

Comprehensive Athletic Fields Master Plan

Final Report

Prepared for the:

Department of Recreation, Parks &
Cultural Activities

Prepared by:



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Section 1 – Executive Summary

1.1 Introduction and Purpose

The City of Alexandria's athletic fields are among the most used park and recreation facilities in the region and currently unable to meet the demand for a variety of field sports. Currently the City of Alexandria hosts more than 15,000 youth, adult, school participants on 48 athletic fields. The demand is high for practice space and field space throughout the city which has resulted in fields not being able to support a quality experience for users and a challenge to manage and maintain by the staff of the Department of Recreation, Park and Cultural Activities. The City of Alexandria has recognized the challenges to meeting the demand, and is working with sports interest groups to help resolve issues and create a support mechanism.

PROS Consulting, LLC (PROS Team) was retained to evaluate the City's athletic fields and develop a Comprehensive Athletic Field Master Plan for guiding decision-making for improvements to developing and managing athletic fields in the City of Alexandria. The Athletic Fields Master Plan will help set priorities on how to improve existing athletic field sites as well as identifying the need for additional capacity to support the needs of the residents. The purpose of this master plan is to find ways to increase capacity to accommodate the existing demand and provide a more enjoyable user experience.

1.2 Project Process

The PROS Team began the Athletic Field Master Plan by evaluating strengths, weaknesses, opportunities and threats to the success of the fields in Alexandria. The assessment was performed through on-site evaluations and analysis of collected data by the PROS Team with the assistance of City staff. The final outcome desired by the City is a working Athletics Fields Master Plan to outline the priorities and timelines for the Department that included existing or new fields which increase play and productivity over a ten (10) year period to meet the needs of current and future residents.

The PROS Team initiated a three (3) task process to prepare the Comprehensive Athletic Field Master Plan. The three tasks included:

- Situational Assessment
- Alternatives Analysis
- Athletic Field Master Plan Recommendations

The Situational Assessment involved onsite review by the PROS Team of all existing fields that was performed to assess the current conditions, functionality, special features, schedule of use, and capital improvement needs. Current maintenance standards as well as existing resources were evaluated. The PROS Team looked at the budget to maintain fields and options that are available for increasing the operational budget to create a higher level of quality fields and facilities for residents. A detailed inventory of fields was created including an allocation process for determining the equivalent field count based on multiple uses of fields.

The Alternatives Analysis included application of PROS' *Facilities Capacity-Demand Standards Model*™ to determine the capacity of the current athletic fields based on usage factors and guidelines for optimal turf management practices by field type (e.g. engineered, non-engineered, synthetic, etc.). This field capacity was converted to number of events (e.g. games, practices, school physical education classes, etc.) and compared to the demand based on actual usage by age segment and sport. Based on participation factors by sport, the service area (population served by a single field) was calculated and mapped to provide a graphical representation of gaps and overlaps in geographic and population reach. From this information, the PROS Team was able to identify the optimal alternatives for field management, operations, and capital improvements supported by cost benefit analysis.

The Comprehensive Athletic Fields Master Plan includes prioritized recommendations and requirements that will help meet the needs of residents in the most cost effective manner. The final outcome is a working master plan for staff to follow that outlines the requirements and priorities to improve the fields.

The following report presents a summary of findings and analysis organized by major task. Additional support data and information is included in the appendix.

Section 2 – Situational Assessment Summary

The PROS Team evaluated the athletic fields of the City of Alexandria in early 2006. The athletic field assessment was conducted with the maintenance staff responsible for each field in the park system. The purpose of the project is to determine the strengths, weaknesses, opportunities and threats associated with each playing field. The review also looked at the current condition of each facility that included functionality and special features such as size, lighting, fencing, spectator stands, scoreboards, and whether the field was designed and engineered to industry standards. The assessment considered the usage and current schedule of games on each field, as well as the level of capital improvement needed to support the current level of play. The maintenance staff also supplied data information on how each field is maintained and managed.

2.1 Key Findings

The evaluation by the PROS Team identified an athletic field system that is scheduled to the maximum extent possible and is struggling to provide the desired level of services to support the more than 15,000 participants annually. This use comes from scheduled games and practices, as well as after school programs. The City provides approximately 250 permits each year in addition to numerous special events, pick-up games and general resident use that require no permits. Key facts about the fields include:

- The City has a total of 48 base athletic fields that includes 16 engineered field and 32 non-engineered fields.
 - More than half of these fields (27) are either located at schools or are used by schools for daily physical education, sports programs or summer day camps.
 - More than half (52%) of the base fields are multi-use fields by means of overlay fields in the outfield of diamond sports (i.e. Soccer field using a Softball outfield). This effectively reduces the capacity of each base field to support its primary sport by having to share time and space with another sport.
 - Sporting events are programmed on each of the 48 base athletic fields during two separate seasons; Season 1 – Spring/Summer and Season 2 – Fall/Winter.
 - Each base field was analyzed to determine its field equivalent based on its percent of multiple-uses by season. **Figure 1** on the following page presents a summary of the base field inventory and current field equivalent based on use by season and field type.

Field Type	Current Number of Base Fields	Average Number of Field Equivalents (Season 1 & 2 Average) (Based on Multiple-Uses of Fields)	Season 1 Current Number of Field Equivalents (Based on Multiple-Uses of Fields)	Season 2 Current Number of Field Equivalents (Based on Multiple-Uses of Fields)	Current Number of Primary Fields Located at Schools	Season 1 Current Number of Fields Equivalents located at Schools (Based on Multiple-Uses of Fields)	Season 2 Current Number of Field Equivalents located at Schools (Based on Multiple-Uses of Fields)
Youth Softball Field(s), Engineered	-	-	-	-	-	-	-
Youth Softball Field(s), Non-Engineered	12	8.3	8.3	0.1	9.0	7.1	-
Adult Softball Field(s), Engineered	4	2.7	2.7	0.8	1.0	0.5	0.3
Adult Softball Field(s), Non-Engineered	5	2.7	2.7	5.2	2.0	-	1.7
60' Baseball Field(s), Engineered	2	2.0	2.0	2.0	-	-	-
60' Baseball Field(s), Non-Engineered	4	2.9	2.9	3.5	2.0	0.9	1.6
90' Baseball Field(s), Engineered	2	2.0	2.0	2.0	-	-	-
90' Baseball Field(s), Non-Engineered	-	-	-	-	-	-	-
Regulation Soccer Field(s), Engineered	6	5.8	5.8	4.3	4.0	3.8	2.3
Regulation Soccer Field(s), Non-Engineered	6	5.5	5.5	4.0	4.0	4.0	2.5
Junior Soccer Field(s), Engineered	1	2.5	2.5	2.0	1.0	1.7	1.0
Junior Soccer Field(s), Non-Engineered	5	9.0	9.0	14.0	4.0	5.9	10.5
Lacrosse/Rugby/Field Hockey Filed(s), Engineered	-	-	-	-	-	-	-
Lacrosse/Rugby/Field Hockey Filed(s), Non-Engineered	-	3.6	3.6	0.6	-	3.1	0.3
Football Field(s), Engineered	1	1.0	1.0	4.7	-	-	2.3
Football Field(s), Non-Engineered	-	-	-	4.7	-	-	4.4
Total	48.0	48.0	48.0	48.0	27.0	27.0	27.0

Figure 1 – Base Athletic Field Inventory and Current Field Equivalent by Season and Field Type

The following findings represent key issues that the PROS Team considers to be of significance to the City of Alexandria's athletic fields:

- The field design standards are not consistent among the many City fields. In addition, many fields are in very poor condition and lack reasonable amenities to support the type of play occurring on the fields such as restrooms, appropriate field lighting, irrigation, dugouts, player and spectator protection fences, and appropriate parking.
- Current design of most fields cannot support the current levels of use, including:
 - The 17 engineered fields can support a higher level of usage because they are designed to meet industry standards including proper drainage, soil and turf composition and overall support amenities.
 - The 32 non-engineered fields are not as productive as engineered fields due to poor drainage, soil compaction and turf type. These fields have not been engineered to industry standards and are only graded and seeded. Ultimately, non-engineered fields do not present the same value as engineered fields because of constant over seeding and problems managing turf. In an attempt to maintain sports fields, Alexandria has had to consistently replace turf annually on these non-engineered fields.
- There are several issues affecting the current and future capacity of the athletic field system including:
 - The construction at T.C. Williams High School has eliminated four (4) fields from use and has put additional stress on the system. The City has worked to accommodate all sports groups, which has resulted in insufficient rest periods for fields. Sports groups have been reluctant to reduce their game schedules thereby not allowing sufficient time needed to maintain fields.
 - The Potomac Yards Development could further impact the capacity of the athletic fields in the City.
 - The potential loss of the two fields at Jones Point due to the National Park Service environmental assessment will also have a critical impact on future capacity.
- As a result of the tremendous demand and low inventory, most fields are over scheduled for games and practices. The fields are not able to rest (i.e. a period of down-time to allow grass to re-establish itself from wear and damage during activity). Because of this high demand, the fields are not being maintained at an appropriate standard to support quality play and reduce hazardous conditions associated with poor turf coverage. Related issues include:
 - The City does not have an adopted field use policy that supports the level of play and desired field maintenance conditions by field type.
 - Improved adherence to usage guidelines will allow increased levels of maintenance including rest periods along with standards for over-seeding, fertilizing, and irrigation at all natural turf field sites.
 - Uncontrolled use of fields is a major problem and fields need to be monitored and designed to keep uncontrollable play off the fields. A select number of fields should be designated for non-scheduled games and communicated to the residents.
 - Due to the lack of field capacity, the City has had to allow team practices in a number of general open space areas, reducing the space's ability to support other park and open space users.

- Additional capacity in fields is required to meet the demand. The cost and availability of land for development of new facilities will be very expensive. Other alternatives must be evaluated to improve the fields and provide a more enjoyable and safe experience. These include the conversion of fields to synthetic surfaces or upgrading existing non-engineered fields to industry standards to improve their capacity and capabilities to support the high level of usage. In addition, the evaluation of lighting at select fields will increase the overall capacity without the need to purchase expensive land along with the development costs and added maintenance costs.
- Lifecycle management plans for replacement and upgrading of facilities and amenities should be defined.
 - The majority of equipment and athletic area amenities need to be updated (e.g. scoreboards, bleachers, fencing, lights). Most of the lighting systems are outdated (as previously identified from the lighting study), are not energy efficient, and need to be replaced. Many of the lights have lost their UL Rating.
- There are currently no miracle fields, a special sports field designed solely for children and adults with physical and mental disabilities, in the City's park system.
- The City lacks a multi-field complex with the ability to support all tournament play.
- Fees must support the operational costs and cover all direct costs for all adult programming.

Detailed site assessments were performed at each park with active athletic fields. These site assessments provide an overview of existing conditions that currently exists on the individual fields as well as initial comments and recommendations for each. These forms are included in **Appendix A** of this report.

In the PROS Team assessment of the existing athletic fields and facilities, a majority are in poor condition. Resource limitations have impacted the quality of turf. Irrigation, lighting and minimum parking are needed at each site. In the final assessment, fields cannot sustain the high level of use that is being placed on them given the current demand. The vast majority of City fields have surpassed their design limits for the current level of use. The recently developed engineered fields, such as Ben Brenman and Boothe are examples of engineered fields that are holding up much better than most in the City inventory.

Section 3 – Alternatives Analysis

The Alternatives Analysis began by establishing a detailed inventory of the current athletic fields to understand their true capacity to support the demand by the various sports and needs. This analysis included the use of PROS' *Facilities Capacity-Demand Standards Model*[™]. This model calculates the capacity of the current facilities based on usage factors (number of events played) and best industry management practices by field type (e.g. number of events that an individual field can support without serious degradation considering a variety of factors such as whether the field is engineered, non-engineered, synthetic, lighted, non-lighted, irrigated, etc.).

Once the field capacity is calculated, demand is calculated and compared to this capacity. Demand is quantified by individual sports using participation factors based on or comprised of actual (historical usage records maintained by the City and leagues) and probable participation (survey data). These participation factors are organized by representative age segment and sport (e.g. 6 to 18 year old females for youth softball fields). This demand is then converted to number of events (e.g. games, practices, school physical education classes, etc.) required by specific sport.

The current service level for fields is based on each field type's capacity and the associated number of individuals within the representative age segment served by a particular field. This service area is mapped to provide a graphical presentation of gaps and overlaps in geographic and population reach. From the service area mapping, alternatives were developed to address areas where fields are needed or shifted from an over-served area to an underserved area. Capital, operations and maintenance costs were applied to these alternatives and a cost-benefit analysis performed to determine the optimal recommended solution.

Following is the analysis and findings from this effort.

3.1 Facility Equivalents Allocation

The PROS Team collected data on the current inventory of athletic fields in Alexandria and performed a site review to confirm this inventory to assess the current condition and needs at each site. From this base field inventory, the scheduled usage of each facility was identified and organized into two seasons. From this data, the PROS Team allocated the usage of fields by their multiple-uses to quantify a field equivalent count. This field equivalent count was applied as a percentage of the base field inventory. The result of this analysis includes:

- The City has a total of 48 athletic fields (base fields) that includes 16 engineered field and 32 non-engineered fields. More than half of these fields (27) are either located at schools or are used by schools for daily physical education, sports programs or summer day camps.
- More than half (52%) of the base fields are multi-use fields by means of overlay fields in the outfield of diamond sports (i.e. Soccer field using a Softball outfield) effectively reducing the fields capacity.

Figures 2 and 3 on the following pages presents the field allocation by season.

Base Athletic Field Inventory				Season 1 Scheduled Field Usage											
Park Name	Field Name	Existing Base Field	Primary Number of Fields	Primary Field Usage	Primary Number of Fields	Allocation of Primary Number of Fields	Overlay Field #1	Secondary Number of Fields	Allocation of Secondary Number of Fields	Overlay Field # 2	Secondary Number of Fields	Allocation of Secondary Number of Fields	Overlay Field # 3	Secondary Number of Fields	Allocation of Secondary Number of Fields
Angel Park Minor	Angel Park Minor	60' Baseball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	100%									
Armistead L. Booth Park	Boothe Overlay	Adult Softball Field (Engineered)	1	Adult Softball Field (Engineered)	1	50%	Regulation Soccer Field (Engineered)	1	50%	Football Field (Engineered)	0	0%			
Beach Park	Beach Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%									
Ben Brenman Park	Ben Brenman	Regulation Soccer Field (Engineered)	1	Regulation Soccer Field (Engineered)	1	100%									
Ben Brenman Park	Ben Brenman Minor	60' Baseball Field (Engineered)	1	60' Baseball Field (Engineered)	1	100%			0%						
Ben Brenman Park	Ben Brenman Overlay	Adult Softball Field (Engineered)	1	Adult Softball Field (Engineered)	1	66%	Junior Soccer Field (Engineered)	1	34%			0%			
Beverly Park	Beverly Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%									
Braddock Field	Braddock Overlay	60' Baseball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	50%	Regulation Soccer Field (Non-Engineered)	0	0%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	1	50%	Football Field (Non-Engineered)		0%
Braddock Field	Braddock Overlay	Youth Softball Field (Non-Engineered)	1	Youth Softball Field (Non-Engineered)	1	100%									
Braddock Field	Braddock Overlay	Youth Softball Field (Non-Engineered)	1	Youth Softball Field (Non-Engineered)	1	100%									
Brookvalley Park	Brookvalley Ballfield	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%									
Charles Barrett School	Charles Barrett Overlay	Youth Softball Field (Non-Engineered)	1	Youth Softball Field (Non-Engineered)	1	100%									
Chinquapin Park / Forest Park	Chinquapin 1	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	100%	Football Field (Non-Engineered)		0%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	0	0%			
Chinquapin Park / Forest Park	Chinquapin 2	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	100%	Football Field (Non-Engineered)		0%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	0	0%			
Chinquapin Park / Forest Park	Chinquapin 3	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	100%	Football Field (Non-Engineered)		0%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	0	0%			
Chinquapin Park / Forest Park	Chinquapin 4	Regulation Soccer Field (Non-Engineered)	0	Regulation Soccer Field (Non-Engineered)	0	0%	Football Field (Non-Engineered)		0%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	0	0%			
Chinquapin Park / Forest Park	Chinquapin 5	Regulation Soccer Field (Non-Engineered)	0	Regulation Soccer Field (Non-Engineered)	0	0%	Football Field (Non-Engineered)		0%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	0	0%			
Ewald	Ewald	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%									
Fort Ward Park	Fort Ward	Junior Soccer Field (Engineered)	1	Junior Soccer Field (Engineered)	1	100%									
Four Mile Run Park	Four Mile Run	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	100%			0%						
Four Mile Run Park	Four Mile Run #2 Overlay	Adult Softball Field (Engineered)	1	Adult Softball Field (Engineered)	1	100%									
Four Mile Run Park	Four Mile Run #3Overlay	Youth Softball Field (Non-Engineered)	1	Youth Softball Field (Non-Engineered)	1	50%	Junior Soccer Field (Non-Engineered)	1	50%						
Four Mile Run Park	Four Mile Run Major #1	90' Baseball Field (Engineered)	1	90' Baseball Field (Engineered)	1	100%			0%			0%			
Francis Hammond School	Hammond Lower	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	100%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	1	0%						
Francis Hammond School	Hammond Upper	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%									
George Mason School	George Mason Overlay	Youth Softball Field (Non-Engineered)	2	Youth Softball Field (Non-Engineered)	2	134%	Junior Soccer Field (Non-Engineered)	1	66%						
George Washington School	GW field #1 (School)	Regulation Soccer Field (Engineered)	2	Regulation Soccer Field (Engineered)	2	134%	Football Field (Engineered)	0	0%	Junior Soccer Field (Engineered)	1	66%			
Hensley Park	Hensley	Regulation Soccer Field (Engineered)	1	Regulation Soccer Field (Engineered)	1	100%									
Hensley Park	Hensley #1	Adult Softball Field (Non-Engineered)	1	Adult Softball Field (Non-Engineered)	1	100%									
Hensley Park	Hensley #2 Overlay	Adult Softball Field (Engineered)	1	Adult Softball Field (Engineered)	1	50%	Junior Soccer Field (Engineered)	1	50%	Football Field (Non-Engineered)	0				
Hensley Park	Hensley #3	Adult Softball Field (Non-Engineered)	1	Adult Softball Field (Non-Engineered)	1	100%									
James K. Polk School	Polk Lower	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%									
James K. Polk School	Polk Upper Overlay	Youth Softball Field (Non-Engineered)	1	Youth Softball Field (Non-Engineered)	1	50%	Junior Soccer Field (Non-Engineered)	1	50%						
Jefferson Houston	Jefferson Houston	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%									
John Adams	John Adams Overlay	Youth Softball Field (Non-Engineered)	1	Youth Softball Field (Non-Engineered)	1	50%	Junior Soccer Field (Non-Engineered)	1	50%						
Jones Point	Jones Point 1 & 2	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%									
Luckett Stadium	Luckett Field	Adult Softball Field (Non-Engineered)	1	Adult Softball Field (Non-Engineered)	1	71%	60' Baseball Field (Non-Engineered)	1	29%						
Maury Field	Maury Overlay	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	50%	Youth Softball Field (Non-Engineered)	1	50%						
Minnie Howard School	Minnie Howard Overlay	Adult Softball Field (Non-Engineered)	2	Adult Softball Field (Non-Engineered)	2	0%	Regulation Soccer Field (Non-Engineered)	0	0%	Football Field (Non-Engineered)	0	0%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	2	200%
Montgomery Park	Montgomery Park Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%									
Mt. Vernon Rec Center	Mt. Vernon Overlay	Youth Softball Field (Non-Engineered)	1	Youth Softball Field (Non-Engineered)	1	100%	Junior Soccer Field (Non-Engineered)	0	0%						
Nannie J. Lee Center	Lee Center Overlay	Youth Softball Field (Non-Engineered)	2	Youth Softball Field (Non-Engineered)	2	67%	60' Baseball Field (Non-Engineered)	0	0%	Junior Soccer Field (Non-Engineered)	1	134%			
Patrick Henry School	Patrick Henry lower Overlay	60' Baseball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	40%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	1	60%						
Patrick Henry School	Patrick Henry Upper	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%									
Potomac Yards	Fields 1 & 2	Regulation Soccer Field (Engineered)	2	Regulation Soccer Field (Engineered)	2	200%									
Simpson Stadium Park	Little Simpson	60' Baseball Field (Engineered)	1	60' Baseball Field (Engineered)	1	100%			0%						
Simpson Stadium Park	Simpson Major	90' Baseball Field (Engineered)	1	90' Baseball Field (Engineered)	1	100%			0%			0%			
Stevenson Park	Stevenson Square Overlay	60' Baseball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	70%	Youth Softball Field (Non-Engineered)	0	0%	Junior Soccer Field (Non-Engineered)	1	30%			
Taney Avenue Park	Taney Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%									
TC Williams HS	New TC Williams Practice Field	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	50%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	1	50%	Football Field (Non-Engineered)					
TC Williams HS	TC Williams Football Field	Football Field (Engineered)	1	Football Field (Engineered)	1	100%									
William Ramsay School	Ramsay Overlay	Youth Softball Field (Non-Engineered)	1	Youth Softball Field (Non-Engineered)	1	30%	Junior Soccer Field (Non-Engineered)	1	70%						
Windmill Hill/Wikes Street Tunnel	Windmill Hill Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%									
Wilson Bridge Site	Recreation Field	Youth Softball Field (Engineered)	0	Youth Softball Field (Engineered)	0	0%			0%						
Wilson Bridge Site	Recreation Fields	Regulation Soccer Field (Engineered)	0	Regulation Soccer Field (Engineered)	0	0%	Lacrosse/Rugby/Field Hockey Field (Engineered)	0	0%	Football Field (Engineered)		0%			
Wilson Bridge Site	Recreation Fields	Regulation Soccer Field (Engineered)	0	Regulation Soccer Field (Engineered)	0	0%	Lacrosse/Rugby/Field Hockey Field (Engineered)	0	0%	Football Field (Engineered)		0%			
			48		48.0	37.1		13.0	6.1		4.0	2.8		2.0	2.0

