipal Facilities, and Stormwater Drainage impact fees based on the most current local data. As indicated in the attached *Draft 2019 Impact Fee Update*, dated June 3, 2019, "impact fees are one-time payments used to construct system improvements needed to accommodate new development. An impact fee represents new growth's proportionate share of capital facility needs". Tischler Bise is scheduled to provide a presentation of its findings and recommendations to the Village Council on June 11, 2019.

The draft impact fee study recommends an increase in impact fees with considerably higher Parks and Recreation and Police impact fees. The proposed increase in the Parks and Recreation impact fee is due to the inclusion of the Community Center in the assessment, and the proposed increase in the Police impact fee is the result of the addition of a facilities component.

Following review and discussion of the draft study with the Village Council on June 11, staff will prepare an ordinance for the Village Council's formal consideration and adoption if so directed.



June 3, 2019

Stephen R. Olmsted, AICP, LEED-GA, Planning Director
Building and Planning Department
Village of Pinecrest
12645 Pinecrest Parkway
Pinecrest, Florida 33156

Stephen,

Enclosed is the draft Impact Fee Study for the Village of Pinecrest prepared by TischlerBise, Inc. The impact fees included in this study include Parks & Recreation, Municipal Services, Police, and Stormwater. Key differences between the current and proposed impact fees are highlighted in the following points:

1. **Current** Parks & Recreation impact fees for residential development differentiate between three development typologies: single-family detached units, single-family attached units, and multifamily units. **Proposed** fees for residential development differentiate between only two typologies: single-family units and multifamily units.
2. **Current** Municipal Services impact fees for nonresidential development are based on 19 typological categories. For the **proposed** impact fees, TischlerBise recommends four nonresidential typologies: industrial, commercial, institutional, and office/other services.
3. **Proposed** impact fees are considerably higher than **current** impact fees overall, largely due to considerably higher fees for Parks & Recreation and Police. The change in the Parks & Recreation impact fee is attributable to the inclusion of the Pinecrest Community Center in the calculation of the cost to maintain current levels of service for Parks facilities. Meanwhile, the change in the Police impact fee is attributable to the addition of a facilities component to the fee calculation.

We look forward to discussing the draft report with the Village Council. Please let me know if you have any questions about this report.

Sincerely,



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DRAFT 2019 Impact Fee Update

Prepared for:
Village of Pinecrest, Florida

June 3, 2019



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EXECUTIVE SUMMARY

TischlerBise, Inc., under contract with the Village of Pinecrest, Florida to update impact fees for Parks & Recreation, Municipal Services, Police, and Stormwater. Impact fees are one-time payments used to construct system improvements needed to accommodate new development. An impact fee represents new growth's proportionate share of capital facility needs. Impact fees do have limitations and should not be regarded as the total solution for infrastructure funding needs. Rather, they are one component of a comprehensive portfolio to ensure provision of adequate public facilities needed to serve new development. In contrast to general taxes, impact fees may not be used for operations, maintenance, replacement of infrastructure, or correcting existing deficiencies.

GENERAL LEGAL FRAMEWORK

Both state and federal courts have recognized the imposition of impact fees on development as a legitimate form of land use regulation, provided the fees meet standards intended to protect against regulatory takings. Land use regulations, development exactions, and impact fees are subject to the Fifth Amendment prohibition on taking of private property for public use without just compensation. To comply with the Fifth Amendment, development regulations must be shown to substantially advance a legitimate governmental interest. In the case of impact fees, that interest is in the protection of public health, safety, and welfare by ensuring that development is not detrimental to the quality of essential public services. The means to this end is also important, requiring both procedural and substantive due process. The process followed to receive community input, with stakeholder meetings, work sessions, and public hearings provide opportunity for comments and refinements to the impact fees.

There is little federal case law specifically dealing with impact fees, although other rulings on other types of exactions (e.g., land dedication requirements) are relevant. In one of the most important exaction cases, the U. S. Supreme Court found that a government agency imposing exactions on development must demonstrate an "essential nexus" between the exaction and the interest being protected (see *Nollan v. California Coastal Commission*, 1987). In a more recent case (*Dolan v. City of Tigard, OR*, 1994), the Court ruled that an exaction also must be "roughly proportional" to the burden created by development. However, the *Dolan* decision appeared to set a higher standard of review for mandatory dedications of land than for monetary exactions such as impact fees.

There are three reasonable relationship requirements for impact fees that related closely to "rational nexus" or "reasonable relationship" requirements enunciated by a number of state courts. Although the term "dual rational nexus" is often used to characterize the standard by which courts evaluate the validity of impact fees under the U.S. Constitution, we prefer a more rigorous formulation that recognizes three elements: "need," "benefit," and "proportionality." The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S.

Supreme Court in the Dolan case. Individual elements of the nexus standard are discussed further in the following paragraphs.

All new development in a community creates additional demands on some, or all, public facilities provided by local government. If the capacity of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Impact fees may be used to recover the cost of development-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The Nollan decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to impact fees. In this study, the impact of development on infrastructure needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level of service standards.

The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the Dolan case (although the relevance of that decision to impact fees has been debated) and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related capital costs, and in the methods used to calculate impact fees for various types of facilities and categories of development. The demand for facilities is measured in terms of relevant and measurable attributes of development (e.g. a typical housing unit's household size).

CURRENT PINECREST IMPACT FEES AND SUMMARY OF MAJOR CHANGES

As documented in this report, Pinecrest has complied with the Florida Development Impact Fee Act and applicable legal precedents. Impact fees are proportionate and reasonably related to capital improvement demands of new development. Specific costs have been identified using local data and current dollars. With input from Village staff, TischlerBise determined demand indicators for each type of infrastructure and calculated growth share factors to allocate costs to new development. This report documents the formulas and input variables used to calculate the impact fees for each type of public facility. Impact fee methodologies also identify the extent to which new development is entitled to various types of credits to avoid potential double payment of growth-related capital costs.

Key differences between the current and proposed impact fees are highlighted in the following points.

1. **Current** Parks & Recreation impact fees for residential development differentiate between three development typologies: single-family detached units, single-family attached units, and multifamily units. **Proposed** fees for residential development differentiate between only two typologies: single-family units and multifamily units.

2. **Current** Municipal Services impact fees for nonresidential development are based on 19 typological categories. For the **proposed** impact fees, TischlerBise recommends four nonresidential typologies: industrial, commercial, institutional, and office/other services.
3. **Proposed** impact fees are considerably higher than **current** impact fees overall, largely due to considerably higher fees for Parks & Recreation and Police. The change in the Parks & Recreation impact fee is attributable to the inclusion of the Pinecrest Community Center in the calculation of the cost to maintain current levels of service for Parks facilities. Meanwhile, the change in the Police impact fee is attributable to the addition of a facilities component to the fee calculation.

CONCEPTUAL IMPACT FEE CALCULATION

In contrast to project-level improvements, impact fees fund growth-related infrastructure that will benefit multiple development projects, or the entire jurisdiction (referred to as system improvements). The first step is to determine an appropriate demand indicator for the particular type of infrastructure. The demand indicator measures the number of demand units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth, and the increase in population can be estimated from the average number of persons per housing unit. The second step in the impact fee formula is to determine infrastructure units per demand unit, typically called Level-Of-Service (LOS) standards. In keeping with the park example, a common LOS standard is park acreage per thousand people. The third step in the impact fee formula is the cost of various infrastructure units. To complete the park example, this part of the formula would establish the cost per acre for land acquisition and/or park improvements.

