

GENERAL
MANAGEMENT PLAN/
CONCEPTUAL
DEVELOPMENT PLAN
AND
PROJECT IMPLEMENTATION
PLAN

TWIN
LAKES
GOLF COURSE

PREPARED BY
FAIRFAX COUNTY PARK AUTHORITY
PLANNING TEAM

APRIL 1993

GENERAL MANAGEMENT PLAN/
CONCEPTUAL DEVELOPMENT PLAN
AND PROJECT IMPLEMENTATION PLAN

for

TWIN LAKES GOLF COURSE

Prepared for
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TABLE OF CONTENTS

General Management Framework for Twin Lakes Golf Course

I.	Introduction.....	1
II.	Park Purpose and Significance.....	1
III.	Existing Conditions.....	2
IV.	Management Framework.....	4
	General Management Framework Map.....	7

Conceptual Development Plan for Twin Lakes Golf Course

I.	Introduction.....	9
II.	Design Concerns.....	9
III.	Description of Plan Elements.....	10
	Conceptual Development Plan Map.....	13

Project Implementation Plan for Twin Lakes Golf Course

I.	Introduction and Overview.....	15
II.	Project Scope Definitions.....	15
III.	Financing.....	20
IV.	Consultant Services.....	21
V.	Phasing/Operational Concerns.....	22
VI.	Annual Operating Costs.....	23
VII.	Schedule.....	24

APPENDIX

GENERAL MANAGEMENT PLAN FOR TWIN LAKES GOLF COURSE

I. INTRODUCTION

A. Park Description

Twin Lakes Golf Course is a 367 acre park with an existing 18 hole golf course, parking lot, and clubhouse. Entrance to the park is from Clifton Road. The park is in the Springfield Supervisory District, in the Clifton area. The existing golf course is located on 186 previously master planned acres. The undeveloped land is partly wooded, partly old field, partly open field.

B. Purpose and Description of the Plan

The purpose of this General Management Plan (GMP) is to serve as a guide for all future planning and programming. This document should be referred to before future planning and design projects are started.

This GMP describes the existing natural and cultural resources of the park, as well as other existing conditions. For additional information and background, refer to the report by Pannell Kerr Forster, "Feasibility Study for Future Golf Development at Three Sites in Fairfax County, Virginia, March 1992". A copy of the report is available for review in the Planning and Land Management Division of the Park Authority.

Management zones have been established, with accompanying lists of potential uses for each zone. The uses are described in general terms, so that as visitor needs change, the uses provided can change also.

General Management Plans are meant to be flexible, to change with the changing needs of park visitors. Every GMP should be updated periodically, to reflect changes that have occurred both on and off-site.

II. PARK PURPOSE AND SIGNIFICANCE

A. Park Purpose: What is the purpose of the park?

Park Purpose statements are intended to provide an umbrella for planning and decision making. If a proposed use conflicts with any one of the purposes listed, it will be considered an incompatible use. By establishing park purposes, future plans can remain flexible, as legislative requirements and visitor preferences change.

The purpose of Twin Lakes Golf Course is to:

- o preserve, protect, and restore natural resources
- o preserve and protect cultural resources
- o provide active recreation for all county citizens
- o generate revenue to support the operation, maintenance, and restoration of park resources and facilities

It may appear that some of these statements conflict. The purpose statements are not intended to be mutually exclusive. They are intended to be integrated into a common purpose of protecting the existing resources, providing recreation, and generating revenue.

B. Significance Statement: Why is this park important?

Twin Lakes Golf Course is important to the Fairfax County park system because it provides much needed golf facilities in the western part of the county. It is the farthest west of any existing FCPA course and is one of the few large developable tracts under FCPA stewardship. As reported in the study by Pannell Kerr Forster, there is a severe shortage of golf opportunities in Fairfax County. For more information, see that report.

III. EXISTING CONDITIONS

Included in this document is a summary of the existing conditions. Additional information is in the golf course feasibility study by Pannell Kerr Forster.

A. Slopes

Most of the site is between 0 and 10% slope. Small areas along the existing lakes are more than 15%. There are also a few areas along tributaries and near the existing parking lot that exceed 15%. Slopes on this site are not restrictive to any kind of recreational development.

B. Cultural Resources

Twin Lakes is being surveyed for historic and archaeological resources. There is evidence that these resources exist. Further work will determine whether the new facilities and any reconstruction of the existing course will impact any significant resources. In the detail design phase of this project decisions will be made about avoidance, mitigation, and other appropriate techniques to protect any resources identified.

C. **Wetlands**

There are small areas of hydric soils scattered throughout the park. These soils are wetland indicators. They are mostly located along upper stream drainage ways, along Johnny Moore Creek and the lakes. Wetlands will be delineated before design is completed. Any designated wetlands will be protected and wetland mitigation measures be provided during design and construction.

D. **Soils**

Much of the land between the existing golf course and Clifton Road consists of clay soils with the potential to contain asbestos. These soils are also poor to marginal for drainage and septic fields. Other soils on site are more suitable to development and septic.

Generally, the soils on site are suitable for active recreation development, though shallow bedrock, clay soils, and low fertility may require more fertilization than is usually the case. Clay soils, however, have a low potential for leaching nutrients or pesticides and tend to hold water, reducing the need for irrigation.

E. **Vegetation**

FCPA Environmental Services Section has prepared a detailed vegetation map of Twin Lakes. The undeveloped portion of the site contains upland hardwood forest, evergreen forest, open field, and old field. Some of the old field should be maintained and enhanced during the golf course design.

F. **Access**

Access is from Clifton Road. Access to any new development could remain in that location, or be relocated to Union Mill Road or Twin Lakes Road.

G. **Utilities**

There is no sanitary sewer to the park. There is public water in a 12" main in Union Mill Road. An 8" line extends from the main into Braddock Park. The existing clubhouse uses well water. Electric service runs to the clubhouse. Storm water management will be required on site.

H. Surrounding Land Use

To the east across Clifton Road, are wooded, vacant, single family lots. On the northern side of Clifton Road is large-lot, single family development. Centreville High School, Braddock Park, single-family houses and townhouses (across Union Mill Road) are to the west. South of the park is a farm and single family homes.

I. Countywide Trail

The County Comprehensive Plan requires a countywide trail along Clifton Road.

J. Existing Facilities

Existing development at Twin Lakes Golf Course includes an 18 hole regulation golf course, maintenance shop, parking lot, and clubhouse.

IV. MANAGEMENT FRAMEWORK

The management framework integrates research (including water quality analysis, environmental assessments, wetland delineation, cultural resource surveys, etc.), site analysis, and basic data presented in this document and in the golf feasibility study prepared by Pannell Kerr Forster. Management zones have been defined to provide a framework for decision making. Existing uses, existing conditions, and recommendations from a wide range of professionals were considered in the development of the management zones. The framework provides broad flexibility within a range of potential uses for each management zone.