Figure 2 - Season 1 (Spring/Summer) Field Allocation Inventory

Base Athletic Field Inventory				Season 2 Scheduled Field Usage								
Park Name	Field Name	Existing Base Field	Primary Number of Fields	Primary	Primary Number of Fields	Allocation of Primary Number of Fields	Overlay Field #1	Allocation of Secondary Number of Fields	Overlay Field # 2	Allocation of Secondary Number of Fields	Overlay Field # 3	Allocation of Secondary Number of Fields
Angel Park Minor	Angel Park Minor	60' Baseball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	100%						
Armistead L. Booth Park	Boothe Overlay	Adult Softball Field (Engineered)	1	Adult Softball Field (Engineered)	1	33%	Football Field (Engineered)	33%	Regulation Soccer Field (Engineered)	33%		
Beach Park	Beach Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%						
Ben Brenman Park	Ben Brenman	Regulation Soccer Field (Engineered)	1	Regulation Soccer Field (Engineered)	1	100%						
Ben Brenman Park	Ben Brenman Minor	60' Baseball Field (Engineered)	1	60' Baseball Field (Engineered)	1	100%						
Ben Brenman Park	Ben Brenman Overlay	Adult Softball Field (Engineered)	1	Junior Soccer Field (Engineered)	1	100%						
Beverly Park	Beverly Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%						
Braddock Field	Braddock Overlay	60' Baseball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	10%	Regulation Soccer Field (Non-Engineered)	0%	Football Field (Non-Engineered)	90%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	0%
Braddock Field	Braddock Overlay	Youth Softball Field (Non-Engineered)	1	Football Field (Non-Engineered)	1	100%						
Braddock Field	Braddock Overlay	Youth Softball Field (Non-Engineered)	1	Football Field (Non-Engineered)	1	100%						
Brookvalley Park	Brookvalley Ballfield	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%						
Charles Barrett School	Charles Barrett Overlay	Youth Softball Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
Chinquapin Park / Forest Park	Chinquapin 1	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	50%	Football Field (Non-Engineered)	50%				
Chinquapin Park / Forest Park	Chinquapin 2	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	50%	Football Field (Non-Engineered)	50%				
Chinquapin Park / Forest Park	Chinquapin 3	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	50%	Football Field (Non-Engineered)	50%				
Chinquapin Park / Forest Park	Chinquapin 4	Regulation Soccer Field (Non-Engineered)	0	Regulation Soccer Field (Non-Engineered)	0	0%						
Chinquapin Park / Forest Park	Chinquapin 5	Regulation Soccer Field (Non-Engineered)	0	Regulation Soccer Field (Non-Engineered)	0	0%						
Ewald	Ewald	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%						
Fort Ward Park	Fort Ward	Junior Soccer Field (Engineered)	1	Junior Soccer Field (Engineered)	1	100%						
Four Mile Run Park	Four Mile Run	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	100%						
Four Mile Run Park	Four Mile Run #2 Overlay	Adult Softball Field (Engineered)	1	Football Field (Engineered)	1	83%	Regulation Soccer Field (Non-Engineered)	17%				
Four Mile Run Park	Four Mile Run #3Overlay	Youth Softball Field (Non-Engineered)	1	Adult Softball Field (Non-Engineered)	1	50%	Junior Soccer Field (Non-Engineered)	50%				
Four Mile Run Park	Four Mile Run Major #1	90' Baseball Field (Engineered)	1	90' Baseball Field (Engineered)	1	100%						
Francis Hammond School	Hammond Lower	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	100%						
Francis Hammond School	Hammond Upper	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
George Mason School	George Mason Overlay	Youth Softball Field (Non-Engineered)	2	Junior Soccer Field (Non-Engineered)	2	200%						
George Washington School	GW field #1 (School)	Regulation Soccer Field (Engineered)	2	Football Field (Engineered)	2	200%						
Hensley Park	Hensley	Regulation Soccer Field (Engineered)	1	Regulation Soccer Field (Engineered)	1	100%						
Hensley Park	Hensley #1	Adult Softball Field (Non-Engineered)	1	Adult Softball Field (Non-Engineered)	1	100%						
Hensley Park	Hensley #2 Overlay	Adult Softball Field (Engineered)	1	Adult Softball Field (Engineered)	1	50%	Football Field (Engineered)	50%				
Hensley Park	Hensley #3	Adult Softball Field (Non-Engineered)	1	Adult Softball Field (Non-Engineered)	1	100%						
James K. Polk School	Polk Lower	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
James K. Polk School	Polk Upper Overlay	Youth Softball Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
Jefferson Houston	Jefferson Houston	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
John Adams	John Adams Overlay	Youth Softball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	50%	Junior Soccer Field (Non-Engineered)	50%				
Jones Point	Jones Point 1 & 2	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%						
Luckett Stadium	Luckett Field	Adult Softball Field (Non-Engineered)	1	Adult Softball Field (Non-Engineered)	1	100%						
Maury Field	Maury Overlay	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
Minnie Howard School	Minnie Howard Overlay	Adult Softball Field (Non-Engineered)	2	Adult Softball Field (Non-Engineered)	2	171%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	29%				
Montgomery Park	Montgomery Park Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%						
Mt. Vernon Rec Center	Mt. Vernon Overlay	Youth Softball Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
Nannie J. Lee Center	Lee Center Overlay	Youth Softball Field (Non-Engineered)	2	Junior Soccer Field (Non-Engineered)	2	200%						
Patrick Henry School	Patrick Henry lower Overlay	60' Baseball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	100%						
Patrick Henry School	Patrick Henry Upper	Junior Soccer Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
Potomac Yards	Fields 1 & 2	Regulation Soccer Field (Engineered)	2	Regulation Soccer Field (Engineered)	2	200%						
Simpson Stadium Park	Little Simpson	60' Baseball Field (Engineered)	1	60' Baseball Field (Engineered)	1	100%						
Simpson Stadium Park	Simpson Major	90' Baseball Field (Engineered)	1	90' Baseball Field (Engineered)	1	100%						
Stevenson Park	Stevenson Square Overlay	60' Baseball Field (Non-Engineered)	1	60' Baseball Field (Non-Engineered)	1	86%	Youth Softball Field (Non-Engineered)	14%				
Taney Avenue Park	Taney Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%						
TC Williams HS	New TC Williams Practice Field	Regulation Soccer Field (Non-Engineered)	1	Regulation Soccer Field (Non-Engineered)	1	33%	Lacrosse/Rugby/Field Hockey Field (Non-Engineered)	33%	Football Field (Non-Engineered)	33%		
TC Williams HS	TC Williams Football Field	Football Field (Engineered)	1	Football Field (Engineered)	1	100%						
William Ramsay School	Ramsay Overlay	Youth Softball Field (Non-Engineered)	1	Junior Soccer Field (Non-Engineered)	1	100%						
Windmill Hill/Wikes Street Tunnel	Windmill Hill Open Space	Junior Soccer Field (Non-Engineered)	0	Junior Soccer Field (Non-Engineered)	0	0%						
Wilson Bridge Site	Recreation Field	Youth Softball Field (Engineered)	0	Youth Softball Field (Engineered)	0	0%						
Wilson Bridge Site	Recreation Fields	Regulation Soccer Field (Engineered)	0	Regulation Soccer Field (Engineered)	0	0%	Lacrosse/Rugby/Field Hockey Field (Engineered)	0%	Football Field (Engineered)	0%		
Wilson Bridge Site	Recreation Fields	Regulation Soccer Field (Engineered)	0	Regulation Soccer Field (Engineered)	0	0%	Lacrosse/Rugby/Field Hockey Field (Engineered)	0%	Football Field (Engineered)	0%		
			48		48.0	42.2		4.3		1.6		

Figure 3 - Season 2 (Fall/Winter) Field Allocation Inventory

3.2 Capacity and Service Area Analysis

Capacity for fields was determined by considering the field type and its ability to support games and events by the representative sport. Based on the professional opinion of the PROS Team, the field condition on the fields in Alexandria is below acceptable industry standards. The more events held on a field, the more the turf will become worn. Without time for rest and growth of new grass, the fields will continue to degrade until they are simply dirt fields.

To accurately determine capacity for each field, factors were established for scheduling, number of users, and operating standards for each of the field types. The following factors were considered for each season to facilitate the calculation of capacity:

- Number of Facility Equivalents in Use – Total number of facilities by field type; multi-use fields and/or overlay fields are counted once for each respective sport/use; double bookings are negated based on scheduling.
- Participating Sports – Types of sports utilizing the facility (i.e. softball, baseball, football).
- Season Parameters – Season start date and end dates for participating sport(s).
- Season Length – Average number of weeks per participating sport(s).
- Length of Event – Average length of event/game/practice for each sport(s); depicted in hours.
- Field Usage Guidelines – Customized guidelines used to quantify the number of weekly events an athletic field can support based on accepted industry practices to ensure the quality of the field is maintained at a desired level. Guidelines consider the amount of usage (i.e. number and length of events) a field can support and the corresponding rest (i.e. non-used time for turf recovery) that is required based on the field construction type (i.e. engineered vs. non-engineered, irrigated vs. non-irrigated). These guidelines were customized to the City of Alexandria based on local conditions and considerations including the high level of demand for athletic fields compared to the realistic availability of the City in meeting the demands with its current inventory of fields. A summary of the Field Usage Guidelines established for the City of Alexandria is presented in **Figure 4**.

Field Construction Type	Primary Use	Recommended Maximum Number of Events Weekly	Average Total Hours of Use Weekly (Based on Maximum Number of Events)	Recommended Minimum Hours of Rest per Event	Recommended Minimum Total Hours of Rest Weekly (Based on Maximum Number of Events)
Synthetic	Game	69	104	N/A	N/A
Engineered/Irrigated	Game	18	27	4	72
Engineered/Non-Irrigated	Game/Limited Practice	13	20	6	80
Non-Engineered/Irrigated	Practice/Limited Game	12	18	8	96
Non-Engineered/Non-Irrigated	Practice Only	9	14	12	108

Figure 4 - Recommended Field Usage Guidelines Summary

Figures 5 and 6 on the following pages present the calculated field capacity by field type based on established Facility Usage Guidelines.

Field Type	Current Number of Base Fields	Season 1 Current Number of Field Equivalents (Based on Multiple-Uses of Fields)	Current Number of Primary Fields Located at Schools	Season 1 Current Number of Fields Equivalents located at Schools (Based on Multiple-Uses of Fields)	SEASON 1 (SPRING/SUMMER) - USAGE CAPACITY (1)				
					Total Weekly Event Capacity (All Fields)	Season Field Event Capacity	Teams Supported per Field	Persons Supported per Facility	Population Service Area (Market size by Target Age Segment)
Youth Softball Field(s), Engineered	-	-	-	-	-	-	9.1	108.7	1 field per 3543
Youth Softball Field(s), Non-Engineered	12	8.3	9.0	7.1	100	997	6.0	72.5	1 field per 2362
Adult Softball Field(s), Engineered	4	2.7	1.0	0.5	48	718	35.4	424.9	1 field per 7970
Adult Softball Field(s), Non-Engineered	5	2.7	2.0	-	33	489	23.6	283.3	1 field per 5313
60' Baseball Field(s), Engineered	2	2.0	-	-	36	360	9.2	110.1	1 field per 1020
60' Baseball Field(s), Non-Engineered	4	2.9	2.0	0.9	35	346	6.1	73.4	1 field per 680
90' Baseball Field(s), Engineered	2	2.0	-	-	36	514	10.5	125.9	1 field per 7888
90' Baseball Field(s), Non-Engineered	-	-	-	-	-	-	-	-	1 field per 0
Regulation Soccer Field(s), Engineered	6	5.8	4.0	3.8	105	1,577	16.4	229.1	1 field per 7698
Regulation Soccer Field(s), Non-Engineered	6	5.5	4.0	4.0	66	990	10.6	148.2	1 field per 4981
Junior Soccer Field(s), Engineered	1	2.5	1.0	1.7	45	450	10.9	152.7	1 field per 2041
Junior Soccer Field(s), Non-Engineered	5	9.0	4.0	5.9	108	1,080	7.3	101.8	1 field per 1361
Lacrosse/Rugby/Field Hockey Filed(s), Engineered	-	-	-	-	-	-	12.6	175.8	1 field per 3685
Lacrosse/Rugby/Field Hockey Filed(s), Non-Engineered	-	3.6	-	3.1	43	648	8.4	117.2	1 field per 2457
Football Field(s), Engineered	1	1.0	-	-	-	-	-	-	1 field per 0
Football Field(s), Non-Engineered	-	-	-	-	-	-	-	-	1 field per 0
Total	48.0	48.0	27.0	27.0	654	8,169	166	2,124	

Figure 5 - Season 1 (Spring/Summer) Field Capacity and Service Level

Field Type	Current Number of Base Fields	Season 2 Current Number of Field Equivalents (Based on Multiple-Uses of Fields)	Current Number of Primary Fields Located at Schools	Season 2 Current Number of Field Equivalents located at Schools (Based on Multiple-Uses of Fields)	SEASON 2 (FALL/WINTER) - USAGE CAPACITY				
					Total Weekly Event Capacity (All Fields)	Total Season Event Capacity (All Fields)	Teams Supported per Field	Persons Supported per Facility	Population Service Area (Market size by Target Age Segment)
Youth Softball Field(s), Engineered	-	-	-	-	-	-	10.0	119.5	1 field per 2064
Youth Softball Field(s), Non-Engineered	12	0.1	9.0	-	2	19	6.6	79.7	1 field per 1376
Adult Softball Field(s), Engineered	4	0.8	1.0	0.3	15	158	25.0	299.5	1 field per 5617
Adult Softball Field(s), Non-Engineered	5	5.2	2.0	1.7	63	661	16.6	199.6	1 field per 3745
60' Baseball Field(s), Engineered	2	2.0	-	-	36	360	9.2	110.1	1 field per 596
60' Baseball Field(s), Non-Engineered	4	3.5	2.0	1.6	41	415	6.1	73.4	1 field per 397
90' Baseball Field(s), Engineered	2	2.0	-	-	36	360	7.3	88.2	1 field per 7407
90' Baseball Field(s), Non-Engineered	-	-	-	-	-	-	-	-	1 field per 0
Regulation Soccer Field(s), Engineered	6	4.3	4.0	2.3	78	946	13.2	185.5	1 field per 6232
Regulation Soccer Field(s), Non-Engineered	6	4.0	4.0	2.5	48	583	8.8	123.6	1 field per 4155
Junior Soccer Field(s), Engineered	1	2.0	1.0	1.0	-	-	7.2	207.9	1 field per 1339
Junior Soccer Field(s), Non-Engineered	5	14.0	4.0	10.5	7	90	4.8	138.6	1 field per 893
Lacrosse/Rugby/Field Hockey Filed(s), Engineered	-	-	-	-	78	946	10.2	142.3	1 field per 2983
Lacrosse/Rugby/Field Hockey Filed(s), Non-Engineered	-	0.6	-	0.3	48	583	6.8	94.9	1 field per 1989
Football Field(s), Engineered	1	4.7	-	2.3	36	473	11.0	154.0	1 field per 1147
Football Field(s), Non-Engineered	-	4.7	-	4.4	168	2,208	7.3	117.4	1 field per 874
Total	48.0	48.0	27.0	27.0	656	7,803	150	2,134	

Figure 6 - Season 2 (Fall/Winter) Field Capacity and Service Level

3.3 Service Area Analysis

The population service area of fields (shown in last column in Figures 5 and 6) represent the market size or pool of potential users for a specific field. These factors, when mapped against population density, show the geographic area or market size for the age segment and gender for a particular sport based on the capacity of the representative field to support the usage. For example:

- A Non-Engineered Youth Softball Field will support 79.7, 6 to 12 year old females per field per season. Based on a probable participation factor of 5.8% of 6 to 12 year old females that participate in organized league play, a non-engineered youth softball field has a market pool of 1,376 females ages 6 to 12.