GENERAL METHODOLOGIES

There are three general methods for calculating impact fees. The choice of a particular method depends primarily on the timing of infrastructure construction (past, concurrent, or future) and service characteristics of the facility type being addressed. Each method has advantages and disadvantages in a particular situation, and each can be used alongside other methods being used for different cost components.

Reduced to its simplest terms, the process of calculating impact fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of impact fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss three basic methods for calculating development impact fees and how those methods can be applied.

Cost Recovery (past improvements)

The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.

Incremental Expansion (concurrent improvements)

The incremental expansion method documents current level-of-service (LOS) standards for each type of public facility, using both quantitative and qualitative measures. This approach ensures that there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increment to keep pace with development.

Plan-Based Fee (future improvements)

The plan-based method allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two options for determining the cost per demand unit: 1) total cost of a public facility can be divided by total demand units (average cost), or 2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost).

Credits

Regardless of the methodology, a consideration of “credits” is integral to the development of a legally defensible impact fee methodology. There are two types of “credits” with specific characteristics, both of which should be addressed in impact fee studies and ordinances.

- First, a revenue credit might be necessary if there is a double payment situation and other revenues are contributing to the capital costs of infrastructure to be funded by impact fees. This type of credit is integrated into the impact fee calculation, thus reducing the fee amount. In contrast to some impact fee studies that only provide general costs, with credits at the back-end of the analysis, the 2019 impact fee update for the Village of Pinecrest uses growth shares to provide an up-front reduction in total costs.
- Second, a site-specific credit or developer reimbursement might be necessary for dedication of land or construction of system improvements funded by impact fees. This type of credit is addressed in the administration and implementation of the impact fee program.

Figure 1 summarizes the methods and cost components used for each type of public facility in the Village’s impact fee update.

Figure 1. Proposed Fee Methods and Cost Components

Category	Service Areas	Incremental Expansion (present)	Plan-Based (future)	Cost Allocation
Parks & Recreation	Citywide	Amenities, Facilities, Vehicles		Population
Municipal Services	Citywide	Facilities, Vehicles		Population, Jobs
Police	Citywide	Police Stations, Vehicles & Equipment		Population, Vehicle Trips
Stormwater	Citywide		Stormwater Facilities	Lot Size
Administrative Costs	Citywide	Administrative Costs		Population, Jobs

PROPOSED IMPACT FEE SCHEDULES

Figure 2 compares current and proposed impact fees for new development in Pinecrest, FL. With the exception of the Stormwater impact fee, proposed fees for residential development are based on a cost per unit, while proposed fees for nonresidential development are stated per 1,000 square feet of floor area. Proposed stormwater fees, meanwhile, are based on a cost per acre of the development site. The fee schedule for nonresidential development is designed to provide a reasonable impact fee determination for general types of development. For unique development types, the Village may allow or require an independent impact fee assessment.

Figure 2. Proposed Impact Fees

Pinecrest Residential Impact Fees (per Housing Unit)							
Type	Parks & Recreation	Municipal Services	Police	Admin Costs	Total Fees	Current Fees*	Increase / (Decrease)
Single-Family Unit	\$6,363	\$833	\$1,262	\$109	\$8,567	\$2,565	\$6,002
Multifamily Unit	\$3,755	\$491	\$745	\$64	\$5,055	\$1,913	\$3,143
Pinecrest Nonresidential Impact Fees (per 1,000 Square Feet)							
Type	Parks & Recreation	Municipal Services	Police	Admin Costs	Total Fees	Current Fees*	Increase / (Decrease)
Industrial	\$0	\$265	\$131	\$72	\$468	\$412	\$56
Commercial	\$0	\$381	\$662	\$103	\$1,146	\$537	\$609
Institutional	\$0	\$151	\$342	\$41	\$534	\$599	(\$65)
Office	\$0	\$484	\$258	\$130	\$872	\$688	\$184

* Excludes Stormwater impact fees

Pinecrest Stormwater Impact Fees	
Capital Cost per Square Foot	
Residential	\$0.16
Commercial/Shopping Center	\$0.23
Business	\$0.30
Public Service	\$0.23
Parks	\$0.23
Transportation	\$0.35
Inland Water	\$0.09

PARKS AND RECREATION IMPACT FEE

As documented below, new development in Pinecrest will maintain current levels of service by incrementally expanding parks and recreation amenities, facilities, and vehicles with impact fee funding. For Parks & Recreation, 100 percent of capital fees are attributed to residential development. Impact fees collected over the next ten years will be used for additional amenities, facilities, and vehicles.

PARKS AMENITIES

Figure 3 provides an inventory of Pinecrest's existing parks amenities. Based on cost estimates for each amenity provided by the Village of Pinecrest, the total value of all amenities is roughly \$11.7 million, with each amenity costing an average of \$179,696. For the purpose of impact fees, the current infrastructure standard is 0.0035 amenities per resident, based on the Village's 2018 population of 18,490. To maintain the existing level of service for park amenities, the Village will spend \$631.71 per additional resident.

Figure 3. Parks Amenities Level-of-Service

Amenity	# of Units	Cost per Unit	Total Cost
Tennis Courts w/Lights	6	\$118,860	\$713,160
Playgrounds	5	\$200,000	\$1,000,000
Multi-purpose Rooms, Large	1	\$1,210,000	\$1,210,000
Multi-purpose Rooms, Small	2	\$500,000	\$1,000,000
Pro Shop	1	\$908,700	\$908,700
Restroom Facilities	10	\$87,500	\$875,000
Fitness Trail	2	\$15,000	\$30,000
Baseball Fields	5	\$250,000	\$1,250,000
Soccer Fields	3	\$370,000	\$1,110,000
Batting Cages	4	\$12,500	\$50,000
Gazebo, Large	1	\$240,969	\$240,969
Gazebo, Small	1	\$178,409	\$178,409
Concession Stands	2	\$125,000	\$250,000
Fitness Area	1	\$46,000	\$46,000
Basketball Courts	2	\$75,000	\$150,000
Football Fields	1	\$370,000	\$370,000
PG Splash Structure	1	\$150,000	\$150,000
PG Bathrooms	4	\$87,500	\$350,000
PG Concessoin Tower	1	\$180,000	\$180,000
PG Playground	1	\$200,000	\$200,000
PG Pavillion	1	\$380,000	\$380,000
PG Butterfly House	1	\$50,000	\$50,000
PG Petting Zoo	1	\$75,000	\$75,000
PG Nursery	1	\$135,000	\$135,000
PG Shadehouse	1	\$25,000	\$25,000
PG Colonnade	1	\$500,000	\$500,000
PG Admissions Booth	1	\$40,000	\$40,000
PG ADA Lift	1	\$90,000	\$90,000
PG Pianos	3	\$41,000	\$123,000
TOTAL	65	\$179,696	\$11,680,238

Level-of-Service (LOS) Standards

Residential Proportionate Share	100%
Residents in 2018	18,490
LOS: Amenities per Resident	0.0035

Cost Analysis

Average Cost per Amenity	\$179,696
LOS: Amenities per Resident	0.0035
Cost per Person	\$631.71

PARKS FACILITIES

Figure 4 provides an inventory of Pinecrest's Parks & Recreation facilities. The current infrastructure standard is 3.0882 square feet per resident. Future recreation buildings are expected to cost approximately \$423 per square foot based on replacement cost estimates for existing facilities provided by the Village of Pinecrest. To maintain the existing level of service for Parks & Recreation facilities, the Village expects to spend \$1,306.29 per additional resident.