The "Potential Uses" stated for each zone describe what uses are acceptable for each zone. If a use is not listed for a zone, by its omission it is considered an incompatible use for that zone. The potential uses are intentionally general to allow flexibility when making decisions.

A. Resource Protection Zone

Areas of valuable natural resources will be definitively mapped and protected by a Resource Protection Zone (RPZ). Most of the RPZ at Twin Lakes consists of buffers along the property lines. There are potential forested wetlands in a few areas. Old field areas and meadows open field are to be preserved within the design of the golf course itself.

Human impact in this zone will be kept to a minimum. Some of the RPZ includes cultural resources as well. Management of natural resources will be allowed, but degradation of this zone shall be prohibited.

Potential Uses:

Trails
Wildlife and Habitat Management
Research
Interpretation and Education
Passive Recreation

B. Cultural Resource Protection Zone

The Cultural Resource Protection Zone (CRPZ) includes both historic and prehistoric sites. It extends east from the existing 10th hole to Clifton Road, and south from Braddock Road to the existing 11th green. There is an additional site encompassed by a RPZ along Union Mill Road. Definitive mapping is dependant upon future research.

The sites will be tested for integrity, extent, and chronology to determine their significance prior to any site design. These areas may be developed as a Recreation Zone, but appropriate steps will be taken to protect or mitigate any resources designated for action.

C. Entrance Zone

Based on field conditions, preliminary routing plans, and other factors, the new entrance to the park should be from Twin Lakes Road. It must be sited carefully to avoid impacting the RPZ and to allow proper distance between the new entrance and other intersections on this road.

The Entrance Zone (EZ) draws visitors into the site and allows them to view the park as they enter.

Potential Uses:

Park Buildings (not to include maintenance buildings)
Trails
Parking and Roads
Utilities

D. Recreation Zone

The Recreation Zone (RZ) will contain most of the active uses for the site. The primary purpose of this zone is to provide visitors with active and passive recreation experiences.

Potential Uses:

Active Recreation
Passive Recreation
Utilities
Parking
Park Buildings

CONCEPTUAL DEVELOPMENT PLAN FOR TWIN LAKES GOLF COURSE

I. INTRODUCTION

The purpose of this Conceptual Development Plan (CDP) is to describe what facilities should be developed, how they fit into the established management framework, where they will be constructed, and how these facilities will be operated in conjunction with other portions of the park and existing uses.

These decisions are based on public input, previous development in the park, and needs assessments as stated in the "Feasibility Study for Future Golf Development at Three Sites in Fairfax County, Virginia, March 1992".

II. DESIGN CONCERNS

A. Traffic Control

The design for the new entrance on Twin Lakes Road should seek to minimize impact to traffic travelling in both directions from the entrance.

B. Water Quality and Turf Management

FCCA has had independent environmental firms conduct studies of both stormwater and water quality on the existing Twin Lakes Golf Course. Best Management Practices, integrated pest management, minimal grading, buffers, and preservation and creation of wildlife habitats will ensure the golf development will "lie lightly on the land".

Operations similar to those described in FCCA's national award winning program "Golf and the Environment - Links with Nature" will be instituted at the new development.

C. Wetlands

Preliminary research indicates the presence of limited wetlands. A thorough wetlands delineation will be completed before design is complete. Wetlands so delineated will be avoided if at all possible. If avoidance is impossible, impact will be minimized or mitigated as required.

D. Vegetative Buffer and Tree Preservation

The Resource Protection Zone, as shown in the General Management Framework, will be preserved in existing condition. Tree preservation will be a top priority during the design phase of the golf course development.

E. Archaeological Evaluation

Twin Lakes is being surveyed for historic and archaeological resources. There is evidence that these resources exist. Further research is needed to determine whether the new facilities and any reconstruction of the existing course can be accomplished to avoid significant resources present.

Testing of some prehistoric sites and potential sites should be included in the design phase of the golf course development.

F. Scheduling for Continuity of Play

During the design of this project, consideration should be given to the timing and structuring of the construction phase. If at all possible, 18 holes should be playable at all times.

III. DESCRIPTION OF CONCEPT PLAN ELEMENTS

A. Golf Courses

The addition of 18 holes to the existing 18 hole course should result in two 18 hole courses operating interdependently. The courses should serve daily fee golfers, with a regular programmed usage also. The client golfer is a public course player with a medium to high handicap, but each course should be challenging to low handicap golfers as well. Environmental sensitivity is of the utmost importance.

B. Driving Range

A 50-station non-lighted driving range primarily to be used for practice by golf course patrons should include 30 all-weather mats and 20 grass stations. It should be sited with consideration for the relationship to both the clubhouse and the two starting tees.

Additional facilities associated with the driving range include:

- * A 7000 plus square foot practice green
- * Practice bunkers
- * Two regulation croquet courts - to be built to national competition standards with spectator areas provided.

C. Maintenance Shop

The maintenance shop should be multi-functional. Areas should be provided for equipment storage, equipment repair, and reel grinding. There also should be space for fertilizer storage and chemical storage.

An employee area with showers, bathrooms, lockers, and lunch room should be provided for the 20 employees working out of the shop. In addition there should be office space and a training room.

Outside areas should be provided for the following:

- * Employee parking
- * Tractor trailer deliveries
- * Dumpsters
- * Concrete material storage bins
- * Wash rack and containment tank
- * Above ground fueling station
- * Spray tank fill area

The entire shop yard should be fenced and secured, with night lighting and a landscape buffer.

D. Clubhouse

The clubhouse functions to conduit daily fee players to the course, serves the varied needs of group use patrons, houses pro-shop and snackbar sales, controls access to the driving range, houses and provides an area for maintenance of golf cart operations, and provides for the needs of staff assigned to the facility.

It also should include a multi-purpose room to accommodate a minimum of 160 golfers during group and tournament play. An outside deck/patio should be partially covered and will be used by the groups as well as regular course players.

The asphalt parking area should accommodate 400 cars and include two bus spaces and drop-off area

E. Trails

An 8 foot wide asphalt countywide trail is required along the entire frontage on Clifton Road.

F. Fencing

Peripheral fencing and, if needed, safety fencing of the portions of the golf course near residential neighborhoods and trails should be provided.

PRELIMINARY
PROJECT IMPLEMENTATION PLAN FOR
TWIN LAKES GOLF COURSE

I. INTRODUCTION AND OVERVIEW

The purpose of this Project Implementation Plan (PIP) is to provide scope definitions, cost estimates, approximate schedule for completion, and funding recommendations for the projects described in the Conceptual Development Plan (CDP).

Implementation of the approved CDP for Twin Lakes Golf Course involves the funding, planning, design, and construction of an additional 18 holes of golf, new entrance, clubhouse, and maintenance shop. The project will be coordinated by the Manager of the Golf Enterprises Division. The project team that created the conceptual development plan should continue to act as resource to the effort. Project Manager for the implementation will be the Park Authority golf course landscape architect. Staff from golf courses, Facility Development Division, and Park Management Division should also participate.

