PINECREST GOLF COURSE

FAIRFAX COUNTY PARK AUTHORITY 4030 HUMMER RD. ANNANDALE. VA. 22003

PRELIMINARY MASTER PLAN REPORT

June 1983

Prepared by;

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June 15, 1983

Mr. Donald F. Lederer Fairfax County Park Authority 4030 Hummer Road Annandale, Virginia 22003

RE: Pinecrest Golf Course Master Plan Study

Dear Mr. Lederer,

Over the past two decades golf as a sport has continued to increase in popularity. Fairfax County is no exception. Through the wise achievement of the Fairfax County Park Authority and the Northern Virginia Regional Park Authority, several new courses have been introduced into Northern Virginia and are operating at peak efficiency. The facility at Pinecrest will simply be a replacement for the existing public course and, in fact, will result in a decline in the number of courses in the area.

The proposed course, illustrated in this report, should prove to be more popular than the existing Pinecrest facility. We are very excited about the proposed design of the golf course, clubhouse, maintenance facility and other features, and are confident that it will be a worthwhile addition to your family of courses. We are confident that the clubhouse and maintenance facilities are efficient, handsome and will prove to be durable throughout their long life. We are particularly pleased that the solar aspects of the clubhouse will save operational costs and have the added advantage of being well within our construction budget.

We are grateful for the fine cooperation of your entire staff and the helpful input by members of the Park Authority and concerned citizens in the area. With you we look forward to seeing these proposals into reality.

Respectfully submitted,

MORTENSEN ASSOCIATES

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PINECREST GOLF COURSE

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1.0 Introduction

The purpose of this report is to present our findings and recommendations relating to the proposed golf course development at Pinecrest.

This report contains the results of our site and program analysis and our analysis of the three options prepared by the Park Authority staff.

In meeting with the staff to discuss these options and in meeting with citizen groups to hear these views we have selected Option 'C' and made certain modifications to more adequately allow the course to fit the land and become a fine golf facility. This information became the basis for the preliminary design which is contained herein.

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2.0 Recommendations

The following are Summary of Recommendations:

- Select the 9 hole mid-length golf course. This type of course will suit the site much better, will appeal to a broader range of the golf course population, would be less expensive to construct and maintain, and will provide a comparable net revenue.
- 2. Build a new clubhouse facility in favor of remodeling the existing clubhouse. The proposed clubhouse design can be constructed for approximately \$250,000, while we estimate it would range between \$285,000 and \$360,000 to renovate the existing clubhouse to handicapped and operational standards. The new location would be in the same general proximity as the existing clubhouse but would allow much better use of the site.
- 3. Adopt the design of the new clubhouse, including the energy-saving recommendations as outlined in this report.
- 4. The new maintenance facility will be located on a site across Braddock Road and will provide easy access to the golf course with minimal disruption of future park activities planned for that area.
- 5. Our market feasibility study shows that there is a high demand for more public courses in this area.
- 6. The new golf course will produce comparable net revenues to those of the existing Park Authority golf courses and may, in fact, exceed those net revenue figures.
- 7. Although we have not included the cost (\$177,000) in the cost estimates, we recommend that the Park Authority authorize including the indoor practice facility in the initial construction.
- 8. We recommend that perimeter security be installed to prevent the vandalism and disruption problems that generally plague urban golf courses. This security will be similar to that at other area courses but will be designed in a more pleasant and esthetic manner.

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- 9. The proposed east-west regional trail will be located between Elmdale and the edge of the fairways which parallel Elmdale, primarily in the right-of-way.
- 10. A new pond will be constructed along Turkeycock Run near Braddock Road which will complement golf course play, minimize the storm water runoff from the golf course property and become the source for irrigation water.

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3.0 Site Analysis

EXISTING CONDITIONS

The site of the proposed new Pinecrest Golf Course in Annandale, Virginia is composed of three major parcels of land totaling some 55 acres. The site is bounded on the outside by Little River Turnpike (Route 236), Braddock Road, Old Columbia Pike, and Elmdale Road. The interior boundry of the site will abut the proposed housing project which will be developed and built over the next several years by Edward R. Carr & Associates, Inc. The new golf course when completed will act as greenbelt buffer between the existing surrounding residential neighborhood and the proposed housing development.

A portion of the total site, essentially the area parallel to Elmdale Road (a total of 26.5 acres) has been owned by the Fairfax County Park Authority since 1970. This area contains a part of the existing golf course as well as a tennis court, picnic area, and a gravel parking lot with access off of Braddock Road. In addition, there is an area comprising some 1.4 acres along Braddock Road which contains a number of 20' x 30' garden plots which can be rented through the Park Authority for \$25.00 a year.

The remaining 28.5 acres is currently occupied by the existing privately owned Pinecrest Golf Course which was completed in 1957. Statistics indicate that the course has experienced a downward trend in the number of rounds played over the last several years. This can be traced directly to the general deterioration of the course due to the lack of upkeep and maintenance (such as fertilization, weed control, etc.).

The clubhouse and parking lots are located in the extreme southern corner of the site at the intersection of Little River Turnpike and Braddock Road. The condition of the clubhouse (like the golf course) has been allowed to deteriorate over the years to the point where it would require extensive rehabilitation/renovation for use as the clubhouse facility for the new course. Vehicular access into the parking lot is off of Braddock Road near the intersection with Little River Turnpike and would fall within the required road improvements to Braddock Road to be completed by Edward R. Carr & Associates, Inc. (This is discussed in more detail within the Traffic section of this report prepared by Bengtson, Debell, Elkin & Titus.)

The traffic volumes on Little River Turnpike and Braddock Road are very heavy at this particular time and can be expected to increase in the future. This will necessitate some type of buffering adjacent to these roads, as the



noise generated can be quite distracting and disruptive to play. Old Columbia Pike carries a similar high volume of traffic, but through a combination of an existing wooded buffer and the road being at a lower elevation than the site, this does not pose a problem. Elmdale Road serves only the immediate residential neighborhood with a very low traffic volume and would not require any buffering.

The natural features of the site can be best characterized as ranging from flat to steeply sloping, lacking significant vegetation in most areas, and having vantage points at various locations that afford good views to other areas within the site and to distant points off-site. This is particularly true when standing on top of the ridgeline in the western part of the site where one can see for quite some distance to the east and southeast. These views, particularly those off-site, will be altered or blocked in some instances by the proposed housing development, the extent of which is not fully known at this point as the housing plan is still evolving.

At present there are three existing surface water features on the site which can be improved and utilized as natural hazards within the layout of the new golf course. The Turkeycock Run, which flows from northwest to southeast across the central portion of the site, has a nice meandering character in many places. Located along the streambanks at various points are several large mature specimen trees and a number of other smaller canopy and flowering trees. The entire stream corridor has become a habitat for various kinds of birds and other small animals which are native to the area. Over the years a large amount of debris and tangled brush has been allowed to accumulate along the banks and in the streambeds. The visual character of the stream could be improved considerably through a general cleanup program and through selective clearing.

The two existing ponds are located in the middle of the site with the surface elevation of the northern most pond being approximately 3'-0" higher than the lower one. Both of these ponds contain large amounts of algae and would need to be cleaned up for future use.

The topography rises dramatically from east to west across the site, with very steep slopes in many places, especially in the northern and western portion of the property. Flat areas are confined to the east and southern portions of the site, where a small portion of the land falls within the 10 and 100 year floodplains of Turkeycock Run.

Tree cover is rather sparse in most areas of the site, with the exception being the one wooded area in the north corner. Most other significant vegetation is found along the banks of Turkeycock Run between fairways or along property lines.

TOPOGRAPHY/SLOPE ANALYSIS

The topographic character of a site is typically the single most important factor in determining the layout of a golf course. Care must be taken in the design of each hole to ensure that adequate visibility from tee to landing area and landing area to the green has been provided for. This sometimes requires extensive earthwork in areas where slopes are steep. The topographic undulation of the Pinecrest site can be characterized as ranging from extremely flat to very steep in certain areas. The eastern and southern portions of the site generally fall within the 0-5% range, while the northern and northwestern portions of the site have the steepest slopes. It is within this zone that the majority of the 123 foot difference in elevation between the lowest and highest points on the site is taken up, with some slopes exceeding 35%.

The slope ranges which can be found on the slope map, along with applicable comments on each, are as follows:

Slope Range 0-5%: Poor drainage can be a problem in areas where the natural slope is less than 2%. This is of major concern on golf courses as all areas should drain quickly so as not to slow or impede play. Monotonous layouts can also result on flat sites if there is a lack of natural features which can provide interest and compensate for the lack of topography.

Slope Range 5-10% & 10-15%: Generally, this stope range provides for the most exciting and challenging golf holes, especially if there are other natural features present. Construction of tees and greens within this slope range would require leveling off adequate areas. Care must be taken to protect exposed slopes within this range during construction to minimize erosion.

Slope Range 15% or Greater: Construction of golf holes within this slope range tend to be more expensive. Major regrading is necessary to create flat areas for tees and greens. In addition, extensive grading is sometimes necessary to provide the golfer with adequate sight distance from the tee to the landing area and landing area to the green. Maintenance costs would also tend to be higher within this slope range with fairways being more difficult to establish and maintain.

An additional consideration is that older players may experience some difficulty in walking these areas of the course, especially if fairways are in an uphill direction, with the result being a general slowdown in play.



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DRAINAGE/HYDROLOGY

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The focus of the natural drainage system on the site is Turkeycock Run which traverses the site and flows from the northwest to the southeast. At present the stream enters the site with approximately 190 acres of contributing watershed area at Old Columbia Pike and exits the site at Braddock Road with a watershed area of some 420 acres. The additional 230 acres is composed of drainage from the entire existing Pinecrest site plus some offsite areas, primarily the residential areas to the north and east of Elmdale Road. The extent of the 10 and 100 year floodplains for Turkeycock Run have been delineated on the Drainage Map. The floodplain area is rather small and should not pose a problem to the new golf course, especially since the construction of the course will not add more impervious surfaces than what presently exist on the site.

Overland surface flow is fairly rapid over most areas of the site, especially where the topography is steep. Much of the runoff on the site is intercepted by a series of natural swales which deposits runoff directly into Turkeycock Run. These areas are often wet for long periods after major rainfall, especially on the lower ends near the stream.

In general, because of the composition of the soils onsite, low lying areas would be wet for long periods of time after heavy rains. This is the case with the extreme northern portion of the site, which is very low and wet most of the time. Any construction within this area would require extensive underdrainage. This portion of the site would lend itself to expansion of the northern most existing pond and/or expansion of Turkeycock Run.

Other existing surface water features include the two ponds and a small stream in the eastern portion of the site which runs into Turkeycock Run. The two ponds are at present both full of algae and would need to be cleaned out during construction. Expansion of either of these ponds is feasible but should be done in a natural manner.



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VEGETATION

The existing vegetation on the site consists of the open grassy areas of the existing golf course, one major wooded area in the northwest corner of the site, and some sparsely scattered trees and brush located along the banks of Turkey Cock Run and/or in thin strips along the edges of fairways or property lines.

The major classifications of vegetation delineated on the Vegetation Map and the descriptions of each category are as follows.

A. WOODED AREAS

The major wooded area on the site is located primarily in the northwest corner of the property, with an additional thin strip extending approximately 750 feet south along the property line and parallel to Old Columbia Pike. The vegetation within this area includes a mixture of native species ranging from large mature deciduous trees to flowering understory trees, shrubs, and groundcover. Species include American Beech, Tulip Poplar, Maple, Oak, Sycamore, Ash, River Birch, Dogwood, Redbud, Serviceberry, Wild Cherry, Mountain Laurel, Honeysuckle, Bloodroot, and Mayapple.

B. OPEN AREAS

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These areas comprise the majority of the site and include the "maintained" areas of the golf course (fairways, trees, and greens), a large grassy strip of land running along Old Columbia Pike (which is not part of the existing golf course), and a small maintained lawn area located east of the existing tennis court. In addition, these areas include a few scattered trees which have been planted over the years to define fairways and/or property lines. Species include White Pine, Virginia Cedar, Spruce, and a few Maples.

C. This zone includes the areas immediately adjacent to Turkey Cock Run. The vegetation is composed of native species which are typically found along streambanks or in wet areas. Significant species include Sycamore, Tuplip Poplar, Wild Cherry, Red Maple, Red Bud, Serviceberry, and a few Dogwoods. In addition, most of these areas contain a mass of tangled underbrush, small saplings, and in some



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areas, dead or broken trees, most of which should be cleared out. This would enhance the visual qualities of the stream and through reduced competition would improve the health of the remaining more desireable species.

GENERAL COMMENTS

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In spite of the sparse tree cover on the site, there are a number of large specimen deciduous trees which range in size from 24"-50" in caliper. These trees are located mainly along Turkey Cock Run and have been noted on the Vegetation Map. Because of their significant size and the limited number of trees in general on the site, every effort should be made to incorporate them into the new golf course layout. Additionally, there are a number of other smaller trees such as Spruce, Dogwood, Redbud, Deodar Cedar, etc. which could easily be transplanted and incorporated into the new layout. The wooded area in the northern corner of the site should be retained in its existing state as much as possible. SPECIAL STUDY SOIL TYPE MAP OF PART OF PINECREST GOLF COURSE IN ANNANDALE, VIRGINIA. SITE IS PROPOSED FOR DEVELOPMENT BY THE FAIRFAX COUNTY PARK AUTHORITY.



<u>Soil Symbol</u>	Soil Name	<u>% Slope</u>
lA+	Alluvial Soils (Flood Plain)	0-2
10B+	Glenville Silt Loam	2-7
20B+	Meadowville Silt Loam	2-7
21D2	Manor Silt Loam	14-25
32B1	Fairfax Silt Loam	2-7
37B1	Beltsville Silt Loam	2-7
54B1	Sassafras Loam	2-7
55B1	Glenelg Silt Loam	2-7
55C2	Glenelg Silt Loam	7-14
113B1	Fairfax Gravelly Loam	2-7
1·13C2	Fairfax Gravelly Loam	7-14
	Soil Boundary	
Scale:	1" = 500 feet	
By:	L. K. Johnson, Soil Scientist	•
	Fairfax County Soil Survey Office	
Date:	June 6, 1983 15	

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PINECREST GOLF COURSE PRELIMINARY STUDIES

UTILITIES

The utilities available to this site include sanitary sewer, water, electricity, telephone and natural gas. These exist in various locations on and around the property and proposed connection locations will depend upon the plan chosen for development and the final engineering.

Several lines of sanitary sewer are accessable to the site. An 8" line in Old Columbia Pike connects to a 10" line running along Turkeycock Run (diagonally through the northwest corner of the site) which flows to a 12" line on the south side of Elmdale Road. The 12" line is at the stream invert or higher and will require a pump station, grinder pump and force main for connection. An 8" line on the north side of Route 236 with a terminal manhole at the intersection of Braddock Road is accessable and can be reached by gravity flow within 300' to 400'. This line runs east, away from the site.

Water service is available at several locations surrounding the site. The lines most easily accessable include a 12" main on the north side of Route 236 and a 16" main on the west side of Braddock Road. These lines are located on the same side of the street as the site, therefore, no road boring is anticipated.

Due to the fact that no information was required or compiled by Fairfax County Health Department before 1962, very little information is available on existing wells in the area. It is probable that some exist along Elmdale Drive because no public water was installed there. Several wells are on record along Route 236, but most properties in the area are served by Fairfax County Water Authority. Wells would be used for irrigation purposes only, with the anticipated yield expected to be in the range of 15-25 gallons per minute.

Existing overhead electric service is available along the north sides of Route 236 and Elmdale Drive, the east side of Braddock Road and the west side of Old Columbia Pike (from Elmdale Road south towards Sleepy Hollow Road). Overhead lines also run diagonally across the southwest corner of the site from Route 236 to Old Columbia Pike. There was no visible evidence of existing underground facilities, but confirmation with utility company records is necessary prior to final construction plans. No electric service connection problems are expected. Existing overhead telephone lines are located along the east side of Braddock Road, the north side of Elmdale Drive, the west side of Elmdale Drive and the west side of Old Columbia Pike (from Elmdale towards Sleepy Hollow Road). There was no visible evidence of underground cable, but buried lines along Route 236 are a possibility. Confirmation with utility company records is recommended prior to final construction plans. No connection problems are anticipated.

Natural gas service is available from several locations. A 2" line runs along the north side of Elmdale Drive from Braddock Road to 400' <u>+</u> east of Old Columbia Pike. There should be no problems in connecting to this line and a open cut installation is probable. On the west side of Braddock Road, from its intersection with Route 236, an 8" main runs toward the south. On the south side of Route 236, from it's intersection with Braddock Road, a 12" line runs toward the east. Connecting to these lines may, however, require boring under Route 236. If natural gas is necessary, generally Washington Gas Light Co. will provide service to the site.

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TRANSPORTATION

The existing roadway system bordering this project varies from the heavily traveled Route 236 and Braddock Road on the south and east, the somewhat less traveled Old Columbia Pike on the west, to Elmdale Road, a secondary subdivision street, on the north. It would be safe to predict that both Route 236 and Braddock Road will experience a steady increase in use in the future as they have done in the past. It would be expected that Old Columbia Pike and Elmdale usage will increase also, but at a considerably less intense rate.

The present Fairfax County and VDH&T standards will require a certain amount of improvements to the existing roads in conjunction with the entrances proposed for the development of this site. These improvements generally will consist of a 200' right turn lane and transition and a 60' acceleration taper. An 8' wide asphalt trail will be provided along the Route 236 frontage as a part of the Carr Pinecrest project. Further, a 6' wide asphalt trail will be provided along Turkeycock Run and Elmdale Road from Old Columbia Pike to Braddock Road as it will provide a valuable link between the Mason District Park and the Green Spring Farm Nature Area.

The southeast corner of the site fronts Little River Turnpike, Route 236, for a distance of approximately 450'. This is presently a 4-lane divided arterial highway, with predominantly edge of pavement and shoulder, except where development has already occurred and curb and gutter was provided. According to VDH&T's Traffic and Safety Division the present traffic count is 27,500 vehicles per day. The following improvements are proffered conditions of Carr's development:

- On Route 236, construction of a third full lane (12' wide) with curb & gutter for the entire site frontage for turning movements into the subdivision and an 8' wide trail.
- 2. Sufficient dedication to accommodate the above improvements. The amount of dedication has not yet been determined.
- 3. Improvement of the intersection of Braddock Road and Route 236.
- 4. Landscaping and buffering.

Due to the proposed turn lanes and the good internal traffic flow of te Carr development, the requirement of a service drive has been waived. Any proposed entrances will need to meet VDH&T standards and no additional crossovers will be allowed along Route 236 to serve the park property. Site frontage along Braddock Road, Route 620, consists of $650'\pm$ of Fairfax County Park Authority property and $900'\pm$ of Carr property for a total frontage of approximately 1550'. Braddock Road is presently a 2-lane undivided road with edge of pavement, some shoulder, and ditch, and a present traffic count of $7000\pm$ vehicles per day. Sight distance is generally good, except at the crest of the hill approximately 800' north of Route 236 where it is reduced to 250'±. Improvements to Braddock Road would include:

- 1) Street dedication to 45' from the centerline of the right-of-way for the full frontage of Fairfax County Park Authority property.
- Construction of a turn lane and transition plus an acceleration taper at the proposed clubhouse driveway entrance. This entrance should be located in an area of optimum sight distance.

It is possible that improvement of the existing culvert crossing at Turkeycock Run may be required since the 1978 countywide drainage study designated this as a problem area. Both the Immediate Action Plan and Long Term Plan address this crossing. See the Drainage Section for further discussion on this particular item.