Figure 4. Parks Facilities Level-of-Service

Parks Facility	Square Feet	Cost per Square Foot	Replacement Cost
Walkway Path Shelters	14,000	\$107	\$1,500,000
Administration Office	900	\$300	\$270,000
Cypress Hall	4,800	\$417	\$2,000,000
Hibiscus Room	2,000	\$300	\$600,000
Historic Entrance	1,600	\$500	\$800,000
Serpentine House	900	\$222	\$200,000
Banyan Bowl	8,500	\$400	\$3,400,000
Garages (2)	2,400	\$167	\$400,000
Pinecrest Community Center	22,000	\$682	\$15,000,000
TOTAL	57,100	\$423	\$24,170,000

Level-of-Service (LOS) Standards

Residential Proportionate Share	100%
Residents in 2018	18,490
LOS: Square Feet per Resident	3.0882

Cost Analysis

Cost per Square Foot	\$423
LOS: Square Feet per Resident	3.0882
Cost per Person	\$1,306.29

PARKS VEHICLES

Figure 5 provides an inventory of Pinecrest's existing Parks & Recreation vehicles used in park operations and maintenance. The current infrastructure standard is 0.0005 vehicles per resident. Future vehicles will cost approximately \$16,556 each based on replacement cost estimates for existing vehicles provided by the Village of Pinecrest. To maintain the existing level of service for vehicles, the Village expects to spend \$8.06 per additional resident.

Figure 5. Parks Vehicles Level-of-Service

<i>Vehicle</i>	<i># of Units</i>	<i>Cost per Unit</i>	<i>Replacement Cost</i>
John Deere Gator	3	\$14,000	\$42,000
Pickup Trucks	2	\$21,000	\$42,000
Infield Groomer	1	\$25,000	\$25,000
Chevrolet Silverado	1	\$16,000	\$16,000
Utility Cart	2	\$12,000	\$24,000
TOTAL	9	\$16,556	\$149,000

Level-of-Service (LOS) Standards

Residential Proportionate Share	100%
Residents in 2018	18,490
LOS: Amenities per Resident	0.0005

Cost Analysis

Average Cost per Amenity	\$16,556
LOS: Amenities per Resident	0.0005
Cost per Person	\$8.06

CREDIT EVALUATION

A credit for future revenue is only necessary if there is potential double payment for system improvements needed to accommodate new development. Pinecrest does not have any existing debt for parks and plans to fund the growth share of future improvements from impact fees. Because no additional revenues are required for this purpose, there is no potential double payment. Site-specific credits or developer reimbursements might be necessary if a developer provides a system improvement, as a condition of development approval.

PROPOSED PARKS AND RECREATION IMPACT FEES

Figure 6 indicates cost factors for the updated Parks and Recreation impact fees. Proposed fees by dwelling unit are equal to the average number of persons per housing unit multiplied by the total capital cost per person. For example, a single-family unit would pay a fee of \$6,363 (truncated) based on an average of 3.27 persons per dwelling unit multiplied by a total capital cost of \$1,946.06 per person.

Figure 6. Proposed Parks & Recreation Impact Fee

Fee Component	Cost per Person
Park Amenities	\$631.71
Recreation Facilities	\$1,306.29
Park Vehicles	\$8.06
TOTAL	\$1,946.06

Residential Development (per housing unit)				
Type	Persons per Housing Unit	Proposed Fee	Current Fee*	Increase / (Decrease)
Single-Family	3.27	\$6,363	\$1,607	\$4,756
Multi-Family	1.93	\$3,755	\$955	\$2,800

*Single-Family Detached for Current Fee

PARKS & RECREATION NEEDS ANALYSIS AND FUNDING STRATEGY

Figure 7 summarizes the growth cost for Parks & Recreation in Pinecrest over the next ten years. The County expects to spend \$3,853,036 for additional park amenities, facilities, and vehicles. This money will pay for growth-related capital expenditures, i.e. 7 additional amenities (\$1,257,872), 6,096 square feet of additional facilities (\$2,578,608), and 1 additional vehicle (\$16,556).

Figure 7. Capital Costs for Parks & Recreation

Park Level-of-Service Standards					
Level-of-Service		Demand Unit	Unit Cost		
0.0035	Amenities	per Person	\$179,696		
3.0882	Rec Centers (sq. ft.)	per Person	\$423		
0.0005	Vehicles	per Person	\$16,556		

Need for Park Amenities & Recreational Facilities					
Year		Population	Park Amenities	Rec Center Sq. Ft.	Vehicles
Base	2018	18,490	65	57,100	9
Year 1	2019	18,679	66	57,684	9
Year 2	2020	18,870	66	58,273	9
Year 3	2021	19,062	67	58,866	9
Year 4	2022	19,256	68	59,466	9
Year 5	2023	19,452	68	60,071	9
Year 6	2024	19,650	69	60,682	10
Year 7	2025	19,850	70	61,300	10
Year 8	2026	20,052	70	61,924	10
Year 9	2027	20,257	71	62,557	10
Year 10	2028	20,464	72	63,196	10
Ten-Year Increase		1,974	7	6,096	1
Growth Related Expenditure			\$1,257,872	\$2,578,608	\$16,556
					\$3,853,036

As shown in Figure 8, projected impact fee revenue from an increase of 137 single-family housing units and 523 multifamily housing units will significantly fall short of the cost of growth-related improvements. As shown in Figure 8, revenue from Parks & Recreation impact fees is projected to result in a deficit of \$1,016,997. This revenue projection is based on the demographic data described in Appendix A and the proposed fee amount for each type of unit. To the extent that the rate of development either accelerates or slows down, there will be a corresponding change in fee revenue and the timing of capital improvements.

Figure 8. Revenue for Parks & Recreation

		Growth Cost	
Park Amenities		\$1,257,872	
Rec Centers		\$2,578,608	
Vehicles		\$16,556	
Total Expenditures		\$3,853,036	

		Single Family	Multifamily
		\$6,363 per Unit	\$3,755 per Unit
Year		Housing Units	Housing Units
Base	2018	5,212	1,363
1	2019	5,225	1,413
2	2020	5,238	1,464
3	2021	5,252	1,515
4	2022	5,265	1,566
5	2023	5,279	1,618
6	2024	5,292	1,671
7	2025	5,306	1,724
8	2026	5,320	1,777
9	2027	5,335	1,831
10	2028	5,349	1,886
10-year Increase		137	523
Projected Revenue		\$870,972	\$1,965,066

Total Projected Revenue		\$2,836,039	
Surplus / (Deficit)		(\$1,016,997)	

MUNICIPAL SERVICES IMPACT FEE

For Municipal Service impact fees, 76 percent of capital costs are allocated to residential development, while the remaining 24 percent of capital costs are allocated to nonresidential development. The new impact fee for Municipal Services is based on current infrastructure standards and cost factors (i.e. the incremental expansion cost method).

COST ALLOCATION FACTORS

As shown in Figure 9, functional population is similar to what the US Census Bureau calls "daytime population" by accounting for people living and working in a jurisdiction. Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in Pinecrest are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents who work outside Pinecrest are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2015 functional population data for Pinecrest, the cost allocation for residential development is 76 percent, while nonresidential development accounts for 24 percent of the demand for Municipal Services.