All facilities and amenities shall be fully accessible to persons with disabilities.

The project cost is estimated at \$7.3 million. (See Appendix A taken from the Feasibility Study for Future Golf Development at Three Sites in Fairfax County, Virginia by Parnell Kerr Forster). Once funding has been obtained, the success of the project will depend upon attentive supervision of the design and permitting process to ensure creation of a quality 36-hole complex with maximum operational flexibility; and on carefully phasing of the construction process so that a minimum of a 9 holes (ideally 18) remain open at all times to ensure a continuous revenue stream.

II. PROJECT SCOPE DEFINITIONS

A. Golf Courses

The end product is envisioned to be two 18 hole golf courses operating interdependently and serving primarily daily fee golfers, with a regular programmed group usage as well. The client golfer is a public course player with a medium to high handicap, however, each course should also challenge low handicappers. While it likely will not be possible to keep the existing 18 holes intact, the "character" and "playability" features of the existing Twin Lakes Golf Course should be maintained.

The new golf courses should be designed to "lie lightly on the land". Environmental sensitivity is of the utmost importance with emphasis on incorporating existing old field habitats into the courses and providing for monitoring of water quality in both surface runoff and groundwater. Minimal grading and clearing is a goal.

Design should reflect expected heavy play levels (60,000 to 75,000 rounds per course) and maintenance expenditures below the national average (\$18,900 per hole, in 1992 dollars). Expected play times of 4.5 hours are to be considered in the design criteria.

The following list of amenities are to be included:

- * Multiple tees (total sq. footage should exceed standards)
- * Large greens (avg. 9,000 plus sq. ft.)
- * On-course restrooms, water fountains and shelters
- * Tee to green cart paths
- * Turfgrass nursery (irrigated)
- * Allowances for temporary tees and greens
- * City water connection to irrigation pump station
- * Starters stand that serves both courses
- * Chemical fill area and wash rack on course

The irrigation system should be energy efficient and be designed with water conservation as a primary goal. It should incorporate components of the existing system whenever feasible. Drainage should be self contained to the maximum extent possible. Additional on-site water storage should be provided to ensure adequate surface water capture for irrigation. Design should, however, discourage Canada Geese if possible.

The grassing plan should consider the needs for continuity of species and cultivars for maintenance purposes. Selection should also, however, be made with the goal of reducing the water, fertilizer, and chemicals required for maintenance.

Special conditions exist that will require the attention of the designer. Archeological resources have been mapped to the degree possible with Fairfax County Park Authority staff limitations. Further study will be required prior to final routing. Wetlands will also have to be mapped prior to this time. The presence of asbestos containing soils will require special consideration during construction. County regulations will require road improvements as part of the overall scope of the project.

Other requirements include BMP's, transitional screening, and compliance with The Americans With Disabilities Act.

B. Driving Range

The range is intended to be approximately 50 stations, unlighted. Approximately 30 stations are to be synthetic surface and the remainder to be grassed. Grassed area should be tiered with one area bermuda and the other a rye mix. The entire range should be irrigated. Target greens are to be incorporated at appropriate distances. Additional facilities associated with the range include:

- * 7000 plus square foot practice green
- * Practice bunkers
- * Two regulation croquet courts

The driving range should be sited with consideration for the relationship to both the clubhouse and the two starting tees. The range should be designed to permit future expansion and lighting.

The croquet courts should be designed and constructed to national competition standards with appropriate spectator areas provided.

C. Maintenance Shop

The shop should encompass approximately 9000 square feet of enclosed building, plus additional covered equipment storage ports (3500 sq. ft.). A fertilizer storage shed (1,000 sq. ft.) and chemical storage building (800 sq. ft.) are also required.

The shop should have a minimum of three bays (one drive through). Ceilings must be high to accommodate an equipment repair lift, overhead hoist, exhaust fans and compressor and lubrication drop lines. Lighting should be augmented with sky lights. All surfaces are to be washable and floor drains are to be installed.

Separate from the main work floor should be the reel grinding area (although it must be served by the overhead hoist). This area should have additional sound and dust protection. It is to be equipped with both reel and bedknife grinders.

A separate employees area should include showers, bathroom, lockers, and lunch room to serve the expected number of employees (20 total, 12 fulltime). In addition there should be two offices and a training room. The offices should have a view of the entire shop floor and a window to the outside. One office will have sensitive equipment (irrigation computer, copier, etc.) and must be secured and protected from dust. Offices and training room must be protected from shop noise.

Outside space should be provided for the following:

- * Employee parking
- * Tractor trailer deliveries
- * Dumpsters
- * Concrete material storage bins
- * Wash rack and containment tank
- * Above ground fueling station
- * Spray tank fill area

The entire shop yard must be fenced and secured, including night lighting. It should be buffered with a landscape buffer as necessary.

D. **Clubhouse**

The clubhouse functions to conduit daily fee players to the course, serves the varied needs of group use patrons, houses pro-shop and snackbar sales, controls access to the driving range, houses and maintains golf cart operations, and provides for the needs of staff assigned to the facility. The entrance to the clubhouse should make a statement regarding the quality of the facilities. The building architecture, simple and functional, should also reflect the character of the surrounding environment and existing course. Natural light should be maximized and augmented by artificial light.

All facilities and amenities will be fully accessible to persons with disabilities and meet all requirements of the Americans with Disabilities Act.

The parking area should be asphalt and accommodate 400 cars with two spaces for buses and a drop area with direct access to the clubhouse.

Entrance way to the clubhouse should include a vestibule with information boards large enough to display tournament results and other materials of interest.

Pro-shop and snack bar functions should be physically separated. Pro-shop should have adequate space for resale display and storage, green fee sales, and range control. Snack bar should accommodate 50-75 seated patrons and large storage areas.

There should be a multipurpose room to accommodate a minimum of 160 golfers with facilities for catering meals. This room should include dividers that create two separate areas and should open onto a deck/patio, a portion of which is covered. It should have direct access to a staging area where groups will gather to be assigned carts during "shotgun" starts. Alcohol Beverage Control Board requirements must be addressed within the design.

Restrooms should be accessed directly from the outside (deck/patio area) and from the snack bar. They will serve as changing rooms, but will not have lockers or showers. A bank of lockers should, however, be provided in the pro-shop, directly adjacent to the counter.

Both operational and administrative office space should be provided. Administrative offices should have a window to both the pro-shop counter and the practice areas. The operational offices will house system controls, tee time and handicap service computers, accounting office, vault and safe, as well as a small club repair area. An employee lunch room should also be provided.

Separate from the facility, but located within easy access to first tees, practice areas, and croquet courts should be a pavilion that can accommodate 70-100 people.

A cart storage and maintenance area should be part of the clubhouse structure or reasonably close-by. It should accommodate 140 carts, a repair area, fueling and cleaning area, as well as storage of carts that are off-line. This entire area(s) should be well secured and protected from the elements.