Site frontage along Old Columbia Pike, Route 712, consists of 200'± of Fairfax County Park Authority property and 2350'± of Carr property for a total of approximately 2550'. This is presently a narrow 2 lane road with edge of pavement, some or no shoulder, steep banks on each side and limited sight distance. The present traffic count is 3850 vehicles per day. Street dedication to 45' from the centerline of the right-of-way will be required along the entire frontage and the inadequate culvert crossing at Turkeycock Run may require improvement. No entrances are planned or recommended due to the substantial frontage improvements required to meet VDH&T standards.

Site frontage along Elmdale Road, Route 2248, is approximately 2100'. Presently a 2 lane secondary (subdivision) street, it has edge of pavement, no shoulder, but good sight distance. No entrances are proposed, and additional dedication is not expected.

DRAINAGE

Turkeycock Run flood plain area runs almost parallel to Elmdale Road along the northeast portion of the site. The 10 year storm water stays generally within the banks of the stream, however, based on preliminary studies, the 100 year storm water flows out of the banks toward Elmdale Drive where the ground is low and flat. Both 10 and 100 year flood plain limits generally span less than 100', with the widest area at the Braddock Road culvert crossing. This crossing is adequate for 10 year flow, provided the pipes and upstream intake are cleaned and channelized, but the water surface is at or near the pavement elevation. A 100 year storm, however, flows 1.0'± deep over the road, resulting in an unsafe and undesirable situation. This crossing is identified on the Fairfax County drainage plan as an area for immediate action and a double 8'x6' box culvert at an estimated cost of \$75,000 is recommended.

It is possible to provide an additional pond or ponds onsite for course obstacle and storm water retention purposes, thereby reducing the total runoff. Accordingly this would reduce the drainage impact at the stream crossing and possibly eliminate the need of replacement of the culvert. These ponds will also provide an alternate source of irrigation water.

In consideration of the location of any new ponds on Turkeycock Run, it appears that just upstream from the Braddock Road crossing would provide many benefits. First, it could provide additional storm drainage control that could possibly eliminate the need to upgrade the inadequate culvert. Secondly, an attractive course hazzard is added to increase the player interest. Third, it could provide a source of irrigation water for the golf course. Finally, it would be a contribution to the overall water quality since its downstream location positions itself to trap and allow to settle onsite pollutants that otherwise might flow on uncontrolled.

There are other potential pond locations, generally, anywhere along Turkeycock Run or up the several onsite major swales draining toward Turkeycock Run. The location will depend on final golf course layout. Generally, these pond will be small and shallow. There is sufficient flow in Turkeycock Run to prevent ponds from becoming stagnant.

A flood plain study based on new grading and improvements will probably be required and a permit approved and issued by the Board of Supervisors prior to any grading or construction within the flood plain area. Cleaning out the culvert barrels, entrance channelization and repairing the existing headwall at Braddock Road will also be required. Any existing obstructions in the stream, such as brush and debris on the banks will need to be removed.

Concentrated surface drainage is presently being discharged by culverts draining from areas on the north side of Elmdale Road. These areas will need to be properly addressed in some form of storm drainage system. No major impact on the proposed golf course is anticipated from these culverts.

SITE ANALYSIS CONCLUSIONS

- The site size will be reduced due to the required dedication along Braddock and Old Columbia Pike to achieve 45' from the center line on each road. This will require approximately 15' of site dedication on each side.
- 2. There is approximately 123' of elevation difference on the site. It is generally excellent topography for golf course development except for approximately 1/3 of the site along Old Columbia Pike and the area up to the western-most pond. This area may require extensive grading to achieve a surface suitable to golf course play and maintenance.
- 3. Vehicular entry to the site must be along Braddock Road. There are only two areas of vehicular site entry possibility consisting of less than one third of the Braddock Road frontage that satisfy the VD&H criteria.
- 4. The existing clubhouse is poorly located with respect to Little River Turnpike. It is too close and any widening of Little River Turnpike or inclusion of buffer would eliminate most of the parking and would require that new parking area be located between the clubhouse and the proposed golf course.
- 5. All necessary site utilities are generally available on the site. The sanitary sewer along Elmdale, however, may be more expensive to utilize and maintain because the invert elevation of the line and the stream are approximately the same and parallel.
- 6. The existing ponds, while unnatural in shape, are very interesting features on the site. However, they would be difficult to expand because of the way they are constructed and the fact that they are higher than the stream elevation.
- 7. There are very good new pond opportunities on the site, all of which relate to Turkeycock Run. Ponds may be constructed elsewhere but would have to be constructed with consideration given to keeping the water circulating and supplementing the elevation through pumping.
- 8. In any golf course scheme there will be a variety of pleasant relationships between the golf course and the residential development. In some cases the residences will be higher, and in some cases they will be lower.
- 9. The overhead electrical transmission line in the western portion of the site will need to be relocated or placed under ground to eliminate hazard potential for the golfers.

- 10. The narrow configuration of the site will require a scheme of side-by-side fairways playable in such a way that the slice or shot going right will always go into the site rather than out to the surrounding uses.
- 11. The proposed housing is very close to the mutual property line in many cases.
- 12. The intersection of Little River Turnpike and Braddock Road provides the highest public visibility for the site.
- 13. The site is generally devoid of trees except for a number of individual large trees and a small wooded area in the northwest corner. To retain the large existing trees may limit the golf course design.
- 14. Some of the steepest slopes on the site will need to be moderated for the golf course maintenance program.
- 15. There are no major site drainage problems due to the presence of Turkeycock Run. It will be necessary, however, to create some retainage areas to retard runoff from the site and increase the life and viability of the existing drainage culvert on Braddock Road.
- 16. It would be desirable to create an on-site water source for the sprinkling system rather than continue the present practice of utilizing public treated water for this purpose.
- 17. We are required to provide a county-wide trail paralleling Elmdale. Since this type of use is not compatible with golf course use the best location would be in the right-ofway along Elmdale. This does not have to be a straight run, however. It can meander and be a very interesting feature. It will be necessary to protect trail users from flying golf balls.
- 18. There appear to be no significant problems regarding soils on the site.
- 19. Our preliminary flood plain analysis indicates that a 100 year flood will be contained on the site, except for flooding over Braddock Road. Providing ponding on the site will alleviate this problem.
- 20. Any proposed golf course plan will not increase any site runoff. The resultant runoff will be the same as exists or less.

EXISTING CONDITIONS

The site for the proposed Pinecrest Golf Course Maintenance Facility is located just southwest of the intersection of Braddock Road and Elmdale Road and includes an area of approximately 6.7 acres in size. The site is bounded by Braddock Road, Green Springs Road, and by single family lots on the northeast and southwest.

The majority of the site area which can be seen from Braddock Road is very flat and almost totally devoid of trees. It is within this zone that the maintenance/storage facility for the existing golf course is located, contained within an area which is slightly less than one acre in size. The existing facility, which is accessible from Braddock Road, consists of an open service yard (which is littered with debris and equipment) around which are grouped three separate dilapidated wooden structures used for repairs and storage. The largest of the three structures has electricity service via an overhead line from Braddock Road. There is also a gasoline pump located within the service yard which is used for refueling golf course maintenance vehicles.

The other existing facility on the site is located in the southern corner off of Green Springs Road. This is a Fairfax County Park Authority Maintenance Facility which services the adjacent Green Springs Farm Park. This facility is contained within a very small area (less than $\frac{1}{2}$ acre) and includes two small concrete block structures used for storage and repairs and a gravel parking lot.

A majority of the site falls within the 0-5% slope range with the steeper areas being confined to portions of the site which are heavily wooded and which are generally adjacent to the existing stream (Turkeycock Run).

In addition to the proposed maintenance facility, the site will also contain the parking lot for the Green Springs Farm Park Facility and an area which will be set aside for the garden plots, which are to be removed from their present location on the golf course site.



TOPOGRAPHY/SLOPE ANALYSIS

here .

The slope variation on the site ranges from very flat (less than 2% in places) in the central and southeastern portions of the site to very steep (greater than 35%) in an area adjacent to the existing stream in the eastern part of the site.

The total change in elevation found on the site is approximately 28' (55.9 to 28) which is found in the area running along Green Springs Road.

The flat zone in the eastern 2/3 of the site is ideally suited as a location for the maintenance facility, which will need large areas for truck maneuvering. Construction in this zone would involve minimal earthwork and would preserve the more sensitive areas of the site in their present state.




DRAINAGE/HYDROLOGY

As is the case on the golf course site, the focus of the natural drainage system is Turkeycock Run, which traverses the site and flows from the northwest to the southeast. At the present time, the stream enters the site under Braddock Road with approximately 420 acres of contributing watershed area and exits the site under Green Springs Road with approximately 507 acres of contributing watershed area. The additional 87 acres of contributing watershed area includes areas to the north and south of the site.

The extent of the 10 and 100 year floodplains have been delineated on the drainage map. This zone is confined wholly to the northern portion of the site and would not present a problem to the proposed maintenance facility which would be best located to the south on the flatter portion of the site.

The entire site drains into Turkeycock Run with the rate of runoff varying, depending on the degree of slope. The areas of steep slopes are adequately protected by the existing tree cover at the present time.

Since a substantial portion of the site falls within the 0-5% slope range, it is anticipated that poor natural drainage and possibly standing water can be expected after periods of major rainfall, especially in areas where the natural slope is less than 2%.



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VEGETATION

The existing vegetation on the site consists of two categories, the open cleared area which accounts for approximately 3.7 acres and the wooded areas which account for the remainder of the site. The wooded areas are generally found in areas where slopes are the steepest (which apparently were left undisturbed when the site was originally cleared) and along the banks of Turkeycock Run. The wooded areas contain a mixture of native vegetation ranging from large deciduous canopy trees to native shrubs and groundcovers. Species include Sycamore, Red Maple, American Beech, Oak, Serviceberry, Dogwood, Wild Cherry, Redbud, Pine, Virginia Cedar, Hornbeam, and River Birch in addition to various native shrubs and groundcover.

The open areas of the site are covered with native grasses and weeds which typically "spring up" in areas that have been "cleared" and have rather poor soil conditions.

The wooded areas which are found along the streambanks and in areas where the slopes are steep would be best preserved in their present state. The stream "corridor" is an especially sensitive area, one which would contain an abundance of small wildlife and birds.



IV. SOILS

The Fairfax County soils map indicates that the maintenace area is composed of Mixed Alluvial Land and the Kempsville series soils.

The Mixed Alluvial Land is primarily silty deposits comprising flood plain area and the limits is generally confined to the stream area.

The Kempsville series is described as being very near the RUSTON-BELTSVILLE gravelly fine sandy loams and is described as follows:

144B1 - <u>RUSTON-BELTSVILLE GRAVELLY FINE SANDY LOAMS</u>, GENTLY SLOPING (2 TO 7%)

Ruston-Beltsville gravelly fine sandy loams, gently sloping, Includes 2 soils too closely associated and intricately mixed to be adequately separated on a map of the scale used. These soils are moderately deep to deep, moderately well-to well-drained soils developed from unconsolidated marine sands, silts, and clays. They occupy undulating ridge crests or undulating flat-shaped sideslopes throughout the Coastal Plain. The surface soils range from light olive brown to light yellowish-brown, and from gravelly fine sandy loams to gravelly loams. The subsoils range from pale brown or brownish-yellow to strong brown or yellowish-red, and from fine sandy loams to clay loams. A weakly to medium developed fragipan occurs in spots throughout the mapping unit. Numerous quartz or quartzite gravel occur throughout the profile.

These soils are very strongly to strongly acid, naturally low in fertility, but fair in productivity. They are rather difficult to work but fairly easy to conserve.

SUITABILITY FOR AGRICULTURAL AND FOREST PRODUCTION

These soils are best suited to small grain and mixed hays, except alfalfa. They are best suited to shortleaf Virginia or lobiolly pines. Fair growths may be expected.

<u>Major Soil Problems in Agricultural and Forest Production</u>: These soils have a relatively coarse textured surface soil 6" to 10" thick that becomes quite droughty during hot, dry summers. There are spots containing rather hard, dense fragipan layers that restrict root and water penetration. Numerous gravel that interfere with tillage operations occur throughout the profile. Short crop sequences are usually adequate to conserve this soil.

SUITABILITY FOR ENGINEERING

These soils are questionable for septic tank drainage fields, but fair for building sites, sanitary land fills, and trench silos. They are fair fill material for roads or pond dams, and are fairly stable in cuts or excavations.

<u>Major Soll Problems in Engineering</u>: Fragipans which limit use for some engineering practices occur in spots.

PINECREST GOLF COURSE MAINTENANCE AREA PRELIMINARY STUDIES

I. UTILITIES

Sanitary sewer is available to this site through a 12" line which runs in an easterly direction parallel to the northern property line and located in parcels 3 & 4, between Braddock Road and Green Spring Road. An easement already exists adjoining the park property and the line appears to be low enough below the stream invert to be accessible by a gravity flow lateral.

A 16" water line exists on the west side of Braddock Road. Connection will most likely require boring under the pavement.

Overhead telephone and electric lines are located on the east side of Braddock Road and the west side of Green Spring Road. No evidence was found of any underground cables, but this should be confirmed with the utility company records prior to final construction plans. No connection problems are anticipated for either service.

Gas service is available from an existing 2" main located on the north side of Elmdale Road with its terminus at its intersection with Braddock Road. No connection problem is anticipated, but boring under Braddock Road is likely. If gas service is necessary, Washington Gas Light Company will provide service to the site.



II. TRANSPORTATION

Site frontage along Braddock Road, Route 620, consists of approximately 650'. This is presently a 2 lane undivided road with edge of pavement, some shoulder, and a traffic count of approximately 7,000 vehicles per day. Sight distance is generally good at the location of the proposed entrance. Improvements to Braddock Road would include:

- 1) Street dedication to 45' from the centerline of the right of way.
- 2) Construction of a 200' right turn lane, 200' transition and a 60' minimum acceleration taper.

Site frontage along Green Spring Road, Route 797, consists of approximately 600¹. This is presently a two lane secondary street with edge of pavement, steep grades and some sight distance problems. Direct access across Braddock Road to the golf course will be logical; therefore, an entrance onto Green Spring Road is not proposed.

Further, the Fairfax County Park Authority is actively pursuing the abandonment of Green Spring Road as an enhancement to the Green Spring Farm Park. Once the proposal has progressed through the public hearing stage and adequate alternate access issues have been addressed, the road will be closed.

In this light, any change in the use or status of Green Spring Road which would likely result in additional right-of-way dedication or improvements is not in the best interests of the Park Authority and is not recommended.

A 6' wide asphalt trail will likely be required along Turkeycock Run as this will complete the link, along with the golf course, in the trail system connecting the Mason District Park and the Green Spring Farm Nature Area.

III. DRAINAGE

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Turkeycock Run flood plain area runs through the northern quarter of the property in an easterly direction. A study will need to be done on the adequacy of the existing culvert under Green Spring Road, but if the Braddock Road culvert is improved and/or ponds are constructed on the golf course to detain storm water, replacement or improvement may not be necessary.

A flood plain study and storm water management will be required. A permit approved and issued by the Board of Supervisors will also be required prior to any grading or construction within the flood plain area.

It is important to note that there presently is an existing drainage swale above the stream and located at the approximate center of the property. Adjacent to this swale is the proposed fueling area of the maintenance area. Extreme care and preventative measures should be incorporated into the ultimate design to prevent water quality problems resulting from normal surface runoff or in the event of unexpected spillage.

Further, the location of the future additional parking area is directly downstream from the discharge point of the Salvation Army project on the south and the final design will need to properly address this item.

SITE ANALYSIS CONCLUSIONS

- The proposed site is ideally suited for a maintenance facility, with a large part of the central portion of the site being relatively flat and devoid of trees. This will greatly reduce normally anticipated clearing and grading costs.
- 2. Vehicular entry into the site can be easily accomodated off of Braddock Road with adequate sight distance in both directions.
- 3. The site is located in such a manner as to provide easy access to the golf course for maintenance vehicles.
- 4. All necessary site utilities are available on the site or nearby.
- 5. The wooded areas and the streambank corridor should be preserved.
- 6. The floodplain area of Turkeycock Run is primarily on the north side of Turkeycock Run and will not present a problem to the new maintenance facility.
- 7. The maintenance facility will need to be screened from Braddock Road.
- 8. The drainage abilities of the flat portion of the site will need to be improved.
- 9. Based on preliminary information we do not anticipate any engineering problems with the existing soils.

4.0 Planning/Design Program Clubhouse & Maintenance Facilities

INTRODUCTION

PLANNING & DESIGN PROGRAM

The purpose of a planning/design program is to develop criteria for the design of a space, building, facility, and/or physical environment. It is a means through which data about the needs of the ultimate facility users are determined and expressed for the instruction of the architect in the development of planning and design solutions. The accurate identification of present and future needs will result in spaces which are better suited to the fulfillment of those needs as well as being less prone to financial and functional obsolescence. The initial accurate identification of needs and design parameters by the programming team will result in the most rapid and efficient design process.

The program will develop a statement of building need in terms of square footage requirements, spacial relationships, and specific individual space requirements through the analysis of staff activity, material and equipment movement, and patron activity.

The Clubhouse and Maintenance Facilities at Jefferson District Park, Burke Park, and Greendale have been used as existing models against which square foot requirements generated for the Pinecrest facility are compared. This comparison is judged to be valid as to the similarity of actual patron volume at these facilities vs. the anticipated volume at Pinecrest. The volume anticipated at Pinecrest is approximately 56,000 rounds per year. Patron volume at the three existing facilities is in the 48,000 to 54,000 round per year range.

PROGRAMMING TEAM

<u>Éres</u>

We would like to thank the following persons for their time and valuable input into this programming process: Donald F Lederer: Superintendent of Design. Barclay L. Whetsell: Superintendent - Division of Golf Courses. Michael A. Kane: Assistant Superintendent Division of Park Facilities. Bob Grove: Manager - Jefferson District Park Golf Course. Bob Cosgrove: Assistant Manager - Burke Golf Course Assistant Manager - Greendale Golf Course. Steve Fauts: Manager - Pinecrest Golf Course. Dave Fetzer: Head Groundskeeper - Twin Lakes Golf Course. CLUBHOUSE: Staff, Material, and Patron Analysis

Staff:

The staff complement at Pinecrest is anticipated to be comparable to that at Jefferson District Park Golf Course. This includes:

- 1 Manager who has overall responsibility for all activities at the golf course facility with the exception of the maintenance of the course itself which is the responsibility of Groundskeeper. He/she is responsible for budget planning and coordination - all cash flow operations - inventory controls - cash receipts - ordering of food and resale items - maintenance of the facility - processing work orders for major work items - hiring and the programming and development of special events.
- Seasonal Assistant assumes managerial responsibilities in the absence of the manager. He/she is generally responsible for daily cash reports, ordering of food, scheduling, and inventory.
- 4 Assistant Facility Supervisors: the assistant facility supervisors are retired persons with an understanding and interest in golf. None of them work a 40 hour week and they normally attend the cash register and run the clubhouse when necessary.
- 4- Snack Bar Attendants are responsible for preparing, serving (over counter), and collecting for snack bar items.
- 3 Cashiers who generally collect greens fees and administer the rental of pull carts and motorized carts.
- 4 Facility Maintenance workers are responsible for the routine maintenance of the clubhouse and the grounds directly adjacent to the clubhouse. They also keep the power carts clean and organized. At times they are called upon to help with maintenance of the course in terms of flag replacement, watering of greens and tees, and changing of water barrels.
- 4 Volunteer Starters and Marshalls are responsible for organizing tee times, organizing groups in periods of heavy use and patrolling the course for registration violators.

All of these staff position will not be filled at the same time. On a typical busy day, in summer months, the greatest complement would be 9 or 10:

- 1 Manager/Seasonal Assistant
- 1 Assistant Facility Supervisor
- 2 Snack Bar Attendants
- 1 Cashier
- 2 Maintenance Workers
- <u>2-3</u> Starters/Marshalls
- 9-10 Total Staff Complement

In slow periods during the winter months, the clubhouse should be designed to be run by as few as one person. This means that there must be a direct proximity relationship between the snack bar, Pro-Shop, and administrative areas, aw well as visual proximity to the 1st tee.

