FIRST AMENDMENT TO THE DECLARATION OF RESTRICTIVE COVENANTS

This **FIRST AMENDMENT TO THE DECLARATION OF RESTRICTIVE COVENANTS** (this "***Amendment***") is made by **LUMBERMEN'S INVESTMENT CORPORATION**, a Delaware corporation ("***Developer***"), **CCRHD LIMITED PARTNERSHIP**, a Delaware limited partnership ("***CCHRD***" and, with Developer, the "***Declarants***") and the City of San Antonio, Texas, a Municipal corporation ("***City***"), as of the date on which this Amendment is filed in the Official Public Records of Real Property of Bexar County, Texas.

RECITALS

A. Declarants are the owners of an aggregate of approximately 2,855.7473 acres of real property in Bexar County, Texas.

B. City, the five representatives appointed by the Bexar County Commissioners Court under *Section 43.0562(b), Texas Local Government Code* and Developer entered into that certain Agreement For Services In Lieu of Annexation, dated December 9, 2002, pursuant to which City agreed to the continuation of the extraterritorial status of the real property.

C. As a condition of the Services Agreement, City required and Developer did restrict the Land, and such divisions, subdivisions and phases thereof, by and with the covenants and restrictions described in the Declaration of Restrictive Covenants, which was then filed in the Official Public Records of Real Property of Bexar County, Texas and to grant, dedicate and/or convey the easements described therein.

D. Since the Developer restricted the Land, Developer has conveyed approximately 30.86 acres of the Land to CCHRD, a partnership controlled by Developer.

E. The parties to the Services Agreement have amended and restated the Services Agreement, due to certain changes in circumstances since the Services Agreement was originally entered into.

F. In connection with the Services Agreement, City and Declarants have agreed to amend the Declaration of Restrictive Covenants, by and with the covenants and restrictions described in this Amendment and to the extent herein provided.

NOW, THEREFORE, Declarants do hereby declare that each portion of the Land shall be owned, held, mortgaged, transferred, sold, conveyed, occupied and enjoyed subject to those restrictions and easements expressly made applicable to such portion of the Land pursuant to the Declaration, as amended by this Amendment, which restrictions and easements shall run with such Land, shall be binding upon Declarant and all parties having right, title, or interest in or to the Land or any part thereof, their heirs, successors, and assigns, and shall inure to the benefit of each owner thereof. Each contract or deed conveying the Land or any portion thereof shall conclusively be held to have been executed, delivered and accepted subject to the restrictions and easements made applicable thereto in accordance with the Declaration, as amended by this Amendment, regardless of whether or not the same are set out in full or by reference in said contract or deed, from and after the Effective Date.

ARTICLE I
AMENDMENTS TO THE DECLARATION

1.1 Amendment to the Recitals. Recital D of the Declaration is hereby amended and restated in its entirety as follows:

> "Pursuant to *Section 43.0563, Texas Local Government Code,* City, the five representatives appointed by the Bexar County Commissioners Court under *Section 43.0562(b), Texas Local Government Code* and Developer have entered into that certain Amended and Restated Agreement For Services In Lieu of Annexation (the "***Services Agreement***") pursuant to which City has

agreed to the continuation of the extraterritorial status of the Annexation Tracts until the termination of the Services Agreement."

1.2 **Definitions.** The following definition as set forth in the "Definitions" section of the Declaration, is hereby amended and restated in its entirety as follows:

"***Golf Course Environmental Management Plan***" means the "Cibolo Canyon Golf Course Environmental Management Plan" attached to the First Amendment to the Declaration of Restrictive Covenants as **Exhibit "A"**, as same may be amended or supplemented from time to time in accordance with the terms thereof."

1.3 **Amendments to Ordinances.** Section 1.1.4 of the Declaration, titled "Amendments to Ordinances" is hereby amended and restated in its entirety as follows:

"**Amendments to Ordinances**. The Land and all Landowners will be subject to future amendments and supplementations to the UDC and to the aquifer protection ordinances described in **Subsection 1.1.2** except those amendments or supplementations to the UDC (other than the ordinances described in **Subsection 1.1.2.2**) which conflict with the terms of this Declaration or those amendments or supplementations (other than the ordinances described in **Subsection 1.1.2.2**) that would be unenforceable as to the development of the Land due to the provisions of *Chapter 245, Texas Government Code* or Section 35-712 of the UDC. For purposes of this Subsection 1.1.4, an amendment or supplement to the Tree Preservation Ordinance shall be deemed to conflict with the terms of this Declaration and the Land and Landowners shall not be subject to such amendments or supplementations."

1.4 **Impervious Cover**. All references to "twenty-five percent (25%)" as set forth in Section 1.3 are hereby amended to state "fifteen percent (15%)."

1.5 **Private Sewage Facilities**. Section 1.7 of the Declaration, titled "Private Sewage Facilities," is hereby amended and restated in its entirety as follows:

"1.7. **Private Sewage Facilities**. Private "On-site sewage facilities (OSSF)", as defined in *Title 30, Section 285.2, Texas Administrative Code*, are prohibited (i) within the southern portion of the Land, as defined by the northeast to southwest trending fault identified in the Vulnerability Assessment Report for the Edwards Aquifer Recharge Zone and set forth within the Golf Course Environmental Management Plan and (ii) within all other portions of the Land (except the Non-Contiguous Tract and as provided in the Golf Course Environmental Management Plan), without SAWS prior written approval."

1.5 **Golf Course Environmental Management Plan**. The "Cibolo Canyon Golf Course Environmental Management Plan" attached to this Amendment as **Exhibit "A"**, amends and restates in its entirety, that certain "Cibolo Canyon Golf Course Environmental Management Plan" attached to the Declaration **as Exhibit "B"**.

ARTICLE II
MISCELLANEOUS

2.1 **Ratification of Declaration**. Except as expressly amended hereby, all terms and provisions of the Declaration remain unamended, unmodified and in full force and effect. The Declaration, as amended hereby, and all rights and powers created thereby, is in all respects ratified and confirmed. From and after the date hereof, all references to the Declaration shall be deemed to mean the Declaration as amended by this Amendment.

2.2 **Counterparts**. This Amendment may be executed in counterparts, each of which, when executed and delivered, shall for all purposes be deemed an original. All of the counterparts, when taken together, shall constitute but one and the same Amendment.

2.3 **Joinder by CCHRD Limited Partnership.** Developer has previously conveyed a tract of 30.86 acres, more or less, of the Land to CCHRD. CCHRD joins in the execution of this Amendment to evidence its acknowledgment of the terms of this Amendment (including any exhibits hereto) and its agreement to such terms.

[Signature Pages to Follow]

Signed on the acknowledgment date noted below.

DECLARANTS:

LUMBERMEN'S INVESTMENT CORPORATION,
a Delaware corporation

By: _____
JOHN PIERRET
EXECUTIVE VICE PRESIDENT

CCRHD LIMITED PARTNERSHIP
By: LIC VENTURES, INC., its general partner

By: _____
JOHN PIERRET
EXECUTIVE VICE PRESIDENT

THE STATE OF TEXAS §
§
COUNTY OF ~~BEXAR~~ Dallas §

This instrument was acknowledged before me on January 14, 2005 by JOHN PIERRET, Executive Vice President of LUMBERMEN'S INVESTMENT CORPORATION, a Delaware corporation, and LIC VENTURES, INC., the general partner of CCRHD LIMITED PARTNERSHIP, a Delaware limited partnership, on behalf ~~of said corporation and partnership~~.

[seal] BARBARA D. LO
Notary Public
State of Texas
Comm. Expires 02-23-2006

_____
Notary Public, State of Texas

My Commission Expires:

_____

_____
Printed/Typed Name

CITY: **CITY OF SAN ANTONIO, TEXAS**

J. Rolando Bono
Interim City Manager

ATTEST:

Leticia M. Vacek
City Clerk

APPROVED AS TO FORM:

Andrew F. Martin, City Attorney

THE STATE OF TEXAS §
§
COUNTY OF BEXAR §

This instrument was acknowledged before me on JANUARY 28, 2005 by J. ROLANDO BONO, as CITY MANAGER of the CITY OF SAN ANTONIO, TEXAS, a municipal corporation, on behalf of said corporation.