These service area factors are mapped against the population density by age segment to graphically demonstrate the geographic area that represents the market pool. Mapping these service areas demonstrates the equity distribution of fields for current day population density by census tract. Service area mapping is defined as a circular area around a facility whose radius encompasses the population associated with the appropriate service area factor (i.e. a service area of 1,376 females ages 6 to 12). These service area maps demonstrate gaps or overlaps to help identify where facilities may be needed or where an area is over saturated. This supports decision-making for appropriate capital improvement needs to deliver the highest level of service.

These service area factors serve as a guide. The factors and mapping are to be coupled with conventional wisdom and judgment related to the particular situation and needs of the community. **Figures 7 – 14** present service area maps based on the Population Service Area presented in Season 1 on Figure 4.

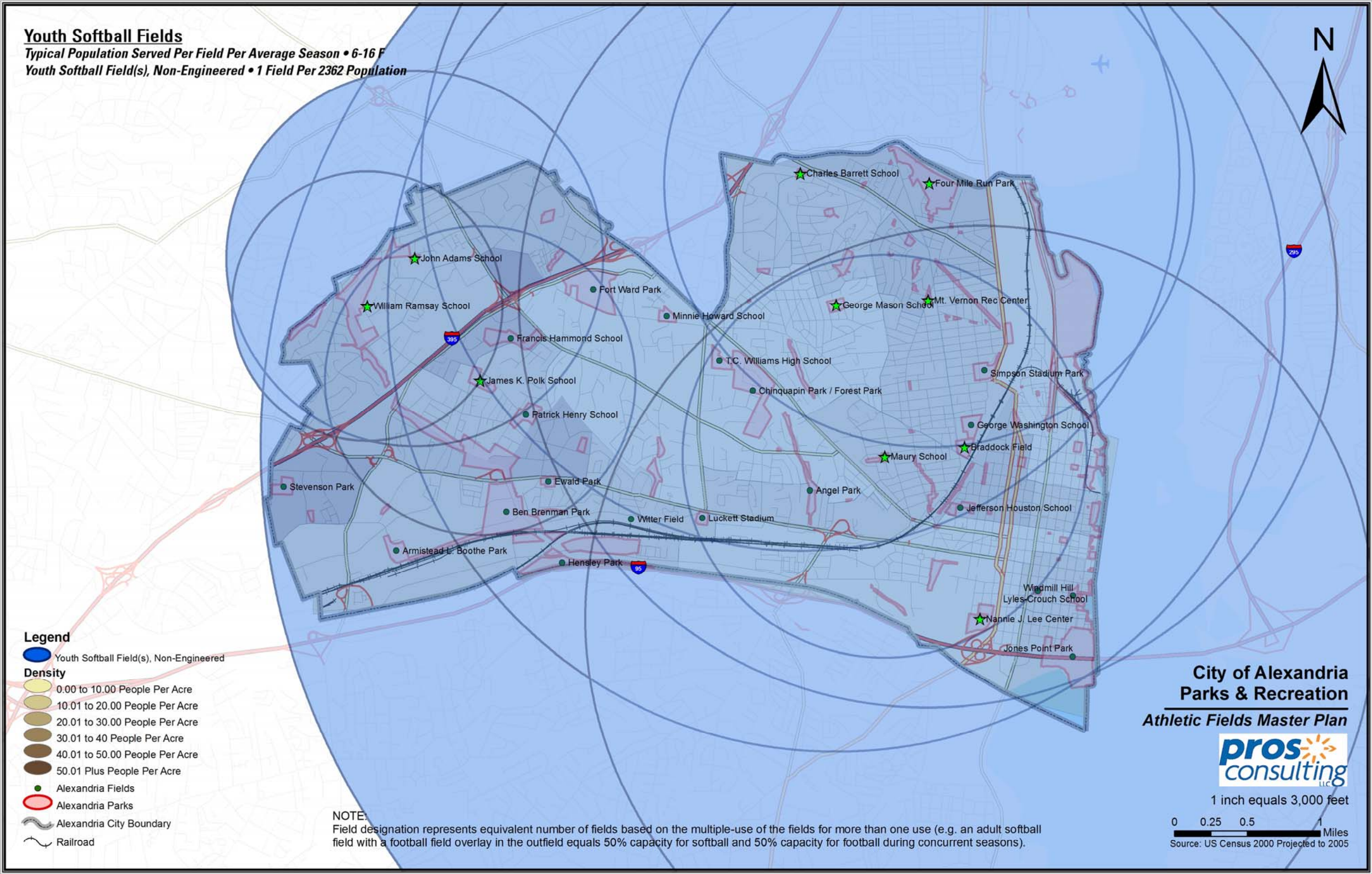


Figure 7 - Youth Softball Service Area Map

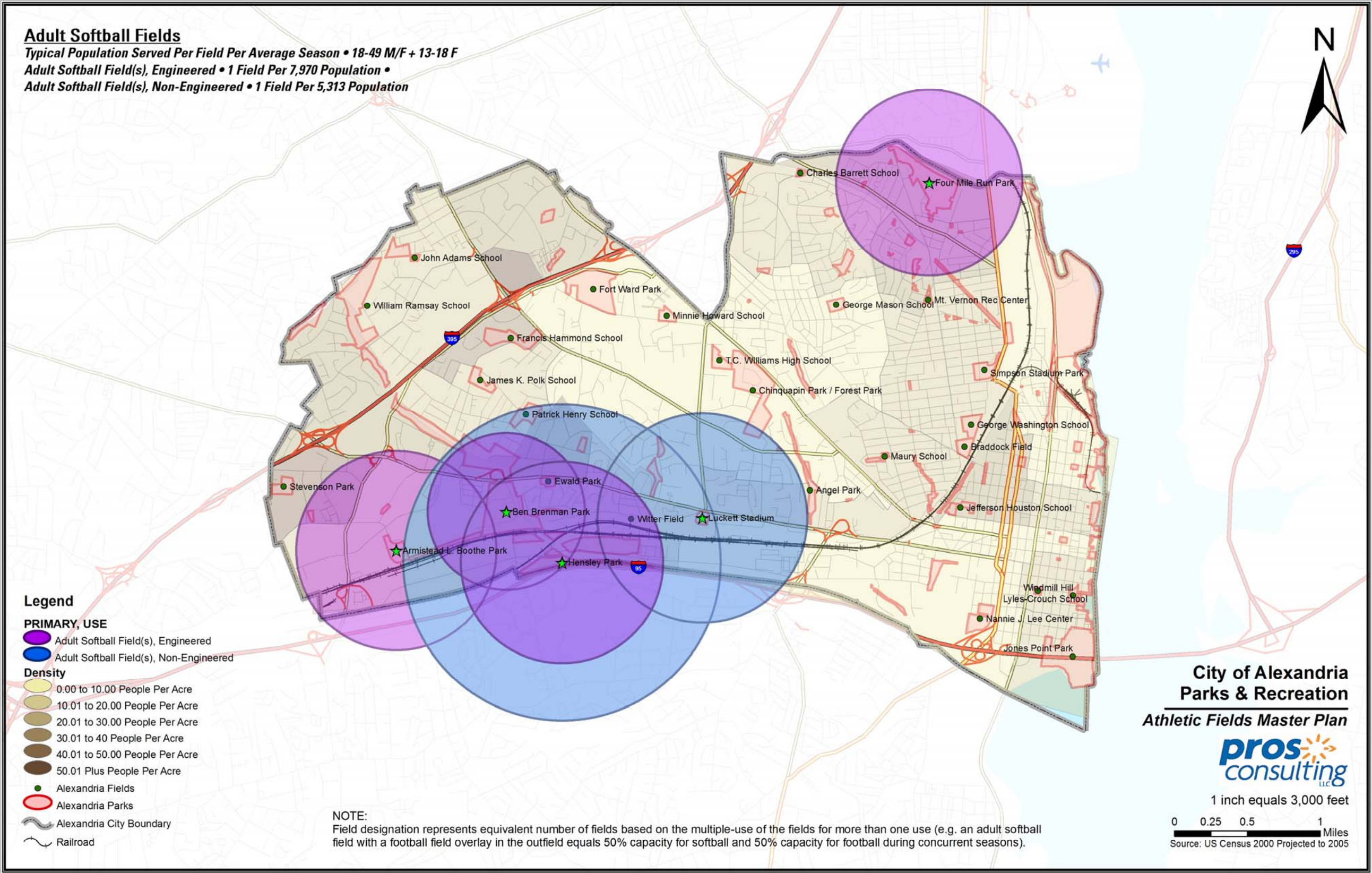


Figure 8 - Adult Softball Service Area Map

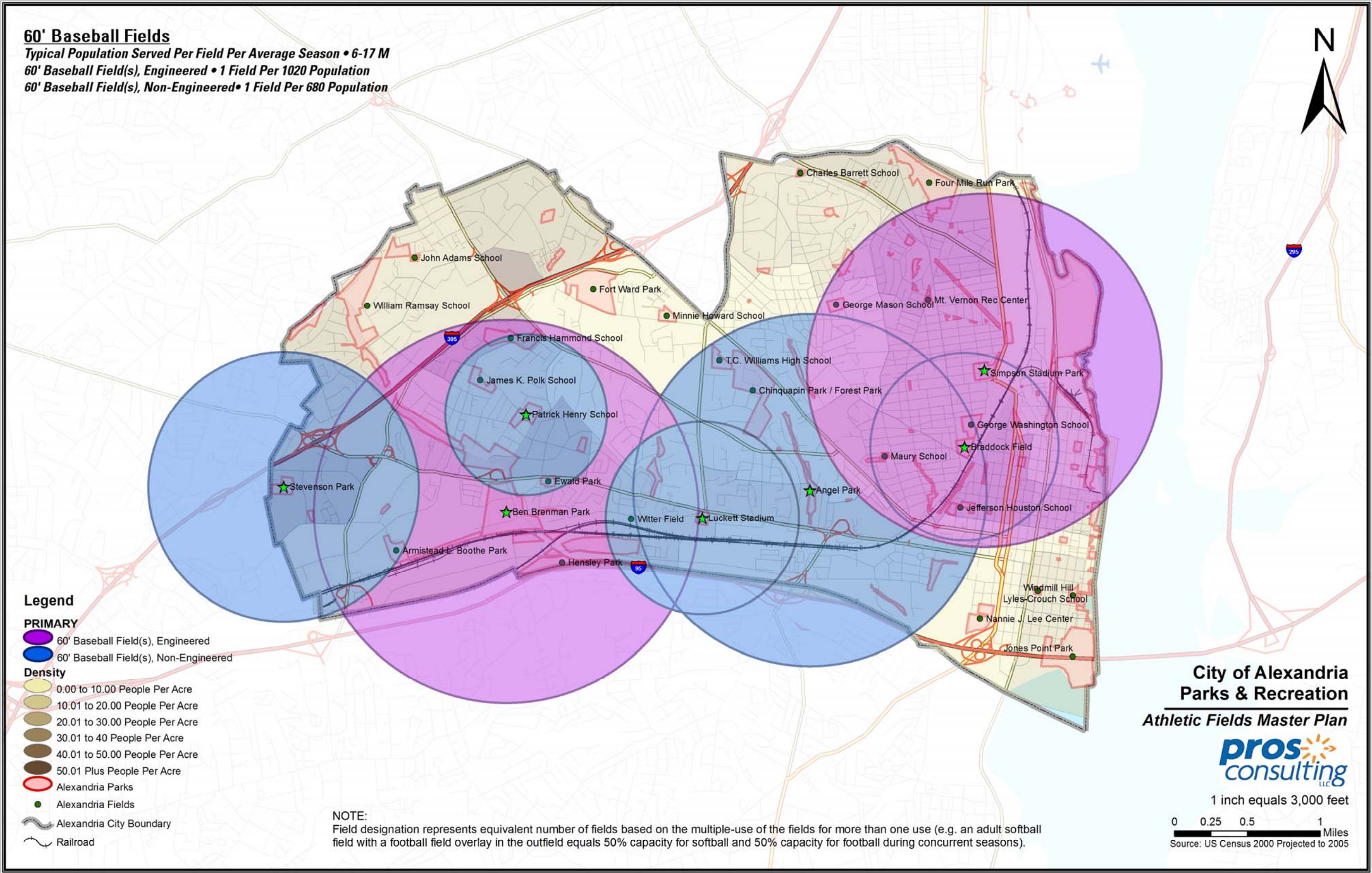


Figure 9 – 60' Baseball Service Area Map

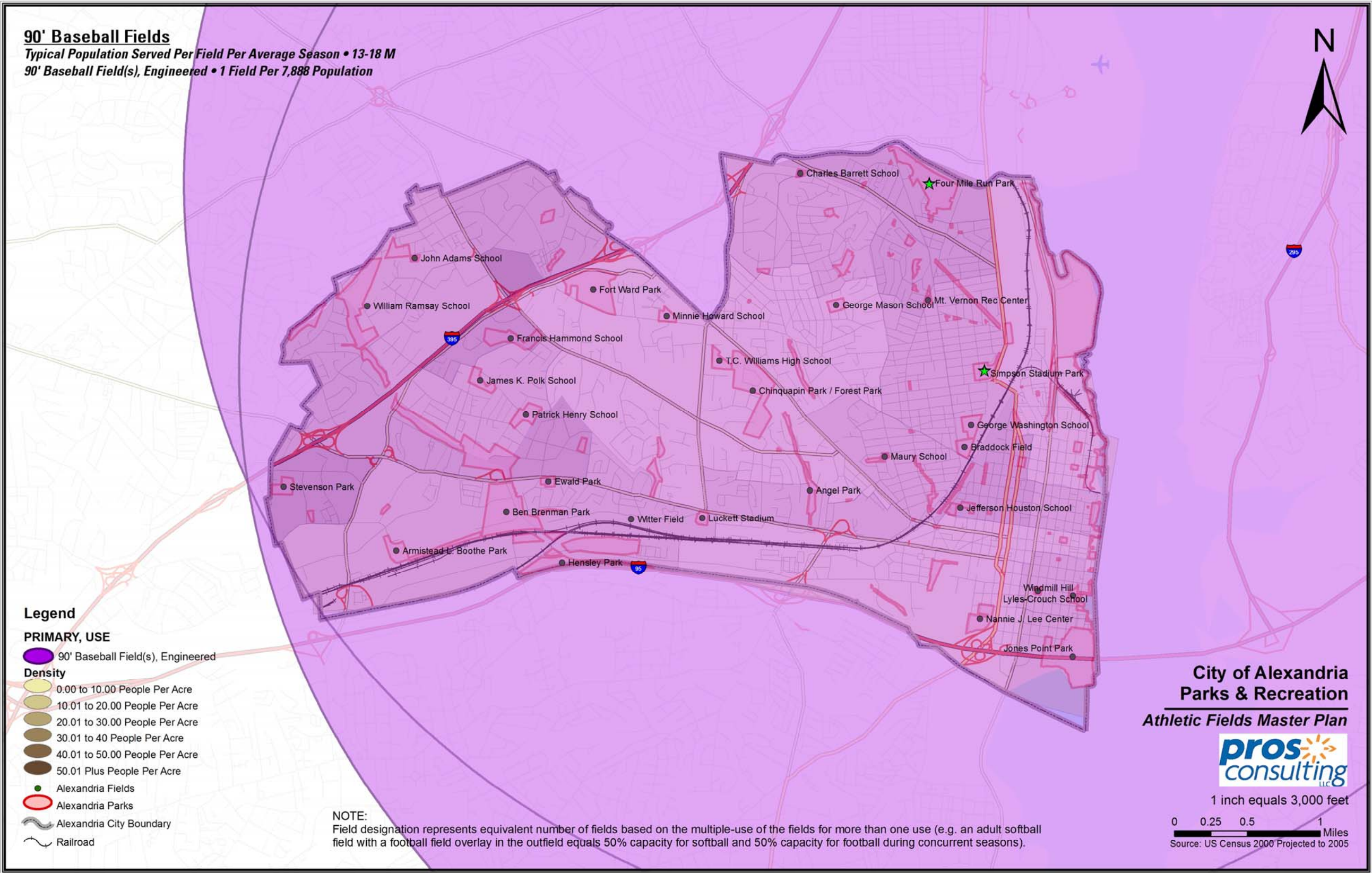


Figure 10 – 90' Baseball Service Area Map

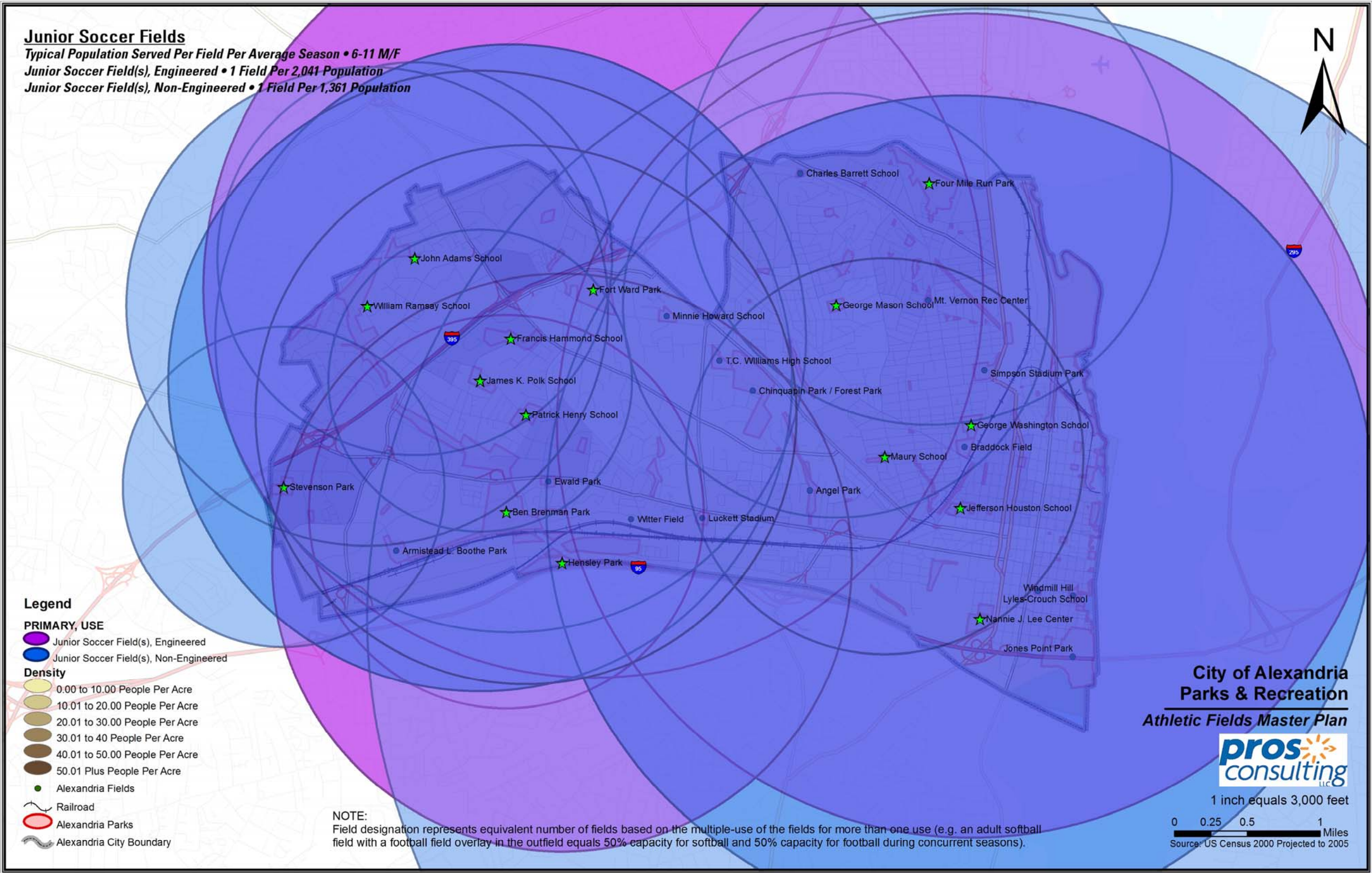


Figure 11 – Junior Soccer Fields

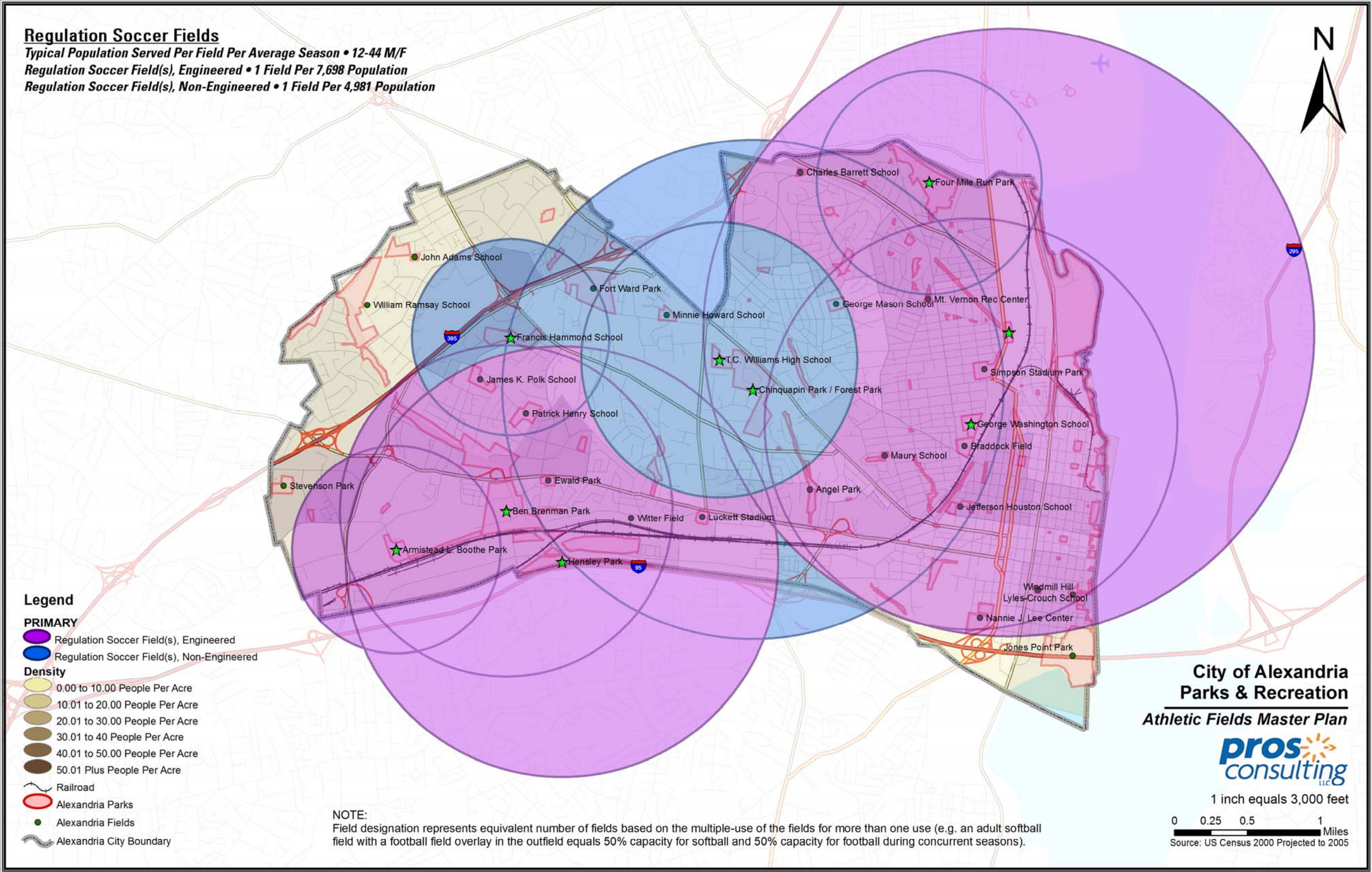


Figure 12 – Regulation Soccer Service Area Map

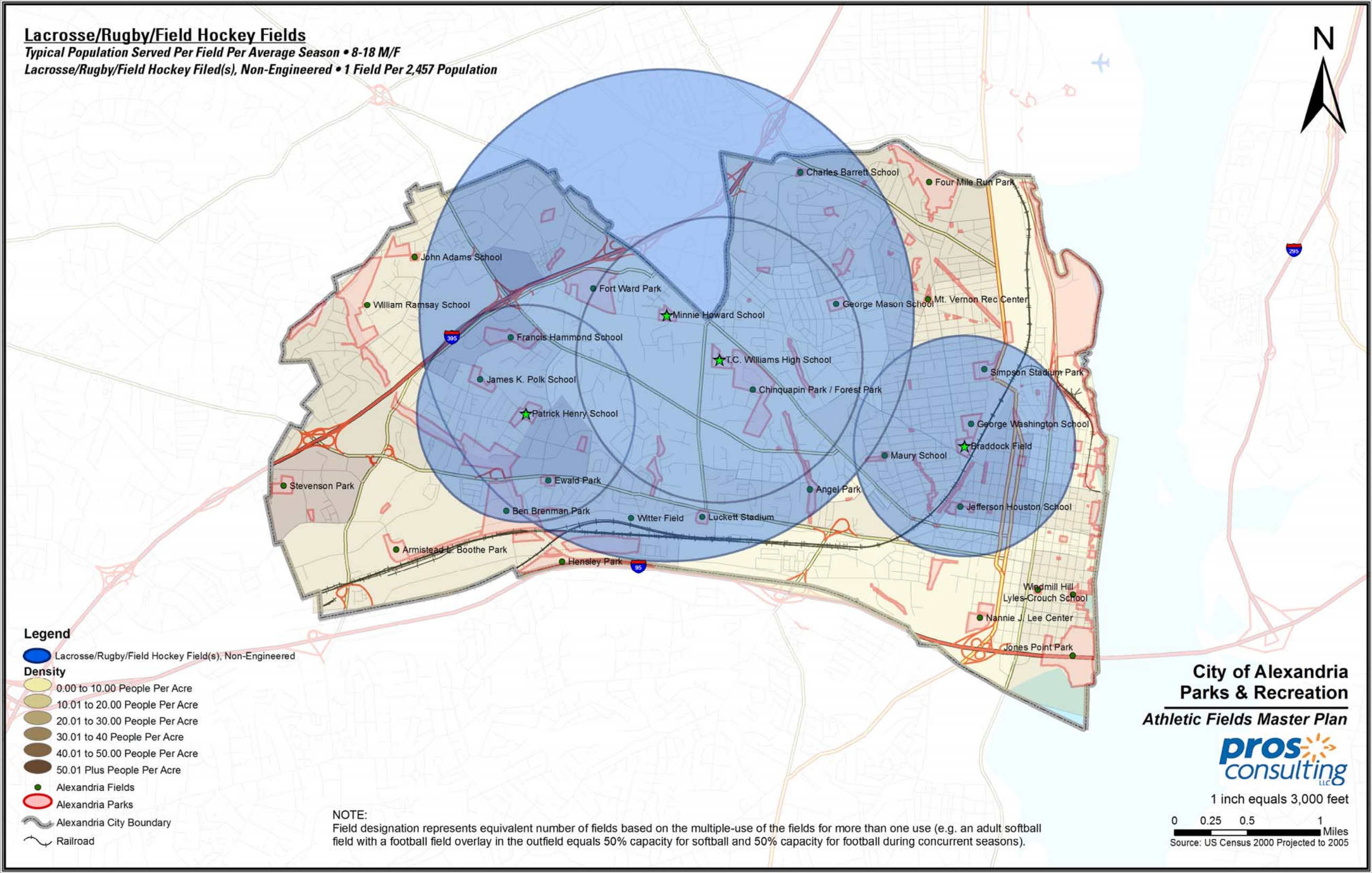


Figure 13 – Lacrosse/Rugby/Field Hockey Field Service Area Map

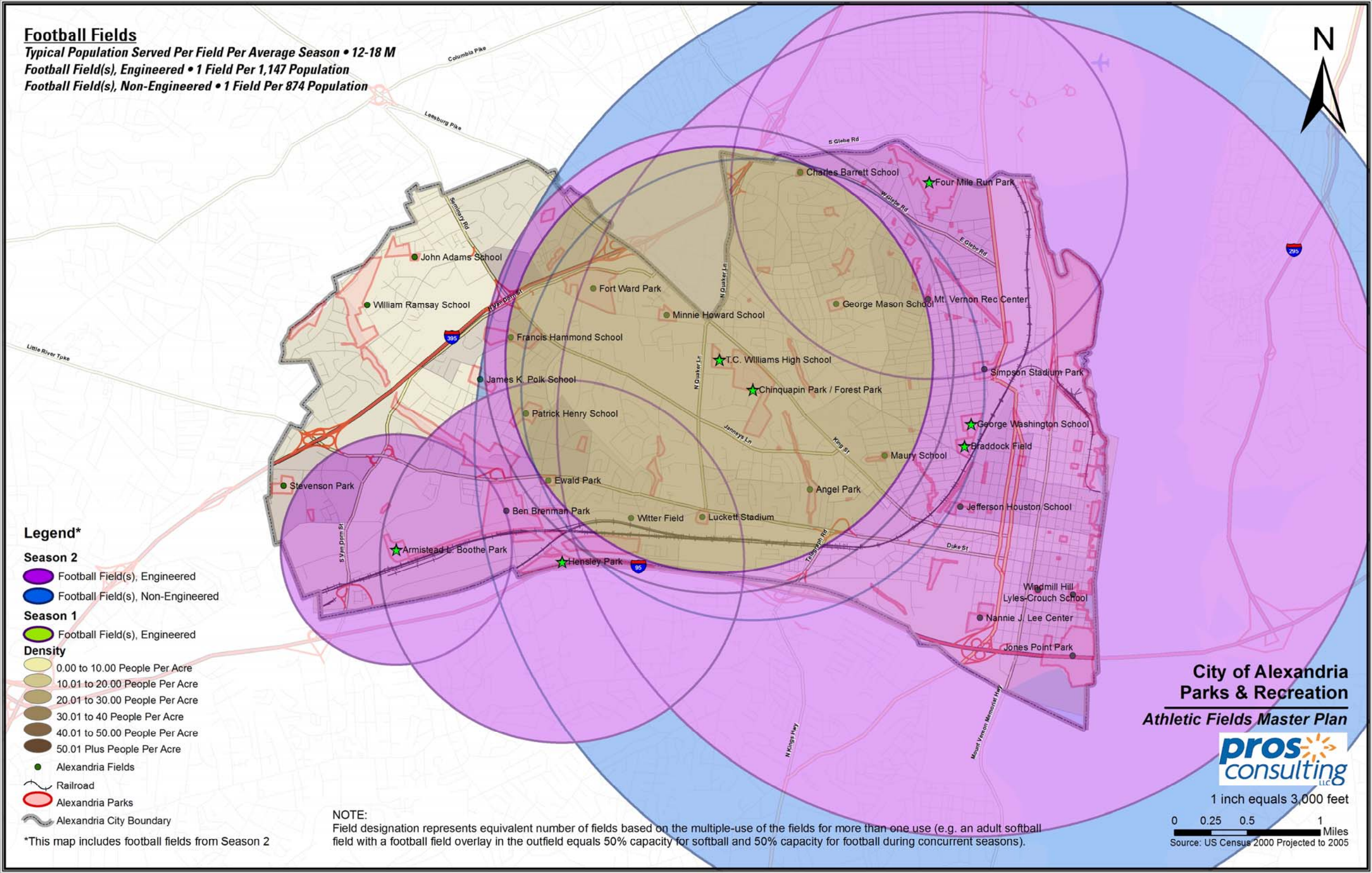


Figure 14 - Football Field Service Area Map

3.4 Demand

To quantify demand for the various fields, usage assumptions were made based on field type and the corresponding sport(s). The following items were considered for each season to calculate the facility demand.

- Practices per Team – average number of practices held by each team at the facility
- Games per Facility per Team – average number of games held at the respective facility
- Average Post-Season and Make-up Games per Team – average number of playoff/post-season games and make-up games