MATERIALS:

The need for material delivery focuses around two activity areas in the clubhouse, snack bar, and Pro-Shop. Deliveries to the snack bar can occur at any time during the day, primarily on Wednesdays and Fridays. If beer is to be sold at the Pinecrest Facility, it will be delivered in kegs, approximately 4-6 at a time. Unlike other snack bar items, the beer orders must be paid for at the time of delivery. Golf supplies such as tees, golf balls, bats, gloves, etc. can also be delivered at any time of day and are usually shipped directly to the clubhouse by United Parcel Service (UPS). Cleaning and general maintenance supplies are issued internally within the Park Authority System.

All deliveries should be capable of being made through a separate entrance adjacent to the snack bar and Pro-Shop to minimize both functional and visual disruption to the patron.

Pro-Shop resale items should be displayed as individual items (not displayed in bilk) within the registration fee counter, in display cases in the dining area adjacent to the Pro-Shop or behind the registration fee counter itself. As a patron identifies the item he/she would like to purchase, the person working the registration counter then goes to bulk storage within the Pro-Shop to find the item in the proper size, color, etc.

All trash and waster materials will be removed from the site through the use of 2-7 cubic yard dupsters. These should be directly accessible to the snack bar and Pro-Shop areas and, be visually screened from the public, but accessible to dumpster pickup vehicles.

Patrons:

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It is anticipated that the degree of patron use at Pinecrest will be within the 54,000 to 56,000 rounds per year area. In looking at the distribution of use throughout the year at similar facilities at Jefferson District Park, Twin Lakes, and Greendale it is anticipated that the heaviest use of the Pinecrest Facility will occur in the months of April through September ranked as follows:

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May	June	July	August	April	September

The hours of operation during these months are from daylight to dark. The hours of operation during the off-season of December through March are from 8:00 a.m. to 5:00 p.m.

The relationship of the clubhouse to the patron is basically twofold. One, to facilitate the play of the golf course and use of the practice areas; and two, to serve as a social center for golfers to meet one another, swap stories and tales, and to record and review handicapps, county programs and events. By its design, the clubhouse should encourage and allow this socialization to occur and present as few barriers, obstacles and disruptions to this activity as possible.

We observed at one facility that one table was set aside specifically for senior citizens thus indicating a desire to define social groups and to define a recognized "sense of place" for senior citizen activity. This desire may exist for other social groupings. The design should allow this to occur. Another potential social activity that was observed centered around the table on which the latest handicapped listings are displayed and scores for handicapps recorded. In each case, however, socializing was hindered because the table on which the handicapps printout was displayed was in a major circulation path, separate from the dining area, with no place to sit. Perhaps an area within the dining area at Pinecrest can be found for this activity.

Areas of patron activity in and around the clubhouse include:

- the parking lot and its relationship to the clubhouse entrance, registration counter, 1st tee, and practice areas.
- (2) Entry vestibule and public telephone area
- (3) Toilet Rooms
- (4) Snack Bar
- (5) Dining Area
- (6) Pro Shop and Registration Counter
- (7) Outdoor patio area
- (8) Practice areas
- (9) 1st and 10th tees.

CLUBHOUSE: Space/Square Footage Requirements

The following recommended spaces and their individual square foot requirements have been generated through the review of three existing facilities and discussions with the managers of these facilities. There are certain variables that will necessitate additions to the square foot requirements which must be added to the "basic facility" should these specific services be provided. These include:

A. Beer sales

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- B. Driving range
- C. Meeting room D. Patron storage (lockers)
- E. Interior cart storage F. Active and/or Passice Energy

SP	ACE	RECOMMENDED	SQUARE FOOTAGE
0	Managers Office & Storage Closet	. 110	sq. ft.
0	Snack Bar Foot Prep Area	. 126	sq. ft.
0	Patron Food Pick-Up and Condiment Area	. 100	sq. ft.
0	Pro-Shop	. 160	sq. ft.
0	Clubhouse Dining/Fee Registration Area	a 800	sq. ft.
0	Vestibule/Public Telephone	. 70	sq. ft.
0	Ladies Restroom	. 180	sq. ft.
0	Mens' Restroom	. 180	sq. ft.
0	Janitor's Closet	40	sq. ft.
0	General Storage Room	100	sq. ft.
0	Mechanical Equipment Room	95	sq. ft.
0	Electric Room	_14	<u>sq. ft.</u>
	Subtotal	2095	sq. ft.
0	Circulatory services and structure @ 20%	419	<u>sq. ft.</u>

Total Gross

2514 sq. ft.

Variables:

Space

- o Beer sales will require the addition of a 6-keg cooler in the snack bar storage room and space in the snack for food prep area for the beer heads..... 28 sq. ft.
- o A driving range will require the addition of a ballwash room and ball holding bin in the Pro Shop (assumes that ball picker is stored in maintenance building.....
- o Meeting Room. At the time of this programming effort the exact requirements for a meeting room in terms of capacity and related support space had not been identified. An assumption has been made that the meeting room if provided would serve the same function as the present meeting room in the existing Pinecrest facility which will accommodate a group of approximately 8 to 12 people..... 260 sq. ft.
- o Lockers. The square foot provision for lockers in both the Ladies and Mens Restrooms along with a bench for changing is based on 200-12x12x12 lockers in each space.....
- o Interior cart storage. The square foot provision for cart storage assumes storage for 10 motorized carts.....
- o Active and/or Passive Solar Energy methods will necessitate the addition of floor area for energy storage (water or air) and for circulation fan and heat sinks (trombe wall)..... 100 sq. ft.+/-Subtotal (Variables)..... 1456 sq. ft.
- o Circulation services and structure *@* 20%..... <u>291 sq ft</u> Total Gross..... 1747 sq. ft.

68 sq. ft.

200 sq. ft.

800 sq. ft.

Total proposed area for the base facility plus variables	4267 sq.	ft.
Patio (entrance covered or uncovered)	250 sq.	ft.

Clubhouse: Space Relationship Matrix

One of the critical elements of the programming and design process is an understanding of the relationship that one space has to another, as well as the relationship of one space to all others. What follows is a presentation of these relationships. The space relationship matrix uses three criteria for evaluation. Directly accessible means that the two spaces actually share a common wall and that passage can take place directly from one space to another without proceeding through another space or corridor. Conveniently accessible means that one space is in the immediate vicinity of another and can be monitored or supervised by one person. No relationship is one of activity; not of travel distance. There is no relationship between the mechanical room and the dining area because the activity that each houses does not have a "people" dependency of one on the other. However, this does not mean that the spaces are not physically connected by a corridor or sheltered passageway.

-		MANAGERS OFFICE	PRO SHOP	SNACK BAR STORAGE	SNACK BAR FOOD PREP	PATRON SNACK BAR AREA	CLUBHOUSE/DINING/F.R.	ENTRY VESTIBULE	LADIES RESTROOM	MEN'S RESTROOM	JANITORS CLOSET	GENERAL STORAGE	MECHANICAL EQUIPMENT ROOM	ELECTRIC ROOM	MEETING ROOM	INTERIOR CART STORAGE	EXTERIOR CART STORAGE	PATIO	1st & 10th TEES	PARKING LOT	SERVICE ROAD
											· _					<u>,</u>					
MANAGERS OFFICE			U	U N	C			C					<u>.</u>	N.		NI O		C			
PRO SHOP			l	<u></u> N				N	N			D N	N N	N		U N	N				
SNACK BAR FOOD PREP					Ļ <u> </u>			N	N	N	C	N	N	N	C	N	N	C	C	M	
PATRON SNACK BAR AREA						Ľ	D	C		C	C	N	N	N	N	N	N	C	C	C	
CIUBHOUSE/DINING/F R								D	C	С	С	C	N	N	С	N	С	D	C	C	N
ENTRY VESTIBULE								L	С	С	С	N	N	N	D	N	С	С	С	D	N
LADIES RESTROOM									L	N	С	N	N	N	С	N	N	С	С	С	N
MENS RESTROOM										L	С	N	N	N	С	N	Ν	С	c ·	С	N
JANITORS CLOSET											L	N	N	N	С	N	Ν	С	N	N	С
GENERAL STORAGE													N	N	N	N	Ν	N	N	N	С
MECHANICAL EQUIPMENT ROOM													·	С	N	N	Ν	N	Ν	N	С
ELECTRIC ROOM															Ν	N	Ν	Ν	Ν	Ν	С
MEETING ROOM																Ν	Ν	С	С	С	Ν
INTERIOR CART STORAGE									•					D	С	С	Ν	С			
EXTERIOR CART STORAGE																		D	D	N	С
PATIO D - Directly Accessible													D	С	С						
1st & 10th TEES	C - Conveniently Accessible													С							
PARKING LOT		V -	No	re	la†	ions	ship	C													Ν
SERVICE ROAD																					

F.R. = Fee Registration

Space Relationship Matrix

Clubhouse

 $\frac{1}{2} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^$

SPACE RELATIONSHIP DIAGRAMS

The graphic presentation of space relationships shows direct circulation linkages of spaces. It is not to scale and should not be construed to be an architectural solution. It is merely a tool for understanding the relationship of one space to others.

S. CLUBHOUSE P. ... Parking V. Vestibule CS. J. Janitors Closet T. Toilet M. Meeting Room 🖕 0. Joogoologooluciu 🌔 GS. T C. Main Clubhouse ĴÛŨ SP. ... Patron Snack Bar <u>ss.</u> Area Ś Ó. Japonnoopport of SB. ... Snack Bar Food . Prep Area ♥ РТ. PS. • SB. SS. ... Snack Bar Stg. PS. ... Pro Shop VISUAL ACUSES ∯GS. ... General Stg. 0. Office SP. PT. ... Patio С. S. Exterior Service 0 Area • V. @ CS. ... Cart Stg. \$ Q Μ. \bigcirc Ρ.

SPACE: Manager's Office

SQUARE FEET: 110 sq. ft.

ACTIVITIES PLANNED: Management operations, ordering resale items, cash accounting, scheduling, staff interviews, administrative paperwork.

NO. OF OCCUPANTS AT ANY ONE TIME: Manager, plus 1 or 2 other people

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: The Pro-Shop and the 1st tee should be visually accessible. The Manager can work most efficiently if there is not direct access from patron areas, i.e. Main Clubhouse to limit disruption to his/her daily activities -- Direct access to Pro-Shop and circulation to other spaces.

SURFACE MATERIAL CONSIDERATIONS: Floor-carpet; walls-durable; ceiling-acoustic

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-conditioned

PLUMBING: None

ELECTRICAL: CLOCK X_ COMMUNICATIONS ____ RECEPTACLES ____ SPECIAL POWER REQ. ____

SECURITY X T.V. ____ TELEPHONE X OTHER X

Security system should be designed to protect closet where safe is located and any windows to the outside -- Other: Possible computer linkage in the future.

STORAGE: Closet to house a safe, manager's coat, and shelves within the closet for loose storage - approximate size of closet $2'-6'' \times 4'-0''$ key cabinet.

FURNITURE/EQUIPMENT: Executive desk, 3 chairs, 4 drawer file cabinet, book shelf (3 lineal feet)

DISPLAY: Chalkboard (4'x4') Tackboard (4'x4')

COMMENTS: Outside lighting for general illumination and security should be controled from manager's office.

SPACE: Pro-Shop

SQUARE FEET: 160 sq. ft.

ACTIVITIES PLANNED: Registration and green fee transfer, rental of golf clubs, and range balls, storage and sale of Pro-Shop items, key storage and rental of motorized carts, all hand carts, desiminating information.

NO. OF OCCUPANTS AT ANY ONE TIME: 2

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Must have visual access to patron registation area (over counter); must have visual access and easy circulation access to snackbar so that one person is able to oversee both areas; must have visual access to 1st and 10th tees; directly accessible to Manager's Office.

SURFACE MATERIAL CONSIDERATIONS: Floor-carpet; walls - durable; ceiling - durable.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-conditioned

PLUMBING: None

ELECTRICAL: CLOCK X COMMUNICATIONS X RECEPTACLES X

SPECIAL POWER REQ. X SECURITY X T.V. ____ TELEPHONE X OTHER ____

Communications -- P.A. system with speakers inside and outside at 1st and 10th tees and at practice area. Special Power -- dedicated circuit for cash register.

STORAGE: Optimum 12 lineal feet under counter display and storage; storage (closed) for cart keys at counter; bulk Pro-Shop items storage; rental golf bags, lost and found; tickets; if driving range storage is needed for ball bin, wire baskets and single clubs.

FURNITURE/EQUIPMENT: Stool for cashier, cash register, total counterspace 6' minimum at register area and additional 8' elsewhere in the space preferably directly adjacent to register counter.

DISPLAY: Minimum of 12 lineal feet x 18" deep (min.) display under counter or display case of equal volume adjacent to counter. Bulletin board (4'x4').

COMMENTS: Provide storage for 12 rental bags -- 2'x6' log deep closet with shelves (5) would be good for bulk resale item storage.

SPACE: General Storage

SQUARE FEET: 100 square feet

ACTIVITIES PLANNED: Storage of resale items, i.e. golf balls, tees, etc. -general storage the Pro-Shop and Manager's Office.

NO. OF OCCUPANTS AT ANY ONE TIME: 2

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to Pro-Shop, Manager's Office, and exterior delivery area.

SURFACE MATERIAL CONSIDERATIONS: Floor - concrete, sealed or V.A.T.; walls - durable; ceiling - drywall or acoustic.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: None

PLUMBING: None

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES X SPECIAL POWER REQ.___

SECURITY X T.V. ____ TELEPHONE ____ OTHER ____

Security on door.

STORAGE: Shelving around all perimeter walls; -- 2 feet deept, 5 shelves - 6 feet high.

FURNITURE/EQUIPMENT: Shelving

DISPLAY: None

4.00

COMMENTS: Main electrical panels, telephone panels, etc. shall not be located in this storage room.

SPACE: Snack Bar Storage

SQUARE FEET: 120 square feet

ACTIVITIES PLANNED: Storage of snack bar dry goods, refrigerator, freezer, beer cocler (if provided), syrup cans for remote soda system.

NO. OF OCCUPANTS AT ANY ONE TIME: 2

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly adjacent to snack bar food preparation area. Conveniently accessible to outdoor service/delivery.

SURFACE MATERIAL CONSIDERATIONS: Floor - concrete; sealed or V.A.T.; walls - durable; ceiling - acoustical tile.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-Conditioned

PLUMBING: Service sink

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES X SPECIAL POWER REQ. ____

SECURITY ____ T.V. ____ TELEPHONE ____ OTHER ____

STORAGE: 2-3 foot wide \times 6' high wire shelving units.

FURNITURE/EQUIPMENT: 2 door refrigerator, 2 door freezer, 6 keg beer cooler with remote dispensing system, remote soda dispensing system.

DISPLAY: None

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COMMENTS: The use of remote compressors for the refrigerator and freezer would eliminate the high heat build-up in the summer months. Main electric panels, telephone panels etc. shall not be located in this storage room.

SPACE: Snack Bar Food Preparation Area

SQUARE FEET: 126-154 feet depending on beer dispensing compatibility.

ACTIVITIES PLANNED: Preparation and sale of snack bar items.

NO. OF OCCUPANTS AT ANY ONE TIME: 2

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible (over counter) to Patron snack bar area; directly accessible to storage; conveniently accessible to Pro-Shop.

SURFACE MATERIAL CONSIDERATIONS: Floor - quarry tile; walls - ceramic tile or epoxy coated drywall; ceiling - drywall.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Exhaust hood for grill and fat fryer equipped with fire extinguishing system.

PLUMBING: Kitchen equipment; floor drains; hand sink

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES X SPECIAL POWER REQ. X

SECURITY ____ T.V. ___ TELEPHONE _X_ OTHER ____

Special Power - for kitchen equipment and dedicated circuit for cash register; lighting must be shielded.

STORAGE: Small refrigerated storage; under grill cabinet storage; storage for candy, gum, cigarettes.

FURNITURE/EQUIPMENT: Deep fat fryer, grill, small refrigerator/freeze unit, 3 compartment sink (under bar type), coffee machine, soda dispenser, beer dispenser, ice cream cabinet, ice bin, toaster, sandwich unit, cash register, microwave oven -- the three compartment sink must have a compartment large enough to accept deep fat fryer vessel.

DISPLAY: Potatoe chips, crackers, gum, candy, and cigarettes.

COMMENTS: Counter should be 36" to 42" high. Doors should be minimum 3' wide.

SPACE: Patron Snack Bar Area

SQUARE FEET: 100 square feet

ACTIVITIES PLANNED: Ordering, peurchasing, preparation (mustard, ketchup, etc.)

NO. OF OCCUPANTS AT ANY ONE TIME: Varies

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible to dining area and snack bar counter. Conveniently accessible from outdoor patrons and starting and finishing holes.

SURFACE MATERIAL CONSIDERATIONS: Floor - carpet; ceiling - durable; walls - durable.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-conditioned

PLUMBING: Drinking fountain

ELECTRICAL: CLOCK ____ COMMUNICATIONS ___ RECEPTACLES X SPECIAL POWER REQ. X

SECURITY ____ T.V. ___ TELEPHONE ___ OTHER ____

Communications - speakers from P.A. system; special power - microwave oven.

STORAGE: Plastic buckets (small) for mustard, ketchup, etc.

FURNITURE/EQUIPMENT: Counter for preparation of hot dogs, hamburgers, etc. and counter for microwave oven. Napkin dispenser and trash receptacle.

DISPLAY: Menu plaque with adjustable letter -- approximately 18" high \times 8'-0" long.

COMMENTS: A clock should be visible from this area, either in food area or main dining area. Investigate use of rubber tile 16" to 18" front of counter.

SPACE: Club House/Dining Fee Registation Area

SQUARE FEET: 800 square feet

ACTIVITIES PLANNED: Socializing, dining, fee registration, browsing through magazines, and other literature, circulation to patio and 1st and 10th tees, and patio area.

NO. OF OCCUPANTS AT ANY ONE TIME: 2 - 80

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible to vestibule, patio, snack bar, fee/registration area. Conveniently accessible to restrooms. Visually accessible to 1st and 10th tees and starters.

SURFACE MATERIAL CONSIDERATIONS: Floor - carpet; ceiling - durable; walls - durable.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-Conditioned

PLUMBING: None

ELECTRICAL: CLOCK _X_ COMMUNICATIONS _X_ RECEPTACLES _X_ SPECIAL POWER REQ.

SECURITY _X_ T.V. _X_ TELEPHONE ____ OTHER ____

Communications - speakers. Security on outside windows.

STORAGE:

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FURNITURE/EQUIPMENT: Tables 11 +/-; Chairs 44 +/-

DISPLAY: Wall hung storage box for county park fliers; wall hung magazine rack, table or counter for handicap printouts and recording, adjustable letter wall plaque for green fees, etc. Hole-in-One plaque; graphic display of course layout; golf memorabilia, tackboard (4'x4' minimum).

COMMENTS: This area is the hub of patron activity, it should be comfortable, have a good view of the golf course, and be as open and airy as possible. Patron circulation to areas should be at the perimeter of the space not through the tables. Doors to exterior must be hollow metal. SPACE: Entry Vestibule

SQUARE FEET: 70 square feet

ACTIVITIES PLANNED: Circulation to toilets, parking area, main clubhouse.

NO. OF OCCUPANTS AT ANY ONE TIME: 4 - 5

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible to parking lot and main clubhouse.

SURFACE MATERIAL CONSIDERATIONS: Floor - carpet; walls - durable; ceiling - durable.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-conditioned

PLUMBING: None

ELECTRICAL: CLOCK ____ COMMUNICATIONS ___ RECEPTACLES _X_ SPECIAL POWER REQ. ____ SECURITY _X_ T.V. ___ TELEPHONE _X_ OTHER ____

Security on doors; public pay telephone

STORAGE: None

FURNITURE/EQUIPMENT: Counter under telephone for books.