[seal]

Mary Lou Rodriguez
Notary Public, State of Texas

My Commission Expires:

MARY LOU RODRIGUEZ
Printed/Typed Name

EXHIBIT "A"
TO
FIRST AMENDMENT TO THE DECLARATION OF RESTRICTIVE COVENANTS

GOLF COURSE ENVIRONMENTAL MANAGEMENT PLAN

CIBOLO CANYON GOLF COURSE

ENVIRONMENTAL MANAGEMENT PLAN

TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

1.0 EXECUTIVE SUMMARY

This Cibolo Canyon Golf Course Environmental Management Plan ("PLAN") sets forth certain design, construction, management, water quality monitoring and corrective action requirements applicable to all Golf Courses and golf learning centers located within that certain real property more particularly described on Exhibit "A" attached hereto (the "Property"). The purpose of this PLAN is to protect the quality of surface water; maintain the quality of recharge to groundwater supplies, particularly the Edwards Aquifer and Trinity Aquifer; minimize erosion and transport of soil resulting from development activities; and preserve and protect native plant and wildlife habitats to the greatest extent practicable.

This Environmental Management Plan consists of the following sections:

- Introduction
- Surface and Groundwater Protection
- Design & Best Management Practices
- Water Quality Monitoring
- Corrective Action
- Enforcement
- Definitions

This PLAN shall be interpreted and applied to protect environmental quality in general, and so as to prevent degradation of surface and groundwater quality in particular.

2.0 INTRODUCTION

2.1 Purpose

The purpose of this PLAN is to set forth the design, construction, management, water quality monitoring and corrective action requirements for all Golf Courses and golf learning centers constructed within the Property (collectively, the "Golf Courses"). This PLAN identifies a wide range of cultural, mechanical, chemical, and structural practices to be employed to protect water quality, preserve and protect habitat, and otherwise preserve environmental quality within the Property. These purposes can be achieved by requiring a Retention/Closed Loop Irrigation System.

2.2 Goals and Objectives

The specific objectives of the PLAN are to:

- Identify site, climate, irrigation, soils, geology, water resources, turf grass, and vegetation conditions at the Golf Courses.
- Identify turfgrass, soil, and water quality risks.
- Identify specific alternate management practices and current Best Management Practices ("BMPs") for controlling runoff, construction, environmentally sound irrigation, soil and water conservation, fertilization, pest and disease control, and otherwise protecting water quality. BMPs change from time to time and may be incorporated into the Environmental Management Plan (EMP) if agreed upon by SAWS and the Developer. The San Antonio Water System, a wholly owned municipal utility of the City of San Antonio ("SAWS") reserves the right to impose different and more stringent BMP's upon the Golf Courses in the event corrective action is required.
- Develop and implement a water quality monitoring plan to protect water resources in general, and the Edwards Aquifer and Trinity Aquifer in particular.
- Identify action thresholds to meet water, soil and turfgrass quality standards.
- Establish corrective action procedure to be followed in the event Developer or a Successor exceeds any action thresholds.
- Establish documentation requirements to record irrigation practices, fertilization and pesticide application practices, required water quality monitoring results, soil fertility tests, and turfgrass nutrient content tests.

2.3 Applicability

The requirements set forth in this PLAN shall apply to any and all Golf Courses constructed within the Property, and shall be binding upon Lumbermen's Investment Corporation (the "Developer") and each successive owner, and lessee of any one or more of the Golf Courses (a "Successor"). The Developer may assign responsibility for compliance with this PLAN to future owners, lessees and/or operators of the Golf Courses provided prior written notice and a copy of such assignment is furnished to SAWS and the City of San Antonio (the "City"), and provided further that SAWS and the City consent to such assignment. The City and SAWS hereby consent to the assignment of responsibility for compliance with this PLAN by the Developer to Marriott International, Inc. or a Marriott International, Inc. controlled entity ("Marriott") in accordance with the terms and conditions of the Services Agreement (as hereinafter defined); provided, that, as a condition of any such assignment, Marriott shall retain a Golf Course operator which has a demonstrated history of environmental sensitivity in the high quality operation and maintenance of golf courses to operate and maintain the Golf Courses. For purposes hereof, PGA TOUR Golf Course Properties, Inc. or an entity controlled by PGA TOUR Golf Course Properties, Inc. operating a "Tournament Players Club" shall be an acceptable operator. Any conveyance of the Golf Courses by the Developer or agreement relating to the operation of one or more of the Golf Courses shall be made expressly subject to this PLAN and the specific operation plans approved by SAWS, and shall obligate the purchaser, lessee and operator to comply with the provisions hereof

2.4 Relationship to Other Legal Requirements

This PLAN constitutes an exhibit to that certain Agreement for Services In Lieu of Annexation between the City of San Antonio and Lumbermen's Investment Corporation (the "Services Agreement") and is incorporated therein for all purposes.

Under no circumstances shall this PLAN be construed to release the Developer, any contractor or any Golf Course operator from compliance with any other applicable federal, state or local law, rule or requirement that may otherwise be applicable to the construction, operation or management of the Golf Courses. In the event of a conflict between this PLAN and any such legal requirement, the more rigorous (i.e., environmentally protective) practice shall control. Further, this PLAN shall in no manner be construed to exempt the Golf Courses from compliance with any applicable local, state, or federal ordinance, law, or regulation that may become effective after execution of the Services Agreement. Finally, any determination that the Golf Courses are exempt from any other local, state or federal requirement shall not be construed to exempt or relieve the Golf Courses from compliance with any requirement set forth in this PLAN, except as expressly provided in this PLAN.

2.5 Amendments

This PLAN may be amended from time to time only by written agreement of SAWS, representing the City of San Antonio, and by the owner(s) of the lands to be impacted by such amendment.

3.0 SURFACE AND GROUNDWATER PROTECTION

3.1 Operation Plans

The following operation plans, the minimum requirements concerning each of which are more fully set forth in this PLAN, shall be submitted to SAWS for review and approval for each Golf Course:

- Water Pollution Abatement Plan
- Storm Water Pollution Prevention Plan
- Integrated Pest Management Plan
- Nutrient Management Plan
- Irrigation Plan
- Wellhead and Source Water Protection Plan
- Water Quality Monitoring Plan

The Developer may submit one or more plans concurrently to expedite review and approval by SAWS. By way of example and not in limitation, the Developer may submit one or more of the individual operation plans listed above as part of a Water Pollution Abatement Plan ("WPAP").

Construction of the Golf Courses shall not commence unless and until SAWS has approved the Water Pollution Abatement Plan and the Storm Water Pollution Prevention Plan ("SWPP") required by this PLAN, or SAWS otherwise provides written authorization to commence specified clearing activities.

3.2 Review and Approval Process

To ensure that information and data within the operation plans listed in Section 3.1 are complete, to expedite SAWS' review and approval, to provide on-going interpretive input from SAWS and to ensure that potential adverse environmental impacts are identified in consultation with Developer as early as possible in the review process, SAWS staff shall participate in each of the following processes associated with the design and construction of the Golf Courses:

- Review of initial Golf Course routing and design plans
- Review of geologic features within the Golf Courses
- On-site inspection of proposed Golf Course routing

- Attend concept design meetings relating to proposed establishment of water quality management zones, if any
- Attend concept design meetings relating to the establishment of all proposed water quality monitoring locations
- Review Golf Course preliminary grading plans
- Review preliminary operation plans
- Review final draft operation plans (including Water Pollution Abatement Plans)
- Review of proposed topsoil sources
- Attend pre-construction meetings
- Attend monthly construction progress meetings
- On-site inspection of construction activities
- Inspect installation of catch basins and monitoring sites
- Attend final walk-through

The results of SAWS' review of individual operation plans (whether combined with a Water Pollution Abatement Plan or not) will be communicated to the applicant not later than forty-five (45) calendar days following the date of receipt of each complete operation plan. Failure to notify the applicant of the results of SAWS' review within said forty-five (45) day period shall constitute deemed approval of the plan(s).