Figure 9. Cost Allocation Factors

Demand Units in 2015		Demand Hours/Day	Person Hours	Proportionate Share
Residential				
Estimated Residents	18,391			
Residents Not Working	10,578	20	211,560	
Resident Workers	7,813			
5% Worked in City	423	14	5,922	
95% Worked Outside City	7,390	14	103,460	
Residential Subtotal			320,942	76%
Nonresidential				
Non-working Residents	10,578	4	42,312	
Jobs Located in City	6,142			
7% Residents Working in City	423	10	4,230	
93% Non-Resident Workers (inflow commuters)	5,719	10	57,190	
Nonresidential Subtotal			103,732	24%
TOTAL			424,674	100%

MUNICIPAL SERVICES FACILITIES

Figure 10 provides an inventory of Pinecrest's Municipal Services facilities. The current infrastructure standard is 0.5964 square feet per resident and 0.3813 square feet per job. Future recreation buildings are expected to cost approximately \$417 per square foot based on replacement cost estimates for existing facilities provided by the Village of Pinecrest. To maintain the existing level of service for recreation buildings, the Village expects to spend \$248.70 per additional resident and \$159.00 per additional job.

Figure 10. Municipal Services Facilities Level-of-Service

Facility	Square Feet	Cost per Square Foot	Total Cost
Administration Building	11,300	\$450	\$5,085,000
Public Works Building	3,210	\$300	\$963,000
TOTAL	14,510	\$417	\$6,048,000

Level-of-Service (LOS) Standards

Residential Proportionate Share	76%
Nonresidential Proportionate Share	24%
Residents in 2019	18,490
Jobs in 2019	9,133
LOS: Square Feet per Resident	0.5964
LOS: Square per Job	0.3813

Cost Analysis

Cost per Square Foot	\$417
LOS: Square Feet per Resident	0.5964
LOS: Square Feet per Job	0.3813
Cost per Person	\$248.70
Cost per Job	\$159.00

MUNICIPAL SERVICES VEHICLES

Figure 11 provides an inventory of Pinecrest's existing Municipal Services vehicles used for operations and maintenance. The current infrastructure standard is 0.00021 vehicles per resident and 0.00013 vehicles by job. Future Municipal Services vehicles will cost approximately \$30,200 each based on replacement cost estimates for existing vehicles provided by the Village of Pinecrest. When the levels of service are compared to the average cost per vehicle, the resulting costs per demand unit are \$6.21 per person and \$3.97 per job.

Figure 11. Municipal Services Vehicles Level-of-Service

Item	Quantity	Unit Cost	Total Cost
Ford F-150	2	\$29,000	\$58,000
Chevrolet Silverado	1	\$29,000	\$29,000
Nissan Leaf	2	\$32,000	\$64,000
Total	5	\$30,200	\$151,000

Level of Service (LOS) Standards

Population in 2018	18,490
Jobs in 2018	9,133
Residential Share	76%
Nonresidential Share	24%
LOS: Vehicles per Person	0.00021
LOS: Vehicles per Job	0.00013

Cost Analysis

Average Cost per Unit	\$30,200
LOS: Vehicles per Person	0.00021
LOS: Vehicles per Job	0.00013
Cost per Person	\$6.21
Cost per Job	\$3.97

CREDIT EVALUATION

A credit for future revenue is only necessary if there is potential double payment for system improvements needed to accommodate new development. Pinecrest has no existing debt for Municipal Services facilities or vehicles and plans to fund the growth share of future facilities or vehicles from impact fees. Because no additional revenues are required to cover the growth cost, there is no potential double payment.

Municipal Services Impact FeeError! Reference source not found. Figure 12 indicates cost factors for the updated Municipal Services impact fee. Proposed fees by dwelling unit are equal to the average number of persons per housing unit multiplied by the total capital cost per person. For example, a single-family unit would pay a fee of \$833 (truncated) based on an average of 3.27 persons per dwelling, multiplied by a total capital cost of \$254.91 per person. A similar calculation is used for nonresidential development.

Figure 12. Proposed Municipal Services Impact Fee

Fee Component	Cost per Person	Cost per Job		
Municipal Services Facilities	\$248.70	\$159.00		
Municipal Services Vehicles	\$6.21	\$3.97		
TOTAL	\$254.91	\$162.97		
Residential Development (per housing unit)				
Type	Persons per Housing Unit	Proposed Fee	Current Fee	Increase / (Decrease)
Single-Family	3.27	\$833	\$822	\$11
Multi-Family	1.93	\$491	\$822	(\$331)
Nonresidential Development (per 1,000 square feet)				
Type	Jobs per 1,000 Sq. Ft.	Proposed Fee	Current Fee	Increase / (Decrease)
Industrial (Manufacturing)	1.16	\$189	\$212	(\$23)
Commercial (50,001 - 100,000 sq. ft.)	2.34	\$381	\$337	\$44
Institutional (Hospital)	0.93	\$151	\$399	(\$248)
Office & Other (10,001 - 25,000 sq. ft.)	2.97	\$484	\$488	(\$4)

MUNICIPAL SERVICES NEEDS ANALYSIS & FUNDING STRATEGY

Figure 13 summarizes the growth cost for Municipal Services in Pinecrest over the next ten years. The Village expects to spend \$580,135 for additional Municipal Services facilities and vehicles. This money will pay for growth-related capital expenditures, i.e. 1,355 square feet of facility space (\$565,035) and 0.5 vehicles (\$15,100).

Figure 13. Capital Costs for Municipal Services

<i>Municipal Services Level-of-Service Standards</i>			
<i>Level-of-Service</i>		<i>Demand Unit</i>	<i>Unit Cost</i>
0.5964	Square Feet	per Person	\$417
0.3813		per Job	
0.00021	Vehicles	per Person	\$30,200
0.00013		per Job	

Growth-Related Need for Municipal Services						
Year		Population	Jobs	Facility Square Feet	Vehicles	
Current	2018	18,490	9,133	14,510	5.0	
Base	2019	18,679	9,179	14,640	5.0	
Year 1	2020	18,870	9,225	14,772	5.1	
Year 2	2021	19,062	9,271	14,904	5.1	
Year 3	2022	19,256	9,317	15,037	5.2	
Year 4	2023	19,452	9,364	15,172	5.2	
Year 5	2024	19,650	9,410	15,308	5.3	
Year 6	2025	19,850	9,457	15,445	5.3	
Year 7	2026	20,052	9,505	15,583	5.4	
Year 8	2027	20,257	9,552	15,724	5.4	
Year 9	2028	20,464	9,600	15,865	5.5	
Ten-Year Increase		1,974	467	1,355	0.5	Total
Growth-Related Expenditure				\$565,035	\$15,100	\$580,135

As shown in Figure 14, projected impact fee revenue from an increase of 137 single-family housing units, 523 multifamily housing units, 19 KSF of industrial development, 114 KSF of commercial development, 86 KSF of institutional development, and 30 KSF of office & other development will fall short of the cost of growth-related improvements. As shown in Figure 14, Municipal Services impact fees are projected to result in a deficit of \$134,576. This revenue projection is based on the demographic data described in Appendix A and the proposed fee amount for each type of unit. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in fee revenue and the timing of capital improvements.