DISPLAY: None

COMMENTS: Exterior doors must be hollow metal.

SPACE: Ladies Restroom

SQUARE FEET: 180 to 280 square feet, if lockers are provided.

ACTIVITIES PLANNED: Patron comfort, changing of shoes.

NO. OF OCCUPANTS AT ANY ONE TIME: 4 - 5.

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to main Clubhouse and 1st and 10th tees and practice area.

SURFACE MATERIAL CONSIDERATIONS: Floor - quarry tile; walls - ceramic tile or epoxy drywall; ceiling - drywall.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-Conditioned

PLUMBING: 3 W.C.s, 1-2 Lavs, floor drains, flush mounted hot water hose bib.

ELECTRICAL: CLOCK ____ COMMUNICATIONS _X_ RECEPTACLES _X_ SPECIAL POWER REQ. ____

SECURITY ____ T.V. ___ TELEPHONE ____ OTHER ____

Communications - speakers

STORAGE: None

FURNITURE/EQUIPMENT: Bench for changing shoes, overhead braced toilet partitions, electric hand blower/dryer, soap dispenser, toilet paper dispenser, sanitary napkin dispenser, grab bars for handicapped toilet, mirror.

DISPLAY: None

COMMENTS: Do not use ceramic tile on floor; do not use marble threshold, entire toilet room facility must be easily accessible to handicapped patrons. Use plastic or block & tile toilet partitions.

SPACE: Mens' Restroom

SQUARE FEET: 180 to 280 square feet, if lockers are provided

ACTIVITIES PLANNED: patron comfort, changing shoes.

NO. OF OCCUPANTS AT ANY ONE TIME: 4-5

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to main clubhouse and 1st and 10th tees and practice area.

SURFACE MATERIAL CONSIDERATIONS: Floor - quarry tile; walls - ceramic tile or epoxy drywall; ceiling - drywall.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-conditioned

PLUMBING: 1 W.C., 2 urinals, 1 to 2 lavs., floor drains, flush mounted hot water hose bib.

ELECTRICAL: CLOCK ____ COMMUNICATIONS _X_ RECEPTACLES _X_ SPECIAL POWER REQ. ___

SECURITY ____ T.V. ___ TELEPHONE ____ OTHER ____

Communications - speakers

STORAGE: None

FURNITURE/EQUIPMENT: Bench for changing shoes, overhead braced toilet partitions, electric hand blower/dryer, soap dispenser, toilet paper dispenser, grap bars for handicapped toilet, mirror.

DISPLAY: None

COMMENTS: Do not use ceramic tile on floor; do not use marble threshold, entire toilet room facility must be easily accessible to the handicapped. Toilet partitions shall be plastic or block & tile.

SPACE: Janitor's Closet

SQUARE FEET: 40 square feet

ACTIVITIES PLANNED: Storage of janitorial products, access to water.

NO. OF OCCUPANTS AT ANY ONE TIME: 1

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to all areas of the Clubhouse.

SURFACE MATERIAL CONSIDERATIONS: Floor - sealed concrete; walls - durable; ceiling - durable.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: --

PLUMBING: Floor mounted service sink

ELECTRICAL: CLOCK ____ COMMUNICATIONS ___ RECEPTACLES _X_ SPECIAL POWER REQ. ____ SECURITY ____ T.V. ___ TELEPHONE ___ OTHER ___

STORAGE: All paper goods serving toilet areas, cleaning agents, brooms, mops, bucket -- approximate shelving requirements 3-4 shelves 12" to 16" deep x 4' x 5' long. Storage of vacuum cleaner must be on floor (to heavy for shelf).

FURNITURE/EQUIPMENT: Paper towel dispenser, soap dispenser.

DISPLAY: None

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COMMENTS: Lighting - 1 x 4 flourescent light fixture with acrylic lens.

SPACE: Meeting Room

SQUARE FEET: See comments

ACTIVITIES PLANNED: See comments

NO. OF OCCUPANTS AT ANY ONE TIME: 8 to 12 -- see comments.

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible from entry vestibule, conveniently accessible to main Clubhouse and toilet rooms

SURFACE MATERIAL CONSIDERATIONS: Floor - carpet; walls - durable; ceiling - acoustic.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-conditioned

PLUMBING:

ELECTRICAL: CLOCK _X_ COMMUNICATIONS _X_ RECEPTACLES _X_ SPECIAL POWER REQ.

SECURITY _X_ T.V. _X_ TELEPHONE ____ OTHER ____

Communications - speakers. Security on any exterior glazing.

STORAGE: Coat storage closet

FURNITURE/EQUIPMENT: Tables and chairs.

DISPLAY: Tackboard, chalkboard, A.V. screen.

COMMENTS: The existing meeting room at Pinecrest is 260 square feet which is what we have used in this programming effort. Perhaps this space could be a part of the main Clubhouse and be separated by a moveable wall, when necessary. SPACE: Interior Cart Storage

SQUARE FEET: 800 square feet

ACTIVITIES PLANNED: Storage of motorized golf carts; charging of carts if electric; storage only if gasoline.

NO. OF OCCUPANTS AT ANY ONE TIME: 2

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to Pro-Shop and main Clubhouse; directly accessible to exterior cart washing area -- the cart storage area can be accessible from the exterior only. Directly accessible to exterior cart refueling if gasoline.

SURFACE MATERIAL CONSIDERATIONS: Floor - concrete sealed; walls - CMU; ceiling - drywall. If the cart storage is below the Clubhouse, the floor/ceiling sandwich must have a 2 hour fire rating.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: None

PLUMBING: Floor drains; hose bib with hot and cold water.

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES _X_ SPECIAL POWER REQ. _X_

SECURITY _X_ T.V. ____ TELEPHONE ____ OTHER ____

Special power for recharging carts, if electric.

STORAGE: Cart capacity 10 to 15.

FURNITURE/EQUIPMENT: Outlets for recharging carts - 6.

DISPLAY: None

COMMENTS: If the topography of the site or budget of the project does not allow a basement, the carts will be stored outside under a roofed area.

SPACE: Mechanical Equipment Room

SQUARE FEET: 95 square feet

ACTIVITIES PLANNED: Location of central heating unit, hot water heater and if affordable, solar heat transfer tank and pumps.

NO. OF OCCUPANTS AT ANY ONE TIME: 1 - 2

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to Clubhouse. May have exterior access only.

SURFACE MATERIAL CONSIDERATIONS: Floor - sealed concrete; walls - durable; ceiling durable. This enclosure must have a 2 hour fire separation from other spaces within the building.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC:

PLUMBING:

ELECTRICAL: CLOCK ____ COMMUNICATIONS ___ RECEPTACLES _X_ SPECIAL POWER REQ. _X_____ SECURITY _X_ T.V. ___ TELEPHONE ____ OTHER ____

Special requirements - for HVAC equipment. Security on door if exterior access.

STORAGE:

FURNITURE/EQUIPMENT: HVAC equipment and hot water heater.

DISPLAY: None

COMMENTS: None
SPACE: Electric Room/Closet

SQUARE FEET: 14 square feet

ACTIVITIES PLANNED: Location of main electric panels.

NO. OF OCCUPANTS AT ANY ONE TIME: 1

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to Clubhouse.

SURFACE MATERIAL CONSIDERATIONS: Floor sealed concrete or V.A.T.; walls - durable; ceiling - durable.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC:

PLUMBING:

ELECTRICAL: CLOCK ____ COMMUNICATIONS ___ RECEPTACLES _X_ SPECIAL POWER REQ. ____ SECURITY _X_ T.V. ___ TELEPHONE ___ OTHER ____

Location of security system main panel.

STORAGE: None

FURNITURE/EQUIPMENT: Electric panel boards, security system panel boards, telephone panels.

DISPLAY: None

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COMMENTS: This space cannot be an integral part of the mechanical equipment room, although it can be accessed from the mechanical equipment room.

SPACE: Exterior Cart Storage

SQUARE FEET: 600 square feet

ACTIVITIES PLANNED: Storage of electric or gasoline carts

NO. OF OCCUPANTS AT ANY ONE TIME: 2 - 3

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible from parking lot, clubhouse, and 1st and 10th tees. Conveniently accessible to refueling or recharging areas.

SURFACE MATERIAL CONSIDERATIONS: Asphalt, if electric, concrete, if gasoline.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC:

PLUMBING:

ELECTRICAL: CLOCK ____ COMMUNICATIONS ___ RECEPTACLES _X_ SPECIAL POWER REQ. ____ SECURITY ____ T.V. ___ TELEPHONE ___ OTHER ____

STORAGE:

FURNITURE/EQUIPMENT:

DISPLAY:

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COMMENTS: See comments on interior cart storage -- this sheet is not to imply that there is both an interior and exterior cart storage.

SPACE: Patic

SQUARE FEET: 250 square feet

ACTIVITIES PLANNED: Socializing, recording scores, dining.

NO. OF OCCUPANTS AT ANY ONE TIME: 16 - 25

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible to main Clubhouse and 1st and 10th tees.

SURFACE MATERIAL CONSIDERATIONS: Can be covered or uncovered -- floor or deck surface must be golf spike proof.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: None

PLUMBING: Hose Bib

ELECTRICAL: CLOCK ____ COMMUNICATIONS _X_ RECEPTACLES _X_ SPECIAL POWER REQ. ____

SECURITY ____ T.V. ___ TELEPHONE ____ OTHER ____

Communications -- speaker

STORAGE: Score cards and pencils

FURNITURE/EQUIPMENT: 4 tables and 16 chairs, golf spike cleaners.

DISPLAY: Bulletin Board

COMMENTS: None

SPACE: Starters chair at the 1st and 10th tees.

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SQUARE FEET: --

ACTIVITIES PLANNED: Starting, organizing, and grouping golfers.

NO. OF OCCUPANTS AT ANY ONE TIME: 1

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible to 1st and 10th tees, and Clubhouse.

SURFACE MATERIAL CONSIDERATIONS: Weather resistant

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: --

PLUMBING: --

ELECTRICAL: CLOCK ____ COMMUNICATIONS _X_ RECEPTACLES ___ SPECIAL POWER REQ. ____ SECURITY ____ T.V. ___ TELEPHONE ___ OTHER ____

Communications -- P.A. system with speakers to Clubhouse, Patio, and practices area.

STORAGE: Score cards, pencils, soft drinks for starters.

FURNITURE/EQUIPMENT: Elevated chair screened from the sun and light showers.

DISPLAY: Graphic display of course.

COMMENTS:

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Clubhouse: Budget Analysis

The budget for the Clubhouse as identified in the Fairfax County Park Authority cost estimate of May, 1982 is:

Clubhouse \$315,378.00 Contingency @ 10% 31,537.00 Sub-total \$346,915.00 Inflation @ 10.8% 37,467.00 Total \$384,382.00

The total square footage identified in this program for the basic building (without variable spaces identified on page 6) is 2514 square feet. Since the square footage is so small, the dollars per square foor cost will be relatively high due to the (a) distribution of "General Conditions" or Division 1 costs over such a small structure than for a large one.

Therefore, considering both the programmed spaces and the size of the project, Scharf-Godfrey & Associates, cost control consultants, have recommended that a range of \$90 to \$110 per square foot be used as am early budget number.

Base Building	2514 sq. ft @ \$90./sq. ft.	2514 sq. ft @ \$110./sq. ft.
Sub-Total	\$226,260	\$276 , 540
Contingency @ 20%	\$ 45,252	\$ 55,308
Sub-Tota I	\$271,512	\$331 , 848
Inflation @ 4%	\$ 10,860	\$ 13,273
TCTAL	\$282 , 372	\$345,121

We recommend that a contingency of 20% be applied to these numbers due to unknown site considerations, as well as the lack of specific design information at this time.

If beer sales, driving range, meeting room, lockers, interior cart storage, patio and active and/or passive solar considerations are added to the basic clubhouse, this will add the following area:

Building Area	787	sq.	ft.
Cart Storage	960	sq.	f †.
Patio	250	sq.	f t.

TOTAL BUILDING AREA:

Base Building		• • • • • • • • • • •	2514	sq.	f t.
Additional Area .		• • • • • • • • • • •	787	sq.	ft.
		TOTAL	3301	sq.	ft.
Building	. 3301 sq. ft. @ \$90/sq. ft.	3301 sq. @ \$110/sq	ft. . ft.		
Sub-Total	\$297,090.00	\$363,110.	00		
Cart Storage	. 960 sq. ft. @\$45/sq. ft.				
Sub-Total	\$43,200.00	\$43,200.0	0		
Patio	250 sq. ft. @ \$12/sq. ft.				
	\$ 3,000.00	\$ 3,000.	00		
Sub-Total	\$343,290.00	\$409 , 310	.00		
Contingency @ 20%	\$ 68,658.00	\$ 81,862	.00		
Sub-Total	\$411,948.00	\$491 , 172	.00		
Inflation @ 4%	\$ 16,477.00	\$ 19 , 646	.00		
TOTAL	\$428,425.00	\$510,818	.00		

If the budget for the clubhouse cannot be increased, we would recommend that selected variable spaces be deleted to accomplish the budgeting goal. None of these estimates of probable cost include monies for furniture. Maintenance Facility: Staff, Material & Equipment Analysis

Staff

The staff complement at Pinecrest is anticipated to be comparable to that at Greendale Golf Course. This includes:

- Groundskeeper Specialist has overall responsibility for the condition of the golf course and practice area and the areas directly adjacent to these areas. He/she organizes and schedules the grounds crews, orders golf course maintenance materials and coordinates the course maintenance schedule with the clubhouse manager.
- 2 Senior Utility Man Mows fairways, maintains equipment; sprays and fertilizes.
- 1 Utility Man Mows aprons, tees, and roughs; maintains equipment.
- 1 Labor Grade 2 Runs the Greens team.
- 3-4 Seasonal labor Persons who work weekends from March 13th thru November. They change cup locations, change the tee markers, rake sandtraps, and generally help where needed.

Hours:

7:00 a.m. - 3:30 p.m.

Schedule:

Monday, Wednesday, Friday - Mow tees, greens and fairways.

Tuesday, Thursday - Spread chemicals and perform routine Maintenance

Parking:

Parking must be provided in the maintenance and for 9 worker vehicles.

Chemical Spreader:

The person who works with the hazardous chemicals must be licensed to do so. He/she wears special clothing and must have a shower available for his/her use.

Materials

The maintenance facility is the main storage area for fertilizers, pesticides, top dressing materials and at times sand and gravel.

Fertilizers are delivered in 50 lb bags and must be kept dry. They may be located outside but they must be covered and kept dry.

Hazardous chemicals include pesticides, fungicides, week killers, disease control chemicals, crab grass killer. These chemicals must be

in a dry, heated area with adequate ventilation. The exhaust fan should be capable of being turned on from outside the storage area so that fumes can be exhausted before the room is entered.

Top dressing, sand and gravel are delivered in 22 ton loads in large 18 wheel trucks. Each load takes an area about 20'x20'. Four 20'x20' areas in the service yard should be planned. The truck should be able to move into the service yard easily and leave without turning around.

There is also a need for several underground fuel storage tanks with pumps capable of being controled from a remote location. There should be tanks for diesel fuel, unleaded gasoline, and if the carts are fueled here a gasoline/oil mixture. Tank capacity: 550 gallons.

Trash disposal: 1-10 cubic yard dumpster.

Equipment

The maintenance facility will house all of the equipment necessary to maintain the golf course as well as all hand tools necessary to maintain the equipment. All hand tools will be store in an enclosed, lockable room. Certain pieces of equipment should be stored inside while other pieces can be stored outside in a covered area.

Equipment list:

Stored Inside Shop	Stored Outside in Covered Area
1-F-10 Tractor/Fairway Mower	1-Greensaver Aerator
2-Turf Trucksters	1-100 Gallon Sprayer
1-Utility Tractor	1-Cyclone Spreader
1-Putting Green Mower	1-Top dresser
1-Tee and Collar Mower	1-3-Gang Mower
4-Commercial Rotary Mowers	1-Power Sprayer
1-Sand Trap Edger	1-3-Section Spray Boom
1-Tire Compressor	1-62" Grass Catcher
1-Power Sand Trap Rake	1-Aero Blade Seeder
	1-Fairway Aerator
	1-Fertilizer Spreader

Maintenance Facility: Space/Square Foot Requirements

The following recommended spaces and their individual square foot requirements have been generated through the review of three existing facilities and discussions with the managers of those facilities:

Space	Recommended Square Footage
o Groundkeeper's Office	108 sq. ft.
o Chemical Storage Room	48 sq. ft.
o Tool Room	60 sq. ft.
o Individual Toilet (can be used as wom	30 sq. ft. en's toilet)
o Gang Toilet Room	60 sq. ft.
o Shower Area	36 sq. ft.
o Lunch Room	180 sq. ft.
o Mechanical/Electrical	Room 60 sq. ft.
o Shop (Equipment Maint & Storage Area)	enance 1890 sq. ft.

Circulation, Services & Structure @ 18%...445sq. ft.

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* This area is based on a 3 bay shop with fertilizer stored inside. If the covered exterior space is not provided it is recommended that the shop area be increased to a 4 bay shop with an additional 400 sq. ft.

Maintenance Facility: Space Relationship Matrix

The space relationship matrix used three criteria for evaluation. Directly accessible means that the two spaces actually share a common wall and that passage can take place directly from one space to another without proceeding through another space or corridor. Conveniently accessible means that one space is in the immediate vicinity of another and can be monitored or supervised by one person. No relationship is one of activity; not of travel distance. There is no relationship between the mechanical room and the lunch room because the activity that each houses does not have a "people" dependency of one on the other. However, this does not mean that the spaces are not physically connected by a corridor or sheltered passageway.

	OFFICE	LUNCH ROOM	INDIVIDUAL TOILET	GANG TOILET	SHOWER ROOM	CHEMICAL STORAGE ROOM	TOOL ROOM	SHOP	MECHANICAL/ELEC. ROOM	COVERED EXT STORAGE	SERVICE YARD						•	
OFFICE		С	С	С	С	С	С	D	N	С	D						ŀ	
LUNCH ROOM			С	С	С	N	Ν	D	Ν	С	С							
INDIVIDUAL TOILET]			С	С	Ν	N	С	Ν	N	С							
GANG TOILET					С	N	Ν	С	Ν	Ν	С							
SHOWER ROOM						С	N	С	N	N	С							
CHEMICAL STORAGE ROOM]						N	С	Ν	С	С							
TOOL ROOM								С	Ν	С	С							
SHOP									С	С	D		 					
MECHANICAL/ELEC. ROOM										Ν	N							
COVERED EXT STORAGE											D	 				-		
SERVICE YARD																		
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SPACE RELATIONSHIP MATRIX MAINTENANCE FACILITY

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SPACE RELATIONSHIP DIAGRAMS

The graphic presentation of space relationships shows direct circulation linkages of spaces. It is not to scale and should not be construed to be an architectural solution. It is merely a tool for understanding the relationship of one space to others.

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OFFICE0
LUNCH ROOML
INDIVIDUAL TOILETIT
TOILETT
SHOWERS
CHEMICAL STGCS
TOOL STORAGETS
SHOPS
MECH/ELEC ROOMME
COVERED EXTERIOR STORAGEES
SERVICE YARDSY

- (A) = 5



SPACE: Office

SQUARE FEET: 100 square feet

ACTIVITIES PLANNED: Administration of grounds keeping effort.

NO. OF OCCUPANTS AT ANY ONE TIME: 3

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Visual access to shop and tool room. Direct access to service yard and visual access to fuel pumps in service yard.