III. FINANCING

Based on recommendations contained in A Feasibility Study for Future Golf Development in Fairfax County, Virginia, March, 1992 by Pannell, Kerr, Forster, Inc. and approved by The Park Authority Board, Twin Lakes Golf Course is to be financed by issuance of revenue bonds. Repayment of these bonds will be from existing and future revenue streams of the Park Authority's Trust Fund. All costs associated with development of the Twin Lakes golf facilities will be accomplished without use of tax monies.

The revenue bonds will be authorized by both Fairfax County Park Authority Board (PAB) and the Board of Supervisors (BOS). The issuance will be structured, underwritten, and marketed utilizing resources provided to the County by financial advisors to the Office of Management and Budget (OMB).

In addition to the consultant's fiscal analysis, it will be necessary to provide OMB and their advisors up-to-date fund statements and projections. This will be coordinated by Fairfax County Park Authority administration.

Timing of the issuance of the bonds is dependant upon PAB and BOS approval and OMB project workloads. Given the present bond interest rates, the sooner the bond issuance takes place, the lower the interest rates and overall bond repayment cost.

The financing of the Twin Lakes project is part of the larger golf development plans outlined in the feasibility study. Attached are three scenarios developed for financing. These represent data updated from the feasibility study to reflect new time tables and known numbers from FY 92 which originally appeared as estimates.

Staff recommends Scenario Three, based on ending fund balance and fund balance available as shown in Appendix D.

Scenario One - Revenue Bond Issue/Lease Purchase Option
Twin Lakes and Oak Marr would be funded by bonds while Richard Jones would involve a lease purchase (Certificates of Participation) type funding. All three projects would be initiated as soon as possible.
See Appendix B

Scenario Two - Revenue Bond Issue/Lease Purchase (Front Loading cash deficits)

This option is the same as the preceding except that additional funds are included in the bond issue to better protect the ending fund balance and fund balance available.

See Appendix C

Scenario Three - Revenue Bonds/Richard Jones Privatization

In this option, Oak Marr and Twin Lakes are again funded with revenue bonds but Richard Jones is offered as a privatization option whereby the land would be leased to a developer who would then finance, build and operate the golf course. After a specified period the facility would revert to FCPA for operation.

See Appendix D

It should be noted that all three options are approached in the most conservative manner, so that the projections are much closer to worse case scenarios than what the ultimate potential may be. For example, the interest rates are from the feasibility study (even though they are likely to be much lower), the projects are not phased to take advantage of new cash flows, the Richard Jones project shows operational results based FCPA green fees rather than the higher private sector fees, and the Jones site does not project the lease payment which would be negotiated prior to signing an agreement.

IV. CONSULTANT SERVICES

A golf course architect will be necessary for this project. A request for qualifications was issued in March 1993, and is to be followed by a request for proposals to the top rated firms and individuals. Criteria for selection of a consultant will center on a proven track record with high use municipal golf design; a proven sensitivity towards, and experience with environmental issues; demonstrated ability to minimize maintenance costs; and experience with golf course renovation and redesign.

Selection of all design, construction, and any other necessary consulting services will be according to all required FCPA and Fairfax County procurement procedures. A project team of FCPA staff will work with the design consultants through the design and construction process to insure the project is completed according to design specifications and legal requirements.

V. PHASING/OPERATIONAL CONCERNS

The expansion of facilities at Twin Lakes should consist of the addition of 18 holes. The final product should provide 36 relatively consistent holes that will be used by both the general public and large groups. Consistency of turf conditions will aid the Superintendent's maintenance efforts.

During construction, it would be expected that 9 holes would remain open at all times and 18 holes for as long as possible. This might require the use of some temporary tees and/or greens, but this can be determined only when the architect's routing plan is drawn up.

A grow-in period must be provided to prepare the golf course for play. This process will be supervised by the Twin Lakes Golf Course Superintendent with support from the Extension Office and Fairfax County Park Authority Turfgrass Specialist. Under no circumstances should the grow-in period be altered to allow play before the course is ready.

Listed below are some of the items on the existing course that need to be addressed during some phase of construction.

- * Tee space expansion. Forward and multiple teeing grounds are needed.
- * Cart paths. Once the routing plan is approved, all 36 holes need to be connected with tee to green asphalt paths.
- * Bridges should be upgraded.
- * North lake spillway needs repair.
- * Culvert pipes need to be replaced. Pipes are now failing after 25+ years.
- * Grading is needed in some fairways.
- * Shelters & restrooms are needed on course.
- * Existing fencing needs to be surveyed; most will need replacement because of condition and additional right-of-way dedication.
- * Bunkers need to be rebuilt.
- * Barn and silo need to be inspected to determine integrity and cost of fortifying and maintaining.

Upon approval of a routing plan, it should be determined how many of the original greens can be rebuilt to the specifications of the new greens while still keeping as many holes as possible open for play. The development of a plan to renovate all greens is to be within the scope of the architect's assignment.

Likewise, the grassing plan will be phased, if necessary, in order to provide a consistency of species and cultivars throughout the entire 36 holes. This should be implemented to cause minimal impact on revenues.

Portions of the existing irrigation system have been recently upgraded and should be incorporated into the new system whenever possible. The main lines, however, are original and should be replaced. If an entirely new system is deemed necessary, then salvage of the old system will be required. Continuity of service during April through October to the existing course is mandatory.

Existing old field habitat is to be incorporated into the course design. In addition, archeological resources are to be protected or mitigated. Each requires "in the field" siting and special attention during construction. Also, water quality monitoring will be conducted throughout the construction and development period.

VI. ANNUAL OPERATING COSTS

Appendix F is a summary of expected operating results from the additional 18 holes at Twin Lakes Golf Course. Included is the estimated maintenance costs as provided by Pannell Kerr and Forster in the feasibility study. The maintenance estimates are in 1992 dollars and represent a cost of \$18,900 per hole compared to the actual cost per hole in FY92 of \$19,500. The difference is a result of the inherent economies of scale associated with maintaining 36 vs 18 holes.

Consolidated operational expenses for the entire 36 hole complex are shown as part of Appendix G. During the first full year of operation (1998) the expenses of \$1,771,579 represent a cost of \$49,200 per hole as compared to the actual cost per hole in FY92 of \$40,000 for the 18 hole complex.

VII. SCHEDULE

Based on FCPA Board approval of this document in early May 1993, work on the three golf course projects will begin immediately thereafter. It is anticipated that Oak Marr can be completed first, opening in the spring of 1996; with Twin Lakes and Richard Jones following in the spring of 1997. Appendix H depicts the sequence of activities for each project. Some milestone dates:

July 1993	Design consultants selected for Oak Marr/Twin Lakes
Oct. 1993	Development partner selected for Richard Jones
March 1994	Design completion - Oak Marr
June 1994	Design completion - Twin Lakes
Oct. 1995	Construction completion - Oak Marr
Spring 1996	Opening - Oak Marr
September 1996	Construction completeion - Twin Lakes/Richard Jones
Spring 1997	Opening - Twin Lakes/Richard Jones

The schedule for each project will be developed in more detail once a consultant contract for each is executed.