Figure 14. Revenue for Municipal Services

		Growth Cost	
Muni Svs Facilities		\$565,035	
Muni Svs Vehicles		\$15,100	
Total Expenditures		\$580,135	

		Single Family	Multifamily	Industrial	Commercial	Institutional	Office & Other
		\$833	\$491	\$189	\$381	\$151	\$484
		per Unit	per Unit	per KSF	per KSF	per KSF	per KSF
Year		Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2018	5,212	1,363	367	2,232	1,679	589
1	2019	5,225	1,413	369	2,244	1,687	592
2	2020	5,238	1,464	371	2,255	1,695	595
3	2021	5,252	1,515	373	2,266	1,704	598
4	2022	5,265	1,566	375	2,277	1,712	601
5	2023	5,279	1,618	376	2,289	1,721	604
6	2024	5,292	1,671	378	2,300	1,730	607
7	2025	5,306	1,724	380	2,312	1,738	610
8	2026	5,320	1,777	382	2,323	1,747	613
9	2027	5,335	1,831	384	2,335	1,756	616
10	2028	5,349	1,886	386	2,347	1,764	619
10-year Increase		137	523	19	114	86	30
Projected Revenue		\$114,022	\$256,950	\$3,549	\$43,496	\$12,962	\$14,581

Total Projected Revenue		\$445,559
Surplus / (Deficit)		(\$134,576)

POLICE IMPACT FEE

For Police impact fees, like the Municipal Services impact fee, 76 percent of capital costs are allocated to residential development, while the remaining 24 percent of capital costs are allocated to nonresidential development. The new impact fee for Police is based on current infrastructure standards and cost factors (i.e. the incremental expansion cost method).

The residential impact fees are calculated per housing unit, based on persons per household. TischlerBise recommends using nonresidential vehicle trips as the best demand indicator for police facilities and vehicles. Trip generation rates are used for nonresidential development because vehicle trips are highest for commercial/retail developments, such as shopping centers, and lowest for industrial development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for police from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, police development fees would be too high for office and institutional development because offices typically have more employees per 1,000 square feet than retail uses.

POLICE FACILITIES

Figure 15 provides an inventory of Pinecrest's Police facilities. The current infrastructure standard is 0.670 square feet per resident and 0.092 square feet per job. Future Police Department buildings are expected to cost approximately \$450 per square foot based on replacement cost estimates provided by the Village of Pinecrest. To maintain the existing level of service for recreation buildings, the Village expects to spend \$301.49 per additional resident and \$41.52 per additional job.

Figure 15. Police Facilities Level-of-Service

<i>Police Stations</i>	<i>Square Feet</i>
Main Station	16,300
TOTAL	16,300

Level-of-Service (LOS) Standards

Population in 2018	18,490
Nonresidential Vehicle Trips in 2018	42,403
Residential Share	76%
Nonresidential Share	24%
LOS: Square Feet per Person	0.670
LOS: Square Feet per Vehicle Trip	0.092

Cost Analysis

Cost per Square Foot	\$450
LOS: Square Feet per Person	0.670
LOS: Square Feet per Vehicle Trip	0.092
Cost per Person	\$301.49
Cost per Vehicle Trip	\$41.52

POLICE VEHICLES & EQUIPMENT

Figure 16 provides an inventory of Pinecrest's existing vehicles and equipment used by Village Police. The current service standard is 0.00173 vehicles/equipment units per additional resident and 0.00024 vehicles/equipment units per additional job. Future vehicles/equipment units will cost approximately \$49,000 each based on cost estimates provided by the Village of Pinecrest. To maintain the existing level of service for recreation buildings, the Village expects to spend \$84.59 per additional resident and \$11.65 per additional job.

Figure 16. Police Vehicles Level-of-Service

Item	Quantity
Crown Victoria	1
Explorer Interceptor	20
Taurus Interceptor	13
Fusion	4
Accord	1
Frontier	2
Cross Trek	1
Total	42

Level of Service (LOS) Standards

Population in 2018	18,490
Nonresidential Vehicle Trips in 2018	42,403
Residential Share	76%
Nonresidential Share	24%
LOS: Vehicles & Equipment per Person	0.00173
LOS: Vehicles & Equipment per Vehicle Trip	0.00024

Cost Analysis

Average Cost per Unit	\$49,000
LOS: Vehicles & Equipment per Person	0.00173
LOS: Vehicles & Equipment per Vehicle Trip	0.00024
Cost per Person	\$84.59
Cost per Vehicle Trip	\$11.65

CREDIT EVALUATION

A credit for future revenue is only necessary if there is potential double payment for system improvements needed to accommodate new development. Pinecrest has no existing debt for Police facilities or vehicles/equipment and plans to fund the growth share of future facilities or vehicles/equipment from impact fees. Because no additional revenues are required to cover the growth cost, there is no potential double payment.

POLICE IMPACT FEE

Figure 17 indicates cost factors for the updated Police impact fee. Proposed fees by dwelling unit are equal to the average number of persons per housing unit multiplied by the total capital cost per person. For example, a single-family unit would pay a fee of \$1,262 (truncated) based on an average of 3.27 persons per dwelling multiplied by a total capital cost of \$386.08 per person. Proposed fees for nonresidential development are equal to the trip ends per 1,000 square feet multiplied by the trip adjustment rate for the use, then multiplied by the total capital cost per vehicle trip. For example, an industrial development of 1,000 would pay \$131 (truncated) based on an average of 4.96 trip ends per 1,000 square feet multiplied by a trip adjustment factor of 50 percent, then multiplied by an average cost of \$53.17 per trip.

Figure 17. Proposed Police Impact Fee

Fee Component	Cost per Person	Cost per Vehicle Trip
Facilities	\$301.49	\$41.52
Vehicles & Equipment	\$84.59	\$11.65
TOTAL	\$386.08	\$53.17

<i>Residential (per housing unit)</i>				
Type of Household	Persons per Housing Unit	Proposed Fee	Current Fee	Increase / (Decrease)
Single-Family	3.27	\$1,262	\$136	\$1,126
Multi-Family	1.93	\$745	\$136	\$609

<i>Nonresidential Development (per 1,000 square feet)</i>					
Type	Trip Ends per 1,000 Sq. Ft.	Trip Rate Adjustment	Proposed Fee	Current Fee	Increase / (Decrease)
Industrial	4.96	50%	\$131	\$200	(\$69)
Commercial	37.75	33%	\$662	\$200	\$462
Institutional	19.52	33%	\$342	\$200	\$142
Office & Other	9.74	50%	\$258	\$200	\$58

POLICE NEEDS ANALYSIS & FUNDING STRATEGY

Figure 18 summarizes the growth cost for Police in Pinecrest over the next ten years. The Village expects to spend \$881,350 for additional Police facilities and vehicles. This money will pay for growth-related capital expenditures, i.e. 1,523 square feet of facility space (\$685,350) and 4 vehicles (\$196,000).

Figure 18. Capital Costs for Police

Year		Population	Nonres. Vehicle Trips	Facility Square Feet	Vehicles and Equipment
Base	2018	18,490	42,403	16,300	42
Year 1	2019	18,679	42,614	16,446	42
Year 2	2020	18,870	42,827	16,594	43
Year 3	2021	19,062	43,041	16,742	43
Year 4	2022	19,256	43,256	16,892	44
Year 5	2023	19,452	43,473	17,043	44
Year 6	2024	19,650	43,689	17,196	44
Year 7	2025	19,850	43,909	17,350	45
Year 8	2026	20,052	44,129	17,506	45
Year 9	2027	20,257	44,348	17,663	46
Year 10	2028	20,464	44,571	17,823	46
Ten-Year Increase		1,974	2,168	1,523	4
Growth-Related Expenditures				\$685,350	\$196,000
					\$881,350

As shown in Figure 19, projected impact fee revenue from an increase of 137 single-family housing units, 523 multifamily housing units, 19 KSF of industrial development, 114 KSF of commercial development, 86 KSF of institutional development, and 30 KSF of office & other development will cover the growth cost of improvements. As shown in Figure 19, Police impact fee revenue is projected to fall short of growth-related costs, resulting in \$203,776 deficit. This revenue projection is based on the demographic data described in Appendix A and the proposed fee amount for each type of unit. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in fee revenue and the timing of capital improvements.