In the event that SAWS does not approve all or a portion of any operation plan, SAWS shall specifically identify the basis for such disapproval during the forty-five (45) day period. The basis for such disapproval must relate to environmental protection or matters within the scope of this PLAN or otherwise within SAWS' regulatory jurisdiction. In the event SAWS withholds its approval, SAWS and the Developer or any Successor shall utilize good faith efforts to reach a mutually-agreeable solution to the issue(s) of concern identified by SAWS as promptly as practicable. Notwithstanding the foregoing, if SAWS, during its participation as provided in this Section 3.2 (or otherwise), provides an interpretation or gives direction to the Developer and Developer relies on such interpretation and/or follows such direction, SAWS may not withhold any approval because of conditions resulting from Developer's reliance and/or following directions.

SAWS' approvals required under this PLAN are limited to the purposes described in this PLAN and except as specifically provided in this PLAN, do not reflect any commitment, approval, representation, warranty or obligation with respect to the sufficiency, accuracy, completeness or integrity of any matters so approved by SAWS, all of which are expressly disclaimed by SAWS. Moreover, each approval by SAWS is in addition to the usual and customary approvals required by SAWS under ordinances adopted by the City.

3.3 Geology Considerations

The Edwards Aquifer is one of the most productive carbonate-rock aquifers in the world. It displays typical karst-type landforms including caves, sinkholes, solution cavities and similar formations. The landforms have been further modified by the results of geologic activities associated with the Balcones Fault Zone. The modifications are seen in the presence of faulting and fracturing of the Edwards Formation and the associated dissolution along these features. Additionally, soil development over the Edwards Recharge Zone is typically shallow (less than 18 inches) and not very widespread.

Most recharge to the Edwards Aquifer results from the percolation of streamflow loss and the infiltration of precipitation through porous parts of the outcropping recharge zone. It is estimated that stream loss accounts for 60-80 percent of the recharge to the Edwards Aquifer in the San Antonio area and the rest of the recharge is derived from direct infiltration in the interstream areas (MacClay and Land, 1988). Carbonate (karst) aquifers can be quite susceptible to contamination where the pollutants are in and near the outcrop or recharge zone. This fact is the basis for several methods of aquifer protection included in typical BMPs for development over the Edwards Aquifer Recharge Zone.

The Property, including the proposed Golf Course areas, lies over an area currently designated as the Edwards Aquifer Recharge Zone in northeastern Bexar County. The site is effectively divided into two portions by a northeast to southwest trending fault. The movement of this fault has placed units of the lower Edwards, the Kainer Formation, at the surface to the north of the fault. Units of the upper Edwards, the Person Formation, are at the surface to the south of the fault (Figure 1 USGS reference).

Multiple geologic assessments have been performed for lands within the Property, including, most recently, the assessment performed by the three-person "Geologic Arbitration Committee." Sensitive features, including karst features, identified as a result of the assessments are identified on the Geologic Map attached as Exhibit "B" hereto. Karst features found on the subject site include two small caves with one known as Elm Waterhole Cave. These features are not located in the proposed Golf Course area, however their presence indicates that other features may be found during construction of the overall development. The units of the Person Formation typically exhibit more porosity and permeability, particularly the Leached & Collapsed member that is present across a large portion of the southern part of the subject site, and therefore are more likely to have karst features present.

Additionally, the U.S. Geological Survey ("USGS") and SAWS cooperated in the development of a Vulnerability Assessment Report (Figure 2) for the Edwards Aquifer Recharge Zone. In this report, the area to the south of the fault previously discussed, especially where the Leached & Collapsed Member is at the surface, is rated as a higher vulnerable area than the adjacent area to the north.

3.4 Recharge Sensitivity

As described in Section 3.3, the Edwards Aquifer is a karst limestone aquifer. While other factors contribute to the creation of pathways that recharge the Edwards Aquifer, such as faulting and bedding planes, the dissolution of bedrock by water flow is the prime ingredient in their creation. Features such as sinkholes and caves are given added importance because they represent areas where greatest flow and discharge of water through subsurface pathways have occurred. The northern portion of the land within the Property is in the very lowest portion of the Edwards geologic section. While caves can be found in this unit, they are localized and generally the geologic unit acts to confine water in the Edwards Aquifer. The northern portion of the land within the Property, therefore, potentially recharges the Trinity Aquifer versus the Edwards Aquifer. The Trinity Aquifer is a source of water for many in north Bexar County and will act as one of the many sources of water that will be developed in the future for the City of San Antonio.

The southern portion of the land within the Property lies within the upper portion of the Edwards geologic section within one of the most sensitive units. While there was a lack of Sensitive Features at the surface, there is a potential for features in the shallow subsurface. This highlights the importance of Best Management Practices, the Integrated Pest Management Plan, and the Water Quality Monitoring Plan required hereunder.

An unnamed tributary of Elm Creek bisects the Property centrally from north to south. Therefore, it probably acts to recharge the Trinity Aquifer to the north and as water flows across the southern portion of the Property, it provides recharge to the Edwards Aquifer. As previously cited, streams and tributaries are the features that recharge a majority of the water to the Edwards Aquifer. Therefore, their buffering and sampling is critical to the successful protection of the water sources in the area.