APPENDIX

**PROPOSED TWIN LAKES GOLF COURSE
ESTIMATED DEVELOPMENT COSTS**

Golf Course Development:

Golf Course Construction	\$3,600,000
Reconfiguration of Existing Holes (1)	900,000
Engineering, Design, Survey and Permit Cost	400,000
Driving Range and Practice Green	80,000
Parking and Interior Roads	568,000
Clubhouse and Surrounding Grounds' Landscaping	<u>130,000</u>
Total Golf Course Development Cost	<u>\$5,678,000</u>

Golf Facilities:

Clubhouse (2)	\$248,000 - 353,000
Golf Cart Shed (3)	180,000 - 495,000
Maintenance Building (3)	180,000 - 495,000
Maintenance Equipment	<u>250,000</u>
Total Facility Cost	<u>\$858,000 - 1,595,000</u>

Total Proposed Twin Lakes Golf Course Development Cost **\$6,536,000 - 7,273,000**

Note: (1) Assumes reconfiguration of four to five holes.
 (2) Average to above average construction.
 (3) Range depicts prefabricated metal and masonry construction, respectively.

Source: National Golf Foundation, Marshall and Swift Valuation Service,
 and PKF Consulting

FAIRFAX COUNTY PARK AUTHORITY
TRUST FUND COMPIILATION
Revenue Bond Issue/Lease Purchase Option

	1991	1992	1993	1994	1995	*1 1996	*2 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
REVENUE:																
*3Golf Courses (Existing)	\$4,207,661	\$4,802,862	\$4,600,000	\$4,800,000	\$4,992,000	\$4,602,226	\$4,006,315	\$4,166,568	\$4,333,230	\$4,506,560	\$4,686,822	\$4,874,295	\$5,069,267	\$5,272,037	\$5,482,919	\$5,702,235
*4Proposed Tw Lakes G.C.							\$1,234,782	\$2,475,392	\$3,146,500	\$3,569,847	\$3,712,640	\$3,861,147	\$4,015,593	\$4,176,217	\$4,343,265	\$4,516,996
Proposed R. Jones G.C.							\$432,567	\$1,384,213	\$1,727,498	\$1,983,744	\$2,063,094	\$2,145,618	\$2,231,442	\$2,320,700	\$2,413,528	\$2,510,069
Proposed Oak Marr G.C.							\$580,933	\$1,510,425	\$1,822,177	\$2,058,431	\$2,140,769	\$2,226,399	\$2,315,455	\$2,408,073	\$2,504,396	\$2,604,572
Other Facilities	\$9,962,621	\$10,631,876	\$9,965,000	\$10,790,000	\$11,183,800	\$11,593,156	\$12,032,686	\$12,489,314	\$12,963,713	\$13,456,584	\$13,968,658	\$14,500,689	\$15,053,468	\$15,627,814	\$16,224,577	\$16,844,644
TOTAL	\$14,170,282	\$15,434,738	\$14,565,000	\$15,590,000	\$16,175,800	\$16,195,382	\$18,287,283	\$22,025,912	\$23,993,118	\$25,575,166	\$26,571,983	\$27,608,148	\$28,685,225	\$29,804,841	\$30,968,685	\$32,178,516
EXPENDITURES:																
*3Golf Courses (Existing)	\$3,059,383	\$3,036,784	\$2,930,000	\$3,381,000	\$3,516,240	\$3,608,418	\$2,993,555	\$3,113,297	\$3,237,829	\$3,367,342	\$3,502,036	\$3,642,117	\$3,787,802	\$3,939,314	\$4,096,887	\$4,260,762
*4Proposed Tw Lakes G.C.							\$958,617	\$1,771,579	\$1,885,154	\$1,983,680	\$2,063,026	\$2,145,549	\$2,231,370	\$2,320,625	\$2,413,450	\$2,509,988
Proposed R. Jones G.C.							\$281,581	\$1,141,164	\$1,206,213	\$1,262,637	\$1,318,343	\$1,371,077	\$1,425,920	\$1,482,957	\$1,542,275	\$1,603,966
Proposed Oak Marr G.C.							\$239,529	\$913,601	\$972,023	\$1,025,617	\$1,066,642	\$1,109,307	\$1,153,680	\$1,199,827	\$1,247,820	\$1,297,733
Other Facilities	\$10,627,175	\$10,955,888	\$11,030,000	\$11,399,000	\$11,854,960	\$12,329,158	\$12,822,325	\$13,335,218	\$13,868,627	\$14,423,372	\$15,000,306	\$15,600,319	\$16,224,331	\$16,873,305	\$17,548,237	\$18,250,166
TOTAL	\$13,686,558	\$13,992,672	\$13,960,000	\$14,780,000	\$15,371,200	\$15,937,576	\$17,295,607	\$20,274,859	\$21,169,846	\$22,062,648	\$22,950,353	\$23,868,369	\$24,823,103	\$25,816,028	\$26,848,669	\$27,922,615
Revenue Exceeding Expend	\$483,724	\$1,442,066	\$605,000	\$810,000	\$804,600	\$257,806	\$991,676	\$1,751,052	\$2,823,272	\$3,512,517	\$3,621,630	\$3,739,778	\$3,862,121	\$3,988,813	\$4,120,016	\$4,255,901
Transfers to Subfund 950	(\$2,486,860)	(\$601,000)	(\$1,082,843)	(\$675,000)*5	(\$675,000)*5	(\$675,000)*5	(\$500,000)	(\$500,000)	(\$500,000)	(\$500,000)	(\$1,000,000)	(\$1,000,000)	(\$2,000,000)	(\$2,000,000)	(\$2,500,000)	(\$2,500,000)
Debt Service:																
Debt Service (Bond)	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)
Lease Payment	\$0	\$0	\$0	\$0	\$0	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)
BEGINNING FUND BALANCE	\$3,021,147	\$1,018,011	\$1,859,077	\$1,381,234	\$1,516,234	\$1,645,834	\$292,134	(\$1,184,220)	(\$1,901,198)	(\$1,545,955)	(\$501,468)	\$152,132	\$923,880	\$817,972	\$838,755	\$490,741
ENDING FUND BALANCE	\$1,018,011	\$1,859,077	\$1,381,234	\$1,516,234	\$1,645,834	\$292,134	(\$1,184,220)	(\$1,901,198)	(\$1,545,955)	(\$501,468)	\$152,132	\$923,880	\$817,972	\$838,755	\$490,741	\$278,612
RESERVES NEEDED:																
Cash Flow	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Golf Course Sinking Fund																
Prior Years			\$0	\$500,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Current Year			\$500,000	\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FUND BALANCE AVAILABLE	\$518,011	\$1,359,077	\$381,234	\$16,234	(\$354,166)	(\$207,866)	(\$1,684,220)	(\$2,401,198)	(\$2,045,955)	(\$1,001,468)	(\$347,868)	\$423,880	\$317,972	\$338,755	(\$9,259)	(\$221,388)

NOTES: *1Existing Twin Lakes revenue and expenditures for 1996 reduced because construction of new course will limit operations to 9 holes.