- School Events/Special Events – Number of events held on a field such as physical education classes, summer camps, etc. This does not include organized sports.

Utilizing these factors, capacity by field type was calculated for both weekly and seasonal totals. These were further organized by the capacity available for school activities during the week and sports activities during the week and weekends. The service area is based on the estimated population served of the target market for each respective sport. To better present the effects of the capacity and corresponding service level for each field type, service area maps were prepared to demonstrate the geographic area associated with the target age segment by sport and field type.

When calculating demand, field sports are used as the variable as compared to field type which was used as the variable for calculating the capacity. This approach allows for an understanding of demand by age segment and sport type in order to apply this demand individually to multi-use and overlay fields. As with the capacity calculation, scheduling is responsible for eliminating simultaneous use.

Demand is expressed by target markets – estimated age range and gender of participants by individual sport represented by field type instead of total population. Similar to the capacity calculations, two sets of assumptions were applied to determine the ultimate demand for each sport, target market assumptions and usage assumptions were made for each of the respective sports. The following factors were considered for each sports target market assumptions:

- Target Market of Likely Participants: Age Segment (Census) – range of age segments that generally participate in the respective sport
- Participation in League Play (City of Alexandria) – participation numbers based on current league data provided by the City of Alexandria Parks and Recreation Department
- Population of Age Segment Served (Census) – total population of target market age segment based on Census data
- Probable Participation Percentage of Age Segment – percentage of actual participant to total population by target market age segment

Figure 15 presents the demand by target market for each sport and their corresponding participation factors.