Figure 1*** cross section***

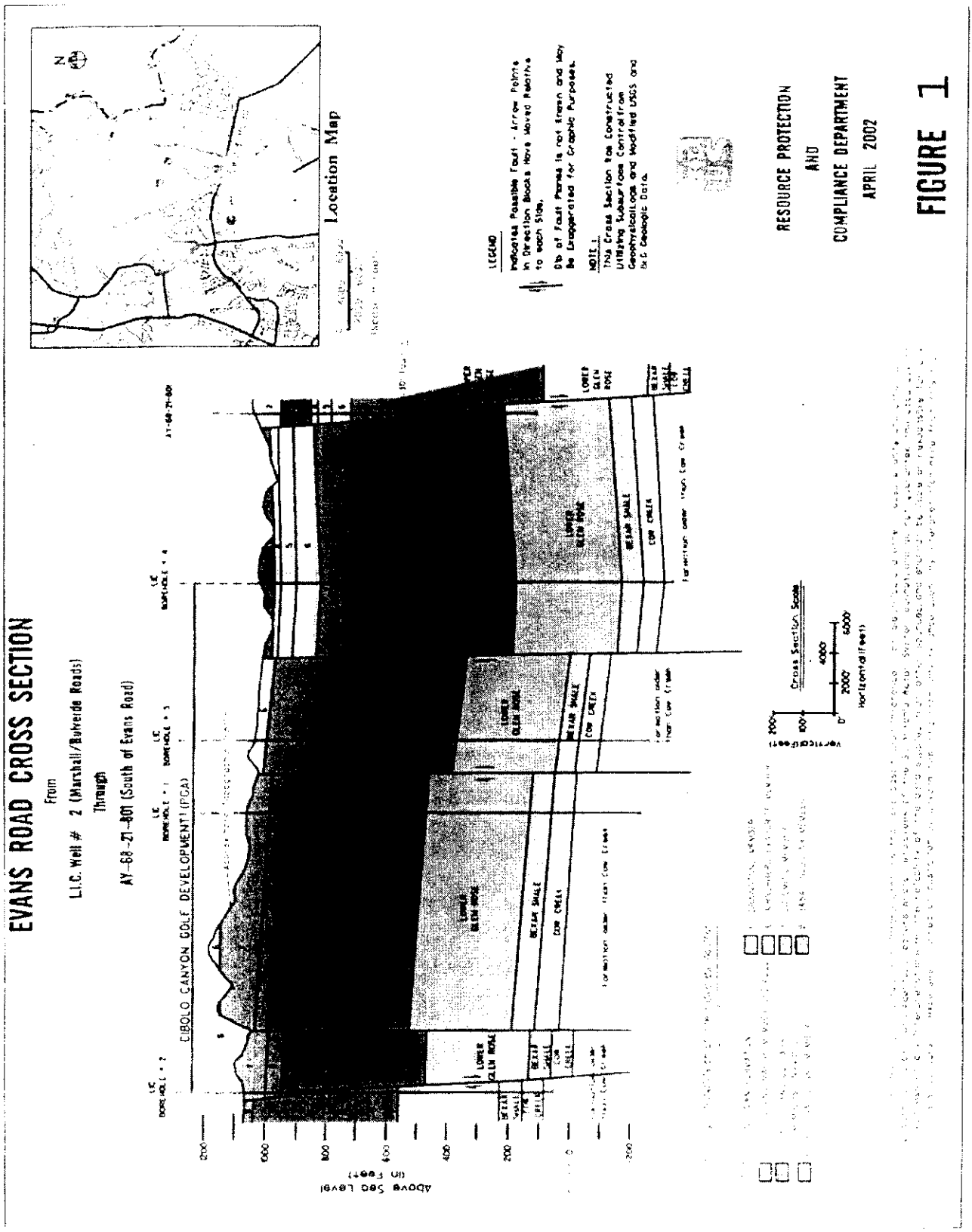
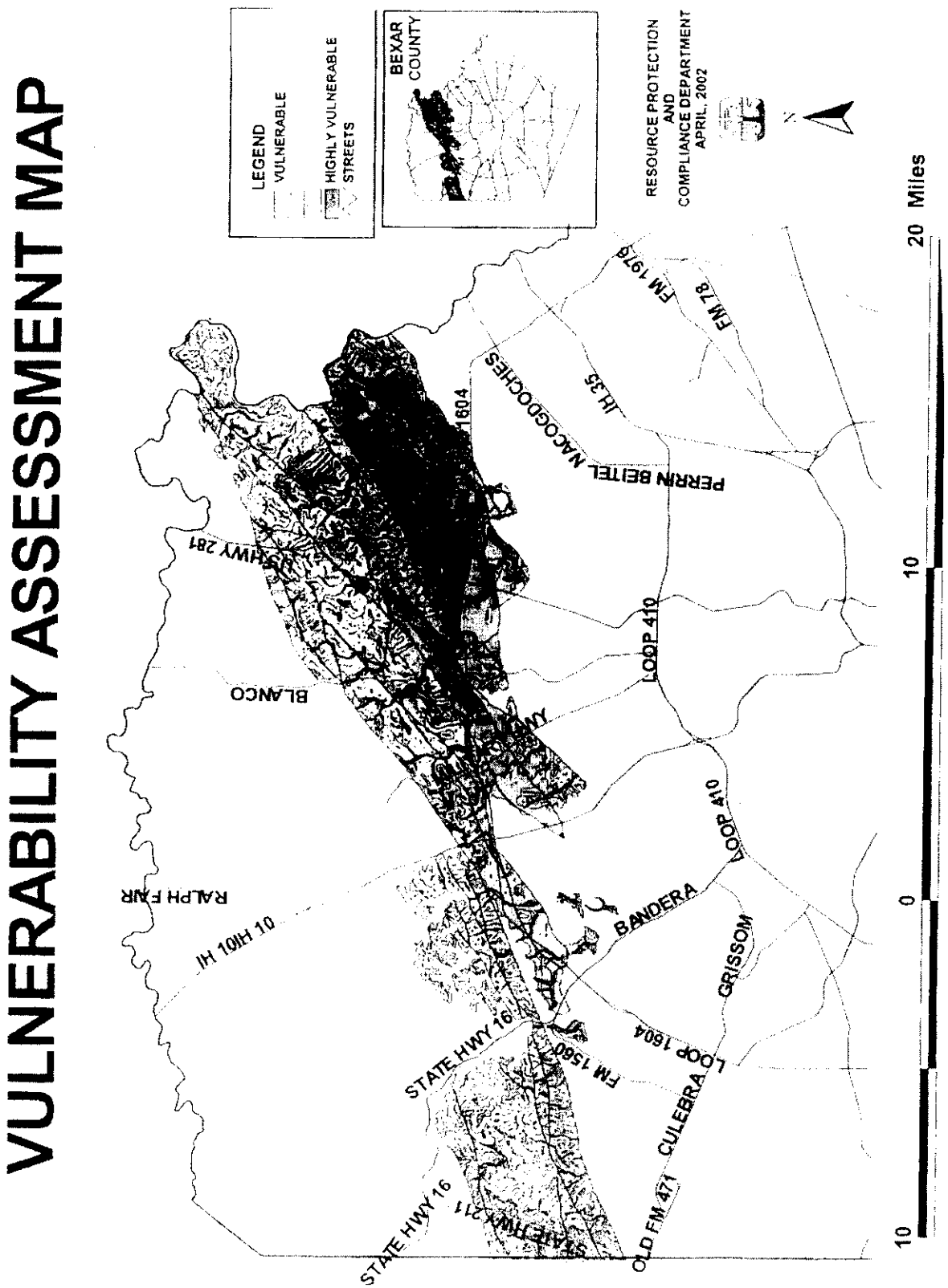


FIGURE 2 ** vulnerability map***



3.5 Water Quality Management Zones

The Golf Courses shall be designed, constructed and operated in accordance with the water quality controls, management practices and monitoring requirements set forth in this PLAN in order to minimize any potential adverse effects of Golf Course construction and operation on the Edwards Aquifer, the Trinity Aquifer and other water resources.

To achieve this result, the Golf Courses may be managed through the creation of one or more Water Quality Management Zones ("WQ Management Zones"). If utilized, the WQ Management Zones shall be designed to identify potential water quality risks for specific conditions present within areas of each Golf Course for purposes of preparing specific management practices that shall be implemented within each zone. The Golf Course designers and engineers shall be responsible for the identification and creation of WQ Management Zones based upon the proposed Golf Course layout and water quality risk factors.

The WQ Management Zones concept has several technical and practical advantages. Use of the WQ Management Zones allows for:

- Flexible development and maintenance of practices to protect water quality and healthy turfgrass.
- Consistent basis for long-term evaluation and monitoring of the success of this PLAN.
- Development and evaluation of practices to mitigate potential adverse water quality effects.

3.6 Identification of WQ Management Zones

Areas within the Golf Courses that contain similar environmental risk factors should be categorized in the same WQ Management Zone. The areas within a WQ Management Zone need not be physically contiguous, and instead should be based on water quality risk factors. All proposed WQ Management Zones shall be submitted to SAWS with the Design Plan (as hereinafter defined).

In developing the WQ Management Zones, water quality risk factors shall be identified and considered, including soils, proximity to surface water, depth to permeable bedrock, proximity to Sensitive Features (as hereinafter defined), topography and other relevant matters. Each WQ Management Zone should be designed to address the following processes potentially affecting water quality:

- Subsurface leaching of compounds to groundwater.

- Drift of applied chemicals during initial application and volatilization.
- Movement of dissolved chemicals in surface runoff water.
- Movement of suspended particulate (e.g. granular) formulations in runoff water.
- Movement of eroded soils and sediment-bound compounds in runoff water.

The foregoing determinations shall be based upon manufacturers' recommendations and commercially-available information concerning chemicals proposed for application to the Golf Courses, and Developer may, but shall not be required to, perform laboratory testing or analysis of chemicals.

To make the WQ Management Zones concept viable, several practical considerations may be used to delineate the WQ Management Zones. These considerations include:

- If a fairway can be delineated into two zones, the more protective unit shall be used for the entire fairway. This conservative method of delineation (1) protects water quality; (2) maintains quality turf grass; and (3) provides for consistent use of management practices.

- Greens and tees may be delineated in management zones different than the fairway on the same hole. Greens and tees have their own specific mechanical, nutrient, and pest and disease control strategies.

- Structural and vegetative controls may be incorporated into boundaries of the WQ Management Zones.