Figure 19. Revenue for Police

		Single Family	Multi Family	Industrial	Commercial	Institutional	Office & Other
		\$1,262 per Unit	\$745 per Unit	\$131 per KSF	\$662 per KSF	\$342 per KSF	\$258 per KSF
Year		Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2018	5,212	1,363	367	2,232	1,679	589
1	2019	5,225	1,413	369	2,244	1,687	592
2	2020	5,238	1,464	371	2,255	1,695	595
3	2021	5,251	1,515	373	2,266	1,704	598
4	2022	5,265	1,566	375	2,277	1,712	601
5	2023	5,278	1,618	376	2,289	1,721	604
6	2024	5,292	1,671	378	2,300	1,730	607
7	2025	5,306	1,724	380	2,312	1,738	610
8	2026	5,320	1,777	382	2,323	1,747	613
9	2027	5,334	1,832	384	2,335	1,756	616
10	2028	5,349	1,887	386	2,347	1,764	619
10-year Increase		137	523	19	114	86	30

Projected Revenue	\$677,574
Surplus / (Deficit)	(\$203,776)

STORMWATER IMPACT FEE

The drainage impact fees are derived using a plan-based methodology. Impact fees were calculated for each land use based on the use's proportionate share of eventual land coverage Village wide under a buildout scenario presented in the 2015 Village of Pinecrest Stormwater Master Plan. The specific projects included in the impact fee calculation, as well as the project costs, are based on information provided in the same plan. The total cost of capital improvements for the Village was multiplied by proportionate share factors for each type of land use, and then divided by the amount of land area by type of land use.

CAPITAL IMPROVEMENT PLAN

As discussed above, the drainage impact fees are derived using a plan-based methodology. The specific projects included in the impact fee calculation as well as the project costs are based on information provided by the Village of Pinecrest. Planned capital improvement projects are shown below in Figure 20.

Figure 20. Planned Stormwater Capital Projects

Project ID	Cost
U29-S	\$2,361,083
C100DN-1W	\$3,094,683
C100A-W3N	\$3,535,768
U35-S	\$981,252
PNL&RGL	\$2,361,101
C100A-E-2	\$1,228,833
C100DN-1E	\$4,261,881
C100A-5	\$1,714,848
C100A-E-1	\$3,558,844
C2-S-9NE	\$3,615,130
U28-E	\$2,767,835
B-Bay-SE	\$4,644,125
U32-S	\$627,709
C100D-N-1	\$2,208,589
C100A-W3S	\$3,858,144
Total Cost	\$40,819,825

CREDIT EVALUATION

A credit for future revenue is only necessary if there is potential double payment for system improvements needed to accommodate new development. Pinecrest has no existing debt for stormwater drainage facilities and improvements and plans to fund the growth share of future facilities and improvements from impact fees. Because no additional revenues are required to cover the growth cost, there is no potential double payment.

STORMWATER IMPACT FEE

Figure 21 shows the level-of-service standards for the Village of Pinecrest and the recommended stormwater impact fee per acre for each land use category. The total cost of stormwater drainage improvements for the Village of Pinecrest is estimated at \$40,819,825 and total acreage in the Village is 4,813, according to the 2015 Village of Pinecrest Stormwater Master Plan. Based on the acreage for each land use presented in the Village's buildout analysis and impervious surface factors, i.e. runoff factors, taken from the Colorado Urban Drainage District Criteria Manual and Pinecrest's 2012 Stormwater Drainage Impact Fee Methodology and Computation report, impervious acres were calculated for each land use, totaling 2,705 acres across the Village. Impervious acres are then used to determine the proportionate share for each land use type. The capital cost per acre was determined by multiplying the total capital cost (\$40,819,825) by the proportionate share factor for each land use, divided by the acreage to be developed.

Figure 21. Proposed Stormwater Impact Fee

Growth-Related Capital Costs				\$40,819,825
<i>Proportionate Share</i>	<i>Projected Land Use Acreage (20-Yr)*</i>	<i>Runoff Factor**</i>	<i>Impervious Acreage</i>	<i>Proportionate Share</i>
Residential	3,571	0.45	1,607	59%
Commercial/Shopping Center	32	0.65	21	1%
Business	109	0.88	96	4%
Public Service	134	0.65	87	3%
Parks	70	0.65	46	2%
Transportation	832	1.00	832	31%
Inland Water	64	0.25	16	1%
TOTAL	4,813		2,705	100%

<i>Capital Cost per Square Foot***</i>	
Residential	\$0.16
Commercial/Shopping Center	\$0.23
Business	\$0.30
Public Service	\$0.23
Parks	\$0.23
Transportation	\$0.35
Inland Water	\$0.09

* Land use acreage based on Village of Pinecrest Stormwater Master Plan

** From Colorado Urban Drainage District Criteria Manual and the 2012 Pinecrest Stormwater Drainage Impact Fee

*** For each type of development, the level-of-service standard (expressed in terms of capital cost per square foot) is equal to the total Village capital cost multiplied by the proportionate share factor, divided by the acreage to be developed, divided by 43,560.

APPENDIX A: DEMOGRAPHIC DATA

The population, housing unit, and job projections contained in this document provide the foundation for the impact fee update for the Village of Pinecrest. To evaluate the demand for growth-related infrastructure from various types of development, TischlerBise prepared documentation on population, housing units, jobs, nonresidential floor area, Average Weekday Vehicle Trip Ends (AWVTE), and demand indicators by type of dwelling. These metrics (explained further below) are the service units and demand indicators that will be used in the impact fee update.

Impact fees are based on the need for growth-related improvements and they must be proportionate by type of land use. Demographic data and development projections will be used to demonstrate proportionality and anticipate the need for future infrastructure. Projections for future residential growth/development are consistent with projections development by the Bureau of Economic and Business Research at the University of Florida, while projections for future nonresidential growth/development are based on an annual job growth rate estimated by TischlerBise. All land use assumptions are derived from US Census data. In contrast to the Comprehensive Plan and metropolitan area transportation model that have a long-range horizon, impact fees require a quantitative analysis with a shorter focus. Typically, impact fee studies look out five to ten years, with the expectation that fees will be periodically updated (e.g. every 5 years). Infrastructure standards are calibrated using 2018 data, with Fiscal Year 2019 being the first projection year.

SUMMARY OF GROWTH INDICATORS

Key development projections for the Pinecrest impact fee study are housing units and nonresidential floor area, as shown in Figure 22. These projections will be used to estimate impact fee revenue and to indicate the anticipated need for growth-related infrastructure. The goal is to have reasonable projections without being overly concerned with precision. Because impact fee methods are designed to reduce sensitivity to development projections in the determination of the proportionate-share fee amounts, if actual development is slower than projected, fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, the County will receive an increase in fee revenue, but will also need to accelerate infrastructure improvements to keep pace with the actual rate of development.