	Target Market Participant Age Segments	Actual Participation Factors from RCPA	Population of Age Segment Served (Census)	Probable Participation Percentage of Age Segment
Youth Softball	6-12	247	3,799	5.8%
Adult Softball	13-49	3,780	70,901	5.3%
Youth (60') Baseball	6-12	620	3,355	18.5%
Teen/Adult (90') Baseball	13-18	28	2,352	1.2%
Regulation Soccer	12-44	1,988	66,794	3.0%
Junior Soccer	6-11	535	7,154	7.5%
Junior Football	7-11	222	2,765	8.0%
Lacrosse/Field Hockey	8-18	511	10,711	4.8%
Regulation Football	12-18	383	2,849	13.4%
Total		8,341		

Figure 15 - Target Market Demand: Participation Factors

The Target Market Demand: Historic participation factors provided by the City were used as the base data for application to quantifying demand defined by number of events required by various activities. The factors used to determine number of events consisted of the following:

- Practices per Team – average number of practices held by each team at the facility
- Games per Facility per Team – average number of games held at the respective facility
- Average Post-Season and Make-up Games per Team – average number of playoff/post-season games and make-up games

Figure 16 on the following page presents the projected demand for sporting events and school related events.

Field Type	SEASON 1 (SPRING/SUMMER) - DEMAND				SEASON 2 (FALL/WINTER) - DEMAND			
	Estimated Number of Games (Events) to be Played (2)	Estimated Number of Practices (Events) to be Held	Estimated Number of School Classes/Camps/Special Events to be Held	Total Estimated Events	Estimated Number of Games (Events) to be Played (2)	Estimated Number of Practices (Events) to be Held	Estimated Number of School Classes/Camps/Special Events to be Held	Total Estimated Events
Youth Softball Fields	108	257	1,311	1,675	-	-	1,311	1,311
Adult Softball Fields	1,043	158	456	1,657	1,043	158	456	1,657
60' Baseball Fields	139	345	282	766	145	362	282	789
90' Baseball Fields	15	42	-	57	8	21	-	29
Regulation Soccer Fields	420	1,144	732	2,296	319	852	732	1,903
Junior Soccer Fields	86	229	1,050	1,365	153	407	1,050	1,610
Lacrosse/Rugby/Field Hockey Fields	100	292	-	392	100	292	-	392
Football Fields	-	-	-	-	132	383	-	514
	1,911	2,466	3,831	8,209	1,900	2,474	3,831	8,205

Figure 16 - Projected Demand by Season

3.5 Field Requirements

The current capacity by field type was compared to current demand to identify how well current demand is being supported. Each field type capacity was further organized by season including school and dedicated sports usage. This allowed for an understanding of the additional field capacity required to meet the needs of school events separate from dedicated sport events.

This analysis indicated the following:

- Eleven (11) total **additional** engineered fields would be required to meet the current demand for school events in Season 1 and eleven (11) total fields in Season 2.
- In Season 1, Softball and Lacrosse fields were the only fields the analysis indicated a deficit in meeting current requirements
- In Season 2, nine (9) total **additional** fields are required to meet sporting event demand.
- When evaluating total net field needs, 6 total **additional** fields are required in Season 1 and 19 in Season 2.

For this analysis, it was assumed that any new fields would at minimum be engineered fields. **Figures 17 and 18** presents a summary of Capacity versus Demand and the number of additional fields required to meet the current demand by field type.

Field Type	SEASON 1 (SPRING/SUMMER) - CAPACITY vs. DEMAND - FIELD REQUIREMENTS								
	Estimated Capacity for School Events (2)	Net School Related Event Capacity Over/ (Under) (2)	Number of ADDITIONAL Fields Required for Current School Related Events Demand (Based on Engineered Fields)	Estimated Capacity for Sports Events (2)	Net Sports Event Capacity Over/ (Under) (2)	Number of ADDITIONAL Fields Required to meet Current Sport Events Demand (Based on Engineered Fields)	Total Estimated Season Event Capacity by Field Type	Current Event Capacity Over/ (Under) Total Events	Total number of ADDITIONAL fields required to meet current event demand (Based on Engineered Fields)
Youth Softball Fields	-	(882.6)	4.9	-	204.4	-	997	(678)	3.8
	428			569					
Adult Softball Fields	68	(388.5)	1.4	651	(61.7)	0.2	1,207	(450)	1.7
	-			489					
60' Baseball Fields	-	(228.0)	1.3	360	168.8	-	706	(59)	0.3
	54			292					
90' Baseball Fields	-	-	-	514	457.1	-	514	457	-
	-			-					
Regulation Soccer Fields	518	146.4	-	1,058	124.7	-	3,215	919	-
	360			630					
Junior Soccer Fields	149	(549.0)	3.1	301	713.6	-	1,530	165	-
	352			728					
Lacrosse/Rugby/Field Hockey Fileds	-	279.0	-	-	(23.4)	0.1	648	256	-
	279			369					
Football Fields	-	-	-	-	-	-	-	-	-
	-			-					
	2,208	(1,623)	11	5,961	1,584	0	8,817	609	6

Figure 17 - Season 1 Field Requirements

Field Type	SEASON 2 (WINTER/FALL) - CAPACITY vs. DEMAND - FIELD REQUIREMENTS								
	Estimated Capacity for School Events (2)	Net School Related Event Capacity Over/ (Under) (2)	Number of ADDITIONAL Fields Required for Current School Related Events Demand (Based on Engineered Fields)	Estimated Capacity for Sports Events (2)	Net Sports Event Capacity Over/ (Under) (2)	Number of ADDITIONAL Fields Required to meet Current Sport Events Demand (Based on Engineered Fields)	Total Estimated Season Event Capacity by Field Type	Current Event Capacity Over/ (Under) Total Events	Total number of ADDITIONAL fields required to meet current event demand (Based on Engineered Fields)
Youth Softball Fields	-	(1,311.0)	6.6	-	18.9	-	19	(1,292.1)	6.5
	-			19					
Adult Softball Fields	31	(315.9)	1.7	127	(521.7)	2.7	819	(837.5)	4.4
	109			553					
60' Baseball Fields	-	(186.0)	1.0	360	171.9	-	775	(14.1)	0.1
	96			319					
90' Baseball Fields	-	-	-	360	331.4	-	360	331.4	-
	-			-					
Regulation Soccer Fields	255	(295.2)	1.4	692	(78.9)	0.4	1,529	(374.1)	1.7
	182			401					
Junior Soccer Fields	118	(103.7)	0.4	(118)	(1,416.5)	6.0	90	(1,520.2)	6.4
	828			(738)					
Lacrosse/Rugby/Field Hockey Fileds	-	20.8	-	946	1,116.1	-	1,529	1,136.9	-
	21			562					
Football Fields	276	622.6	-	198	1,544.3	-	2,681	2,166.9	-
	347			1,861					
	2,263	(1,568)	11	5,540	1,166	9	7,803	(403)	19

Figure 18 - Season 2 Field Requirements

3.6 Alternatives Analysis

Due to lack and cost of available land to locate additional fields in the City of Alexandria, the PROS Team evaluated the opportunity of increasing the capacity of existing fields. To support this strategy, the following objectives were defined:

- Increase capacity of current fields to the greatest extent possible through the use of synthetic surfaces
- Strive to reduce duplicate and overlay use of fields to increase effective capacity
- Improve overall quality and sustainability of sports fields to support high levels of use

The PROS Team evaluated each field's current use and identified proposed improvements that supported the overall objectives. Through extensive analysis, it was determined that improvements to existing fields and shifts in the uses of existing fields could yield the necessary capacity to meet current demand and provide for additional capacity for the future. This included recommendations for development of recently proposed parks. The basis for these recommendations is included in Appendix A – Facility Assessment Matrix.

With an aggressive redevelopment and redesign of the Alexandria athletic fields, the overall objectives can be achieved. **Figure 19** presents a summary of Proposed Field Improvements by Field Type including a breakout of those located at schools or used for school activities.

Based on the proposed improvements, additional capacity will be created based on shifts to synthetic surfaces on 46 base athletic fields along with the addition of lighting and reduction of overlay fields. **Figures 20** and **21** present the affect the proposed improvements have on meeting the current demand.

Field Type	Current Number of Base Fields	Proposed Number of Primary Fields				Proposed Number of Equivalent Fields (Total)				Proposed Number of Equivalent Fields Located at Schools			
		Non-Engineered Fields	Engineered Fields	Synthetic	Total	Non-Engineered Fields	Engineered Fields	Synthetic	Total	Non-Engineered Fields	Engineered Fields	Synthetic	Total
Youth Softball Fields	-	-	1.0	9.0	10.0	-	0.5	5.3	5.8	-	0.5	3.7	4.2
	12												
Adult Softball Fields	4	1.0	2.0	6.0	9.0	1.0	1.3	4.8	7.2	-	0.3	1.3	1.7
	5												
Youth Baseball Fields	2	-	4.0	2.0	6.0	-	4.0	2.0	6.0	-	-	0.3	0.3
	4												
Adult Baseball Fields	2	-	2.0	-	2.0	-	2.0	-	2.0	-	-	-	-
	-												
Regulation Soccer Fields	6	-	-	18.0	18.0	-	0.3	12.2	12.5	-	0.3	6.8	7.2
	6												
Junior Soccer Fields	1	-	1.0	8.0	9.0	-	2.0	11.0	13.0	-	2.0	5.3	7.3
	5												
Lacrosse/Rugby/Field Hockey Fileds	-	-	-	1.0	1.0	-	0.3	4.3	4.7	-	-	2.8	2.8
	-												
Football Fields	1	-	1.0	1.0	2.0	-	2.2	3.7	5.8	-	0.3	2.2	2.5
	-												
48.0		1.0	11.0	45.0	57.0	1.0	12.7	43.3	57.0	-	3.5	22.5	26.0

Figure 19 - Summary of Proposed Field Improvements

Field Type	Proposed Number of Equivalent Fields (Total)				SEASON 1 (SPRING/SUMMER) - PROPOSED IMPROVEMENTS					
	Non-Engineered Fields	Engineered Fields	Synthetic	Total	Estimated School Event Capacity based on PROPOSED IMPROVEMENTS	Over/ (Under) Estimated School Events Capacity Based on PROPOSED IMPROVEMENTS	Estimated Sports Event Capacity Based on Proposed Field Improvement Based on PROPOSED IMPROVEMENTS	Over/ (Under) Estimated Sports Events Capacity Based on PROPOSED IMPROVEMENTS	Estimated TOTAL Event Capacity Based on PROPOSED IMPROVEMENTS	Over/ (Under) Net Event Capacity for Combined Sports-School Events Based on PROPOSED IMPROVEMENTS
Youth Softball Fields	-	0.5	5.3	5.8	1,147.0	(164.0)	1,922.6	1,558	3,069.6	1,394.2
Adult Softball Fields	1.0	1.3	4.8	7.2	648.0	192.0	1,599.6	399	2,247.6	590.7
60' Baseball Fields	-	4.0	2.0	6.0	100.0	(182.0)	1,595.0	1,111	1,695.0	929.5
90' Baseball Fields	-	2.0	-	2.0	-	-	360.0	303	360.0	302.8
Regulation Soccer Fields	-	0.3	12.2	12.5	3,117.0	2,385.0	2,075.4	512	5,192.4	2,896.7
Junior Soccer Fields	-	2.0	11.0	13.0	1,779.0	729.0	2,869.7	2,554	4,648.7	3,283.3
Lacrosse/Rugby/Field Hockey Fileds	-	0.3	4.3	4.7	1,273.5	1,273.5	862.6	470	2,136.1	1,743.7
Football Fields	-	2.2	3.7	5.8	-	-	-	-	-	-
	1.0	12.7	43.3	57.0	6,791	2,960	10,422	6,437	19,349	9,397

Figure 20 – Season 1 (Spring/Summer): Summary of Capacity vs. Demand based on Proposed Field Improvements

Field Type	Proposed Number of Equivalent Fields (Total)				SEASON 2 (FALL/Winter) - PROPOSED IMPROVEMENTS					
	Non-Engineered Fields	Engineered Fields	Synthetic	Total	Estimated School Event Capacity based on PROPOSED IMPROVEMENTS	Over/ (Under) Estimated School Events Capacity Based on PROPOSED IMPROVEMENTS	Estimated Sports Event Capacity Based on Proposed Field Improvement Based on PROPOSED IMPROVEMENTS	Over/ (Under) Estimated Sports Events Capacity Based on PROPOSED IMPROVEMENTS	Estimated TOTAL Event Capacity Based on PROPOSED IMPROVEMENTS	Over/ (Under) Net Event Capacity for Combined Sports-School Events Based on PROPOSED IMPROVEMENTS
Youth Softball Fields	-	0.5	5.3	5.8	1,261.7	(49.3)	364.5	365	1,626.2	315.2
Adult Softball Fields	1.0	1.3	4.8	7.2	456.7	0.7	1,919.3	718	2,376.0	719.1
60' Baseball Fields	-	4.0	2.0	6.0	100.0	(182.0)	1,790.0	1,283	1,890.0	1,101.0
90' Baseball Fields	-	2.0	-	2.0	-	-	360.0	331	360.0	331.4
Regulation Soccer Fields	-	0.3	12.2	12.5	2,523.3	1,791.3	2,361.1	1,190	4,884.3	2,981.0
Junior Soccer Fields	-	2.0	11.0	13.0	2,338.1	1,288.1	5,309.3	4,749	7,647.4	6,037.5
Lacrosse/Rugby/Field Hockey Fileds	-	0.3	4.3	4.7	1,030.9	1,030.9	1,089.3	697	2,120.3	1,727.9
Football Fields	-	2.2	3.7	5.8	893.3	893.3	3,033.1	2,519	3,926.4	3,412.2
	1.0	12.7	43.3	57.0	8,604	4,773	16,227	11,852	24,831	16,625

Figure 21 – Season 2 (Fall/Winter): Summary of Capacity vs. Demand based on Proposed Field Improvements

3.7 Cost-Benefit Analysis

The PROS Team evaluated the cost-benefit of these proposed improvements along with recommended priorities. Based on the proposed improvements, the overall objectives can be achieved with an estimated initial development cost of \$17.8 million with an annual maintenance cost savings of \$1 million. A summary of these costs is seen in **Figure 22**.

Priority Improvements	Total Est. Field Development Cost	Estimated Cost for Other Proposed Improvements	Total Estimated Cost for Proposed Improvements	Est Annual Maintenance Cost Current Field (Direct Costs)	Estimated Annual Maintenance Cost Difference - Proposed Improvements LESS Current Field Type
High	\$ 11,020,846	\$ 10,092,400	\$ 21,113,246	\$ 1,810,932	\$ (530,855)
Medium	\$ 3,595,595	\$ 2,016,000	\$ 5,611,595	\$ 573,555	\$ (84,963)
Low	\$ 2,541,927	\$ 3,232,000	\$ 5,773,927	\$ 1,137,277	\$ (445,042)
	\$ 17,158,369	\$ 15,340,400	\$ 32,498,769	\$ 3,521,764	\$ (1,060,860)

Figure 22 - Summary of Recommended Improvements and Cost Benefit

Figure 23 on the following page presents the detailed proposed improvements by park sorted in alphabetical order.