*2 Opening of Twin Lakes, Oak Marr Center and R.Jones

*3 Includes Twin Lakes (1991-1996),Jefferson, Greendale, Pinecrest, and Burke Lake Golf Courses

*4 Assumes Consolidated Twin Lakes Operation. Figures include existing golf course.

*5 Includes yearly lease payment for SIMS

FAIRFAX COUNTY PARK AUTHORITY
TRUST FUND COMPIATION
Revenue Bond Issue/Lease Purchase Option
Front Funding of Cash Deficits

	1991	1992	1993	1994	1995	*1 1996	*2 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
REVENUE:																
*3Golf Courses (Existing)	\$4,207,661	\$4,802,862	\$4,600,000	\$4,800,000	\$4,992,000	\$4,602,226	\$4,006,315	\$4,166,568	\$4,333,230	\$4,506,560	\$4,686,822	\$4,874,295	\$5,069,267	\$5,272,037	\$5,482,919	\$5,702,235
*4Proposed Tw Lakes G.C.							\$1,234,782	\$2,475,392	\$3,146,500	\$3,569,847	\$3,712,640	\$3,861,147	\$4,015,593	\$4,176,217	\$4,343,265	\$4,516,996
Proposed R. Jones G.C.							\$432,567	\$1,384,213	\$1,727,498	\$1,983,744	\$2,063,094	\$2,145,618	\$2,231,442	\$2,320,700	\$2,413,528	\$2,510,069
Proposed Oak Marr G.C.							\$580,933	\$1,510,425	\$1,822,177	\$2,058,431	\$2,140,769	\$2,226,399	\$2,315,455	\$2,408,073	\$2,504,396	\$2,604,572
Other Facilities	\$9,962,621	\$10,631,876	\$9,965,000	\$10,790,000	\$11,183,800	\$11,593,156	\$12,032,686	\$12,489,314	\$12,963,713	\$13,456,584	\$13,968,658	\$14,500,689	\$15,053,468	\$15,627,814	\$16,224,577	\$16,844,644
TOTAL	\$14,170,282	\$15,434,738	\$14,565,000	\$15,590,000	\$16,175,800	\$16,195,382	\$18,287,283	\$22,025,912	\$23,993,118	\$25,575,166	\$26,571,983	\$27,608,148	\$28,685,225	\$29,804,841	\$30,968,685	\$32,178,516
EXPENDITURES:																
*3Golf Courses (Existing)	\$3,059,383	\$3,036,784	\$2,930,000	\$3,381,000	\$3,516,240	\$3,608,418	\$2,993,555	\$3,113,297	\$3,237,829	\$3,367,342	\$3,502,036	\$3,642,117	\$3,787,802	\$3,939,314	\$4,096,887	\$4,260,762
*4Proposed Tw Lakes G.C.							\$958,617	\$1,771,579	\$1,885,154	\$1,983,680	\$2,063,026	\$2,145,549	\$2,231,370	\$2,320,625	\$2,413,450	\$2,509,988
Proposed R. Jones G.C.							\$281,581	\$1,141,164	\$1,206,213	\$1,262,637	\$1,318,343	\$1,371,077	\$1,425,920	\$1,482,957	\$1,542,275	\$1,603,966
Proposed Oak Marr G.C.							\$239,529	\$913,601	\$972,023	\$1,025,617	\$1,066,642	\$1,109,307	\$1,153,680	\$1,199,827	\$1,247,820	\$1,297,733
Other Facilities	\$10,627,175	\$10,955,888	\$11,030,000	\$11,399,000	\$11,854,960	\$12,329,158	\$12,822,325	\$13,335,218	\$13,868,627	\$14,423,372	\$15,000,306	\$15,600,319	\$16,224,331	\$16,873,305	\$17,548,237	\$18,250,166
TOTAL	\$13,686,558	\$13,992,672	\$13,960,000	\$14,780,000	\$15,371,200	\$15,937,576	\$17,295,607	\$20,274,859	\$21,169,846	\$22,062,648	\$22,950,353	\$23,868,369	\$24,823,103	\$25,816,028	\$26,848,669	\$27,922,615
Revenue Exceeding Expend	\$483,724	\$1,442,066	\$605,000	\$810,000	\$804,600	\$257,806	\$991,676	\$1,751,052	\$2,823,272	\$3,512,517	\$3,621,630	\$3,739,778	\$3,862,121	\$3,988,813	\$4,120,016	\$4,255,901
Transfers to Subfund 950	(\$2,486,860)	(\$601,000)	(\$1,082,843)	(\$675,000)*5	(\$675,000)*5	(\$675,000)*5	(\$500,000)	(\$500,000)	(\$500,000)	(\$500,000)	(\$1,000,000)	(\$1,000,000)	(\$2,000,000)	(\$2,000,000)	(\$2,500,000)	(\$2,500,000)
INCREASED BOND SALE AMOUNT (support of PA cash shortfall)						\$2,500,000										
Debt Service:																
Debt Service (Bond)	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)
Lease Payment	\$0	\$0	\$0	\$0	\$0	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)	(\$936,506)
Debt Service for Incr. Amt						\$0	(\$250,000)	(\$250,000)	(\$250,000)	(\$250,000)	(\$250,000)	(\$250,000)	(\$250,000)	(\$250,000)	(\$250,000)	(\$250,000)
BEGINNING FUND BALANCE	\$3,021,147	\$1,018,011	\$1,859,077	\$1,381,234	\$1,516,234	\$1,645,834	\$2,792,134	\$1,065,780	\$98,802	\$204,045	\$998,532	\$1,402,132	\$1,923,880	\$1,567,972	\$1,338,755	\$740,741
ENDING FUND BALANCE	\$1,018,011	\$1,859,077	\$1,381,234	\$1,516,234	\$1,645,834	\$2,792,134	\$1,065,780	\$98,802	\$204,045	\$998,532	\$1,402,132	\$1,923,880	\$1,567,972	\$1,338,755	\$740,741	\$278,612
RESERVES NEEDED:																
Cash Flow	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Golf Course Sinking Fund																
Prior Years			\$0	\$500,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Current Year			\$500,000	\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FUND BALANCE AVAILABLE	\$518,011	\$1,359,077	\$381,234	\$16,234	(\$354,166)	\$2,292,134	\$565,780	(\$401,198)	(\$295,955)	\$498,532	\$902,132	\$1,423,880	\$1,067,972	\$838,755	\$240,741	(\$221,388)