Over the next ten years, the Village expects an increase of 660 housing units. Similarly, the Village expects an increase of 249,000 square feet of nonresidential floor area over the same timeframe. Current estimates of floor area and trip generation by type of nonresidential development are discussed in the text below.

Figure 22. Pinecrest Projections

			2018	2023	2028	2033	2038	5-Year	10-Year	20-Year
			Base	5	10	15	20	Change	Change	Change
Population										
Total Population			18,490	19,452	20,464	21,529	22,650	962	1,974	4,160
Housing Units										
Single-Family Units			5,212	5,279	5,349	5,423	5,500	67	137	288
Multifamily Units			1,363	1,618	1,886	2,169	2,466	255	523	1,103
Total Housing Units			6,575	6,897	7,235	7,591	7,966	322	660	1,391
			2018	2023	2028	2033	2038	5-Year	10-Year	20-Year
			Base	5	10	15	20	Change	Change	Change
Jobs										
Industrial Jobs			597	612	628	643	660	15	31	63
Commercial Jobs			5,228	5,360	5,495	5,634	5,776	132	267	548
Institutional Jobs			1,560	1,599	1,640	1,681	1,724	39	80	164
Office / Other Jobs			1,748	1,792	1,837	1,884	1,931	44	89	183
Total Jobs			9,133	9,364	9,600	9,842	10,091	231	467	958
Nonresidential Floor Area (KSF)										
	ITE SF per Job									
Industrial KSF	615		367	376	386	396	406	9	19	39
Commercial KSF	427		2,232	2,289	2,347	2,406	2,467	56	114	234
Institutional KSF	1,076		1,679	1,721	1,764	1,809	1,855	42	86	176
Office / Other KSF	337		589	604	619	635	651	15	30	62
Total Nonresidential Floor Area			4,867	4,990	5,116	5,245	5,378	123	249	511
			2018	2023	2028	2033	2038	5-Year	10-Year	20-Year
			Base	5	10	15	20	Change	Change	Change
Nonresidential Vehicle Trips										
Industrial Trips	4.96	50%	911	934	957	981	1006	23	46	95
Commercial Trips	37.75	33%	27,810	28,512	29,232	29,970	30,727	702	1,422	2,917
Institutional Trips	19.52	33%	10,813	11,086	11,366	11,653	11,947	273	553	1,134
Office / Other Trips	9.74	50%	2,869	2,941	3,016	3,092	3,170	72	147	301
Total Vehicle Trips			42,403	43,473	44,571	45,696	46,850	1,070	2,168	4,447

RESIDENTIAL GROWTH ASSUMPTIONS

Population and Population Growth Rate

Figure 23 shows the 2018 population of Pinecrest according to the Bureau of Business and Economic Research (BEBR) at The University of Florida. This statistic, the 2018 population of the Village, is the base year population count used in the model while 2019 is the first projection year. In order to project the future population of Pinecrest, TischlerBise utilized population projections for Miami-Dade County prepared by BEBR. Countywide population projections expect an average annual growth rate of 1.02 percent in residential population from 2018 to 2040, as shown in Figure 24. It is assumed that rate of population growth in Pinecrest will keep pace with that of countywide growth.

Figure 23. Pinecrest 2018 Population

Population of Pinecrest Village	
Year	Population
2018	18,490

Source: Bureau of Economic and Business Research, UFL, 2018

Figure 24. Miami-Dade County Population Projections

Projections for Miami-Dade County	
Year	Population
2018	2,779,322
2020	2,872,800
2030	3,215,100
2040	3,477,600
2018-2040 Avg Annual Growth Rate	1.02%

Source: Bureau of Economic and Business Research, UFL, 2018

Housing Characteristics

Figure 25 displays various summary characteristics of the housing stock in Pinecrest, including housing mix and persons per housing unit by type. While the US Census estimates the number of housing units in Pinecrest to be 6,492 in 2018, this analysis utilizes BEBR's 2018 estimate of 6,575 for the number of base year housing units. It assumed, however, that the housing mix is the same as that reported by the US Census, resulting in 5,212 single-family units and 1,363 multifamily units in 2018, as shown in Figure 26.

Figure 25. Census Housing Characteristics

Type	Persons	Population Mix	Housing Units	Housing Mix	Persons per Housing Unit
Single Unit*	16,818	87%	5,146	79%	3.27
2+ Units**	2,603	13%	1,346	21%	1.93
Subtotal	19,421	100%	6,492		2.99
Group Quarters	20				
TOTAL	19,441		6,492		2.99

Source: U.S. Census Bureau's American Community Survey, 2017 5-Year Estimates, Tables B25024, B25032, B25033, and B26001.

* Includes attached, detached, and mobile homes.

** Includes boat, RV, van, etc.

Figure 26. Pinecrest 2018 Housing Characteristics

Type	Housing Mix	Units
TOTAL	100%	6,575
Single-family Unit	79%	5,212
Multifamily Unit	21%	1,363

Source: U.S. Census Bureau's American Community Survey, 2017 5-Year Estimates; Bureau of Economic and Business Research

Population & Housing Projections

As discussed above, it is assumed that the residential population of Pinecrest grows by 1.02 percent annually. In order to calculate additional housing development across the projection period, year-over-year population growth is divided by the average number of persons per housing unit, i.e. 2.99. While single-family units currently account for 79 percent of housing units in Pinecrest and multifamily units account for 21 percent of unit, it is assumed that this ratio will be inverted for future development; it is assumed that single-family units will account for 21 percent of new housing units and multifamily units will account for 79 percent of new housing units. Multiplying the total number of new housing units by the percentages that are single-family/multifamily then adding this number to the existing number of single-family/multifamily units yields the total number of future housing units for each year. These projections, displayed in

Figure 27, serve as the basis for need and revenue projections.

Figure 27. Population & Housing Projections

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	5-Year Change	10-Year Change
	Base	1	2	3	4	5	6	7	8	9	10		
Population													
Year-over-Year Growth		189	191	192	194	196	198	200	202	205	207	N/A	N/A
Total Population	18,490	18,679	18,870	19,062	19,256	19,452	19,650	19,850	20,052	20,257	20,464	962	1,974
Housing Units													
Single-Family Units	5,212	5,225	5,238	5,252	5,265	5,279	5,292	5,306	5,320	5,335	5,349	67	137
Multifamily Units	1,363	1,413	1,464	1,515	1,566	1,618	1,671	1,724	1,777	1,831	1,886	255	523
Year-over-Year Growth		63	64	64	65	66	66	67	68	69	69		
Total Housing Units	6,575	6,638	6,702	6,766	6,831	6,897	6,963	7,030	7,097	7,166	7,235	322	660

	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	20-Year Change
	10	11	12	13	14	15	16	17	18	19	20	
Population												
Year-over-Year Growth	207	209	211	213	215	217	220	222	224	226	229	N/A
Total Population	20,464	20,673	20,884	21,097	21,312	21,529	21,749	21,971	22,195	22,421	22,650	4,160
Housing Units												
Single-Family Units	5,349	5,363	5,378	5,393	5,408	5,423	5,438	5,453	5,469	5,485	5,500	288
Multifamily Units	1,886	1,942	1,998	2,054	2,111	2,169	2,227	2,286	2,345	2,405	2,466	1,103
Year-over-Year Growth	69	70	71	71	72	73	74	74	75	76	77	
Total Housing Units	7,235	7,305	7,376	7,447	7,519	7,591	7,665	7,739	7,814	7,890	7,966	1,391

NONRESIDENTIAL GROWTH ASSUMPTIONS

Employment and Employment Growth Rate

In addition to data on residential development, the calculation of impact fees requires data on nonresidential development. Figure 28 presents a breakdown of jobs in Pinecrest according to ESRI Business Analyst. TischlerBise uses the term “job” to refer to employment by place of work. The share of employment in industrial, commercial, institutional, and office and other services taken from ESRI was then applied to BEBR’s 2018 employment estimate to determine the current number of jobs in each sector in Pinecrest, as shown in Figure 29.