3.7 Best Management Practices

Each of the Best Management Practices required by this PLAN shall be tailored to the specific conditions and risks present within each WQ Management Zone.

4.0 REQUIRED DESIGN AND BEST MANAGEMENT PRACTICES

4.1 Golf Course Design Criteria

Plans required in section 3.1 and meeting the requirements set forth in this section shall be submitted to the SAWS Resource Protection and Compliance Department Director for approval prior to the scheduled pre-construction meeting and construction phase of each of the Golf Courses. The Developer may include these requirements as part of a Water Pollution Abatement Plan ("WPAP").

Under no circumstances shall Golf Course construction commence in an area of concern until a design plan incorporating the requirements of this PLAN has been submitted by the Developer. In the event that SAWS deems that any portion of the design plan does not comply with the requirements of this PLAN, SAWS shall specifically identify the part of the design plan not in compliance, and such basis must relate to environmental protection matters within the scope of this PLAN or otherwise within SAWS' regulatory jurisdiction. In the event that SAWS deems that any portion of the design plan is not in compliance with this PLAN, SAWS and the Developer or any Successor shall utilize good faith efforts to reach a mutually agreeable solution to the issue(s) of concern identified by SAWS as promptly as practicable. Notwithstanding the forgoing, if SAWS, during its participation as provided in Section 3.2 or otherwise, provides an interpretation or gives direction to the Developer and Developer relies on such interpretation and/or follows such direction, SAWS may not deem such portion of the design plan not in compliance with this PLAN because of conditions resulting from Developer's reliance and/or following directions.

4.2 General Principles

Plans required under 3.1 shall incorporate the following general principles:

- All "Sensitive Features" on the Golf Courses shall be preserved and protected, as provided herein except as otherwise approved by SAWS and the TCEQ. For purposes of this PLAN, Sensitive Features shall be defined as any permeable geologic or manmade feature located on the Golf Courses where a potential for hydraulic interconnectedness with the Edwards Aquifer or the Trinity Aquifer exists, and rapid infiltration to the subsurface may occur. The identification of Sensitive Features shall be made utilizing established regulatory criteria, including the "TNRCC Instructions to Geologists for Geological Assessments" dated June 6, 1999, as amended or superceded from time to time. The Sensitive Features currently identified to be protected in the Design Plan are those features identified by the "Geological Arbitration Committee", as depicted on the Geologic Map attached as Exhibit "B" hereto.

- Golf Course holes shall be designed to provide the greatest buffer practicable between managed turfgrass areas and Sensitive Features. The design shall provide a minimum buffer zone for all Sensitive Features in an amount set forth in the San Antonio City Code, Aquifer Recharge Zone and Watershed Protection Ordinance No. 81491, City Code Chapter 34, Article VI, Section 920, regardless of whether

such ordinance would otherwise be applicable to the Golf Courses. SAWS may grant individual exemptions to the minimum buffer zone requirement set forth herein.

- The design shall incorporate and provide for adequate soil depths.

- All irrigation lakes located on the Golf Courses shall be designed to include a synthetic impervious liner to prevent subsurface migration of contaminants.

- The Golf Courses shall be designed to ensure that the Golf Courses may be sampled and analyzed in accordance with the Water Quality Monitoring Plan requirements set forth in Article V of this PLAN.

- The design shall include natural vegetative buffer zone strips around the perimeters of FEMA 100-year flood plains in accordance with City of San Antonio Ordinance No. 81491.

- The Design Plan shall include topographic contour maps, showing lightly dashed lines for existing contours and solid lines for proposed contours, having a contour interval not greater than two (2) feet.

- For detention/filtration control devices, the Design Plan shall include a summary of calculations for runoff and sizing in accordance with TCEQ's Technical Guidance Manual.

- The design of erosion control and sedimentation facilities including channels, storm sewer inlets, detention ponds and water quality facilities, shall be based on TCEQ's Technical Guidance Manual.

- The design shall include temporary rock/silt fence berms and other controls in major drainage pathways that may be impacted by construction activities.

- The design shall include a Computer Controlled Irrigation System ("CCIS") that interfaces with a digital weather station. The CCIS should be programmed to operate based on real-time Evapo-transpiration ("ET") rates collected from the on-site weather station. The CCIS should be programmed to terminate irrigation operations during rainfall events.

- The design shall promote the preservation of large native trees and associated understory vegetation, where practicable.

- The design shall incorporate sand filter basins (or approved equivalent) for treatment of stormwater runoff from maintenance barns, clubhouse areas, and parking areas.

- The design shall provide for a covered wash rack area that meets SAWS' criteria as provided herein and that drains to an oil/water separator consistent with American Petroleum Institute specifications.

- The design shall provide for a leak detection alarm system for all aboveground storage tanks.

- The design shall provide for double-walled tanks and piping for aboveground fuel storage tanks with electronic inventory control.

- The design shall provide for 150 percent spill containment volume or a ConVault or equivalent system for aboveground fuel storage.

- The design shall minimize elements that encourage development of gullies, rerouting of streams, and changes to the natural surface and subsurface drainage. Where Golf Course grading creates potentially erosive flows, the design will incorporate structural features to reduce flow velocity and sediment.

- Cart paths shall be designed and located to control traffic in order to protect Sensitive Features.

4.3 Retention/Closed Loop Irrigation System

To capture any pollutants generated by the Golf Courses, the establishment of a Retention/Closed Loop Irrigation System shall be included as part of the design, operation, and construction of the Golf Courses. Under this system, the design of the Golf Courses will facilitate the capture of runoff from each Golf Course and routing of the runoff to the irrigation lakes where the runoff will be used as irrigation water.

Design for the Retention/Closed Loop Irrigation System shall include:

- Golf Course runoff may be captured in grass lined catchment basins and routed to the irrigation lakes via gravity based piping or pump systems.

- Golf Course runoff may also be captured in amenity lakes that are designed to provide additional storage capacity for Golf Course runoff. Captured runoff would be routed to the irrigation lakes via gravity based piping or pump systems.

- Golf Course runoff capture volumes will be based on TCEQ's 1999 Technical Guidance Manual, Complying with the Edwards Aquifer Rules: Technical Guidance on BMPs (RG-348), but in no case will the volume be less than one-half inch of runoff from the respective drainage area.

- Construct a twelve (12) inch clay shaping and subgrade layer within agreed tolerances or a synthetic liner below the eight (8) inch required soil profile. This clay layer will have a minimum Plasticity Index (PI) of 20. The clay will be compacted to eighty-five (85%) optimum density prior to placement of topsoil. The WPAP will include details concerning permeability, construction quality control, and quality assurance.
- Golf Course runoff not captured in the Retention/Closed Loop Irrigation System will be treated in accordance with the Water Quality Management Zone Criteria established in Section 3.5.

4.4 Vegetation Selection

Native and/or naturalized vegetation shall be incorporated into the design of the Golf Courses in areas that are not designated as play areas. In the play areas, landscape designers should select grasses that are best adapted to the local environmental conditions for the San Antonio, Texas climate. The selected grasses shall meet the necessary characteristics of play area yet permit the use of environmentally sustainable maintenance techniques.

As part of the Design Plan, a Turfgrass Management Plan meeting the requirements of Section 4.35 of this PLAN shall be submitted to the SAWS Resource Protection and Compliance Department Director for review and written approval. The plan shall identify types of grasses, locations of grasses and vegetation, and maintenance plans.

4.5 Sustainable Maintenance

The Design Plan shall incorporate integrated plant management and resource conservation practices that are environmentally responsible and efficient. Integrated plant management includes integrated pest management and emphasizes plant nutrition and overall plant health, as more fully described throughout this PLAN.

4.6 Recharge Features

All Sensitive Features at the Golf Courses shall be identified in the Design Plan, which shall include those Sensitive Features identified on Exhibit "B" attached hereto. An updated map identifying all Sensitive Features identified during construction shall be furnished to SAWS at the completion of construction of each Golf Course as part of the "as-built" plan submittal.