Park Name	Field Name	Existing Base Field	Proposed Primary Field(s)	Recommended Changes (additional improvements identified in Field Matrix)	Priority Ranking	ESTIMATED COST DATA BY CURRENT FIELD TYPE		ESTIMATED COST DATA BY PROPOSED FIELD TYPE					DIFFERENCE - PROPOSED LESS CURRENT
						Current Field Type	Est Annual Maintenance Cost Current Field (Direct Costs)	Proposed Field Type	Total Est. Field Development Cost	Estimated Cost for Other Proposed Improvements	Total Estimated Cost for Proposed Improvements	Est Annual Maintenance Cost Current Field (Direct Costs)	Estimated Annual Cost Difference - Proposed LESS Current
Angel Park Minor	Angel Park Minor	60' Baseball Field (Non-Engineered)	60' Baseball Field (Engineered)	Upgrade to engineered field.	Medium	Non-Engineered	\$ 58,982	Engineered	\$ 26,400	\$ 25,000	\$ 51,400	\$ 93,425	\$ 34,442
Armistead L. Booth Park	Boothe Overlay	Adult Softball Field (Engineered)	Adult Softball Field (Engineered)	Maintain as currently configured.	Low	Engineered	\$ 115,816	Engineered	\$ 32,727	\$ 400,000	\$ 432,727	\$ 115,816	\$ -
Beach Park	Beach Open Space	Junior Soccer Field (Non-Engineered)	Open Space	Maintain as open space.	Low	Non-Engineered	\$ 65,863	NONE	\$ -	\$ -	\$ -	\$ -	\$ (65,863)
Ben Brenman Park	Ben Brenman	Regulation Soccer Field (Engineered)	Regulation Soccer Field (Synthetic)	Upgrade to synthetic surface with 2 additional synthetic junior lighted soccer fields in open area	High	Engineered	\$ 381,484	Synthetic	\$ 1,886,500	\$ 600,000	\$ 2,486,500	\$ 202,438	\$ (179,045)
Ben Brenman Park	Ben Brenman Minor	60' Baseball Field (Engineered)	60' Baseball Field (Engineered)	Maintain youth baseball as currently configured.	High	Engineered	\$ 155,708	Engineered	\$ 44,000	\$ 600,000	\$ 644,000	\$ 155,708	\$ -
Ben Brenman Park	Ben Brenman Overlay	Adult Softball Field (Engineered)	Adult Softball Field (Engineered)	Relocate overlay soccer field to open area.	High	Engineered	\$ 144,770	Engineered	\$ 40,909	\$ -	\$ 40,909	\$ 144,770	\$ -
Beverly Park	Beverly Open Space	Junior Soccer Field (Non-Engineered)	Junior Soccer Field (Non-Engineered)	Maintain as open space.	Low	Non-Engineered	\$ 65,863	Non-Engineered	\$ 7,370	\$ -	\$ 7,370	\$ 65,863	\$ -
Braddock Field	Braddock Overlay	60' Baseball Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Master Plan entire park in conjunction with George Washington School with synthetic fields and running track.	High	Non-Engineered	\$ 73,118	Synthetic	\$ 572,727	\$ 296,000	\$ 868,727	\$ 61,459	\$ (11,660)
Braddock Field	Braddock Overlay	Youth Softball Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Master Plan entire park in conjunction with George Washington School with synthetic fields and running track.	High	Non-Engineered	\$ 73,118	Synthetic	\$ 572,727	\$ 296,000	\$ 868,727	\$ 61,459	\$ (11,660)
Braddock Field	Braddock Overlay	Youth Softball Field (Non-Engineered)	Remove Field	Remove field as part of new park master plan in conjunction with George Washington School.	High	Non-Engineered	\$ 58,982	NONE	\$ -	\$ -	\$ -	\$ -	\$ (58,982)
Brookvalley Park	Brookvalley Ballfield	Junior Soccer Field (Non-Engineered)	Open Space	Maintain as open space.	Low	Non-Engineered	\$ 65,863	NONE	\$ -	\$ -	\$ -	\$ -	\$ (65,863)
Charles Barrett School	Charles Barrett Overlay	Youth Softball Field (Non-Engineered)	Youth Softball Field (Synthetic)	Upgrade to synthetic surface.	Medium	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 36,000	\$ 290,545	\$ 27,315	\$ (5,182)
Chinquapin Park / Forest Park	Chinquapin 1	Regulation Soccer Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 149,400	\$ 403,945	\$ 27,315	\$ (5,182)
Chinquapin Park / Forest Park	Chinquapin 2	Regulation Soccer Field (Non-Engineered)	Football Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 149,000	\$ 403,545	\$ 27,315	\$ (5,182)
Chinquapin Park / Forest Park	Chinquapin 3	Regulation Soccer Field (Non-Engineered)	Lacrosse/Rugby/Field Hockey Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 149,000	\$ 403,545	\$ 27,315	\$ (5,182)
Chinquapin Park / Forest Park	Chinquapin 4	Regulation Soccer Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 149,000	\$ 403,545	\$ 27,315	\$ (5,182)
Chinquapin Park / Forest Park	Chinquapin 5	Regulation Soccer Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Non-Engineered	\$ 18,280	Synthetic	\$ 143,182	\$ 149,000	\$ 292,182	\$ 15,365	\$ (2,915)
Ewald	Ewald	Junior Soccer Field (Non-Engineered)	Junior Soccer Field (Synthetic)	Upgrade to synthetic surface.	Medium	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 25,000	\$ 279,545	\$ 27,315	\$ (5,182)
Fort Ward Park	Fort Ward	Junior Soccer Field (Engineered)	Regulation Soccer Field (Synthetic)	Upgrade to synthetic surface. Proposed for non-scheduled/pick-up games.	Medium	Engineered	\$ 127,397	Synthetic	\$ 630,000	\$ 25,000	\$ 655,000	\$ 67,605	\$ (59,792)
Four Mile Run Park	Four Mile Run	Regulation Soccer Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Upgrade to synthetic surface.	High	Non-Engineered	\$ 73,118	Synthetic	\$ 572,727	\$ 25,000	\$ 597,727	\$ 61,459	\$ (11,660)
Four Mile Run Park	Four Mile Run #2 Overlay	Adult Softball Field (Engineered)	Adult Softball Field (Synthetic)	Upgrade to synthetic surface.	Low	Engineered	\$ 80,428	Synthetic	\$ 397,727	\$ 330,000	\$ 727,727	\$ 42,680	\$ (37,748)
Four Mile Run Park	Four Mile Run #3Overlay	Youth Softball Field (Non-Engineered)	Youth Baseball Field (Synthetic)	Reconfigure for separate youth baseball and rectangle synthetic fields.	High	Non-Engineered	\$ 50,777	Synthetic	\$ 397,727	\$ 100,000	\$ 497,727	\$ 42,680	\$ (8,097)
Four Mile Run Park	Four Mile Run Major #1	90' Baseball Field (Engineered)	90' Baseball Field (Engineered)	General improvements.	High	Engineered	\$ 267,039	Engineered	\$ 75,460	\$ 267,000	\$ 342,460	\$ 267,039	\$ -
Francis Hammond School	Hammond Lower	Regulation Soccer Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Upgrade to synthetic surface.	High	Non-Engineered	\$ 73,118	Synthetic	\$ 572,727	\$ 225,000	\$ 797,727	\$ 61,459	\$ (11,660)
Francis Hammond School	Hammond Upper	Junior Soccer Field (Non-Engineered)	Junior Soccer Field (Synthetic)	Upgrade to synthetic surface.	High	Non-Engineered	\$ 65,807	Synthetic	\$ 515,455	\$ 50,000	\$ 565,455	\$ 55,313	\$ (10,494)
George Mason School	George Mason Overlay	Youth Softball Field (Non-Engineered)	Youth Softball Field (Synthetic)	Upgrade to synthetic surface.	High	Non-Engineered	\$ 50,777	Synthetic	\$ 397,727	\$ 755,000	\$ 1,152,727	\$ 42,680	\$ (8,097)
George Washington School	GW field #1 (School)	Regulation Soccer Field (Engineered)	Regulation Soccer Field (Synthetic)	Upgrade to Synthetic	High	Engineered	\$ 115,816	Synthetic	\$ 572,727	\$ 1,010,000	\$ 1,582,727	\$ 61,459	\$ (54,357)
Hensley Park	Hensley	Regulation Soccer Field (Engineered)	Regulation Soccer Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Engineered	\$ 97,317	Synthetic	\$ 481,250	\$ 637,500	\$ 1,118,750	\$ 51,642	\$ (45,675)
Hensley Park	Hensley #1	Adult Softball Field (Non-Engineered)	Adult Softball Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 637,500	\$ 892,045	\$ 27,315	\$ (5,182)
Hensley Park	Hensley #2 Overlay	Adult Softball Field (Engineered)	Adult Softball Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Engineered	\$ 51,474	Synthetic	\$ 254,545	\$ 637,500	\$ 892,045	\$ 27,315	\$ (24,159)
Hensley Park	Hensley #3	Adult Softball Field (Non-Engineered)	Adult Softball Field (Synthetic)	Master Plan entire park as tournament quality facility. Upgrade to synthetic field.	High	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 637,500	\$ 892,045	\$ 27,315	\$ (5,182)
James K. Polk School	Polk Lower	Junior Soccer Field (Non-Engineered)	Junior Soccer Field (Synthetic)	Upgrade to synthetic surface.	Medium	Non-Engineered	\$ 18,280	Synthetic	\$ 143,182	\$ 136,000	\$ 279,182	\$ 15,365	\$ (2,915)
James K. Polk School	Polk Upper Overlay	Youth Softball Field (Non-Engineered)	Youth Softball Field (Synthetic)	Upgrade to synthetic surface.	Medium	Non-Engineered	\$ 50,777	Synthetic	\$ 397,727	\$ 136,000	\$ 533,727	\$ 42,680	\$ (8,097)
Jefferson Houston	Jefferson Houston	Junior Soccer Field (Non-Engineered)	Junior Soccer Field (Synthetic)	Upgrade to synthetic surface.	Medium	Non-Engineered	\$ 50,777	Synthetic	\$ 397,727	\$ 25,000	\$ 422,727	\$ 42,680	\$ (8,097)
John Adams	John Adams Overlay	Youth Softball Field (Non-Engineered)	Youth Softball Field (Synthetic)	Upgrade to synthetic surface.	High	Non-Engineered	\$ 50,777	Synthetic	\$ 397,727	\$ 56,000	\$ 453,727	\$ 42,680	\$ (8,097)
Jones Point	Jones Point 1 & 2	Junior Soccer Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Develop new synthetic regulation soccer field. Work with National Park Service to secure approval.	Medium	Non-Engineered	\$ 73,236	Synthetic	\$ 573,650	\$ 500,000	\$ 1,073,650	\$ 61,558	\$ (11,678)
Luckett Stadium	Luckett Field	Adult Softball Field (Non-Engineered)	Adult Softball Field (Non-Engineered)	Maintain as currently configured.	Medium	Non-Engineered	\$ 98,304	Non-Engineered	\$ 11,000	\$ 808,000	\$ 819,000	\$ 98,304	\$ -
Maury Field	Maury Overlay	Junior Soccer Field (Non-Engineered)	Junior Soccer Field (Engineered)	Upgrade to engineered field.	Low	Non-Engineered	\$ 32,497	Engineered	\$ 14,545	\$ 25,000	\$ 39,545	\$ 51,474	\$ 18,977
Minnie Howard School	Minnie Howard Overlay	Adult Softball Field (Non-Engineered)	Adult Softball Field (Synthetic)	Upgrade to synthetic surface.	High	Non-Engineered	\$ 73,118	Synthetic	\$ 572,727	\$ 1,107,000	\$ 1,679,727	\$ 61,459	\$ (11,660)
Montgomery Park	Montgomery Park Open Space	Junior Soccer Field (Non-Engineered)	Open Space	Maintain as open space.	Low	Non-Engineered	\$ 65,863	NONE	\$ -	\$ -	\$ -	\$ -	\$ (65,863)
Mt. Vernon Rec Center	Mt. Vernon Overlay	Youth Softball Field (Non-Engineered)	Youth Softball Field (Engineered)	Upgrade to engineered field.	Low	Non-Engineered	\$ 32,497	Engineered	\$ 14,545	\$ 50,000	\$ 64,545	\$ 51,474	\$ 18,977
Nannie J. Lee Center	Lee Center Overlay	Youth Softball Field (Non-Engineered)	Youth Softball Field (Synthetic)	Upgrade to synthetic surface.	Medium	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 50,000	\$ 304,545	\$ 27,315	\$ (5,182)
Patrick Henry School	Patrick Henry lower Overlay	60' Baseball Field (Non-Engineered)	Youth Baseball Field (Synthetic)	Upgrade to synthetic surface.	Medium	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 225,000	\$ 479,545	\$ 27,315	\$ (5,182)
Patrick Henry School	Patrick Henry Upper	Junior Soccer Field (Non-Engineered)	Junior Soccer Field (Synthetic)	Upgrade to synthetic surface.	Medium	Non-Engineered	\$ 50,777	Synthetic	\$ 397,727	\$ 25,000	\$ 422,727	\$ 42,680	\$ (8,097)
Potomac Yards	Fields 1 & 2	Regulation Soccer Field (Engineered)	Regulation Soccer Field (Synthetic)	To be relocated.	High	Engineered	\$ 115,816	Synthetic	\$ 572,727	\$ 1,135,000	\$ 1,707,727	\$ 61,459	\$ (54,357)
Simpson Stadium Park	Little Simpson	60' Baseball Field (Engineered)	60' Baseball Field (Engineered)	Maintain as currently configured.	Low	Engineered	\$ 155,708	Engineered	\$ 44,000	\$ 463,500	\$ 507,500	\$ 155,708	\$ -
Simpson Stadium Park	Simpson Major	90' Baseball Field (Engineered)	90' Baseball Field (Engineered)	Maintain as currently configured.	Low	Engineered	\$ 267,039	Engineered	\$ 75,460	\$ 463,500	\$ 538,960	\$ 267,039	\$ -
Stevenson Park	Stevenson Square Overlay	60' Baseball Field (Non-Engineered)	60' Baseball Field (Engineered)	Remove overlay usage and upgrading to t engineered youth baseball field with lights.	High	Non-Engineered	\$ 50,777	Engineered	\$ 22,727	\$ 225,000	\$ 247,727	\$ 80,428	\$ 29,651
Taney Avenue Park	Taney Open Space	Junior Soccer Field (Non-Engineered)	Junior Soccer Field (Non-Engineered)	Maintain as open space.	Low	Non-Engineered	\$ 65,863	Non-Engineered	\$ 7,370	\$ -	\$ 7,370	\$ 65,863	\$ -
TC Williams HS	New TC Williams Practice Field	Regulation Soccer Field (Non-Engineered)	Regulation Soccer Field (Synthetic)	Upgrade to synthetic surface.	High	Non-Engineered	\$ 73,118	Synthetic	\$ 572,727	\$ 25,000	\$ 597,727	\$ 61,459	\$ (11,660)
TC Williams HS	TC Williams Football Field	Football Field (Engineered)	Football Field (Engineered)	Maintain as currently configured.	Low	Engineered	\$ 115,816	Engineered	\$ 32,727	\$ -	\$ 32,727	\$ 115,816	\$ -
William Ramsay School	Ramsay Overlay	Youth Softball Field (Non-Engineered)	Youth Softball Field (Synthetic)	Upgrade to synthetic surface.	High	Non-Engineered	\$ 32,497	Synthetic	\$ 254,545	\$ 25,000	\$ 279,545	\$ 27,315	\$ (5,182)
Windmill Hill/Wikes Street Tunnel	Windmill Hill Open Space	Junior Soccer Field (Non-Engineered)	Open Space	Maintain as open space.	Low	Non-Engineered	\$ 65,863	NONE	\$ -	\$ -	\$ -	\$ -	\$ (65,863)
Wilson Bridge Site	Recreation Field	Youth Softball Field (Engineered)	Youth Softball Field (Synthetic)	Develop new synthetic field.	Low	Engineered	\$ 155,708	Synthetic	\$ 770,000	\$ 500,000	\$ 1,270,000	\$ 82,628	\$ (73,080)
Wilson Bridge Site	Recreation Fields	Regulation Soccer Field (Engineered)	Regulation Soccer Field (Synthetic)	Develop new synthetic field.	Low	Engineered	\$ 115,816	Synthetic	\$ 572,727	\$ 500,000	\$ 1,072,727	\$ 61,459	\$ (54,357)
Wilson Bridge Site	Recreation Fields	Regulation Soccer Field (Engineered)	Regulation Soccer Field (Synthetic)	Develop new synthetic field.	Low	Engineered	\$ 115,816	Synthetic	\$ 572,727	\$ 500,000	\$ 1,072,727	\$ 61,459	\$ (54,357)
							\$ 4,582,623		\$ 17,158,369	\$ 15,340,400	\$ 32,498,769	\$ 3,521,764	\$ (1,060,859.66)

Figure 23 - Recommended Improvements - Cost-Benefit Analysis

Section 4 – Recommendations

The Alexandria Athletic Fields Master Plan presents an alternative approach to meeting the needs of the community for an adequate supply of quality sports fields. Based on the findings and analysis presented in this report, the PROS Team recommends the following action plan:

- Establish a phased Athletic Field Capital Improvement Plan focusing on the following:
 - Address high priority needs within five (5) years beginning with development of new facilities to allow current usage to shift to those fields while existing fields are re-developed. This includes adding or updating lighting at recommended locations as well as securing facilities through fencing improvements.
 - Address medium and low priority needs within five (5) to ten (10) years while considering the overall effectiveness of the high priority improvements and any shifts in demand that might occur during this period.
 - Additional improvements should be included in all redevelopment and new development projects including field amenities such as restrooms, concessions, irrigation, scoreboards, bleachers and storage facilities.
- The School District should strongly consider the recommended improvements of developing synthetic fields at each of their facilities where high levels of school activities and sports events occur.
- Establish policies for field usage for leagues based on a defined number of games and practices for each team. This includes establishing fields for casual pick-up games.
- Update maintenance standards on all fields as outlined Appendix B of this report.
- Evaluate pricing policies related to fees on scheduled game fields based on true cost of service.
- Establish a life cycle maintenance and renewal/replacement program for all athletic fields to extend the life of fields and have the ability to replace or renovate fields once they have reached their useful lives.

Although this master plan will not be easy to implement, it has the ability to position Alexandria with greatly improved fields and capacity to meet the user's needs with high quality athletic facilities.