SURFACE MATERIAL CONSIDERATIONS: Floor - V.A.T.; walls - C.M.U.; ceiling - accoustic.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Air-conditioned

PLUMBING: Sink

ELECTRICAL: CLOCK _X_ COMMUNICATIONS _X_ RECEPTACLES _X_ SPECIAL POWER REQ. _X_

SECURITY _X_ T.V. ___ TELEPHONE _X_ OTHER ____

Communications - intercom with Clubhouse, Manager's Office. Special Power - computerized irrigation system, fuel pump controls. Security-exit door and window.

STORAGE: Coat Closet

FURNITURE/EQUIPMENT: File cabinet, desk, 3 chairs, fuel pump controls, computer irrigation system controls.

DISPLAY: $4' \times 4'$ tack board, $4' \times 4'$ chalkboard.

COMMENTS:

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SPACE: Shop (Equipment Maintenance & Storage)

SQUARE FEET: 1,890 square feet

ACTIVITIES PLANNED: Storage of maintenance equipment; storage of fertilizer; maintenance of maintenance equipment.

NO. OF OCCUPANTS AT ANY ONE TIME: 5 - 9.

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible to service yard and office.

SURFACE MATERIAL CONSIDERATIONS: Floor - concrete; walls - CMU; ceiling - exposed structure.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Vacuum for grinder

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PLUMBING: Floor drains, service sink for hand washing, hose bibs, water cooler.

ELECTRICAL: CLOCK _X_ COMMUNICATIONS _X_ RECEPTACLES _X_ SPECIAL POWER REQ. _X_

SECURITY ____ T.V. ___ TELEPHONE ____ OTHER ____

Communications - bell or buzzer in shop and outside bouilding to service yard that rings with telephone. Special power - welding machine, cart charging.

STORAGE: Fire rated metal paint cabinet.

FURNITURE/EQUIPMENT: Work bench for tool repair with vise and drawer - bench top $8' \times 2'$.

DISPLAY: 4' x 4' tackboard, 4' x 4' chalkboard.

COMMENTS: 2 of 3 bays should be drive-through; garage doors should be 10' high; combustion exhaust hoses must be provided to carry engine fumes to outside; ceiling height 12' minimum.

SPACE: Lunch Room

SQUARE FEET: 180 square feet

ACTIVITIES PLANNED: Lunch, meetings, socializing.

NO. OF OCCUPANTS AT ANY ONE TIME: 8 - 9.

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Circulation to shower and toilet area should not be through the lunch room.

SURFACE MATERIAL CONSIDERATIONS: Floor - V.A.T.; walls - CMU; ceiling - acoustical.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC:

PLUMBING: Kitchenette Unit.

ELECTRICAL: CLOCK _X_ COMMUNICATIONS ____ RECEPTACLES _X_ SPECIAL POWER REQ. ____

SECURITY _X_ T.V. ___ TELEPHONE _X_ OTHER ____

Security on all exterior glazing. Pay telephone.

STORAGE: Workers coats (9 lockers 60" height x 15" width x 15" deep).

FURNITURE/EQUIPMENT: Table 30" x 72"; 9 chairs; 5' kitchenette unit with under-counter refrigerator, burners and sink; wall mounted magazine rack.

DISPLAY: $4' \times 4'$ chalkboard, $4' \times 4'$ tackboard.

COMMENTS:

SPACE: Individual Toilet.

SQUARE FEET: 30 square feet.

ACTIVITIES PLANNED: Personal comfort.

NO. OF OCCUPANTS AT ANY ONE TIME: 1

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to Shop.

SURFACE MATERIAL CONSIDERATIONS: Floor - resinous; wall - CMU; ceiling - drywall.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Exhaust

PLUMBING: One W.C., 1 lavatory.

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES _X_ SPECIAL POWER REQ. ____ SECURITY ____ T.V. ____ TELEPHONE ____ OTHER ____

STORAGE: None.

FURNITURE/EQUIPMENT: Toilet paper dispenser, paper towel dispenser, paper towel receptacle, mirror, coat hook on bak of door, soap dispenser.

DISPLAY: None.

COMMENTS: None.

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SPACE: Gang toilet.

SQUARE FEET: 60 square feet.

ACTIVITIES PLANNED: Personal comfort.

NO. OF OCCUPANTS AT ANY ONE TIME: 3

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to Shop.

SURFACE MATERIAL CONSIDERATIONS: Floor - resinous; walls - CMU; ceiling - drywall.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Exhaust.

PLUMBING: One W.C., 1 urinal, 2 lavatories, floor drain.

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES _X_ SPECIAL POWER REQ. ____ SECURITY ____ T.V. ___ TELEPHONE ___ OTHER ____

STORAGE: None.

FURNITURE/EQUIPMENT: Overhead braced toilet partitions, 2 mirrors, toilet paper dispenser, paper towel dispenser, and receptacle, 2 soap dispensers.

DISPLAY: None.

COMMENTS: None.

SPACE: Shower Room.

SQUARE FEET: 36 square feet.

ACTIVITIES PLANNED: Removal of chemical materials.

NO. OF OCCUPANTS AT ANY ONE TIME: 1

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible from both the individual toilet and gang toilet. Conveniently accessible to the Shop.

SURFACE MATERIAL CONSIDERATIONS: Floor - resinous; walls - CMU with epoxy paint; ceiling - drywall.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Exhaust.

PLUMBING: Shower, floor drain.

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES ____ SPECIAL POWER REQ. ____

SECURITY _____ T.V. ____ TELEPHONE ____ OTHER ____

STORAGE: None.

FURNITURE/EQUIPMENT: Bench, clothing hook, towel bar, soap dish, shower curtain.

DISPLAY: None.

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COMMENTS: The area directly in front of the shower should be large enough to undress and sit on a bench opposite or adjacent to the shower.

SPACE: Tool Room

SQUARE FEET: 60 square feet.

ACTIVITIES PLANNED: Storage of all hand tools used in course maintenance operations and minor equipment repair.

NO. OF OCCUPANTS AT ANY ONE TIME: 2

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Visually accessible from office; . conveniently accessible from the Shop.

SURFACE MATERIAL CONSIDERATIONS: Floor - concrete sealed; walls - CMU; ceiling drywall.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC:

PLUMBING:

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES _X_ SPECIAL POWER REQ. ____

SECURITY _X_ T.V. ___ TELEPHONE ___ OTHER ____

Security on door.

STORAGE: Shelving - metal 4' wide \times 16" deep \times 72" high. Pegboard along two walls, 3 lineal feet \times 4' height.

FURNITURE/EQUIPMENT: Hand tools.

DISPLAY: None.

COMMENTS: None.

SPACE: Chemical Storage Room

SQUARE FEET: 48 square feet.

ACTIVITIES PLANNED: Storage of pesticides, weed killers, fungicides, crab grass killer, and disease control chemicals.

NO. OF OCCUPANTS AT ANY ONE TIME: 1

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Conveniently accessible to Shop.

SURFACE MATERIAL CONSIDERATIONS: Floor - concrete sealed; walls - CMU; ceiling - drywall.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: Ventilation.

PLUMBING: Floor drain; sprinkled.

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES _X_ SPECIAL POWER REQ. ____

SECURITY ____ T.V. ____ TELEPHONE ____ OTHER ____

STORAGE: 8 lineal feet of shelving, 2 feet deep. 3 shelves per 6 feet height.

FURNITURE/EQUIPMENT: None.

DISPLAY: None.

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COMMENTS: Exhaust fan must be operated from outside the room so that the space can be ventilated before entering.

SPACE: Mechanical/Electrical Room

SQUARE FEET: 60 square feet.

ACTIVITIES PLANNED: Space to house heating source, hot water heater and electric panels. Electric panels must be enclosed in closet type space 18" deep minimum, with 3' clear work space in front.

NO. OF OCCUPANTS AT ANY ONE TIME: 1

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: None -- may be entered from outside.

SURFACE MATERIAL CONSIDERATIONS: Floor - concrete; walls - CMU; ceiling - drywall (fire rated).

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC:

PLUMBING: Floor drain.

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES _X_ SPECIAL POWER REQ. ____

SECURITY _X_ T.V. ___ TELEPHONE ___ OTHER ___

Security on door if entered from outside.

STORAGE: None.

FURNITURE/EQUIPMENT: Mechanical/Electrical equipment.

DISPLAY: None.

COMMENTS: None.

SPACE: Covered Exterior Storage.

SQUARE FEET: 500 square feet.

ACTIVITIES PLANNED: Storage of grounds maintenance equipment listed on page 34.

NO. OF OCCUPANTS AT ANY ONE TIME: 1 - 3.

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible from service yard.

SURFACE MATERIAL CONSIDERATIONS: Asphalt paving; exposed structure cover.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: None.

PLUMBING: Hose bib.

ELECTRICAL: CLOCK ____ COMMUNICATIONS ____ RECEPTACLES _X_ SPECIAL POWER REQ. ____ SECURITY ____ T.V. ____ TELEPHONE ____ OTHER ____

STORAGE: None, other than paved area itself.

FURNITURE/EQUIPMENT: None.

DISPLAY: None.

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COMMENTS: Minimum overhead height 8'.

SPACE: Service Yard.

SQUARE FEET: 15,700 square feet.

ACTIVITIES PLANNED: Refueling equipment; parking for employees' cars; offloading top dressing, gravel, sand, etc.; off-loading supplies; circulation to Shop.

NO. OF OCCUPANTS AT ANY ONE TIME: 1 - 9.

RELATIONSHIP TO OTHER ACTIVIES OR SPACES: Directly accessible to office, covered storage, and shop.

SURFACE MATERIAL CONSIDERATIONS: Asphalt - the top dressing, gravel, sand, etc. Piles should be placed so that material is not contaminated with other materials when loading.

MECHANICAL/ELECTRICAL CONSIDERATIONS:

HVAC: None.

PLUMBING: Hose bibs, area drain.

ELECTRICAL: CLOCK ____ COMMUNICATIONS _X_ RECEPTACLES ____ SPECIAL POWER REQ.

SECURITY ____ T.V. ___ TELEPHONE ___ OTHER ____

Communications - bell or buzzer connected to telephone to alert people in service yard that phone is ringing.

STORAGE: Underground tanks - 3 @ 55 gallons each for diesel fuel, unleaded gasoline, oil/gasoline mix, if carts refueled here. Island to also provide air and water.

FURNITURE/EQUIPMENT: None.

DISPLAY: None.

COMMENTS: Deliveries are made with 18 wheel trucks, they should be able to conveniently be able to get in and out of service yard. A loop road around the maintenance facility would present the optimum solution.

Maintenance Facility: Budget Analysis

The budget established by the Fairfax County Park Authority for the Maintenance Area in May 1982 is:

Building and Site\$417,000
Contingency @ 10% 41,700 \$458,700
Inflation @ 10.8% 49,539
Total\$508.239

The total square footage identified in this program for the basic building is 2917 square feet. Since the square footage is so small the dollars per square foot cost will be relatively high due to the (A) distribution of General Conditions or Divison 1 cost over such a small area and (B) contractors markup will be higher for such a small structure than for a larger one.

Therefore, considering both the programmed spaces and the size of the project Scharf-Godfrey & Associates, cost control consultants, have recommended that a range of \$60 to \$68 per square foot be used as an early budget number.

Sitework LS\$170,000
Building 2917 sq. ft. x\$68/sq. ft 198,356
Covered Storage500 sq. ft. x\$40/sq. ft 20,000
Subtotal\$388,356
Contingency @ 20% 77,671 \$466,027
Inflation @ 4% <u>18.641</u>

TOTAL \$484,668

This estimate of probable construction cost does not include any monies for grounds equipment, hand tools, or furniture. Also, the lump sum number established for site work is very crude since it is not possible at this time to establish the scope of site work. As a percentage of building cost it does appear high due to the need to demolish buildings presently occupying the site as well as the assumption that the entire site will be fenced.

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APPENDIX

The managers of the Jefferson District Park, Burke, and Greendale clubhouses and maintenance facilities were asked to discuss the pros and cons of their facilities. The following are unstructured statements by them in response to this request.

Jefferson District Park: Clubhouse

- o Need more display space for resale items.
- o The snack bar would have to be a bit larger in order to accommodate beer, ice cream, and pop corn sales which are requests of the patrons.
- o The office should be away from the public areas.
- o The snack bar storage room is a good size.
- o The office should be a bit larger so that the file cabinet could be located within.
- o A space must be found to store past years records.
- o The heating bills are quite high.
- o Could use a closeable closet in the Pro Shop rather than free standing metal storage cabinet.
- o It is important that one can see the first tee from the fee/registration area.
- o Coat closet needed for employee's coats.
- Don't use ceramic tile on the floors in the bathroom and don't use marble thresholds.
- o Toilet partitions should be overhead braced.
- o Must have at least 2 urinals in men's room.
- Need a graphic representation of course layout displayed in clubhouse area.
- o Circulation should be on the perimeter of the dining space to the fee/registration counter and toilets, not among the tables.
- o Cart storage area good size for 10 carts.
- o Need regular garage door with 3' wide door beside it.
- o Need starters structure at 1st tee to provide shade, communications source, and protection from light rain.
- o Would like a community meeting room. There is a great call for such a space.

Jefferson District Park Maintenance Facility

- Would be nice to have an intercom system between the maintenance building and clubhouse.
- o Controls to fuel pumps inside managers office.
- Two bays would be adequate if covered storage were provided outside in service yard area.
- o Lunch room should have a kitchenette unit in it.
- o The janitors closet should not be accessible only through the lunch room.
- o Workers should be able to clean hands and paint brushes in the shop area without always having to go into the toilet room.
- o Would be nice to have a vacuum system for the grinder.
- o Service yard area is not big enough.
- o Deliveries are made by large 18 wheel trailer trucks; they cannot turn around; they back all the way out.

Burke: Clubhouse

- o Clubhouse is too small to serve busiest times.
- o Likes handling all fee registration etc. from outside windows.
- o Would be nice to have some outdoor tables and chairs.
- o The quarry tile floor has held up well in men's room.
- o Would like to have an office separate from the fee/registration area.
- o Would like to have more general storage
- o Display space is lacking.

Burke: Maintenance Facility

o No comments.

Greendale: Clubhouse

- o Would like to have more wall area for announcements and plagues.
- o Walkup fee/registration window is not used.
- o Need more general storage space for snack bar items.
- Motorized carts are stored outside and should have some overhead protection.

- o Don't use ceramic tile in toilet room
- o Need lockable power cart key storage close to cash register.
- Movement of beer kegs from the cooler to the snack bar is quite difficult. They now are allowed to drop to the floor out of the cooler and are rolled across the dining area carpet.

Greendale: Maintenance Facility

- o Office location in the back of the structure is bad, feels shut off from all of the activity that he is to manage.
- o Minimum shop door height should be 10'-0".
- o Minimum shop ceiling height should be 12'-0".
- o The shower is not used; used now for storage.
- o Would like a screened area for seeds to deny access by mice.
- o Would like hand tools hung on peg board with painted profile on peg board so that tools can be easily checked in and out.
- o Shop area needs floor drains.
- o Need 220 outlet in shop area for welding machine.
- o Could use bell or buzzer on outside of building and in shop to let them know when the telephone is ringing.
- o Golf cart refueling and maintenance should take place close to where they are stored.
- o Would like a kitchenette in the lunch room.
- o Circulation through the lunch room to the toilets and showers is not good.
- o 3 fuel tanks are needed, 1 for diesel fuel, 1 for unleaded gasoline and 1 for an oil/gas mixture for golf carts.
- o Need direct hose hook up and exhaust of combustion engine fumes when working on equipment in the winter months.

5.0 Existing Clubhouse Analysis

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Existing Golf Course Clubhouse

The purpose of this analysis is to investigate the potential for incorporating the existing clubhouse facility into the master plan for the new redesigned, Pinecrest Golf Course.

The existing building located on the northwest corner of the intersection of Little River Turnpike and Braddock Road was, in the early 1960's, an office for a real estate firm. When it became associated with the public golf course, it was converted and rehabed into a golf clubhouse. Shortly thereafter, there was a need for additional space and the structure was expanded approximately 22 feet to the west over what was an outdoor concrete patio. The existing building presently houses approximately 1,647 square feet on the upper level and 1,067 square feet on the lower level.

The entrance to the facility is off of Braddock Road with the majority of the parking sandwiched between the clubhouse and Little River Turnpike. The Highway Department in the future will expand Little River Turnpike one lane in each direction. This expansion, along with revised easements, may eliminate the one row of parking spaces directly adjacent to Little River Turnpike. Should the clubhouse be recycled, the entire issue of vehicular approach, parking, and service to the building will have to be studied and redesigned. Patron approch from the parking area to the clubhouse, tees, and practice areas will also need to be studied and redesigned.





LOWER LEVEL

The building's structural system is heavy timber post and beam with heavy timber roof rafters, wood deck, and composition aggregate roofing on a gable roof. The high point of the gable runs along the long axis of the building. The perimeter wall infill is a combination of brick veneer, wood siding, and floor to ceiling glazing. Due to the simplicity of this system the building would be easily expandable along the long axis to the east and west or perpendicular to the main axis to the north and south. Expansion to the north and south parallel to the main axis would be more difficult. Since this expansion would take place at the eave line of the roof a new roof form would have to be introduced because an extension of the present roof slope would (depending on the width of the expansion) result in new eave line with less than acceptable head room off the finish floor. We feel that to introduce a new roof form of relatively small square footage would most likely result in visual discord. The following space/square foot analysis compares the space requirements identified in the programming portion of this study with the spaces as they presently exists.

	Space	Programed Square Feet	Existing Square Feet
0	Managers Office	110	95
0	Snack Bar Food Prep Area	126	209
0	Snack Bar Storage	120	-0-
0	Patron Food Pick-Up and Condiment Area	100	80
0	Pro Shop	160	109
0	Clubhouse Dining/Fee Registration Area	. 800	699
0	Vestibule/Public Telephone	70	-0-
0	Ladies Restroom		
	w/o lockers w/ lockers	180 280	139 139
0	Mens Restroom w/o lockers w/ lockers	180 280	261 261
0	Janitors Closet	40	-0-
0	General Storage Room	100	192
0	Mechanical Equipment Room	95	170
0	Electric Room	14	-0-
0	Meeting Room	260	261
0	Interior Cart Storage	800	430
0	Unprogrammed Space	-0-	69
	Subtotal: w/o lockers w/ lockers	3155 sq. ft. 3355 sq. ft.	2714 sq. ft. 2714 sq. ft.

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o Circulation service and structure @ 20%:

	w/o w/	lockers lockers	631 671	sq. sq.	ft. ft.	542 542 sq. f	÷ + .
Total	: w/o	lockers	3786	sq.	ft.	3256 sq. f	+.
	w/	lockers	4026	sq.	ft.	3256 sq. f	+.

This analysis indicates that the existing square footage would have to be expanded between 530 and 770 square feet. Should a driving range and/or active solar energy considerations be incorporated into the project an additional 200 or so square feet would have to be added.

We must caution that this analysis may be a bit deceiving. The programmed square footage assumes a facility primarily on one level with perhaps only the enclosed cart storage area on a lower level. In the existing facility the toilet and meeting room are on the lower level. This would cause a drop in the efficiency of the spacial layout which would increase the square footage expansion requirements. The degree to which this occurs will not be known until the schematic design effort is undertaken. Also, if there is a need to make the toilets accessible to the handicapped from the main clubhouse the existing toilets would have to be abandoned and new toilets added on the upper level or an elevator or rampway system would have to be incorporated into the project. Both options will add square footage in addition to that identified above.

The following space relationship review compares those optimum relationships identified in the clubhouse programming effort with the relationships that now exist.