NOTES: *1Existing Twin Lakes revenue and expenditures for 1996 reduced because construction of new course will limit operations to 9 holes.
*2 Opening of Twin Lakes, Oak Marr Center and R.Jones
*3 Includes Twin Lakes (1991-1996),Jefferson, Greendale, Pinecrest, and Burke Lake Golf Courses
*4 Assumes Consolidated Twin Lakes Operation. Figures include existing golf course.
*5 Includes yearly lease payment for SIMS

FAIRFAX COUNTY PARK AUTHORITY
TRUST FUND COMPIIATION
Revenue Bonds/Oak Marr and Twin Lakes
R. Jones - Built and Operated by Developer

	1991	1992	1993	1994	1995	*1 1996	*2 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
REVENUE:																
*3Golf Courses (Existing)	\$4,207,661	\$4,802,862	\$4,600,000	\$4,800,000	\$4,992,000	\$4,602,226	\$4,006,315	\$4,166,568	\$4,333,230	\$4,506,560	\$4,686,822	\$4,874,295	\$5,069,267	\$5,272,037	\$5,482,919	\$5,702,235
*4Proposed Tw Lakes G.C.							\$1,234,782	\$2,475,392	\$3,146,500	\$3,569,847	\$3,712,640	\$3,861,147	\$4,015,593	\$4,176,217	\$4,343,265	\$4,516,996
Proposed Oak Marr G.C.							\$580,933	\$1,510,425	\$1,822,177	\$2,058,431	\$2,140,769	\$2,226,399	\$2,315,455	\$2,408,073	\$2,504,396	\$2,604,572
Other Facilities	\$9,962,621	\$10,631,876	\$9,965,000	\$10,790,000	\$11,183,800	\$11,593,156	\$12,032,686	\$12,489,314	\$12,963,713	\$13,456,584	\$13,968,658	\$14,500,689	\$15,053,468	\$15,627,814	\$16,224,577	\$16,844,644
TOTAL	\$14,170,282	\$15,434,738	\$14,565,000	\$15,590,000	\$16,175,800	\$16,195,382	\$17,854,716	\$20,641,699	\$22,265,620	\$23,591,422	\$24,508,889	\$25,462,530	\$26,453,783	\$27,484,141	\$28,555,157	\$29,668,447
EXPENDITURES:																
*3Golf Courses (Existing)	\$3,059,383	\$3,036,784	\$2,930,000	\$3,381,000	\$3,516,240	\$3,608,418	\$2,993,555	\$3,113,297	\$3,237,829	\$3,367,342	\$3,502,036	\$3,642,117	\$3,787,802	\$3,939,314	\$4,096,887	\$4,260,762
*4Proposed Tw Lakes G.C.							\$958,617	\$1,771,579	\$1,885,154	\$1,983,680	\$2,063,026	\$2,145,549	\$2,231,370	\$2,320,625	\$2,413,450	\$2,509,988
Proposed Oak Marr G.C.							\$239,529	\$913,601	\$972,023	\$1,025,617	\$1,066,642	\$1,109,307	\$1,153,680	\$1,199,827	\$1,247,820	\$1,297,733
Other Facilities	\$10,627,175	\$10,955,888	\$11,030,000	\$11,399,000	\$11,854,960	\$12,329,158	\$12,822,325	\$13,335,218	\$13,868,627	\$14,423,372	\$15,000,306	\$15,600,319	\$16,224,331	\$16,873,305	\$17,548,237	\$18,250,166
TOTAL	\$13,686,558	\$13,992,672	\$13,960,000	\$14,780,000	\$15,371,200	\$15,937,576	\$17,014,026	\$19,133,695	\$19,963,633	\$20,800,011	\$21,632,010	\$22,497,292	\$23,397,183	\$24,333,071	\$25,306,394	\$26,318,649
Revenue Exceeding Expend	\$483,724	\$1,442,066	\$605,000	\$810,000	\$804,600	\$257,806	\$840,690	\$1,508,003	\$2,301,987	\$2,791,410	\$2,876,879	\$2,965,237	\$3,056,599	\$3,151,070	\$3,248,763	\$3,349,798
Transfers to Subfund 950	(\$2,486,860)	(\$601,000)	(\$1,082,843)	(\$675,000)*5	(\$675,000)*5	(\$675,000)*5	(\$500,000)	(\$500,000)	(\$500,000)	(\$500,000)	(\$1,000,000)	(\$1,000,000)	(\$2,000,000)	(\$2,000,000)	(\$2,500,000)	(\$2,500,000)
Debt Service:																
Debt Service (Bond)	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)	(\$1,031,524)
BEGINNING FUND BALANCE	\$3,021,147	\$1,018,011	\$1,859,077	\$1,381,234	\$1,516,234	\$1,645,834	\$1,228,640	\$537,806	\$514,285	\$1,284,749	\$2,544,635	\$3,389,990	\$4,323,703	\$4,348,779	\$4,468,325	\$4,185,564
ENDING FUND BALANCE	\$1,018,011	\$1,859,077	\$1,381,234	\$1,516,234	\$1,645,834	\$1,228,640	\$537,806	\$514,285	\$1,284,749	\$2,544,635	\$3,389,990	\$4,323,703	\$4,348,779	\$4,468,325	\$4,185,564	\$4,003,838
RESERVES NEEDED:																
Cash Flow	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Golf Course Sinking Fund																
Prior Years			\$0	\$500,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Current Year			\$500,000	\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FUND BALANCE AVAILABLE	\$518,011	\$1,359,077	\$381,234	\$16,234	(\$354,166)	\$728,640	\$37,806	\$14,285	\$784,749	\$2,044,635	\$2,889,990	\$3,823,703	\$3,848,779	\$3,968,325	\$3,685,564	\$3,503,838

NOTES: *1Existing Twin Lakes revenue and expenditures for 1996 reduced because construction of new course will limit operations to 9 holes.
*2 Opening of Twin Lakes, Oak Marr Center
*3 Includes Twin Lakes (1991-1996), Jefferson, Greendale, Pinecrest, and Burke Lake Golf Courses
*4 Assumes Consolidated Twin Lakes Operation. Figures include existing golf course.
*5 Includes yearly lease payment for SIMS