4.7 Maintenance Facilities

On-site maintenance facilities, storage areas for vehicles and off-road equipment often result in used oils, tires, batteries, cleaning solvents and other wastes. Other potential waste generators include restaurants and/or food service areas.

A waste management plan shall be developed for on-site maintenance facilities and submitted as part of the Design Plan. The plan shall address vehicle maintenance and repair operations, vehicle and equipment washing, fueling operations, and painting operations.

4.8 Restaurants and Food Service Areas

Restaurants and food service areas in the Golf Courses shall have an oil/grease trap at the facility of a type approved by SAWS. A maintenance plan for the oil/grease trap must be submitted as part of the Design Plan. Small concession stands where only prepackaged food items are sold shall be exempt from the oil/grease trap requirement.

4.9 Construction Requirements

Construction activities within the Golf Courses shall be performed so as to effectively control sediment, protect water resources and reduce disruption to wildlife, plant species and designated environmental resource areas.

No construction shall take place until all approvals required under applicable laws, the Services Agreement, if any, and Section 3.1 of this PLAN have been received or deemed received. Construction for each phase of the Golf Courses may commence once the Developer has demonstrated to SAWS that approval of the WPAP and SWPP for such phase has been obtained.

For each Golf Course, SAWS shall be furnished copies of the final plans required under Section 3.1 for the proposed Golf Course. Not later than forty-five (45) days following receipt of all documentation described in the preceding sentence, SAWS shall either acknowledge in writing that the proposed Golf Course plans and design are in compliance with the requirements of this PLAN or shall identify in writing the deficiencies which must be addressed prior to receipt of approvals for commencement of construction of such Golf Course. In the event SAWS withholds its approval, SAWS and the Developer or any Successor shall utilize good faith efforts to reach a mutually agreeable solution to the issue(s) of concern identified by SAWS as promptly as practicable. Notwithstanding the foregoing, if SAWS, during its participation as provided in Section 3.2 (or otherwise), provides an interpretation or gives direction to the Developer and Developer relies on such interpretation and/or follows such direction, SAWS may not withhold any approval because of conditions resulting from Developer's reliance and/or following directions. Failure by SAWS to identify in writing any deficiencies within such forty-five (45) day period shall be deemed approval by SAWS of the submitted documentation. Upon receipt of a notice of deficiency, the Developer must submit revised plans that address the deficiency and receive SAWS approval therefore in accordance with the procedures described in this paragraph prior to commencement of construction of the area in question of the Golf Course. The basis for withholding approval by SAWS must relate to environmental protection matters within the scope of this PLAN or otherwise within SAWS' regulatory jurisdiction.

Upon the completion of construction, the Developer shall submit as-built plans, and land surveys, to SAWS for all Golf Course improvements.

4.10 Qualified Contractor

Only qualified and competent contractors who are experienced in the special requirements of golf course construction shall be utilized in connection with the Golf Courses.

4.11 Schedule of Construction

A construction schedule shall be prepared and furnished to SAWS at the pre-construction meeting. The construction schedule should allow for the most efficient progress of the work while optimizing environmental conservation and resource management.

4.12 Golf Course Manager

A qualified and competent Golf Course manager, such as PGA Tour Construction Services, Inc., shall oversee all construction in order to integrate sustainable maintenance practices in the development, maintenance, and operation of the Golf Courses.

4.13 Construction Requirements

Construction of the Golf Courses shall include the following controls to minimize adverse environmental impacts:

- Civil engineering construction plans prepared by the Developer or its assigns must be prepared under the supervision of a professional engineer licensed in the State of Texas. This will be witnessed by the engineer affixing his or her seal and signature to each plan sheet and any reports or calculations submitted to support the plans.

- Representative sampling of each borrow area used for off site soils delivered to the Golf Courses shall be sampled for indicator pollutants to be approved by SAWS at their source prior to delivery to confirm that they are free of contamination. The Developer shall provide documentation identifying the origin of the imported soils.

- Where construction is to occur in a channel that drains greater than five (5) acres, a note shall be included in the construction plans specifying that the contractor shall remove spoil material from the channel of any creek or drainage way at the end of each work day.

- Temporary erosion control devices shall be used to mitigate off site transport of runoff and sediment.

- In order to prevent erosion, mulches, matting, blankets or similar practices shall be utilized where necessary to control or minimize runoff until vegetation or long-term measures are in place.

- Newly constructed areas shall be shaped using swales, berms, and contours for temporary detention of runoff water and sediment to minimize concentrated erosive flows.

- Construction shall utilize sodding and long-term stabilization measures where necessary to prevent erosion.

- Small check dams or weirs shall be constructed to flatten upstream slopes and decrease the velocity of runoff.

- The Golf Course contractors shall construct temporary silt fences to stop movement of eroded soil from construction areas.

- Construction shall be phased so as to minimize impact to streams and geologic features.

- BMPs shall be inspected during construction and subsequent to construction. SAWS shall be furnished a copy of the certification from a registered engineer submitted to TCEQ that structural BMPs are constructed in accordance with the design and specifications.

4.14 Water Pollution Abatement Plan

Construction within the Golf Courses shall comply with Chapter 213 of the TCEQ's rules, as amended from time to time, including the preparation of one or more WPAPs.

The Developer agrees to prepare and submit a WPAP for each Golf Course to SAWS for approval simultaneously with submission of the WPAP to the TCEQ. In the event that it is ever determined that any portion of the Property is not subject to the TCEQ's rules, such determination shall not relieve Developer of its obligation to prepare WPAP(s) for review and approval by SAWS.

SAWS shall review and approve each WPAP in accordance with the standards set forth in Chapter 213 of the TCEQ's rules and the requirements of this PLAN. In the event that SAWS does not approve all or part of any WPAP, SAWS shall specifically identify the matter(s) for which approval is withheld and the basis therefore, which must relate to environmental matters under the scope of this PLAN. SAWS and the Developer shall thereafter attempt in good faith to reach a mutually-agreeable solution as promptly as practicable. Notwithstanding the foregoing, if SAWS, during its participation as provided in Section 3.2 (or otherwise), provides an interpretation or gives direction to the Developer and Developer relies on such interpretation and/or follows such direction, SAWS may not withhold any approval because of conditions resulting from Developer's reliance and/or following directions.

4.15 National Pollutant Discharge Elimination System ("NPDES")

Construction activities within the Golf Courses that will result in the disturbance of five or more acres require a Storm Water Discharge Permit under Section 402 of the federal Clean Water Act (as amended). In accordance with the Clean Water Act, a Storm Water Pollution Prevention

Plan ("SWPPP") shall be prepared that complies with the Monday, July 6, 1998 Federal Register, Part II, Environmental Protection Agency, Re-issuance of NPDES General Permits for Storm Water Discharges from Construction Activities in Region 6; Notice, as applicable and as amended from time to time. The SWPPP shall be present on site at all times for regulatory review and shall be adhered to in all respects. All required EPA postings shall be posted in a visible location and accessible to the public.

The Developer or contractor shall submit the SWPPP to the SAWS Resource Protection and Compliance Department, Construction Compliance Section prior to commencing regulated construction activities. SAWS shall retain the right to inspect all regulated construction activities without prior notice to confirm that SWPPP practices are adhered to in all respects. The SWPPP will include a schedule for the installation of Turfgrass and other protective cover (including vegetative mats).

4.16 Texas Pollutant Discharge Elimination System

Scheduled construction activities shall be subject to the applicable regulatory requirements of the Texas Pollutant Discharge Elimination System ("TPDES") program. SAWS shall have the right to inspect the Golf Courses routinely to confirm that all activities are in compliance with applicable TPDES requirements.

4.17 City of San Antonio Construction Ordinance No. 94002

The City of San Antonio Construction Site Ordinance No. 94002 ("Ordinance No. 94002") regulates the discharge of pollutants into the Municipal Separate Storm Sewer System pursuant to Federal Permit No. TXS001901. Ordinance No. 94002 provides that it is unlawful for any person to engage in construction activity that results in a measurable volume of sediment, soils, soils material, or pollutants entering the City's storm sewer system. Violations of Ordinance No. 94002 may result in a "Stop Work Order", civil injunctive relief, or fines and penalties.