Re	elationship	Conforms	Does Not Conform
1.	The main entrance should be directly accessible from the parking area.	x	
2.	The building should be accessible to the handi- capped from the parking lot and tees and practice area.		Χ.
3.	The meeting room should be conveniently accessible from the main entrance.	х	
4.	The snack bar storage room should be direclty accessible from the snack bar.		X

- 5. The snack bar should be conveniently accessible from the Pro Shop so that one person can monitor both areas.
- The managers office should be directly accessible to the Pro Shop.
- 7. The managers office should be removed from the public areas.
- 8. The 1st and 10th tees should be observable from the managers office.
- 9. The general storage area should be conveniently accessible from the Pro Shop.
- 10. The 1st and 10th tees should be visually accessible from the Pro Shop so that in slow times the Pro Shop attendant can act as starter
- 11. The outdoor patio should be directly accessible from the dining area.
- 12. Patron circulation to the Pro Shop and toilets should be on the perimeter of the dining area.
- 13. All public spaces should be easily accessible to the handicapped without having to circulate outside.
- 14. The snack bar storage room should be capable of being serviced from a service entrance separate from the main entrance.

This brief analysis indicates that all internal arrangement of spaces and circulation patterns would have to be redesigned in order to produce a functional, efficient clubhouse facility.

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Budget Analysis:

The BOCA building code dictates that when a structure is increased in area the entire building must be brought into conformance with all state and local building codes mechanically and electrically as well as architectrically and structurally. This requirement coupled with the need for extensive interior renovation has led our cost control consultant to recommend a square foot cost for renovation of from \$55 to \$75/sq. ft.

Existing Building Area	3256 sq. ft. <u>x\$55/sq.</u> ft.	3256 sq. ft. <u>x\$75/sq. ft.</u>
Sub-Tota I	\$179,080	\$244,200
Addition (w/o lockers)	530 sq.ft. x \$90/sq. ft.	530 sq. ft. x\$110 sq. ft.
Sub-Tota I	\$ 47,700	58,300
Monies for handicapped access and inefficiency in 2 level scheme	\$ 60,000	\$ 60,000
	Ф 00,000	\$ 60,000
Sub-Total	\$ 286,780	\$362,500
Contingency @ 20%	57,356.	72,500
Sub-Tota I	\$ 344,136	\$ 435,000
Inflation @ 4%	\$ 13,765	\$ 17,400
Total	\$357,901	\$ 452,400

The reuse of the existing building presents certain obstacles to the goal of maintaining flexibility in the potential layout of the golf course itself. Once the clubhouse is located starting and finishing points are also determined. This coupled with the problems and financial commitment needed to expand and renovate the existing facility leads us to believe that the reuse of the building will not present the greatest value or benefit to either the Fairfax County Park Authority or the Pinecrest patron.

6.0 Clubhouse Location Analysis

CLUBHOUSE LOCATION ANALYSIS

The location of the clubhouse is the most critical part of the planning scheme. The clubhouse completely dictates the rest of the site layout. In general, each location was analyzed with respect to the following criteria:

- 1. Availability of utilities
- 2. Impact on Surrounding Neighborhoods
- 3. Cost
- 4. Vehicular access
- Playability of golf course
 Resultant land for golf course
- 7. Relationship of building to golf course

Location A .

Advantages:

- 1. High visibility
- 2. Minimal impact on surrounding residential neighborhoods
- 3. Would take advantage of existing building
- 4. Could utilize much of existing parking lot
- 5. Would provide the most area for golf course development
- 6. Site entry would have to be relocated but would be possible
- 7. All utilities are in place and accessible
- 8. Would not require demolition of existing building

Disadvantages:

- 1. Building is located too close to Little River Turnpike and there would be very little buffer space for visual relief from the busy intersection
- 2. Cost of remodeling building to bring it up to code as well as handicapped standards and required square footage would equal the cost of constructing a new building. We would then be limited to the existing architectural style
- 3. An appropriate parking scheme would require the parking to be one story below the main floor of the clubhouse, with not too much of the parking being close to the clubhouse


- 4. Existing building is musty, poorly maintained and in a deteriorated condition
- 5. The site around the building is steep and not ideally suited for this use
- 6. The remodeled building would not be as organizationally nor as energy efficient as a new building

Location B

Advantages:

- 1. We would be able to build a clubhouse to the program requirements of the Park Authority
- 2. The location would permit adequate buffering from Little River Turnpike, Braddock Road and the proposed Pinecrest residences
- 3. This location would not have any adverse impact on the neighborhoods
- 4. Would allow construction of the parking lot between the clubhouse and Little River Turnpike and away from the golf course and directly adjacent to and at the same level as the building entry
- 5. Sanitary sewer availability is close by
- 6. All utilities are convenient
- 7. Vehicular access to the site would be well within the optimum entrance area
- 8. This location would afford the most land for golf course and practice facility development
- 9. A new clubhouse would allow the existing building to be used for contractor's office and storage during construction
- 10. A new clubhouse design would set a new architectural character and possibly be more compatible with the new course
- 11. A new building would not inherit the problems of an old building
- 12. New building would be more energy efficient, operationally efficient and be more sensitive to handicapped requirements

Disadvantages:

- 1. Would require new utility hook-ups
- Might cost slightly more than remodeling the old building (but might cost less)
- 3. The new entrance from Braddock Road would be within the range of engineering feasibility but would be close to the intersection
- 4. This would incur the cost of demolition of the existing building

Location C

Advantages:

- 1. Items 1,5,6,7,9,10,11, and 12 from Location B
- 2. Auto entrance would be farther north on Braddock than Location B
- 3. Would be closer to the brow of the hill where it could look over the lower portions of the golf course
- 4. Left over land towards Little River Turnpike might be considered for use as a short iron driving range

Disadvantages:

- 1. Items 1,2, and 4 from Location B
- 2. This location becomes visible from the residences on Elmdale
- 3. It provides a large leftover portion of the site that is, for all purposes, unusable, taking away from the available land for the golf holes
- 4. It is marginally available for sanitary sewer along Little River Turnpike

Location D

Advantages:

- 1. Items 1,6,7,9,10,11, and 12 from Location B
- 2. Topography would allow us to have a two story building with the lower story coming out on an at-grade level
- 3. The leftover property towards Little River Turnpike could be utilized for golf holes which would provide a scenic view from the intersection of Braddock and Little River Turnpike
- 4. Views over the golf course would be expanded and could be very handsome to the lower areas, especially if a large water feature were located with respect to the lower end of Turkeycock Run
- 5. Would be close to the maintenance facility
- 6. Auto access would be good here

Disadvantages

- 1. This location would be very visible from the residences on Elmdale
- 2. Parking lot and service would provide difficulties in interfering with potential golf course play
- 3. Sanitary sewer would be more expensive having to cross the stream to get to Elmdale Road and utilize a pumping station

Location E

Advantages:

- 1. Would be centrally located on the golf course with holes on either side of it
- This location would be ideal for a par 3 golf course with 9 holes on each side
- 3. Takes advantage of the view opportunities east and west, overlooking water, stream, etc.

Disadvantages:

- 1. Would have a high negative impact on the visibility from the surrounding neighborhoods
- 2. The cost of providing a road and parking to this location would be very expensive
- 3. Sewer availability would require pumping station
- 4. Location of parking lot and service would take up some of the more scenic aspects of the site
- 5. The long drive to it would require considerable land from the golf course
- 6. The entrance from Braddock would be required to be at the top of the hill, or if it is at the bottom of the hill would require replacing the existing culvert, cost estimated to be about \$75,000
- 7. The overall land requirement for a facility in this location would be more than double that of any other of the locations
- 8. There would be expensive earth work required in this location

7.0 Analysis of Illustrative Plans

DESIGN ANALYSIS AND RECOMMENDATIONS

Various conceptual plans were initially prepared to illustrate several possibilities of course layouts on the 55+ acre parcel available for development. It is noteworthy to point out that the Park Authority is quite fortunate to possess land with such advantageous natural features and amenities which will complement the game of golf. The rolling topography with generally open lands accented with semi-mature specimen trees offers an opportunity to work with a variety of land characteristics without necessarily designing artificial contrivances to direct play. The natural meandering stream bed can also become a major amenity to the course and in conjunction with 2 existing ponds will be a contributing feature to the strategy of play. The natural "rough" vegetation of the streambed banks offers excellent buffer to assist in directing play in addition to providing natural beauty to the course.

Initially, the schemes proposed were:

- Plan A: 18 hole, par 3, aproximately 2420 yds., par 54.
- Plan B: 9 hole, mid length (executive), aproximately 2,025 yds., par 31; plus a 3 hole instructional area segregated from the course.
- Plan C: 9 hole, mid length (executive), approximately 2620 yds., par 35

It is a fact that any of the three proposed schemes could be built on the site within reasonable expense. However, the location of the clubhouse, with the variable factors of site development and utility costs, markedly affects the total overall cost of the project without contributing to the quality of the golfing experience.

In addition to Plans A, B and C, which were provided by FCPA staff, based on more extensive site analysis, market feasibility, and results of public forum and staff conferences, other conceptual plans were developed by the Consultant Design team. These included another par 3 course which resolved the conflict with the surrounding neighborhood and eliminated some high construction costs but was considered unworkable from a golfcourse operations standpoint. Also, several other 9 hole mid-length (executive) courses were conceptually designed, the result of which combines their best features and is, in fact, the final recommendation of this study, further discussed herein.

It should be noted that development of a conventional driving range as part of the instructional facilities, normally adjunct to a course, is not permitted under the proffers of accepting this land parcel. Additionally, this type of facility would also normally consume nearly 35% of the total available land, resulting in the remaining land being inadequate for a playable course to be built. Therefore, to satisfy the teaching requirement, outdoor driving cages and/or indoor computer target driving screens should be considered in conjunction with the normally provided practice putting green.

Summary Analysis - Plan A, B, C.

<u>General</u>. - In all illustrative plans, player safety was noted to be a critical factor. Attempts were made to gain as much length to the course as possible resulting in the greens, tees and fairways being extremely tight and providing only limited buffer between primary playing areas. In addition to the obvious physical hazards, it creates general confusion and slows play, as those players particularly who overplay greens will actually interfere with others who are attempting to tee off. This is illustrated graphically on the accompanying three illustrative sketch plans, along with other pertinent remarks.

Due to the narrow, restrictive shape of the land there is an obvious conflict with the surrounding community and adjacent roadways. In all cases, only a clockwise playing rotation should be considered, which would reduce the quantity of mis-directed drives. There are approximately 9 slices (right) to each hook (left); therefore, by playing clockwise 90% of the misdirected drives can be directed toward the interior of the site or away from existing and future residential areas and roadways.

Where at all possible, vegetation would remain and/or be supplemented to provide safety buffers as well as to best direct line of play.

It is proposed and recommended that the entire site be fenced for both security and safety. Security of the course would be the primary reason since the frequency of vandalism of golf courses is increasing. The opportunities for children on bicycles and mini-bikes, and adults in motor vehicles, to cause damage to greens, tees and traps (at \$20,000. each!) are unlimited. Moreover, with this type of incident the course must be closed for various time lengths for repair, thus losing important revenues in addition to aggrevation of patrons and management. Where fencing is adjacent to residential areas, the alignment can be staggered and with utilization of black vinyl-clad fabric and generous plantings can be done in such a sensitive manner as to mitigate any offensive qualities of "ordinary chain-link fencing". It is important to recognize the fact that the eye level and primary viewing angle of the course from the Elmdale residential area is actually above the alignment of the proposed fence. The normal view would be well over the top of any security buffer.

<u>Plan A</u> - recognizes the potential of utilizing the natural rolling topography which, though it would provide a variety in play, might be considered too challenging for the type player that is normally attracted to a par 3. By necessity of controlling play, the mid-course clubhouse, however, is the most costly location of all schemes and it also becomes a structural and an activity generator, which conflicts with the surrounding community.

<u>Plan B</u> - also utilizes natural topography and vegetation to good playing advantage, but has compromised the quality and length of the course in order to provide an instructional area of questionable value. The instructional area provides a doubtful benefit to the integrity of the course, especially when it utilizes many acres of land so desperately needed to provide a more reasonable playing langth and opportunities for a 9 hole course. The intended use of this area would require extra professional staff and could be expected to be incapable of handling any volume of patrons which could support such a teaching activity. Its maintenance would be much more extensive than even the average playable hole or driving range.

<u>Plan C</u> - best utilizes the land, with an advantageous clubhouse location, and offers a variety of playing situations which would be conducive to attracting patrons on a regular basis. It has the potential of working well with existing vegetation and water sheds. Its disadvantage is a counter-clockwise playing rotation which can be easily reversed to provide minimum conflict with surrounding land use. It also recognizes the optimum location for the entrance access, parking, and location for management to control daily operations.

<u>Preferred Alternative Plan</u> - This scheme is proposed as a solution which recognizes optimum land use as is illustrated by various site analyses, results of public forum, conferences with staff, and observations made at a field stake-out.

The layout provides a variety of holes with full 3, 4 and 5 hole par which offers the opportunity for a wide range of club use. Its mid length accentuates the challenge of shotmaking finesse in contrast to power hitting contests. When played to its potential, it is a test of skill rather than simple length and strength. It is tentatively proposed to be a 9 hole, mid-length (executive) course which would play between 2460 yd. and 2650 yd. with a par 33. There is a combination of heroic and strategic holes which will also have the option of being played conservatively without undue penal implications. Representative of the tentative playing card, the statistics are a follows:

	Hole	Yards	5		Par	Comments
	1	386	Downhill fairway		4	Penal/traps
	2	200	Downhill fairway		3	Heroic/water
	3	210	Cross slope fairway		3	Penal/traps
	4	453	Uphill fairway		5	Strategic/traps
	5	200	Level fairway		3	Penal/traps
	6	325	Downhill, cross slop rolling fairway	ре,	4	Strategic landing areas
	7	180	Level fairway		3	Penal/water trap
	8	430	Level fairway		5	Strategic/water trap
	9	170	Uphill fairway		3	Penal/water trap
TOTAL	J	2554	yds.	par	33	

The mid-length aspect of this course particularly benefits beginners, many women players, senior golfers and others simply looking for a more easily negotiable course. It will encourage family play and facilitate fair competition among players of varying skills. As a side benefit to area golfing, it will also serve to possibly relieve the longer courses of these types of player groups.

The preferred alternative plan also proposes the construction of a special addition to the clubhouse for the computer target driving range. It is a substantial revenue producer, but most important it offers to the beginning, as well as avid, golfer the opportunity to benefit from the facility during periods in which the course is unplayable due to weather conditions.



PINECREST GOLF COURSE REVIEW OF PLAN "A"

- I. UTILITIES
 - A. Sanitary
 - 1) A 12" sewer line is available on the south side of Elmdale Road; however, the existing sewer line is higher than the stream invert.
 - 2) The lateral will require a gravity line to pump manhole near the stream and then a force main up into existing 12" line.
 - 3) Anticipated sewage flows (assume 375 rounds/day all foursomes) = 1500 people plus a snack bar. Use 16 gpd/person: 16 x 1500 = 24,000 gpd = 0.024 MGD; P.F.F. = 6.38. Design flow: 6.38 X 0.024 = 0.153 MGD; a 4" line (PVC) @ 1/4":1' (2.08%) is adequate to handle this flow.
 - B. Water
 - An existing 16" water line is available on west side of Braddock Road.
 - Connection will require a wet tap plus 1,100'± of 6" or 8" line to serve a fire hydrant and the building.
 - The line may need to be oversized to compensate for the long length and assure adequate fire flow for the building.
 - C. Electric
 - 1) Existing overhead electric service is available in Braddock Road and Elmdale Road
 - Possible relocation of the existing onsite overhead lines near Old Columbia Pike could be required if they pose a safety hazzard
 - D. Telephone
 - 1) Existing overhead telephone service is available in Braddock Road and Elmdale Road.
 - E. Gas
 - An existing 2" gas main is available on the north side of Elmdale Road.

II. TRANSPORTATION

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- A. Road Improvements and Proposed Entrance
 - 1) A 45' dedication will be required from the centerline of Braddock Road and Old columbia Pike
 - 2) Adequate sight distance is available at the proposed entrance location on Braddock Road.
 - 3) A 200' right turn lane, 200' transition, and a 60' minimum acceleration taper will be required for the proposed entrance.

- 4) The turn lane and transition is likely to overlap existing culvert crossing on Turkeycock Run and the intersection with Elmdale Road. The impact of this could:
 - a) Result in the culvert replacement at an estimated cost of \$75,000±; and
 - b) Result in possible intersection improvements at Elmdale Road.
- 5) The proposed entrance lines up with the entrance to the primary maintenance area on the east side of Braddock Road which offers favorable road crossing conditions for tractors and/or other slow moving maintenance equipment.
- 6) No entrances are recommended for Route 236, Elmdale Road, or Old Columbia Pike.
- B. Other Improvements:
 - 1) Trails for Turkeycock Run and Elmdale Road will be required.
 - 2) Connections to the proposed Trail System in Carr's subdivision will be required.
- C. The long entrance driveway will have a high initial construction cost and subsequent maintenance expenses. Further, the two proposed stream crossings will impact the flood plain area and add to the drainage costs.

III. DRAINAGE

- A. Improvements
 - 1) Storm water management and a flood plan study will be required.
 - The entrance improvements impact on the existing culvert under Braddock Road will need to be addressed in accordance with the current standards.
- B. Problem Areas
 - The two stream crossings on the entrance driveway will add significant cost due to the large contributing drainage area and their impact on the flood plain area.
 - 2) Part of the proposed parking lot is located in the flood plain area.
 - 3) The proposed golf course grading, parking and driveway within the flood plain area will require approval from the Board of Supervisors.

PINECREST GOLF COURSE PLAN "A" PAGE THREE

IV. MISCELLANEOUS

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- A. Irrigation
 - The existing, and any proposed new ponds, can be utilized in conjunction with new onsite wells and/or public water supply.
 - 2) The predicted yield for new wells, based on current Health Department records, is in the range of 15 to 25 GPM.
 - 3) There are no known existing water quality problems which would prohibit the use of the ponds and wells for irrigation purposes.



PINECREST GOLF COURSE REVIEW OF PLAN "B"

I. UTILITIES

- A. Sanitary
 - 1) An existing 12" sewer line is available on the south side of Elmdale Road; however, the existing sewer line is higher than the stream invert.
 - 2) A long (650'±) gravity lateral will be required from the proposed clubhouse with cleanouts every 50' to 100' to a pump manhole located in the vicinity of the stream and then a force main up to the existing 12" line.
 - 3) Anticipated sewage flows (assume 375 rounds/day all foursomes) = 1500 people plus a snack bar. Use 16 gpd/person: 16 x 1500 = 24,000 gpd. P.F.F. = 6.38. Design flow: 6.38 x 0.024 = 0.153 MGD; a 4" line (PVC) @ 1/4":1" (2.08%) is adequate to handle this flow.
 - 4) Alternate:

Construct new sewer line north along Braddock from Route 236 a distance of 800' to 900' to a point where the proposed clubhouse will be serviced by a gravity flow lateral. Anticipated cost for this method is aproximately \$31,000.00 and a cost-benefit study would be needed.

B. Water

- 1) An existing 16" water line is available on the west side of Braddock Road.
- 2) A short connection to the proposed clubhouse offers minimal flow loss and a 6" line would likely provide adequate service to the building and a new fire hydrant.
- C. Electric
 - 1) Overhead electric service is available on the east side of Braddock Road.
 - Possible relocation of existing overhead electric lines near Old Columbia Pike could be required if they pose a potential safety hazzard.
- D. Telephone
 - 1) Existing overhead telephone service is available on the east side of Braddock Road.