FAIRFAX COUNTY PARK AUTHORITY
TRUST FUND COMPIILATION

OTHER FACILITIES

	1991	1992	1993	1994	1995	*1 1996	*2 1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
REVENUE:																
Conservation	\$42,955	\$83,665	\$20,000	\$20,000	\$20,400	\$20,808	\$21,224	\$21,649	\$22,082	\$22,523	\$22,974	\$23,433	\$23,902	\$24,380	\$24,867	\$25,365
Historic Preservation	\$164,813	\$187,615	\$170,000	\$180,000	\$183,600	\$187,272	\$191,017	\$194,838	\$198,735	\$202,709	\$206,763	\$210,899	\$215,117	\$219,419	\$223,807	\$228,284
Managed Parks	\$978,959	\$829,154	\$700,000	\$700,000	\$700,000	\$700,000	\$714,000	\$728,280	\$742,846	\$757,703	\$772,857	\$788,314	\$804,080	\$820,162	\$836,565	\$853,296
Recreation Centers	\$8,452,730	\$9,193,686	\$8,800,000	\$9,600,000	\$9,984,000	\$10,383,360	\$10,798,694	\$11,230,642	\$11,679,868	\$12,147,063	\$12,632,945	\$13,138,263	\$13,663,793	\$14,210,345	\$14,778,759	\$15,369,909
Administration	\$323,164	\$337,756	\$260,000	\$270,000	\$275,400	\$280,908	\$286,526	\$292,257	\$298,102	\$304,064	\$310,145	\$316,348	\$322,675	\$329,128	\$335,711	\$342,425
OMI			\$15,000	\$20,000	\$20,400	\$20,808	\$21,224	\$21,649	\$22,082	\$22,523	\$22,974	\$23,433	\$23,902	\$24,380	\$24,867	\$25,365
TOTAL	\$9,962,621	\$10,631,876	\$9,965,000	\$10,790,000	\$11,183,800	\$11,593,156	\$12,032,686	\$12,489,314	\$12,963,713	\$13,456,585	\$13,968,658	\$14,500,690	\$15,053,469	\$15,627,814	\$16,224,577	\$16,844,644
EXPENDITURES:																
Historic Preservation	\$183,371	\$173,516	\$160,000	\$202,000	\$210,080	\$218,483	\$227,223	\$236,311	\$245,764	\$255,594	\$265,818	\$276,451	\$287,509	\$299,009	\$310,970	\$323,409
Managed Parks	\$0	\$0	\$310,000	\$334,500	\$347,880	\$361,795	\$376,267	\$391,318	\$406,970	\$423,249	\$440,179	\$457,786	\$476,098	\$495,142	\$514,947	\$535,545
Recreation Centers	\$9,739,352	\$9,818,462	\$9,400,000	\$9,700,000	\$10,088,000	\$10,491,520	\$10,911,181	\$11,347,628	\$11,801,533	\$12,273,594	\$12,764,538	\$13,275,120	\$13,806,125	\$14,358,370	\$14,932,704	\$15,530,013
Administration	\$704,452	\$963,910	\$490,000	\$451,500	\$469,560	\$488,342	\$507,876	\$528,191	\$549,319	\$571,292	\$594,143	\$617,909	\$642,625	\$668,330	\$695,064	\$722,866
OMI	\$0	\$0	\$380,000	\$403,000	\$419,120	\$435,885	\$453,320	\$471,453	\$490,311	\$509,924	\$530,321	\$551,533	\$573,595	\$596,538	\$620,400	\$645,216
Programming & Marketing	\$0	\$0	\$290,000	\$308,000	\$320,320	\$333,133	\$346,458	\$360,316	\$374,729	\$389,718	\$405,307	\$421,519	\$438,380	\$455,915	\$474,152	\$493,118
TOTAL	\$10,627,175	\$10,955,888	\$11,030,000	\$11,399,000	\$11,854,960	\$12,329,158	\$12,822,325	\$13,335,218	\$13,868,626	\$14,423,371	\$15,000,306	\$15,600,319	\$16,224,331	\$16,873,305	\$17,548,237	\$18,250,166

TWIN LAKES COURSE
Fairfax County Park Authority

Statements of Estimated Operating Results
For a Representative Year in Current Value (1992) Dollars

<u>Revenues</u>		
Green Fees	\$866,232	57.6%
Cart Rental(1)	\$122,173	8.1%
Driving Range	\$294,480	19.6%
Pro Shop	\$30,750	2.0%
Snack Bar	\$108,000	7.2%
Equipment Rental	\$21,000	1.4%
Lesson Income	\$61,000	4.1%
TOTAL	\$1,503,635	100.0%
<u>Departmental Expenses</u>		
Golf Course Maintenance	\$340,000	39.3%
Cart Maintenance(2)	\$6,000	4.9%
Driving Range	\$31,200	10.6%
Pro Shop	\$21,525	70.0%
Snack Bar	\$77,700	71.9%
Club House Payroll	\$164,400	11.3%
TOTAL	\$640,825	42.6%
Operating Income/(Loss)	\$862,810	57.4%
<u>Undistributed Expenses</u>		
Administrative and General	\$30,000	2.0%
Energy	\$12,500	0.8%
Marketing	\$15,000	1.0%
Property Operations and Maintenance	\$22,000	1.5%
TOTAL	\$79,500	5.3%
Income Before Fixed Charges	\$783,310	52.1%
<u>Fixed Charges</u>		
Building and Contents Insurance	\$11,000	0.7%
TOTAL	\$11,000	0.7%
Income Before Reserve	\$772,310	51.4%
Reserve for Replacement	\$45,109	3.0%
Income Before Other Fixed Charges (3)	\$727,201	48.4%

Notes: (1) Cart Rental revenues represents 68% of the total revenues received.

The remaining 32% is paid out to the lessor in the form of a lease payment.

(2) Golf Cart Maintenance Fees represent fuel cost and minor repairs. The lessor will assume the associated repair, replacement, and property tax expense on the carts.

(3) Income before other fixed charges such as depreciation, amortization, and debt service.

Source: PKF Consulting

<p align="center">Table 3 Summary of Total Expenses - Proposed Golf Developments</p>						
Fiscal Year	Twin Lakes			Richard Jones	Oak Marr	Total (Rounded)
	(1)Existing	Proposed	Consolidated			
1996	724,573	(2)234,044	958,617	Not Open	239,529	1,199,000
1997	859,494	912,085	1,771,579	281,581	913,601	2,968,000
1998	914,298	970,856	1,885,154	1,141,164	972,023	3,998,000
1999	961,946	1,021,734	1,983,680	1,206,213	1,025,617	4,216,000
2000	1,000,423	1,062,603	2,063,026	1,262,637	1,066,642	4,398,000
2001	1,040,441	1,105,108	2,145,549	1,318,343	1,109,307	4,573,000
2002	1,082,058	1,148,312	2,231,370	1,371,077	1,153,680	4,756,000
2003	1,125,341	1,195,284	2,320,625	1,425,919	1,199,828	4,947,000
2004	1,170,354	1,243,096	2,413,450	1,482,956	1,247,820	5,144,000
2005	1,217,168	1,292,820	2,509,988	1,542,275	1,297,733	5,350,000
2006	1,265,855	1,344,533	2,610,388	1,603,965	1,349,642	5,564,000
<p>Note: (1) Not shown in feasibility study. Estimated expenses attributable to the existing golf course. (2) Partial year of operation.</p>						
<p>Source: PKF Consulting, Inc.</p>						

NOTE: The figures in this table assume a 1996 opening.
Tables in Appendices B-D have been revised to reflect a 1997 opening.

GOLF COURSES DESIGN AND CONSTRUCTION SCHEDULE

April, 1993

1993

1994

1995

1996

1997