The Developer and all contractors shall comply with Ordinance No. 94002.

The SAWS Construction Compliance Section of the Resource Protection and Compliance Department will conduct routine site inspections for compliance with Ordinance No. 94002. Failure to comply will result in enforcement action.

4.18 Impervious Cover

Impervious cover is one of the most important factors that can affect water quality and the watershed. Impervious cover can change the hydrologic cycle by:

- Reducing the ability of surface water to infiltrate.
- Increasing the velocity of runoff.
- Increasing the volume of runoff.
- Reducing the ability of soil to store water due to regrading.
- Changing evapotranspiration rates due to loss of vegetation in an area.

Each WPAP submitted to SAWS for review and approval with respect to any one or more of the Golf Courses shall specify (i) the area and percent of all existing Impervious Cover on the Golf Courses; (ii) the area and percent of all future Impervious Cover described in each approved WPAP for the Golf Courses which has not been withdrawn or canceled following approval, and (iii) the area and percent of the Impervious Cover described in the proposed WPAP.

4.19 Preservation of Sensitive Recharge Features

All construction activities within the Golf Courses shall preserve all Sensitive Features unless approved otherwise by the TCEQ. Buffer zones and other protective measures shall be maintained during all construction activities to protect Sensitive Features.

In the event that additional Sensitive Features are identified on the Golf Courses during construction, all related construction activities in the immediate area of the feature shall cease immediately. The Developer and/or contractor shall notify immediately the TCEQ and any other governmental entity with jurisdiction, and simultaneous notice shall be given to SAWS. The feature shall be protected immediately and subsequent construction shall incorporate temporary and permanent BMPs to protect the Sensitive Feature, as required by all regulatory agencies with jurisdiction. If SAWS and Developer do not agree as to whether a feature is a Sensitive Feature or the extent to which construction activities should be curtailed in response to the discovery of the potential Sensitive Feature, the "Geologic Assessment Team" (also known as the "GAC", as defined in the Restrictive Covenants) shall make such determinations.

4.20 Construction Waste

Construction waste is generated by the maintenance of vehicles, construction equipment and normal construction activities. These wastes include, but are not limited to, used oils, grease, tires, batteries, cleaning solvents, and empty containers. To the extent possible, all vehicle and equipment maintenance shall be performed in a maintenance/storage area. This area shall be constructed to contain any spills or releases. Used oils, grease, solvents and batteries shall be stored in a covered container until proper disposal off-site is completed in a timely manner. Spills or releases shall be cleaned immediately and disposed of in accordance with applicable regulations. All persons associated with maintenance activities shall be trained in pollution prevention practices. The construction superintendent shall be qualified, competent and "OSHA 40-Hour HAZWOPER" certified. All other construction related waste shall be disposed of in approved, covered, non-leaking containers within the maintenance/storage area and disposed of in a timely manner in accordance with applicable regulations.

4.21 Fuel Storage and Use

The storage of fuels outside the maintenance areas in containers greater than five (5) gallons on the Golf Courses is prohibited during the construction phase of the Golf Courses. Mobile fueling stations (fuel/maintenance trucks) are permitted on the site only for short time durations while required fueling/maintenance of construction equipment is performed. The operator(s) of the

fuel/maintenance equipment shall be trained in pollution prevention practices. Any spills on the site shall be cleaned immediately and disposed of in accordance with all applicable regulations. Spills greater than five (5) gallons shall be documented (product, quantity, location, date, time, etc.) and reported immediately to the SAWS Construction Compliance Section, and to any other governmental entity with jurisdiction.

4.22 Water Supply Protection

Water shall be used during all construction activities for dust control, moisture applications to soils and road construction preparation. When water is delivered from a SAWS main to stand tanks or water trucks, an approved air-break tank or "RPZ" check valve shall be installed to provide backflow protection. Air gaps at the fill point of service trucks shall be in place to prevent back siphoning.

4.23 Materials Management

Pesticides, fertilizers, hydrocarbon-based products and waste from equipment maintenance, if not properly managed, may contribute to point-source and non-point source contamination of soil, surface water, and groundwater.

A materials management plan shall be submitted to SAWS for review and approval with the Design Plan. The materials management plan shall include the minimum requirements set forth in this Article IV.

4.24 Pesticides

Pesticides shall be stored in a lockable, concrete or metal building that allows for fire fighting access. The pesticide storage area shall be separate from other buildings or separated from areas used to store other materials, especially fertilizers. Shelving shall be plastic or reinforced metal. Metal shelving shall be kept painted to avoid corrosion. Wood shelving is prohibited because it may absorb spilled pesticide materials. Floors shall be seamless metal or concrete and sealed with a chemical resistant coating, and shall have a continuous sill to retain spilled materials. The floors shall not have drains, although a sump may be included.

Sloped ramps shall be provided at the entrance to the pesticide storage to allow wheeled handcarts to move material in and out of the storage area safely. Exhaust fans and an emergency wash area shall be provided. The light/fan switch shall be located outside the storage area so that both are on when entering or leaving the storage area. An inventory of the pesticides kept in the storage building and the associated Material Safety Data Sheets ("MSDS") for the chemicals used in the operation shall be maintained on the premises. The inventory list and MSD sheets shall not be stored inside the pesticide storage area itself, as this would make them unavailable in case of an emergency.

Pesticide containers shall be cleaned immediately upon emptying. Containers shall be properly cleaned by pressure-rinsing or triple-rinsing and the rinse water dumped into the sprayer as part of the make-up water. Non-rigid bags shall be shaken clean so that all dust and material falls into the application equipment. The clean containers shall be stored in a clean area, out of the rain and weather, until they are disposed of in accordance with all applicable regulatory requirements.

Washwater from pesticide application equipment must be managed properly as it contains pesticide residues. The currently required BMP for this material is to collect it and utilize it as a pesticide in accordance with label instructions for that pesticide. This applies to washwater generated from both the inside and outside of the application equipment.

For small spills in the pesticide mixing and loading areas, absorbents such as cat litter or sand shall be used to clean up the spill and then applied as a top dressing in accordance with the label rates, or properly disposed of as waste. Large spills shall be remediated in accordance with all applicable state and federal regulatory requirements.

4.25 Fertilizers

Fertilizers shall be stored separately and away from solvents, fuels and pesticides since many fertilizers are oxidants. Fertilizers shall be stored in a concrete building with a metal or other flame resistant roof. Fertilizers shall always be stored in an area that is protected from rainfall.

Cleaning of the fertilizer storage area shall be performed by washing down the loading area or dry collection methods such as sweeping and vacuuming. Any washwater generated shall be collected and applied to the courses. Discharge of this washwater to storm drains is unlawful and prohibited.

Flammable pesticides and fertilizers shall be separated from non-flammable products. Dry bags must be stored on raised pallets to prevent contamination by liquid spills. Labels should be clearly visible.

4.26 Secondary Containment

Areas where pesticides or fertilizers are stored, mixed and loaded, or where containers or equipment for such materials are rinsed, must have proper secondary containment to collect spills and facilitate product recycling. The volume of the secondary containment must be not less than 150 percent of total storage volume. All secondary containment areas shall be included in the WPAP.

Secondary containment structures shall be constructed of concrete or other approved materials. The floor shall be sloped to a sump where liquid can be pumped into a holding tank for recycling. Due to concrete's porosity and low chemical resistance, concrete coming in contact with pesticides and fertilizers shall be protected with a chemically resistant coating or liner.

Pesticide, fertilizer, and other chemical operations shall be isolated from other operations such as material storage and equipment and golf cart maintenance.

4.27 Specific Management Requirements

The following additional management requirements shall be applicable to the Golf Courses:

- All liquid accumulated in containment structures shall be pumped from the structure and placed in a container for proper disposal or recycling.