PINECREST GOLF COURSE PLAN "B" PAGE TWO

- E. Gas
 - A 2" gas main is available on the north side of Elmdale Road.
 - 2) An alternate source of gas service is at the intersection of Route 236 and Braddock Road where a 12" gas main is located on the south side of Route 236.
 - 3) A lengthy connection would be required for service in either direction.
- II. TRANSPORTATION
 - A. Road Improvements and Proposed Entrance
 - 1) A 45' dedication will be required from the centerline of Braddock Road and Old Courthouse Road.
 - 2) Adequate sight distance is available at the proposed entrance location on Braddock Road.
 - 3) A 200' right turn land, 200' transition and a 60' minimum acceleration taper will be required for the proposed entrance.
 - 4) The turn land and transition is likely to overlap the existing culvert crossing on Turkeycock Run and the intersection with Elmdale Road. The impact of this could:
 - a) Result in the culvert replacement of an estimated cost of \$75,000±; and
 - b) Result in possible intersection improvements at Eimdale Road.
 - 5) The proposed entrance lines up with the entrance to the primary maintenance area on the east side of Braddock Road which offers favorable crossing conditions for the tractors and/or other slow moving vehicles.
 - 6) No entrances are roommended for Route 236, Elmdale Road or Old Columbia Pike.
 - B. Other Improvements

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- 1) Trails for Turkeycock Run and Elmdale Road will be required.
- 2) Connections to the proposed Trail System in Carr's subdivision will be required.

PINECREST GOLF COURSE PLAN "B" PAGE THREE

- III. DRAINAGE
 - A. Improvements
 - 1) Storm water management and a flood plain study will be required.
 - 2) The entrance improvements impact on the existing culvert under Braddock Road will need to be addressed in accordance with the current standards.
 - B. Problem Areas
 - The lower edge of the parking lot and the grading for the golf course probably are in the flood plain area and will require approval from the Board of Supervisors.

IV. MISCELLANEOUS

- A. Irrigation
 - The existing and any proposed new ponds can be utilized in conjunction with new onsite wells and/or public water supply.
 - 2) The predicted yield for new wells, based on current Health Department records, is in the range of 15 to 25 GPM.
 - There are no known existing water quality problems which would prohibit the use of the ponds and wells for irrigation purposes.



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PINECREST GOLF COURSE REVIEW OF PLAN "C"

I. UTILITIES

- A. Sanitary Sewer
 - 1) An existing 8" line sewer with a terminal manhole is available at the intersection of Braddock Road and Route 236.
 - 2) A gravity flow lateral from the proposed clubhouse to the existing manhole can be expected at this located.
 - 3) Anticipated sewage flows (assume 375 rounds/day all foursomes) = 1500 people plus a snack bar. Use 16 gpd/person: 16 x 1500 = 24,000 gpd. P.F.F. = 6.38. Design flow: 6.38 x 0.024 = 0.153 MGD; a 4" line (PVC) @ 1/4":1" (2.08%) is adequate to handle this flow.
- B. Water
 - 1) An existing 16" water line is available on the west side of Braddock Road and an existing 12" water line is available on the north side of Route 236.
 - A short connection distance to the proposed clubhouse offers minimal flow losses and a 6" line would likely provide adequate service to the building and a new fire hydrant.
- C. Electric
 - 1) Existing overhead electric service is available on the east side of Braddock Road and on the north side of Route 236.
 - Possible relocation of existing overhead electric lines near Old Columbia Pike could be required if they pose a potential safety hazzard.
- D. Telephone
 - 1) Existing overhead telphone service is available on the east side of Braddock Road.
- E. Gas
 - 1) An existing 12" gas main is available on the south side of Route 236 at its intersection with Braddock Road.

II. TRANSPORTATION

- A. Road Improvements and Proposed Entrances
 - 1) A 45' dedication will be requried from the centerline of Braddock Road and Old Columbia Pike.
 - 2) Adequate sight distance is available at the proposed entrance location on Braddock Road.

- 3) A 200' right turn lane with 200' transition will be required with the proposed entrance.
- 4) The proposed entrance is 200'<u>+</u> north of the intersection with Route 236 and in the area of Carr's proffered intersection improvements. The golf course entrance should be designed to properly tie in to Carr's improvements.
- 5) It will likely be required to provide a service entrance of some sort opposite the primary maintenance area on Braddock Road to discourage slow moving maintenance vehicles on Braddock Road and to allow a means of safe crossing of these vehicles to the golf course.
- 6) The proposed entrance could possibly cause some onsite congestion due to the stacking of vehicles desiring to exit the site and go south on Braddock Road and then go east on Route 236.
- 7) It should be understood that no additional crossover on Route 236 along the golf course frontage will be allowed.
- 8) It is recommended that no entrance be proposed on Route 236 due to its proximity to the intersection with Braddock Road.
- No entrances are recommended for Elmdale Road and/or Old Columbia Pike.
- B. Other Improvements:
 - 1) Trails for Turkeycock Run and Elmdale Road will be required.
 - 2) Connections to the proposed Trail System in Carr's subdivision will be required.

III. DRAINAGE

- A. Improvements and Problem Areas
 - 1) Storm water management and a flood plain study will be required.
 - The proposed golf course grading in the flood plain area will require approval from the Board of Supervisors.

PINECREST GOLF COURSE PLAN "C" PAGE THREE

IV. MISCELLANEOUS

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- A. Irrigation
 - The existing, and any proposed new ponds, can be utilized in conjunction with new onsite wells and/or public water supply.
 - 2) The predicted yield for new wells, based on current Health Department records, is in the range of 15 to 25 GPM.
 - 3) There are no known existing water quality problems which would prohibit the use of the ponds and wells for irrigation purposes.

PINECREST GOLF COURSE GENERAL SUMMARY 0F PLANS A, B, & C

1. UTILITIES

- A. All public utilities are available and are generally easily accessible for all alternates.
- B. The sanitary connection for the clubhouse location on Plans A and B will most likely require a domestic type pump station since the existing 12" sewer on Elmdale Road is at or above the stream bed elevation.

The Plan B clubhouse location could possibly receive sewer service by extending sewer north along Braddock Road 800' to 900' for gravity flow lateral.

Plan C will have gravity flow sewer to existing manhole at Intersection of Route 236 and Braddock Road.

- C. Plan A will require a lengthy water connection and due to possible pipe losses over that length could require an 8" line rather than a 6" line to provide adequate fire flow. The other plans are short connections and 6" lines should be sufficient.
- D. Electric, telephone and gas service, if required, are available and appear to present no connection problems for all alternates.
- The existing overhead lines running diagonally through Ε. southwest corner of site (from the substation on the south side of Route 236 toward Old Columbia Pike) may need to be relocated or perhaps placed underground if their location poses a significant obstacle in course layout and player safety.

11. TRANSPORTATION

- Α. The proposed course and clubhouse entrances in all three plans appear to have adequate sight distance and meet VDH&T geometry standards.
- B. The conditions of approval for all entrances will be subject to:
 - 1) 45' dedication from centerline on Braddock Road
 - 200' right turn lane
 200' transition

 - 4) Acceleration taper (60' minimum)
 - 5) Conformance to and approval by VDH&T

PINECREST GOLF COURSE GENERAL SUMMARY PAGE TWO

- C. The proposed entrance locations for Plans A&B have as disadvantages:
 - 1) The turn lane and taper will cross Turkeycock Run at the existing culvert on Braddock Road.
 - 2) The culvert has been identified by Fairfax County as insufficient and replacement is recommended as part of their Immediate Action Plan Replacement is specified to be a twin 8' x 6' box culvert with estimated cost in the range of \$75,000.00.
 - 3) The turn lane and transition will overlap the intersection at Eimdale Road and possible intersection improvements could be required by the Highway Department.
 - 4) The long driveway for Plan A has two stream crossings.
- D. Entrance for Plans A & B has as advantages:
 - 1) Adequate sight distance
 - 2) The entrance is aligned opposite entrance to Green Spring Farm Park and the primary maintenance area.
 - 3) Since maintenance vehicles, tractors, etc., will be stored at the proposed maintenance facility on the east side of Braddock Road in Green Spring Farm Park, easy crossing of Braddock Road is provided thereby eliminating the problem of slow moving maintenance vehicles interrupting the traffic flow on Braddock Road creating unsafe conditions.
- E. The entrance on Plan C is approximately 200'<u>+</u> from the Braddock Road intersection with Route 236 and will be in area of intersection improvements proffered by Carr. Sight distance appears to be sufficient and the entrance should be far enough away from the intersection so as not to generate and further traffic and safety problems; but, it should be carefully studied so as not to create any undue congestion for vehicles desiring to exit south on Braddock Road and then go east on Route 236.
 - If Plan C is utilized, then it is recommended that some sort of service entrance should be provided for tractors, etc. opposite the Green Spring Farm Park maintenance park entrance.
- F. No entrance or access from Elmdale, Old Columbia Pike or Route 236 is proposed or recommended.
- G. Trails, will need to be provided along the following:

1) Turkeycock Run

PINECREST GOLF COURSE GENERAL SUMMARY PAGE THREE

- 2) EImdale Road (Fairfax County Trail Plan calls for the trail to be in the stream valley park but since the stream is an integral part of the golf course, the trail should be located along the road where there is Golf Course frontage).
- H. Trails may need to be constructed connecting the clubhouse and perimeter with the trails above with those proposed by Carr in the subdivision.

III. DRAINAGE

- A. A flood plain study on Turkeycock Run will be required since the County has none on file and will need to reflect the effects of proposed improvements within present flood limits.
- B. Storm water management will be required for the increased runoff. Permanent pond or ponds are recommended for the following reasons:
 - Source of irrigation water to be used in conjunction with wells (or public water as a last resort)
 - 2) Source of overall water quality management in control of non-point pollution
 - 3) Ability to reduce peak downstream storm discharges providing assistance in alleviating existing downstream flooding problems (most especially the inadequate culvert crossing at Braddock Road.)
 - 4) Adding to the playability of the golf course.
- C. It is recommended to generally "clean-up" and channelize the upstream entrance to the existing culvert at Braddock Road thereby increasing entrance efficiency and the flow capacity.
- D. Approval will be required by the Board of Supervisors for all work proposed in a flood plain overlay area.

IV. SOILS

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- A. Although this area has not been mapped, Fairfax County has indicated that this area is likely to consist of the Beltsville, Sassafras and Elkton type of soils.
- B. These soils do not appear to restrict the proposed development of this site as a golf course, but they are a poor source of topsoil and will likely need enrichment on a periodic basis to support vegetative cover.
- C. Rock has not been investigated. Borings should be made in areas of deep cut and in foundation areas of proposed buildings.

8.0 Market Feasibility Study

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BASIC FEASIBILITY OF PROPOSED PINECREST GOLF COURSE

The basic premise of the feasibility of a golf course is its ability to attract a certain number of golfing rounds per year within its market area. The proposed Pinecrest Golf Course is feasible for the following reasons:

- 1. The 9 hole or 18 hole par 3 layout would be replacing either the existing 9 hole or the existing par 3 18 hole layout that is on the property today. Area golfers would in fact be losing the other course.
- The National Golf Foundation estimates that a public golf course is feasible if there are 75,000 people within a 5 mile radius. There are over 310,000 people within a 5 mile radius of the Pinecrest Golf Course.
- 3. Another important foundation to the success of a golf course is its management system. The new Pinecrest Golf Course will be managed by the Fairfax County Park Authority who are the area's foremost experts in the management of public golf courses. They now operate 4 successful golf courses.
- 5. Based on National Golf Foundation statistics the Northern Virginia area population would support approximately 30 eighteen hole public golf courses. There are now about 1/3 of that number, which means, theoretically, that in this area we could build close to 20 new golf courses before reaching a saturation point.
- 6. Other National Golf Foundation statistics that are of interest in this regard are:
 - a. 70 people out of every 1,000 are golfers, nationally. In the Washington, D.C. area it is estimated that 85 people out of 1,000 are golfers.
 - b. The average golfer plays 15 rounds or more per year.
 - c. 35% of the adult population have played golf at least once.
 - d. The general economy of the Northern Virginia area is higher, more favorable and more stable than most of the economies in the national use figures.
 - e. In the Mid-Atlantic Region 38.7% of public golfers travel less than 5 miles to the golf course; 29.1% travel 6-10 miles.
 - f. In this region 22.8% of the public golfers will spend \$500 and more on green fees and golf car rentals. Close to 1/3 of the golfers pay between \$200 and \$400 annually.

- g. In this region 31.4% of the golfers use a golf car 76-100% of the time. 42% use a golf car 0-25% of the time.
- h. 48.6% of the people feel another course is needed.
- 7. Based on the above, it is safe to project that either a 9 hole executive or an 18 hole par 3 course would be popular and profitable by County standards at this location.
- 8. Based on existing statistics, an 18 hole par 3 facility would experience a higher income per round average but would also have a higher expense per hole. A 9 hole facility would attract a slightly broader segment of the population and would probably have a higher total round average, presuming that each facility were of the same quality.
- 9. The 9 hole facility would have an income potential from the demand for power carts which does not generally exist on an 18 hole facility. Should an 18 hole facility be utilized at Pinecrest, we would anticipate there would be some demand for power carts because of the 120' difference in elevation on the site.
- 10. Because of the history and the existing play on the Pinecrest Course, this being a replacement course, and because of its proximity to commercial areas and the area population, we would anticipate that the snack bar income would be somewhat higher than the other Fairfax County Park Authority golf facilities.

PINECREST - ESTIMATED INCOME/EXPENSE/NET INCOME FOR THE THREE PROPOSED GOLF COURSE SCHEMES

In order to assess the net income potentials of the 3 schemes we analyzed the following data:

- 1. FY1982 Annual Report Burke Lake Park Golf Course
- 2. FY1982 Annual Report Twin Lakes Golf Course
- 3. FY1982 Annual Report Greendale Golf Course
- 4. FY1982 Annual Report Jefferson District Park
- 5. FY1981/82/83 Annual Reports Algonkian Park Golf Course
- 6. FY1981/82/83 Annual Reports Pohick Bay Golf Course
- 7. National Golf Foundation Research Data

8. Pinecrest Golf Course 1981 and 1982 Income/Expense Report

9. Pinecrest Historic Play Data

In reviewing this information we were able to make the following observations:

1. 32.79% of all 18 hole rounds at Burke were seniors Burke is an 18 hole par 3 layout

2. 26% of all 9 hole rounds at Burke were seniors

3. The proposed fees for 1983 for the Fairfax County Golf Courses are as follows:

Item	Weekday		Weekend &	Holiday
9 Holes	\$3.75		\$4.75	
18 Holes	6.50		7.50	
Senior Citizen &				
Under 18 (9 holes)	2,00		4.75	
Senior Citizens &	-		-	
Under 18 (18 holes)	4.00		7.50	
			, , , , , , , , , , , , , , , , , , , ,	
Winter Rates $12/1-2/28$				
All Day Fee		\$ 5.00		
Seniors		3 00		
Dull Cart		1 25		
Pull Cart		1.20		
Power Cart 9 holes		7.00		
Power Cart 18 holes		12.00		
Seasonal Passes				
50 18 hole rounds		318.00		
50 9 hole rounds		178.00		
25 18 hole rounds	•	159.00		
25 9 hole rounds		89.00		
10 18 hole rounds	4.	64 00		
10 9 hole rounds		36.00		

4. At Pinecrest Golf Course the total rounds per year ranged from 75,000 to 80,000 in the early 1970's, steadily declining to 57,000 to 62,700 in 1981 and 1982. This can possibly be attributed to the steady decline in the maintenance of the course.

- 5. The driving range at Pinecrest accounted for 26.41% of the total revenues and cost 6.56% of the total expenses.
- 6. At Burke Lake the number of 9 hole rounds outnumbered 18 hole rounds by almost 2-1, while at Pinecrest 18 hole par 3 rounds outnumbered the 9 hole rounds approximately 4-1.
- At Pinecrest it was estimated that the 9 hole rounds outnumbered the 18 hole rounds 10-1. Coincidentally, the same ratio applies at Jefferson 9 hole course.
- 8. For income-expense ratios we are making the assumption that Scheme B and Scheme C are the same. The main difference in the two schemes is the 3 hole instructional area on Scheme B. It is our opinion that the increase in maintenance for these greens and tees would offset any revenue.
- 9. Because of the existing clientele at Pinecrest, we are assuming that the senior play ratio exhibited at Jefferson would not apply equally but would be less. We're assuming that it would be closer to the 1/3 of play ratio as exhibited at Burke.
- 10. There is no accurate data to predict the number of multiple passes that will be purchased for the new Pinecrest Golf Course. Pinecrest currently sells about 1,000 of these each year, which is less in the Fairfax County Park Authority Golf Courses. We are using a constant figure in each case of 250 passes, which could vary widely, either up or down.
- 11. Because of the hilly nature and the more challenging nature of the new Pinecrest, would it be a 9 hole course, we are recommending an increase in the available carts from 10 to 15.
- 12. Included in these projections are an estimated peak play of 62,540 rounds. This figure is derived from research compiled by the National Golf Foundation for "Estimating Golf Play on Public Golf Courses in the Mid-Atlantic Area". It would be reasonable to expect a normal season to be about 85% of peak, and we are projecting income revenue and net income based upon peak play, 80% of peak play and at 70% of peak play. It is unlikely that in the worst year imaginable it would go lower than 70% of peak play, which would be 43,778 rounds.
- 13. There is no estimate of income and expense from beer sales at Pinecrest. We would anticipate that the net income figures would be enhanced greatly with this figure.

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- 14. There are a number of factors that could enhance or deteriorate the net income figures projected. These would include: extra maintenance, capital improvements, excessive vandalism or natural destruction of property, mismanagement, or the success or failure of special events. Since these are not predictable they have not been included in the figures.
- 15. It is anticipated that there would be income from some practice facilities at either of these facilities in addition to the 3 hole practice area. These could include indoor vending machine type golf facilities, such as Golf-O-Mat, and outdoor practice enclosures which have limited appeal but would be useful in this type of facility.
- 16. We wish to thank numerous individuals for their cooperation in compiling these statistics, including the entire Fairfax County Park Authority Golf Course Operations and Maintenance Staff; Mr. Steve Fouts, the manager of Pinecrest Golf Course; Mr. David Hobson, Capital Programs Director, the Northern Virginia Regional Park Authority; and Mr. Syl Wagasky from the National Golf Foundation.