Appendix A – Athletic Fields Site Review Findings

Park Name: Ben Brenman Park

Item	Description	Notes
Number of Fields	A. One (1) Regulation Soccer Field B. One (1) Youth Baseball Field C. One (1) Adult Softball Field w/ Junior Soccer Overlay	Total Fields=3 Alexandria Soccer Association uses the Overlay by making 4 Fields of 20x25 yds on the softball overlay
Types of Field Use	Youth Little League Baseball, Softball, Lacrosse, and Soccer	In addition, Ben Brenman Park hosts a number of special events during the year
Type of User and Number of Games Played	Alexandria Little League Baseball, TC Williams, JV Softball, Alexandria Soccer Association, Alexandria Youth Sports Division, Preschool, Special Events, Summer Camps, Boy Scouts	22 plus games per week plus practice per field in season
Engineered Field?	Yes, all (3) Fields are Engineered	Every field needs to be controlled and managed appropriately
Irrigated Yes/No	Yes, all (3) Fields are Irrigated	
Current Condition	Beautiful site, no lights, engineered fields, irrigated fields, no concession facility, has restrooms, picnic area available. Turf is in good condition on ball fields, turf worn at center and goal mouths of rectangle field but exteriors are good, overall good. The site is not as productive as it could be because of the lack of lights.	Future land could be developed. SUP changes required for new athletic field and lights.
Current Maintenance Dollars Spent on the Fields	\$200k	2,264 Annual Hours of Maintenance
Lights Yes/No	No	
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	No	
Controlled Field Yes/No	Yes	
Recommended Improvements	A. Upgrade Regulation Soccer Field to synthetic surface B. Maintain Youth Baseball Field as currently configured C. Upgrade Adult Softball Field/Overlay to synthetic surface; relocate overlay D. Develop two (2) additional synthetic Junior Soccer Fields, lighted, in open area of park E. Develop one (1) additional synthetic Youth Softball Field, lighted, in southwest corner of park Miscellaneous Other Improvements (may include improvements listed above): F. Lighting G. Parking H. Fencing I. Concession/Restrooms	

Park Name: Boothe Park

Item	Description	Notes
Number of Fields	A. One (1) Adult Softball Field w/ Regulation Soccer Overlay	Total Fields=1 Alexandria Soccer Association only uses the Outside Area of the Softball Field – 6 Fields 15x20 yds due to softball use
Types of Field Use	Youth and Adult Softball, Soccer, Football, Lacrosse	
Type of User and Number of Games Played	School classes, TC Williams JV Softball, TC Williams Varsity Softball, Alexandria Youth Sports Division, Alexandria Soccer Association, Summer Campsite, Head Start Group,	35 P.E. hours per week 5 Adult/Youth Games per week 17 High School Games per week 14 Soccer Games per week Summer Camp - 5 to 9 weeks
Engineered Field?	Yes	
Irrigated Yes/No	Yes	
Current Condition	Nice field, turf is in good condition, good lights, overall good	
Current Maintenance Dollars Spent on the Field	\$45-\$50k	
Lights Yes/No	Yes	New lights
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	No	
Controlled Field Yes/No	Yes	
Recommended Improvements	A. Maintain field as currently configured Miscellaneous Other Improvements (may include improvements listed above): B. Upgrade restrooms	

Park Name: Braddock Field

Item	Description	Notes
Number of Fields	A. One (1) Youth Baseball Field w/ Regulation Soccer Overlay B. Two (2) Youth Softball Fields w/ Football Field Overlay (each softball has one (1) Football Overlay)	Total Fields = 3 with soccer overlay
Types of Field Use	Youth/Adult Soccer, Football, P.E., Lacrosse, Softball, Rugby, Baseball and T-Ball	
Type of User and Number of Games Played	G.W. School P.E. Classes during the school year depending on the season, Alexandria Soccer Association, ASL, Alexandria Lacrosse Club, Alexandria Little League, Alexandria Youth Sports Division and Youth Sports Football on evenings and weekends, adult football leagues	35 P.E. hours per week for Softball and rectangular field 16 Youth Games per season
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Not lighted, poor turf, new back stops, poor field conditions, no irrigation, no restrooms, no concession, grass infield on 90' Field.	
Current Maintenance Dollars Spent on the Field	\$30k	
Lights Yes/No	No	
Standards Met for Region of the City	No	
Partnership in Place? Who?	No	
Controlled Field Yes/No	No	
Recommended Improvements	A. Master plan entire park in conjunction with George Washington School; develop synthetic fields and running track B. Remove one (1) Youth Softball Field/Overlay per new master planned development Miscellaneous Other improvements (may include improvements listed above): C. Lighting D. Parking E. Fencing F. Restrooms G. Storage H. Master Plan/Design	Excellent place for synthetic turf

Park Name: Charles Barrett Center (School Facility)

Item	Description	Notes
Number of Fields	A. One (1) Youth Softball Field w/ junior Soccer Overlay	Very Small Total Fields=1 (2 Uses)
Types of Field Use	Youth Softball, Soccer, and T-Ball, P.E., After-School Use, Practice, Preschool	
Type of User and Number of Games Played	Alexandria Youth Sports Division, Alexandria Soccer Association, P.E., Preschool	3 Preschool hours per week 35 P.E. hours per week Practice every night by youth sports groups
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Overall fair but the field is experiencing overuse	
Current Maintenance Dollars Spent on the Field	\$10k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	No	
Partnership in Place? Who?	No	
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Youth Baseball Field/Overlay to synthetic surface B. Miscellaneous upgrades	

Park Name: Chinquapin Park and Center

Item	Description	Notes
Number of Fields	A. Three (3) Regulation Soccer Fields B. Two (2) Regulation Soccer Fields in development	Total Fields=3 (2 Out of service due to high school construction)
Types of Field Use	Boy's and Girl's High School Soccer, Football High School, Boys and Girls Lacrosse High School, Band Camp High School, Summer Camp Recreation Program, Boy's and Girl's Alexandria Soccer Association Youth Programming, P.E. Classes High School	
Type of User and Number of Games Played	TC Williams Football Teams, Band Camp, and the ROTC program use the fields during late Summer and Fall. During the school year, TC Williams P.E. classes use the field daily. Men's and Women's Varsity Soccer and Lacrosse Teams use the field in the Spring, Alexandria Soccer Association, Chinquapin Summer Camp Program also uses the fields, as well ROTC and summer camps.	35 High School hours for recreation classes per week 8 Youth/ASA Soccer Games per week in season 21 Band Camp hours per week during season 35 Summer camp hours for 9-week season
Engineered Field?	No	
Irrigated Yes/No	Yes	Need re-designed
Current Condition	No Lights, turf conditions are poor due to heavy use, not engineered	
Current Maintenance Dollars Spent on the Field	\$150k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	No	Due to the use and design
Partnership in Place? Who?	No	
Controlled Field Yes/No	No	
Recommended Improvements	A. Master Plan entire park as tournament quality facility B. Upgrade all fields to synthetic surfaces Miscellaneous Other Improvements (may include improvements listed above): C. Lighting D. Parking E. Fencing F. Restrooms G. Storage H. Master Plan/Design	

Park Name: Fort Ward Park

Item	Description	Notes
Number of Fields	A. One (1) Junior Soccer Field	Total Fields=1
Types of Field Use	Youth Soccer, Field Hockey, T-Ball, P.E., and other Recreational Games, Select Soccer Site, Practice Fields for Saint Agnus and Saint Stevens	
Type of User and Number of Games Played	Alexandria Soccer Association, P.E. Classes	35 hours per week P.E. Classes 15 Games soccer per season
Engineered Field?	Yes	
Irrigated Yes/No	Yes	
Current Condition	Turf is poor, no lights	
Current Maintenance Dollars Spent on the Field	\$0	St. Stevens
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	No	
Partnership in Place? Who?	Yes	St. Stevens
Controlled Field Yes/No	Yes	People routinely climb fence to use field
Recommended Improvements	A. Upgrade Junior Soccer Field to synthetic surface B. Proposed for non-scheduled use/pick-up games C. Miscellaneous upgrades	

Park Name: Four Mile Run Park

Item	Description	Notes
Number of Fields	A. One (1) Adult Softball Field w/Football Overlay B. One (1) Regulation Soccer Field C. One (1) Adult Baseball Field D. One (1) Youth Softball Field w/ Junior Soccer Overlay	Total Fields=4
Types of Field Use	Youth and Adult Soccer/Baseball/Softball, Youth and Adult Baseball, Field Hockey, Football, High School, Pick-up Soccer games on the fields from 3-6 p.m. and Jogging	
Type of User and Number of Games Played	TC Williams High School, ABI, Alexandria Youth and Adult Sports Division, Alexandria Soccer Association, Bishop Ireton High School Baseball/Softball/Soccer, TC Williams JV Baseball, practices for the Congressional Game, and many other men's and women's leagues, Pick-up Soccer Games for 3-6 p.m.	7 Baseball Games per week in season 15 Softball Games per week in season 7 Youth Soccer Games per week in season Adult Soccer 8 games per week per season Uncontrolled pick-up games are constant
Engineered Field?	Yes, Baseball No, Softball No, Soccer	
Irrigated Yes/No	Yes; 3 fields irrigated; youth softball area not irrigated	Drainage Problem on Softball Field and soccer field
Current Condition	Need updated fencing, new lights, address drainage problem, concrete is needed for bleachers, parking lots not striped, need protective bull pins, need color schemes, no concession, no outfield fence for Youth Softball, poor fencing for Youth Softball, poor sign for Softball Field, soccer field has poor playing turf and is overused, very little parking for soccer field and a very poor sign for the soccer field, lights are on all fields but one softball field, overall softball and baseball are in good condition and soccer field is in poor condition	Four Mile Run Restroom should be considered in any master planning process and is in need of renovation
Current Maintenance Dollars Spent on the Field	\$50k	
Light Yes/No (Age of Lights)	Yes: (3) fields; youth softball field is unlit	30 Year Old Lights.
Standards Met for Region of the City	Yes, Baseball No, Softball No, Soccer No, Youth fields	Would be perfect place for synthetic turf and miracle fields
Partnership in Place? Who?	No	
Controlled Field Yes/No	Yes, Baseball Yes, Softball No, Soccer No, Small Youth Field	
Recommended Improvements	A. Upgrade Adult Softball Field/Overlay to synthetic surface B. Upgrade Regulation Soccer Field to synthetic surface C. General improvements to Adult Baseball Field D. Reconfigure existing Overlay for separate synthetic Youth Softball and Junior Soccer fields Miscellaneous Other Improvements (may include improvements listed above): E. Lighting F. Fencing G. Bleachers H. Drainage	

Park Name: George Washington Middle School (School Facility/RPCA)

Item	Description	Notes
Number of Fields	A. Two (2) Regulation Soccer Fields	Total Fields=2
Types of Field Use	Youth/Adult Soccer, Football, P.E., and Lacrosse	
Type of User and Number of Games Played	P.E., Alexandria Soccer Association, ASL, Youth Sports Football, TC William Girls Varsity and JV Soccer, TC Williams Boys Varsity and JV Soccer, Lacrosse could play here, T.C. Williams Freshman Football	46 P.E. hours per week 11 Soccer Games per week in season 10 Football Games per week in season
Engineered Field?	Yes	
Irrigated Yes/No	Yes	
Current Condition	Engineered, not lighted, irrigated, scoreboards, no restroom, no concession, need asphalt pads for bleachers, fenced, adding new scoreboards, overall good	
Current Maintenance Dollars Spent on the Field	\$100k per year	
Light Yes/No (Age of Lights)	No	Need lights
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	Yes	No
Controlled Field Yes/No	1 Controlled 1 Not Controlled Small fence on football field	Pick-up games are often found on football field due to the low height of fence around field
Recommended Improvements	A. Upgrade Regulation Soccer Fields to synthetic surface Miscellaneous Other Improvements (may include improvements listed above): B. Lighting C. Restrooms D. Storage E. Press Box	Site used to have lights

Park Name: George Mason

Item	Description	Notes
Number of Fields	Two (2) Youth Softball Fields w/ Junior Soccer Overlay	Total Fields=2 Fields/2 Uses
Types of Field Use	P.E., T-Ball, Coach Pitch, Football	15 youth hours per week 5 practice per week in season 35 hours per week by P.E>
Type of User and Number of Games Played	Alexandria Soccer Association, Alexandria Youth Sports Division, School P.E.	15 Youth Games per week 5 Practices per week 35 P.E. Games per week
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Overall fair	
Current Maintenance Dollars Spent on the Field	\$25k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	No	
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Youth Softball Fields/Overlay to synthetic surface Miscellaneous Other Improvements (may include improvements listed above): B. Lighting C. Fencing D. Bleachers E. Drainage	

Park Name: Hammond Lower (School Facility)

Item	Description	Notes
Number of Fields	A. One (1) Regulation Soccer Field w/ backstops	Total Fields=1 2 Backstops for Baseball, Softball, T-Ball, etc.
Types of Field Use	P.E., J.V. Soccer, Baseball use, School teams	
Type of User and Number of Games Played	Alexandria Soccer Association, P.E.	8 Soccer Games per week 35 P.E. Games per week
Engineered Field?	No	
Irrigated Yes/No	Yes	Don't control irrigation
Current Condition	Overall poor	
Current Maintenance Dollars Spent on the Field	\$6k	Parks and Rec. is \$6k Schools maintain most of Field
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	No	
Partnership in Place? Who?	No	
Controlled Field Yes/No	Yes/No	Cut holes in the fence
Recommended Improvements	A. Upgrade Regulation Soccer Field to synthetic surface Miscellaneous Other Improvements (may include improvements listed above): B. Lighting C. Storage	

Park Name: Hammond Upper (School Facility)

Item	Description	Notes
Number of Fields	A. One (1) Junior Soccer Field	Total Fields=1
Types of Field Use	Little League Baseball, Soccer, Youth Soccer/Lacrosse, Gym Classes, Boys Varsity Soccer Practice Site	
Type of User and Number of Games Played	P.E. Classes, Alexandria Soccer Association, TC Williams Boys Soccer (Practice Only)	35 P.E. hours per week
Engineered Field?	No	
Irrigated Yes/No	Yes	Outdated; in need of an upgrade
Current Condition	Irrigation system not working, bleachers	
Current Maintenance Dollars Spent on the Field	\$0k	Schools are unknown \$0k from Parks and Rec. Additional Security is Needed.
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	No	
Partnership in Place? Who?	Yes	School
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Junior Soccer Field to synthetic surface Miscellaneous Other Improvements (may include improvements listed above): B. Bleachers C. Storage	

Park Name: Hensley Park/Site of the Proposed All City Sports Complex

Item	Description	Notes
Number of Fields	A. One (1) Regulation Soccer Field B. Two (2) Adult Softball Fields C. One (1) Adult Softball Fields w/ Junior Soccer/Football Overlay	Total Fields=4 with 6 Uses
Types of Field Use	Youth and Adult Softball/Soccer/Football, Lacrosse, Field Hockey, Baseball Practice and festivals, Canine Events, Bishop Ireton uses for Football and Softball	Heaviest fields used in City
Type of User and Number of Games Played	Adult Sports League, Bishop Ireton Varsity and Junior Varsity Softball and Softball Teams, Alexandria Soccer Association, Lacrosse practice, K-9 Olympics and annual police K-9 show and minor festivals	15 Adult Games per week 18 Youth Games per week 5 High School Games per week Facility also has many special events
Engineered Field?	No	
Irrigated Yes/No	Yes, Soccer Field Yes, 1 Softball Field No, 2 Softball Fields	Drainage problem needs engineering.
Current Condition	All fields have good lighting, restrooms, drainage problem that needs engineered, need backstops/wing fence, concession available, turf suffers in late summers due to the irrigation system/lack there of and heavy use, overall poor	Too much use
Current Maintenance Dollars Spent on the Field	\$180k	
Light Yes/No (Age of Lights)	Yes	
Standards Met for Region of the City	Yes	Not in terms of quality
Partnership in Place? Who?	No	
Controlled Field Yes/No	No	
Recommended Improvements	A. Master Plan entire park as tournament quality facility B. Upgrade all fields to synthetic surfaces C. Tournament level upgrades	

Park Name: James K. Polk School (School Facility)

Item	Description	Notes
Number of Fields	A. One (1) Junior Soccer Field B. One (1) Youth Softball Field w/ Junior Soccer Overlay	Total Fields=2 with 3 Uses
Types of Field Use	Youth Softball/Soccer, P.E., T-Ball, Coach Pitch	
Type of User and Number of Games Played	Alexandria Soccer Association, Alexandria Youth Sports Division, P.E., Softball Practice	9 Soccer Games per week in season 35 P.E. hours per week
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Overall fair	School mows facility
Current Maintenance Dollars Spent on the Field	\$25k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	Yes	School
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Junior Soccer Field to synthetic surface B. Upgrade Youth Softball Field/Overlay with synthetic surface Miscellaneous Other Improvements (may include improvements listed above): C. Fencing D. Storage E. Backstop F. Drainage	

Park Name: John Adams

Item	Description	Notes
Number of Fields	A. One (1) Youth Softball Field w/ Junior Soccer Overlay	1 Field (2 uses)
Types of Field Use	Youth and School P.E.	35 hours per week by P.E>
Type of User and Number of Games Played	Youth	
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Poor	
Current Maintenance Dollars Spent on the Field	\$5k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	No	
Partnership in Place? Who?	Yes	School
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Youth Softball Field/Overlay to synthetic surface Miscellaneous Other Improvements (may include improvements listed above): B. Fencing C. Backstops D. Bleachers	artificial turf is possible

Park Name: Lee Center/Nannie J. Lee Center (Parks Administration Office)

Item	Description	Notes
Number of Fields	A. Two (2) Youth Softball Fields w/ Junior Soccer Overlay	Total Fields=2 Needs Re-Design
Types of Field Use	Multi-Purpose Field used for Soccer, Football, Youth Soccer, Softball, Baseball, T-Ball and Recreational Events	.
Type of User and Number of Games Played	Alexandria Youth Sports Division, Alexandria Soccer Association	6 Soccer Games per week in season 10 Softball Games per week in season
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Turf fair condition, underused	Traffic issues with bridge construction
Current Maintenance Dollars Spent on the Field	\$45-\$50k on season	
Light Yes/No (Age of Lights)	No	Lights needed
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	No	
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Youth Softball Fields/Overlay to synthetic surface B. Miscellaneous upgrades	This would be an excellent place for a miracle field

Park Name: Lockett Field

Item	Description	Notes
Number of Fields	A. One (1) Adult Softball Field	Total Fields=1
Types of Field Use	Adult Softball, Youth Baseball, Little League Baseball, Lacrosse Practice Site for Bishop Ireton High School, T.C. Williams Club Rugby	
Type of User and Number of Games Played	Adult Sports Department of Recreation Parks and Cultural Activities, Adult Sports Men's and Coed Softball Teams, Thorton School, Bishop Ireton J.V. Baseball Team, Alexandria Little League	25 Games per week for 9.5 months
Engineered Field?	No	
Irrigated Yes/No	Yes	
Current Condition	30 Year Old Lights, 300' outfield fence, no restroom facility, turf is in good condition, overall good	
Current Maintenance Dollars Spent on the Field	\$60-\$80k	
Light Yes/No (Age of Lights)	Yes	Need new lights
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	No	
Controlled Field Yes/No	Yes	
Recommended Improvements	A. Maintain Adult Softball Field as currently configured Miscellaneous Other Improvements (may include improvements listed above): B. Lighting C. Fencing D. Bleachers E. Backstops F. Restrooms G. Storage H. Drainage	

Park Name: Minnie Howard School (School Facility)

Item	Description	Notes
Number of Fields	A. Two (2) Adult Softball Fields w/ Lacrosse Overlay	Total Fields=2 with 4 Uses
Types of Field Use	Youth and Adult Softball, Soccer, Field Hockey, Lacrosse, P.E.	
Type of User and Number of Games Played	Daily P.E. for Minnie Howard Middle School, Summer School P.E., T.C. Williams High School JV and Varsity Softball, Coed/Adult Softball, High School Field Hockey, Winter Nighttime Soccer Practice, Softball Church Leagues, Lacrosse, Girls Summer Softball League, Alexandria Soccer Association, and used by 3 teams for practice and varsity games.	35 hours per week P.E. 4 lacrosse games per week in season 6 Field Hockey games per week in season 9 adult games per week in season 7 summer school P.E. hours per week 8-week program Common area for pick-up games
Engineered Field?	No	
Irrigated Yes/No	Yes	
Current Condition	Poor lighting not to standard, additional upgrades to restrooms, bleachers, softball fields share a common outfield, turf is okay, new green fences, batting cage	
Current Maintenance Dollars Spent on the Field	\$70-\$80k	
Light Yes/No (Age of Lights)	Yes	Not up to date to meet standards
Standards Met for Region of the City	No	
Partnership in Place? Who?	Yes	School
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Adult Softball Field/Overlay to synthetic surface Miscellaneous Other Improvements (may include improvements listed above): B. Lighting C. Fencing D. Bleachers E. Backstops F. Scoreboard G. Restrooms H. Drainage I. Storage	