Figure 28. ESRI Employment by Type

Employment Type	Jobs	
Industrial Jobs*	594	6.5%
Commercial Jobs**	5,197	57.2%
Institutional Jobs***	1,551	17.1%
Office / Other Jobs	1,738	19.1%
Total Jobs	9,080	100.0%

Source: ESRI Business Analyst

*Includes Agriculture & Mining; Construction; Manufacturing; Transportation; Communication, Utility; and Wholesale Trade

**Includes Retail Trades; Hotels & Lodging; Automotive Services; Motion Pictures & Amusements; and Other Services

***Includes Health Services; Education Institutions & Libraries; and Government

****Includes Finance, Insurance, and Real Estate Trades; Legal Services; and Unclassified Establishments

Figure 29. Pinecrest 2018 Employment by Type

Employment Type	2018 Jobs
Industrial Jobs	597
Commercial Jobs	5,228
Institutional Jobs	1,560
Office / Other Jobs	1,748
Total Jobs	9,133

Source: Bureau of Economic and Business Research, UFL, 2018

Jobs by Type of Nonresidential Development

In Figure 30, light blue shading indicates four nonresidential development prototypes that were used to derive average weekday vehicle trips and Vehicle Miles of Travel (VMT). Current floor area estimates for industrial, commercial, and office/other services, were developed based on the job estimates presented in the previous section and the employment space efficiency assumptions below.

The prototype for future industrial development is light industrial space (ITE code 110). For future institutional development, an elementary school (ITE code 520) is a reasonable proxy for industrial development. For office and other services, general office space (ITE code 710) is the prototype for future development. The prototype for future development commercial development is an average-sized shopping center (ITE code 820).

Figure 30. Nonresidential Development Employees per Demand Unit

ITE Code	Land Use / Size	Demand Unit	Emp Per Dmd Unit	Sq Ft Per Emp
110	Light Industrial	1,000 Sq Ft	1.63	615
130	Industrial Park	1,000 Sq Ft	1.16	864
140	Manufacturing	1,000 Sq Ft	1.59	628
150	Warehousing	1,000 Sq Ft	0.34	2,902
254	Assisted Living	bed	0.61	na
320	Motel	room	0.13	na
520	Elementary School	1,000 Sq Ft	0.93	1,076
530	High School	1,000 Sq Ft	0.63	1,581
540	Community College	student	0.08	na
550	University/College	student	0.18	na
565	Day Care	student	0.19	na
610	Hospital	1,000 Sq Ft	2.83	354
710	General Office (avg size)	1,000 Sq Ft	2.97	337
760	Research & Dev Center	1,000 Sq Ft	3.42	292
770	Business Park	1,000 Sq Ft	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	2.34	427
932	High-Turnover Restaurant	1,000 Sq Ft	3.80	263
934	Fast-Food Restaurant (w/ drive-thru)	1,000 Sq Ft	8.33	120

* Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Trip Generation by Development Typology

Trips associated with nonresidential development function as the demand unit for the nonresidential component of the Police impact fee. In order to convert square footages to trip ends, TischlerBise used ITE data regarding the average weekday trips generated by either 1,000 square feet of nonresidential development or one housing unit of various use types. As shown in Figure 31, nonresidential development typologies highlighted in light blue contain the trip generation rates utilized by TischlerBise to model trips from industrial (ITE code 110), commercial (ITE code 820), institutional (ITE code 520), and office and other development (ITE code 710).

Figure 31. Nonresidential Development Trips per Demand Unit

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit*	Wkdy Trip Ends Per Employee*
110	Light Industrial	1,000 Sq Ft	4.96	3.05
130	Industrial Park	1,000 Sq Ft	3.37	2.91
140	Manufacturing	1,000 Sq Ft	3.93	2.47
150	Warehousing	1,000 Sq Ft	1.74	5.05
254	Assisted Living	bed	2.60	4.24
320	Motel	room	3.35	25.17
520	Elementary School	1,000 Sq Ft	19.52	21.00
530	High School	1,000 Sq Ft	14.07	22.25
540	Community College	student	1.15	14.61
550	University/College	student	1.56	8.89
565	Day Care	student	4.09	21.38
610	Hospital	1,000 Sq Ft	10.72	3.79
710	General Office (avg size)	1,000 Sq Ft	9.74	3.28
760	Research & Dev Center	1,000 Sq Ft	11.26	3.29
770	Business Park	1,000 Sq Ft	12.44	4.04
820	Shopping Center (avg size)	1,000 Sq Ft	37.75	16.11
932	High-Turnover Restaurant	1,000 Sq Ft	112.18	
934	Fast-Food Restaurant (w/ drive-thru)	1,000 Sq Ft	470.95	

* Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Jobs, Nonresidential Development & Trips Projections

In order to project future employment growth in Pinecrest, TischlerBise assumed that employment would expand by 0.5 percent annual. Using this assumption and the data discussed above, TischlerBise projected job growth, nonresidential development, and vehicle trips for Pinecrest through 2038. These projections, displayed in Figure 32, serve as the basis for nonresidential fee components.

Figure 32. Jobs, Nonresidential Development & Trips Projections

			2018	2023	2028	2033	2038	5-Year	10-Year	20-Year
			Base	5	10	15	20	Change	Change	Change
Jobs										
Industrial Jobs			597	612	628	643	660	15	31	63
Commercial Jobs			5,228	5,360	5,495	5,634	5,776	132	267	548
Institutional Jobs			1,560	1,599	1,640	1,681	1,724	39	80	164
Office / Other Jobs			1,748	1,792	1,837	1,884	1,931	44	89	183
Total Jobs			9,133	9,364	9,600	9,842	10,091	231	467	958
Nonresidential Floor Area (KSF)										
	ITE SF per Job									
Industrial KSF	615		367	376	386	396	406	9	19	39
Commercial KSF	427		2,232	2,289	2,347	2,406	2,467	56	114	234
Institutional KSF	1,076		1,679	1,721	1,764	1,809	1,855	42	86	176
Office / Other KSF	337		589	604	619	635	651	15	30	62
Total Nonresidential Floor Area			4,867	4,990	5,116	5,245	5,378	123	249	511
			2018	2023	2028	2033	2038	5-Year	10-Year	20-Year
			Base	5	10	15	20	Change	Change	Change
Nonresidential Vehicle Trips										
	VTE per KSF	Adj Factor								
Industrial Trips	4.96	50%	911	934	957	981	1,006	23	46	95
Commercial Trips	37.75	33%	27,810	28,512	29,232	29,970	30,727	702	1,422	2,917
Institutional Trips	19.52	33%	10,813	11,086	11,366	11,653	11,947	273	553	1,134
Office / Other Trips	9.74	50%	2,869	2,941	3,016	3,092	3,170	72	147	301
Total Vehicle Trips			42,403	43,473	44,571	45,696	46,850	1,070	2,168	4,447

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