SCHEME 'A'

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Α.	INCOME	
	l. Green Fees	
	a. <u>April-October</u> 19,200 Total Weekends and Holidays 60% 18 hole 11,520 @ 7.50 40% 9 hole 7,680 @ 4.75 30,000 Total Weekdays 60% 18 hole 18,000 @ 6.50 40% 9 hole 12,000 @ 3.75 Less for Senior Discount (1/3 total rounds)	\$ 86,400 36,480 117,000 45,000 (22,000)
	<pre>b. March-November 3,600 Total Weekends and Holidays 60% 18 hole 2,160 @ 7.50 40% 9 hole 1,440 @ 4.75 4,400 Total Weekdays 60% 18 hole 2,640 @ 6.50 40% 9 hole 1,760 @ 3.75 Less for Senior Discount (1/3 total rounds)</pre>	16,200 6,840 17,160 6,600 (1,026)
	c. <u>December-February</u> 5,340 Total 67% Regular 3,578 @ 5.00 33% Senior 1,762 @ 3.00 Total Green Fees	17,890 <u>5,286</u> \$331,830
	2. Multiple Passes	· · · · ·
	Est. 200 @ 64 50 @ 159 Total Passes	12,800 7,950 \$ 20,750
	3. Clubhouse Snack Bar @ .80/round Carts Supplies @ .27/round Miscellaneous	50,032 8,000 16,886 500
	Total Clubhouse	\$ 75 , 418
	Total Income	\$427 , 998
	Summary IncomeRoundsPeak Play62,54080% Peak Play50,03270% Peak Play43,778	Income \$427,998 342,398 299,599

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B. EXPENSES

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Golf Course Maintenance		\$105.000
Clubhouse (2.10/round)		131,334
@ 80%	\$105,067	_01,001
@ 70%	91,933	

Total Expenses 23

236,334

Summary H	Expenses	
Peak I	Play	236,334
80% P€	eak Play	210,067
70% Pe	∋ak Play	196,933

C. SUMMARY INCOME/EXPENSES

		Net Income
Peak Play 🗄	427,998/236,334	\$191.664
80% Peak Play	342,398/210.067	132,331
70% Peak Play	299,599/196,933	102,666

SCHEME 'B' AND 'C'

A. INCOME

\$____

1. Green Fees

a. April-Octob	er			
19,200 Tota 10% 18 90% 9 30,000 Tota 10% 18	Weekends and hole 1,920 (hole 17,280 (Weekdays hole 3,000 (Holidays 7.50 4.75	\$ 14 82 19	,400 ,080
90% 9 Less f	hole 27,000 (or Senior Disco /3 total rounds	3.75 ount s)	101 (18	,250 ,250)
b. March-Novem 3,600 Total 10% 18 90% 9 4,400 Total 10% 18 90% 9 Less f (1	ber Weekends and H hole 3,240 (Weekdays hole 440 (hole 3,960 (or Senior Disco /3 total rounds	Holidays 7.50 4.75 6.50 3.75 5 9 9 9 9 9 9 9 9 9 9	2 15 2 14 (2	,700 ,390 ,860 ,850 ,678)
c. December-Fe 5,340 Total 67% Re 33% Se	bruary gular nior	5.00 3.00	17 5	,890 ,286
Total	Green Fees		\$255	,278
2. Multiple Passe	s (See Schedule	e 'A')	20	,750
3. Clubhouse Snack Bar Carts @ . Supplies Miscellan	@ .80/round 57/round @ .34/round eous		50 35 21	,032 ,648 ,264 500
Total	Clubhouse		107	,444
Т	otal Income		383	,472
Summary Income Peak Play 80% Peak Play 70% Peak Play	Rounds 62,540 50,032 43,778		Inco \$383 306 268	me ,472 ,778 ,430

B. EXPENSES

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Golf Course	Maintenance @ 7,000/hole	\$ 63,000
Clubhouse @	2.10/round	131,334
@80%	105,067	
@ 70%	91,933	

Total Expenses 194,334

Summary	/ Expe	enses	
Peak	c Play	7	194,334
808	Peak	Play	168,067
70%	Peak	Play	154,933

C. <u>SUMMARY INCOME/EXPENSES</u>

		Net Income
Peak Play	383,472/194,334	<u>\$189,138</u>
80% Peak Play	306,778/168,067	138,711
70% Peak Play	268,430/154,933	113,497

INDOOR PRACTICE FACILITY REVENUE/EXPENSE ANALYSIS

As an integral part of the practice aspect for Pinecrest we have investigated a computerized golf practice range. This can be utilized year around and is a low maintenance item.

Here golfers can dial one of seven of the world's top courses and play either singly or up to regular foursomes. The best facility we have found is Golf-O-Mat Corporation that is located in Arlington, Virginia.

We have programmed 4 such facilities in the clubhouse.

Anticipated charges for the use would be by-the-hour. The hourly cost would generally be 1-2 dollars higher than an 18 hole fee.

A. RATES AND DEMAND EXPECTATION

	WEEKEND	WEEKDAY		DAILY	TOTAL HO	URS
SEASON	RATE	RATE	USEAGE	HOURS	WEEKEND	WEEKDAY
Peak Nov15-Mar30	10.50	8.50	60 - 80%	8am-10pm(1	2) 492	1152
Shoulder Oct15-Nov14, Aprl-May31	8.50	6.50	40 - 60%	8am-6pm(10) 180	740
Offseason Junel-Octl4	6.50	4.50	10-20%	8am-9pm(11) 440	1056

B. REVENUE EXPECTATION

l. FEES

Peak Season	Shoulder	Off Season	Total Per 4 Machines
•			
8,985	2,536	761	49,088
11,966	3,804	1,522	69,168
986	368	150	6,016
1,315	552	299	8,664
	Peak Season 8,985 11,966 986 1,315	Peak Season Shoulder 8,985 2,536 11,966 3,804 986 368 1,315 552	Peak Season Shoulder Off Season 8,985 2,536 761 11,966 3,804 1,522 986 368 150 1,315 552 299

2. CONCESSIONS @\$1.50/HR Low 9,024 High 12,996
C. EXPENSE (assuming labor is already on premise) High Low Replacement Lamps 1,200 1,730 1,200 1,200 Replacement Film 1,800 Utility Cost @150/mo 1,800 3,000 Repair & Maintenance 2,000 Screen Replacement (10 yr life) 60 60 Cost of Goods Sold (.80/hr) 4,813 6,931 Total Annual Expense 11,073 14,721

SUMMARY REVENUE/EXPENSE

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		Net	Income	Annually
High	69,168/14,721	\$54	,447	-
Low	49,088/11,073	\$38	,015	

TABLE 1GOLFCOURSECOMPARISONFAIRFAXCOUNTY1982

•	BURKE LAKE 18 HOLE PAR 3	TWIN LAKES 18 HOLE REGULATION	GREENDALE 18 HOLE REGULATION	JEFFERSON 9 HOLE EXECUTIVE	PINECREST 18 HOLE PAR 3	PINECREST 9 HOLE REGULATION	ALGONKIAN 18 HOLE REGULATION	
	18 9	18 9	18 9	18 9	18 9	18 9		
Total Rounds	16910 29317	30736 23195	30175 19981	4190 44290	17578 4395	4081 36727		
Total	46227	53931	50156	48480	21973	40808	39600 est	
Total Income	302722	480763	392633	204635	127603	405657	397443	
Total Expense	205027	271257	308266	181599	181599 123512		329326	
Income-Golf Course	195451	295895	233999	148255	90945	168899	247640	
Snack	35754	72401	66032	. 29784	32966	61222	64908	
Carts	7472	76600	55318	9022	3691	30000	37100	
Driv. Range	49866	-	-	-	-	145232	8639	
Supp/Rental	12495	27771	32325	16457	-	_	38535 est.	
Misc.	684	7096	4957	1183	-	304	621	
Expense-Golf Course	104229	125690	150682	84963	43489	80764	N/A	
Clubhouse	96943	145567	157584	96637	80023	148615	N/A	
Driv. Range	3856		-	.—	-	16704	3000 est	
Total Income/Hole	14048	26709	21813	22737	7089	28936	21600	
Total Op. Exp./Hole (Factoring DR out	11176	15069	17126	20178	6862	25486	18129	
Gross Profit Margin	25.70%	77.24%	27.37%	12.68%	3.3%	13.54%	19.15%	

SEASON	JEFFERSON GOLF COURSE 1982	00	NGF*	00	PINECREST 1981/82 AVE	00
April-October	39,784	82.1	49,200	78.7	41,879	80.8
March-November	6,123	12.6	8,000	12.8	6,061	11.7
December-February	2,573	5.3	5,340	8.5	3,902	7.5
TOTAL	48,480 (77.5% NGF Total)	100	62,540	100	51,842 (82.9% NGF Tota	100 (1)

TABLE 2 ANNUAL ROUNDS PLAYED COMPARISON

* National Golf Foundation "Estimating Golf Play on Public Golf Courses" expected average for play on a Mid-Atlantic area golf course.

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COURSE	18 HOLE REGULAR	010	18 HOLE SR/JR	00	9 HOLE REGULAR	010	9 HOLE SR/JR	00	REG.	SR/JR
Burke Lake	11,365	67	5,545	33	21,695	74	7,622	26	71.5	28.5
Twin Lakes	23,742	77	6,985	23	18,030	78	5,165	22	77.5	22.5
Greendale	16,444	72	3,537	18	21,382	71	8,793	29	75	25
Jefferson	1,986	47	2,204	53	23,683	53	20,607	47	53	47

TABLE 3FEE PLAY BREAKDOWN BY GROUP - FAIRFAX COUNTY

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9.0 Concept

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CONCEPT

- Locate a new clubhouse as close to Little River Turnpike as possible. This clubhouse would have a northerly view and would be sited in such a manner to take advantage of solar opportunities.
- Locate a new parking facility between the clubhouse and Little River Turnpike. Utilize buffering techniques that would be compatible with the Pinecrest residential development along Braddock/Little River Turnpike and between the parking/clubhouse area and the proposed residential area.
- 3. Create a new vehicle site entrance as close to the intersection as feasible and permissible by VDH&T.
- 4. Establish the golf course routing program starting out on the west side of the clubhouse going in a clockwise direction around the property and returning back to the clubhouse on the east side. Since most golfers slice or hit the ball to the right, this will minimize the impact of the golf holes on the surrounding properties and roads. Greens and tees will be located along this route where play and existing conditions permit.
- 5. Provide a 9 hole Executive length facility along the established routing pattern.
- 6. Establish practice opportunities between the clubhouse and the first tee and ninth green, consisting of (a) a large practice putting and practice chipping green, and (b) practice enclosures on the east part of the site, which would be available for teaching, lessons, warm-up for golfers, and practice. These facilities would be handsomely landscaped as an integral part of the golf course.
- 7. Service to the clubhouse would be on the west side of the clubhouse.
- 8. Create a new pond at the eastern-most portion of Turkeycock Run which would add to the beauty and playability of the golf course. The pond would be the source for the golf course irrigation system and would control or minimize the storm water runoff from the site. In this location it would also recapture a significant percentage of the sprinkler water. The pond would require a supplemental well.
- 9. Create a maintenance access from Braddock Road directly across from the maintenance main entry which will be located across Braddock Road in the northeast part of the site.







. PUBLIC VIEW ACCESSIBILITY TO GOLF COURSE

· SOLAR GAIN.

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SITE CONSIDERATIONS



- SOLAR GAIN
- MAXIMIZE PUBLIC EXPOSLIRE TO GOLF COURSE/CONVENIENT ACCESS TO BERVANT FUNCTIONS AND GOLF COURSE
- · GROUP SERVANT FUNCTIONS FOR MOST EFFICIENT OPERATION/CONTROL

PUBUC	
·DINING	
· SNACK BAR	,
. PRD . HDP	

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<u>SER VANT</u> • OFFICE • MECHANICAL • STORAGE • TOILETS

2

BUILDING CONSIDERATIONS

NIEMS & CIRCULATION



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SOLAR CONSIDERATIONS



MAINTENANCE FACILITY CONCEPT PLAN



144



1 SITE CONSIDERATIONS

- · PROPOSED ROADS.
- EXISTING TREES/DRAINAGE SYSTEM.
- · TRAFFIC FLOW-AROUND AND THRU BUILDING.
- · SCREEN MAINTENANCE AREA FROM VIEW.





- OFFICE TO HAVE VIEW OF ALL VEHICLES ENTERING THE MAINTENANCE YARD; GAS PUMPS AND WORK VEHICLE. ENTERING MAINTENANCE WORK AREA.
- · BUILDING SHOULD BE COMPACT, EASILY ACCESSAIBLE AND REQUIRE A MINIMUM OF MAINTENANCE.

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10.0 Design

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PINECREST CLUBHOUSE DESIGN SOLUTION

One statement explaining the design process is that it is the search for a "fit" between the site, building program, budget, and the personality of the activity that the structure is to house. The Clubhouse design solution is clearly and quite strongly influenced by each of these criteria. One additional design influence was the desire to investigate the use of passive solar heating and cooling principals.

The programmed spaces can be divided into two general categories: Public or served spaces (dining area, patio, snack bar, and proshop registration counter) and servant spaces (storage, mechanical equipment, restrooms, etc.). The design solution orients all of the public spaces to the 1st tee, 9th green, and practice area, to take advantage of the view and to enhance the ease of circulation to the golf-course itself. All servant or support spaces have been placed between the public spaces and the parking lot to the south to serve as a solar collector in the heating months and a solar buffer in the cooling months.

The roof forms reflect the distinction between the public or served spaces and the servant spaces. Gabled roofs cover the public spaces and are designed to provide light and ventilation at the gabled ends. The slope of the gabled roof will be exposed on the interior, giving the public spaces a greater sense of volumn, spaciousness, and personality. The servant spaces are housed by a flat roof to reflect their distinction in use and to reduce the building volumn where minimum volumn is needed, or desired, for heating and cooling purposes

The criteria for selection of materials were primarily durability, ease of installation, maintainability, and personality in keeping with the nature of the building's use.

Materials to be used on the interior of the building are discussed in the Program for each of the spaces being housed. Proposed exterior materials are wood siding, wood shingle roofing (on the gabled roofs), single ply membrane roofing on the flat roof, insulated glazing materials, and hollow metal exterior doors.

Phase II of the project is a 2600 square foot structure to house four computer operated golfomatic machines. Circulation to the structure will be from the main clubhouse. Its form and materials will be a natural extension of the main clubhouse structure.









CLUBHOUSE

6)

OTHER FACILITY PROJECTIONS FOR PINECREST GOLF COURSE

1. Parking

On an executive 9 hole layout we would estimate there to be, at peak times, between 70 and 85 people on the course. There is generally a 25% overlap of people coming to the practice facility, just coming off the course, utilizing the clubhouse before their tee time. In addition, there would be a need for 8-10 employee parking to handle the peak flow. We would, therefore, recommend that the parking lot consist of between 96 and 116 cars.

2. Practice

There is not enough room for a regulation size driving range on any portion of the Pinecrest site. It is important, however, to provide opportunity for practice and teaching to encourage interest in the game, allow golfers to warm up for their rounds and generate additional income. At Pinecrest we recommend a practice facility utilizing the following:

- a. practice green for putting
- b. practice green for chipping
- c. practice enclosures consisting of netting and fencing providing at least 15, and possibly up to 25 or 30, spaces, depending upon allowable room
- d. consider the provision of indoor golf facilities. There are products on the market that are popular in some areas where golfers up to a foursome will dial their favorite golf course, such as Pebble Beach, Oakmont, etc., play golf into a screen, and keep score just like they would on a regular course. These can be very popular facilities.

PINECREST MAINTENANCE FACILITY DESIGN SOLUTION

The Maintenance Facility is a 3,7000 square foot structure that houses a four bay (3 drive through) shop, support spaces (office, lunch room, toilets, and storage rooms for tools and chemicals), and an exterior covered storage area for course maintenance equipment. The building is organized around the main shop space with support spaces on one end and covered storage on the other. The Grounds Keeper's office has been located to afford visual control of the shop, exterior service yard, fuel pumps, and the tool room.

By developing an earth berm along the southern wall of the structure and adjacent parking spaces, the visual impact of the maintenance facility on the proposed garden plots and parking area serving the Green Spring Park has been minimized.

The materials proposed for use on the interior of the building are discussed in the program. Proposed exterior materials are exposed concrete block walls, asphalt shingles on the sloped roof and either single ply membrane roofing on 3-ply built-up roofing on the flat roof, insulated glazing materials, and insulated metal garage doors, entry doors and infill panels.





ELEVATION A



B MANJELIE

ELEVATION C



MAINTENANCE FACILITY

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11.0 Cost Estimate

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COMPARATIVE COST ESTIMATES Plan A - Par 3 course, 18 hole Plan B - Instructional Course, 9 hole + 3 hole Plan C - Executive Course, 9 hole Preferred Alternative - Mid-length, 9 hole (From illustrative plans) Preferred Plan C 'Alternative Plan A Plan B I. CLUBHOUSE AREA 1. CLUBHOUSE (a) a. Main Floor (b) \$251,800 \$251,000 \$251,000 2350 SF @ \$107. b. Basement (b) 55,500 55,500 55,500 1850 SF @ \$30. c. Deck^(b) 11,400 11,400 11,400 760 SF @ \$15. d. Main Building & Equip 253,500 4400 SF e. Target (Driving) $^{(d)}$ (177,000)* d Building & Equip. 2500 SF \$318,700 \$318,700 \$318,700 TOTALS: \$253,500 2. UTILITIES a. San Sewer @ \$15. 7,700 12,200 21,900 5,200 b. Water @ \$30. 35,500 7,700 9,200 12,000 c. Elec. UG @ \$2.50 4,400 3,900 8,500 8,500 TOTALS: \$47,600 \$23,800 \$39,600 \$25,700

* The Computer Golf Building and Equipment is not included in total budget estimates. This item is proposed as result of market research to provide certain instructional facilities normally associated with any golf course.

		-	Plan A	A Plan B	Plan C	Preferred Alternative
	3.	SITE DEVELOPMENT				
		a. Demolition & Clearing	\$27,100	\$27,100	\$27,100	\$27,100
		b. Grading	60,000	60,000	60,000	55,000
		c. Roads & Drainage	149,500	70,000	59,800	30,000
		d. Parking & Drainage	e 132,300	132,300	177,000	182,000
		e. Landscaping	40,000	40,000	40,000	40,000
		f. Trails/Walks	10,000	10,000	10,000	10,000
		g. Signage	14,000	14,000	14,000	14,000
		h. Misc. Loose & Fixe Equip.	d 15,000	15,000	15,000	15,000
		TOTALS:	\$447,900	\$368,400	\$402,900	\$373,100
II.	<u>G0</u>]	LF COURSE				
	1.	Grading & Fairways	600,000	620,000	540,000	540,000
	2.	Tees & Greens	200,000	186,000	140,000	140,000
	3.	Irrigation	130,000	105,000	120,000	140,000
	4.	Fencing	120,000	120,000	120,000	120,000
	5.	Buffers & Landscape	100,000	100,000	100,000	130,000
	6.	Practice Facilities	25,000	25,000	25,000	50,000
	7.	Cart Paths & Bridges	180,000	180,000	180,000	180,000
		TOTALS: \$	1,355,000	\$1,336,000\$	1,225,000	\$1,300,000
III.	MA	INTENANCE AREA				
	1.	Office & Service Cent	er É			
		a. Building & Services (f)	200,000	200,000	200,000	176,500
		b. Equipment	150,000	150,000	150,000	150,000
		TOTALS:	350,000	350,000	350,000	326,500

		Plan A	Plan B	Plan C	Preferred Alternative
2.	Utilities				
	a. San. Sewer				5,600
	b. Water				17,700
	c. Electrical				6,000
	d. Estimate (f)	29,300	29,300	29,300	
	TOTALS:	29,300	29,300	29,300	29,300
3.	Site Development				
	a. Demolition & Clearing				9,400
	b. Grading				6,000
	c. Roads & Drainage				45,000
	d. Entrance to Braddock Rd. Impr.				21,300
	e. Paving, Parking & Lighting @				140,500
	f. Trails			·	2,200
	g. Landscape & Buffer				21,000
	h. Fencing				6,000
ø	i. Signage				2,000
	j. Estimate igoplus	110,000	110,000	110,000	
	TOTALS:	110,000	110,000	110,000	253,400
	TOTAL MAINTENANCE:	489,300	489,300	489,300	609.200

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Alternative TOTAL FACILITY \$2,658,500 \$2,536,200 \$2,475,500 \$2,561,500 IV. CONTRUCTION CONTIN-GENCIES @ 15% (h) 398,800 380,400 371,300 384,200 TOTAL: \$3,057,300 \$2,916,600 \$2,846,800 \$2,945,700 v. FEES, PERMITS, CONTRACT ADMINISTRATION, CHANGE ORDERS, @ 25% 764,300 729,200 711,700 736,400 GRAND TOTAL: \$3,821,600 \$3,645,800 \$3,558,500 \$3,682,100

Plan A

Plan B

Plan C

Preferred

Note: Cost data assumes Bid Date of March, 1984; Construction to commence May, 1984.

- (a). If existing clubhouse was brought into code conformance with other renovation, estimated cost between \$358,000. and \$452,500.
- (b). Assumption only, based on similar park structures. No architectural program available.
- C. Cost includes electrical, HVAC and passive solar installation.
- (d). Building cost \$109,000; computer golf equipment \$68,000, not included in totals.
- (e). Parking spaces 91, 91; 105; 114.
- (f) Assumption only, based on similar park structures. Building/Site pro-rata average.
- (g). Concrete service and parking areas \$112,800. included.
- (h). Contingencies appropriate for Masterplan stage.