Park Name: Mt. Vernon

Item	Description	Notes
Number of Fields	A. One (1) Youth Softball Field w/ Junior Soccer Overlay	Total Fields=1 field 2 uses This field could be a miracle field
Types of Field Use	Softball, P.E., Soccer	
Type of User and Number of Games Played	Soccer, P.E., Softball	12 Soccer Games per week in season 35 P.E. hours per week 15 Softball Games per week in season
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Overall fair	
Current Maintenance Dollars Spent on the Field	\$35k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	No	
Partnership in Place? Who?	Yes	School
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Youth Softball Field/Overlay to engineered field B. Miscellaneous upgrades	

Park Name: Patrick Henry School (School Facility)

Item	Description	Notes
Number of Fields	A. One (1) Junior Soccer Field B. One (1) Youth Baseball Field w/ Lacrosse Overlay	Total Fields=2
Types of Field Use	P.E., Youth Soccer, Football, Lacrosse, Baseball, and other play activities	
Type of User and Number of Games Played	Alexandria Lacrosse Club, Alexandria Youth Sports Division, Alexandria Little League, Alexandria Soccer Association	35 P.E. hours per week 20 Little League Games per week in season 20 Soccer Games per week in season
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Overall poor	
Current Maintenance Dollars Spent on the Field	\$10k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	Yes	School
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Junior Soccer Field to synthetic surface B. Upgrade Youth Baseball Field/Overlay to synthetic surface Miscellaneous Other improvements (may include improvements listed above): C. Drainage	

Park Name: Potomac Yards

Item	Description	Notes
Number of Fields	A. Two (2) Regulation Soccer Field	Total Fields=2 Full Size Fields Note: This project is in the process of being moved to a new area.
Types of Field Use	Soccer	
Number of Games Played by Type of User	Alexandria Soccer Association, Adult Soccer	18 Soccer Games per week
Engineered Field?	Yes	
Irrigated Yes/No	Yes	
Current Condition	Very nice fields, finest among the area, overall good	
Current Maintenance Dollars Spent on the Field	\$100k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	No	
Controlled Field Yes/No	Yes	
Recommended Improvements	A. To be relocated B. Site development/upgrades	Developer to partner with City on costs

Park Name: Ramsey Recreation Center and School (School Facility)

Item	Description	Notes
Number of Fields	A. One (1) Youth Softball Field w/ Junior Soccer Overlay	Total Fields=1 with 2 Uses
Types of Field Use	Youth Soccer, Softball, P.E., Little League Baseball Practice	
Type of User and Number of Games Played	P.E., Alexandria Soccer Association, Softball, Alexandria Youth Sports Division	Summer Camps 35 P.E. Games per week 5 ASA Games per week 10 Softball Games per week
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Overlapping fields, parking is at a premium, overall poor	
Current Maintenance Dollars Spent on the Field	\$30k	
Light Yes/No (Age of Lights)	No	
Standards Met for Region of the City	No	
Partnership in Place? Who?	No	
Controlled Field Yes/No	No	
Recommended Improvements	A. Upgrade Youth Softball Field/Overlay to synthetic surface B. Miscellaneous upgrades	

Park Name: Simpson Stadium

Item	Description	Notes
Number of Fields	A. One (1) Youth Baseball Field B. One (1) Adult Baseball Field	Total Fields=2
Types of Field Use	Youth (Little League), Adult and High School Baseball	
Type of User and Number of Games Played	Alexandria Little League, Adult Leagues, TC Williams Varsity Baseball (Games and Practice), TC Williams JV Baseball (Games Only), and Travel Baseball Teams	28 Little League Games per week in season
Engineered Field?	Yes, Large Field No, Small Field	
Irrigated Yes/No	Yes, both fields	25 Years
Current Condition	Engineered, small parking area, restrooms and storage, blankets on infield, lighted, irrigation, scoreboard, field has no concession, Little League Scoreboard is old but works, good turf on both fields, overall good. New screens added in 2006.	
Current Maintenance Dollars Spent on the Field	\$100k	
Light Yes/No (Age of Lights)	Yes	Little League Field is 25 Years Old
Standards Met for Region of the City	Yes	Except for lights
Partnership in Place? Who?	YES	Alexandria Little League
Controlled Field Yes/No	Yes	
Recommended Improvements	A. Maintain Youth Baseball Field as currently configured B. Maintain Adult Baseball Field as currently configured Miscellaneous Other Improvements (may include improvements listed above): C. Lighting D. Fencing E. Bleachers F. Backstops G. Scoreboard H. Storage I. Restrooms/Concessions	

Park Name: Stevenson Park

Item	Description	Notes
Number of Fields	A. One (1) Youth Baseball Field w/ Junior Soccer Overlay	Total Fields=1 with 2 Uses 1 overlay for soccer
Types of Field Use	Youth Baseball and Soccer	
Type of User and Number of Games Played	Little League Baseball, Alexandria Soccer Association, Alexandria Youth Sports Division, and open play	18 Baseball Games per week in season 4 Soccer Games per week in season
Engineered Field?	No	
Irrigated Yes/No	No	
Current Condition	Not engineered, needs fencing, has a poor backstop, drainage problems, low parking level, no restrooms, poor bleachers, soccer field used heavily, no lights, overall baseball field is fair and soccer field/overlay is poor	
Current Maintenance Dollars Spent on the Field	\$52k per year	
Light Yes/No (Age of Lights)	Both No	Needed
Standards Met for Region of the City	Yes	
Partnership in Place? Who?	No	
Controlled Field Yes/No	Both No	Need more fencing
Recommended Improvements	A. Remove Junior Soccer Overlay usage B. Upgrade Youth Baseball Field to engineered surface Miscellaneous Other Improvements (may include improvements listed above): C. Lighting	

Appendix B – Recommended Athletic Field Maintenance Standards

The following are maintenance standards for sports fields the City should consider adopting and budgeting to meet these standards that support the level of play and pressure the existing fields are getting in the City.

Maintenance Standards Description

Level 1 – Maintenance Standards

Standards will be calculated by time and equipment needed to develop required operation budgets.

- Athletic Fields Grounds Maintenance (baseball and softball)
 - High Profile Game Fields
 - Use reel mower capable of “striping” the turf
 - Mowing will occur 2 times/week
 - Mowing heights
 - 2” during cool season (day time highs consistently below 75 degrees)
 - 2 ½ “ during warm season (day time highs consistently above 75 degrees)
 - Edging of all field perimeters will occur twice monthly
 - 96% turf coverage at the start of every season
 - 92% turf coverage after play begins
 - 4% weed infestation
 - 0% bare area at the start of every season
 - 4% bare area will be acceptable after play begins
 - Apply pre-germinated seed to heavily worn areas after every tournament
 - Remove grass clippings if visible
 - Aerate twice annually
 - Spot aerate high use areas as needed
 - Inspect thatch layer regularly and remove as needed
 - Test soil and water annually
 - Additional testing will occur if deemed necessary
 - Soil moisture will be consistent
 - No wet areas
 - No dry areas
 - Firm enough for foot and mower traffic
 - Apply wetting agents to assist in uniform soil moisture
 - Hand water as needed
 - Inspect daily for insects, disease, and stress and respond to outbreaks within 24 hours
 - Re-work infield at the conclusion of individual seasons
 - Prep fields per requests and agreements with
 - Prep fields once weekly when not in use (no chalk)
 - Repair mounds and worn areas during field prep (additional repairs as safety dictates)

- Keep infields weed-free when not in use
- Athletic fields grounds maintenance (rectangular)
 - Use reel mower capable of “striping” the turf
 - Mowing will occur twice weekly
 - Mowing heights
 - 2” during cool season (day time highs consistently below 75 degrees)
 - 2 ½ “ during warm season (day time highs consistently above 75 degrees)
 - Edging of field perimeters will occur twice monthly
 - 95% turf coverage at the start of every season
 - 80% turf coverage after play begins
 - 5% weed infestation
 - 0% bare area at the start of every season
 - 15% bare and weak areas will be acceptable after play begins
 - Apply pre-germinated seed to heavily worn areas after every tournament
 - Remove grass clippings if visible
 - Aerate 3 times annually
 - Spot aerate high use areas as needed
 - Inspect thatch layer regularly and remove as needed
 - Test soil and water annually
 - Additional testing will occur if deemed necessary
 - Soil moisture will be consistent
 - No wet areas
 - No dry areas
 - Firm enough for foot and mower traffic
 - Apply wetting agents to assist in uniform soil moisture
 - Hand water as needed
 - Inspect daily for insects, disease, and stress and respond to outbreaks within 24 hours
- All Weather Fields
 - Inspect for and remove trash daily
 - Inspect for safety issues daily and respond immediately
 - Blow off pavement per event and/or 2 times weekly
 - Paint lines on field twice annually
 - Groom field twice monthly or more depending on use
 - Inspect rubber layer annually
 - Inspect nets and replace as needed
 - Change lighting on a regularly scheduled maintenance program

Level 2 – Maintenance Standards

Standards will be calculated by time and equipment needed to develop the required operation budgets. The difference between Level 1 and Level 2 standards is the frequency rate.

- Athletic Field Grounds Maintenance (baseball & softball)
 - Use mower capable of “striping” the turf (preferably a reel mower)
 - Mowing will occur once weekly
 - Mowing heights
 - 2 ½” during cool season (day time highs consistently below 75 degrees)

- 3" during warm season (day time highs consistently above 75 degrees)
 - Edging of all field perimeters will occur once monthly
 - 80% turf coverage at the start of every season
 - 76% turf coverage after play begins
 - 20% weed infestation
 - 0% bare area at the start of every season
 - 4% bare area will be acceptable after play begins
 - Remove grass clippings if visible
 - Aerate twice annually
 - Spot aerate high use areas as needed
 - Inspect thatch layer regularly and remove as needed
 - Test soil and water annually
 - Additional testing will occur if deemed necessary
 - Soil moisture will be consistent
 - No wet areas
 - No dry areas
 - Firm enough for foot and mower traffic
 - Apply wetting agents to assist in uniform soil moisture
 - Hand water as needed
 - Inspect daily for insects, disease, and stress and respond to outbreaks within 24 hours
 - Re-work infield at the conclusion of individual seasons
 - Prep fields per requests and agreements with Recreation and participating group
 - Prep fields once monthly when not in use (no chalk)
 - Repair mounds and worn areas during field prep (additional repairs as safety dictates)
 - Keep infields weed-free when not in use
- Athletic Field Grounds Maintenance (rectangular)
 - Mowing will occur twice weekly
 - Mowing heights
 - 2 ½" during cool season (day time highs consistently below 75 degrees)
 - 3" during warm season (day time highs consistently above 75 degrees)
 - Edging of all field perimeters will occur once monthly
 - 80% turf coverage at the start of every season
 - 65% turf coverage after play begins
 - 20% weed infestation
 - 5% bare area at the start of every season
 - 15% bare and weak areas will be acceptable after play begins
 - Apply pre-germinated seed to heavily worn areas after every tournament
 - Remove grass clippings if visible
 - Aerate twice annually
 - Spot aerate high use areas as needed
 - Inspect thatch layer regularly and remove as needed
 - Test soil and water annually
 - Additional testing will occur if deemed necessary
 - Soil moisture will be consistent
 - No wet areas
 - No dry areas

- Firm enough for foot and mower traffic
 - Apply wetting agents to assist in uniform soil moisture
 - Hand water as needed
- Inspect daily for insects, disease, and stress, and respond to outbreaks within 24 hours

Level 3 – Maintenance Standards

Standards will be calculated by time and equipment needed to develop required operation budgets.

- Athletic Fields (baseball & softball)
 - Mowing will occur once weekly
 - Mowing heights
 - 2 ½" during cool season (day time highs consistently below 75 degrees)
 - 3" during warm season (day time highs consistently above 75 degrees)
 - Edging of all field perimeters will occur quarterly
 - 60% turf coverage at the start of every season and after play begins
 - 35% weed infestation
 - 2% bare area at the start of every season
 - 5% bare area will be acceptable after play begins
 - Remove grass clippings if visible
 - Aerate once annually
 - Spot aerate high use areas as needed
 - Inspect thatch layer regularly and remove as needed
 - Test soil and water annually
 - Additional testing will occur if deemed necessary
 - Soil moisture will be consistent
 - Firm enough for foot and mower traffic
 - Apply wetting agents to assist in uniform soil moisture
 - Inspect daily for insects, disease, and stress and respond to outbreaks within 24 hours
 - Re-work infield at the conclusion of individual seasons
 - Prep fields per requests and agreements with Recreation and participating group
 - Keep infields weed free when not in use
 - Repair mounds and worn areas during field prep (additional repairs as safety dictates)
- Athletic Field Grounds Maintenance (rectangular)
 - Mowing will occur twice weekly
 - Mowing heights
 - 2 ½" during cool season (day time highs consistently below 75 degrees)
 - 3" during warm season (day time highs consistently above 75 degrees)
 - Edging of all field perimeters will occur once monthly
 - 80% turf coverage at the start of every season
 - 65% turf coverage after play begins
 - 20% weed infestation
 - 5% bare area at the start of every season
 - 15% bare and weak areas will be acceptable after play begins
 - Apply pre-germinated seed to heavily worn areas after every tournament
 - Remove grass clippings if visible

- Aerate twice annually
- Spot aerate high use areas as needed
- Inspect thatch layer regularly and remove as needed
- Test soil and water annually
 - Additional testing will occur if deemed necessary
- Soil moisture will be consistent
 - No wet areas
 - No dry areas
 - Firm enough for foot and mower traffic
 - Apply wetting agents to assist in uniform soil moisture
 - Hand water as needed
- Inspect daily for insects, disease, and stress, and respond to outbreaks within 24 hours

Appendix C – Court Site Review

PROS Consulting, while not asked to look at all courts, did review many of them. After reviewing the system's courts, The PROS Team recommends that small tennis court facilities that include 2 courts or less, are not the most efficient means to provide tennis activities. Larger facilities that have the ability to host tournaments, as well as creating a large group feeling for participants, would be more beneficial and cost effective.

There are 31 tennis courts in the City that recreation, parks and cultural activities is responsible for. Of the tennis courts in place, six (6) could be described as in poor condition, 17 could be described as in fair condition of which 7 courts are tile courts which does not appeal to the competitive players. The City needs to consider their overall approach to tennis in the City and the number of courts versus the number of players. Ideally, tennis complexes in the 8, 12, and 16 court systems are much more productive and revenues from players through leagues, clinics, camps, and lessons can help offset operational costs.

The City has not invested in their courts at the level needed over a number of years. Courts that are not used should be eliminated or used in a different format or use to support the outdoor basketball needs of the community. Tennis for a number of years has lost player interest and has been in decline. In the past five years, there has been strong efforts by the USTA to revive the play of youth and adults which has helped to gain some popularity in certain markets across the United States. The current tennis participation levels need to be evaluated in Alexandria to establish the future needs of the sport. Developing a complex setting will enhance interests and build a stronger base of loyal players. Many of the tennis courts in the system are used for soccer and inline hockey versus tennis. Recreation Centers use the tennis courts for summer clinics and lessons, which is a great asset.

The following tennis courts conditions exist:

- **Ewald Tennis Courts:** Two(2) courts, currently in poor condition, scheduled for replacement in 2006
- **William Ramsay Courts:** Two (2) courts, currently in poor condition, the tennis courts are lighted, scheduled for replacement in 2007
- **FT. Ward Courts:** Two (2) courts, currently in poor condition, scheduled for replacement in 2008
- **Mt. Vernon Court:** One (1) court, currently in fair condition but is a tile court, scheduled for replacement in 2009
- **Powhatan Court:** One (1) court, currently in fair condition, scheduled for replacement in 2009
- **Montgomery Court:** Four (4) courts, in fair condition, scheduled for replacement in 2010.
- **Hoofs Run Court:** One (1) court, in fair condition, scheduled for replacement in 2013

- **Nannie Lee Courts:** Two (2) courts in fair condition but a tile court, scheduled for replacement in 2014
- **George Mason:** Two (2) courts, in fair condition, scheduled for replacement in 2015
- **Minnie Howard Courts:** Two (2), courts in fair condition, scheduled for replacement in 2016
- **Chamblis Courts:** Two (2) courts, in fair condition, scheduled for replacement in 2018
- **Patrick Henry Courts:** Two(2) courts in fair condition scheduled for 2018
- **Simpson Courts:** Two (2) courts in good condition, scheduled for replacement in 2019
- **Chinquapin Courts:** Four (4) in good condition, scheduled for replacement in 2020 or with development of recreation center addition and renovation
- **Boothe Courts:** Two (2) courts in good condition scheduled for replacement in 2023

**Alexandria Sports Fields Master Plan
Facility Standards**

Park and Amenity Description	Facilities	Recommended Standard per persons	Current Service Level based on Current Population (135,000)	Need Based on Current Population (135,000)	Over/(Under) of Current Amenities Meeting Recommended Facility Needs
Basketball Court(s)	9.00	1 court/5,000	1 court/ 14,222	26	(18)
Tennis Court(s)	15.00	1 court/2,000	1 court/ 8,533	64	(53)

Need to cite where we got these standards.

The City currently has 1 tennis court for 4,655 people which is high for the number of people who play tennis. Typical tennis standards are one court for every 7,000 people which is more realistic for the City to consider. If tennis picks up players in the future, then there may be a need to add courts or convert existing basketball courts to tennis but currently it does not make sense to continue to replace courts at the current standard.