- Gravity underground drains are prohibited in secondary containment structures.
- Buried pits or underground storage of hazardous materials, including, but not limited to, petroleum products, are prohibited.
- Sumps shall be emptied and cleaned regularly.
- Pesticide and chemical mixing, loading and equipment washing shall be performed under a roof and in a structure elevated above storm water runoff.
- The loading area shall always be clean to prevent tires of vehicles tracking residues out of the loading area.
- If vehicle tires should come in contact with residues, they shall be cleaned before driving off of the loading pad.
- Empty containers shall be promptly rinsed and properly stored prior to disposal or recycling.
- All instructions provided by the manufacturer for all chemicals shall be strictly adhered to by maintenance personnel.
- All bulk storage tanks for chemicals shall have lockable valves.

4.28 Used Oil, Antifreeze and Lead-Acid Batteries

Used oil and antifreeze shall be collected in marked containers and offered for recycling. Antifreeze must be disposed by a licensed recycler in accordance with all applicable laws.

Lead-acid storage batteries, such as used in golf carts and for starting other equipment, must be disposed by a licensed recycler in accordance with all applicable laws.

4.29 Solvents and Degreasers

Solvents and degreasers are generally flammable and toxic and shall be stored in lockable metal cabinets in an area with adequate ventilation, away from ignition sources. They shall not be stored near an area where welding or other similar activities are performed, nor shall they be stored with pesticides or fertilizers. An inventory of the solvents stored and the MSDS sheets for these materials shall be kept on the premises, but not in the solvent storage area. Any emergency response equipment recommended by the manufacturer of the solvent shall remain accessible at all times, but not inside the area itself.

Solvents and degreasers shall be used over a collection basin or pad that is ample to collect all used material. Solvents shall never be allowed to drain onto pavement or soil, or discharged into storm drains, sewers or septic systems, even in small amounts. Routine discharge of even small amounts of solvents can result in the accumulation of contaminants in soil or ground water and is prohibited.

Used solvents and degreasers shall be collected, placed into containers marked with the contents and the date, and then picked up by a licensed hazardous waste management firm that will properly recycle or dispose of these materials in accordance with all applicable state and local regulations.

4.30 Aboveground Storage Tanks

The Design Plan shall identify all proposed Aboveground Storage Tank Systems (" ASTs") to be located at the Golf Courses. ASTs shall comply with the state rules and regulations. All ASTs shall be placed within an impervious containment basin designed to capture and retain a minimum of 150 percent of the storage capacity of the AST or will use a ConVault or equivalent system. All valves, pipes, fittings and other controls connected to the AST shall be placed within the containment basin. A spill containment kit and approved absorbent materials designed to capture and retain potential spills shall be clearly labeled and displayed within 20 feet of the containment area. SAWS shall have the authority to inspect all ASTs at all reasonable times.

If a fuel storage facility is utilized, only ASTs with appropriate controls approved in writing by TCEQ will be allowed. The above ground fuel storage tank facility must meet the following minimum design and operation requirements:

- Double walled.
- Electronic inventory control.
- Leak detection alarm system.
- Provisions for a 150 percent spill containment volume for total volume of above ground fuel storage within the containment structure or a ConVault or equivalent system.
- The fuel dispenser shall be located inside the containment structure for the AST.
- The vehicle fueling area will be constructed of sloped impervious concrete draining into grated spill recovery sump (sump volume to hold not less than 150 percent of the largest equipment fuel tank to be fueled) or filtration basin to prevent fuel spills from entering the environment.
- Any discharge of rain water from the spill recovery sump shall be authorized by the site superintendent only after a determination has been made that there is no contamination of rain water through sampling or other objective means. Recordkeeping of all sampling results shall be kept and shall remain available for inspection by SAWS at all reasonable times.
- A spill response kit shall be maintained at the facility.
- All personnel who will be fueling equipment shall be trained concerning proper pollution prevention, proper fueling procedures and spill response kit use.
- Records shall be kept concerning all fuel deliveries, consumption and spills.

- A SAWS representative from the Resource Protection and Compliance Department will inspect the facility at least once each year to review records and assure that the fueling facility is operated in a manner that will not adversely impact the environment.

4.31 Underground Storage Tanks

The installation or operation of underground storage tanks for hazardous materials including, but not limited to petroleum products, permanent or temporary, at the Golf Courses is prohibited.

4.32 On-site Sewage Facilities

The installation or operation of septic systems and other on-site sewage facilities are prohibited within any portion of the Golf Course(s) located on the southern portion of the Property, as defined by the northeast to southwest trending fault identified in the Vulnerability Assessment Report.

The design of any septic systems or other on-site sewage facilities proposed within other areas of the Golf Course(s) must be approved by SAWS. In addition, SAWS shall be authorized to enter the Property at any time with prior notice to inspect the on-site sewage facilities. At the time of entry to the Golf Courses, SAWS shall endeavor to provide notice to any representative of the Golf Courses that may be present, but such person's consent shall not be required for SAWS to enter the Golf Courses for such purposes. Based upon the results of such inspection, SAWS shall have the right to monitor the operation of the on site sewage facilities. SAWS shall coordinate with the operator of the Golf Course to minimize any disruption to play associated with such inspections, sampling and/or monitoring activities and, absent an emergency situation, SAWS shall not conduct any inspection during the conduct of any professional golf tournament being held at the Golf Courses.

4.33 Integrated Pest Management

4.33.1 Insects

Of the numerous insects residing in golf course turf, very few actually injure the turfgrass. The few that do injure the turf grass are classified as burrowing and root-feeding or shoot feeding. Several species of white grub, mole crickets and older billbug larvae feed on turfgrass roots. Armyworms, sod webworms, cutworms, leafhoppers, spittlebugs, chinch bugs and adult and larvae billbugs feed on the aerial shoots. Several insects are preferential feeders, which limit the injuring to the turf grass. Others will injure the turfgrass as they feed on stems, roots and leaves.

4.33.2 Nematodes

Nematodes are microscopic round worms that reproduce eggs and molt four times prior to becoming an adult. All soils contain nematodes and most are harmless, however a limited number, at some time during their life, parasitize turf grasses. Plant parasitic nematodes are classified based on their feeding habits and are ectoparasitic or endoparasitic.

The tolerance levels of turfgrasses to parasitic nematodes range and is dependent on several factors. Areas of turfgrass damage are noted by an irregular shape and will vary in size. Aerial shoots often change from green to light green, to yellow and subsequently to brown. In addition, the turfgrass will appear stunted. Roots will be very short with few, if any, root hairs. Brown or red lesions may be visible at the tips and the root may appear swollen. The turfgrass root systems under attack from these nematodes will be severely weakened and therefore, not able to take up nutrients from the soil.

4.33.3 Weeds

Weed control is a significant part of the overall turfgrass program as many are prolific seed producers. Water, wind, maintenance equipment and golfers may transport seeds and therefore, spread weeds throughout the courses. Topsoil and straw used to mulch soil surfaces may also contain plant segments capable of growing into a mature weed.

There are two major groups of weeds, based on plant form, that are of concern to the aesthetic of the turfgrasses. These two groups are weed grasses and broadleaf weeds. Weed grasses, such as crabgrass, dallisgrass and goosegrass are monocots, which emerge from a seed with a single seeding leaf. The leaves of monocots display parallel veins. Dicots, which include dandelions and white clover, have two seedling leaves as they emerge from the soil. The veins of a dicot plant form a network-like pattern.

The weeds are further subdivided into five groups based on their season growth: summer and winter annual weed grasses, summer and winter annual broadleaf weeds, and perennial weeds. Summer annual weed grasses germinate from seed and compete with turfgrass for available moisture, nutrients, light and space. These aggressive weeds begin to emerge from a seed in the spring and grow very fast during the summer months. By the fall, these weeds have completed their life cycle and die. Winter annual weeds germinate late in summer, fall and winter. These plants usually complete their life cycle in the spring.

Summer annual broadleaf weeds emerge from seed in the spring and enter turfgrass in the summer months. Winter annual broadleaf weeds invade cool season turf grasses and complete their life cycle in the spring.

4.33.4 Diseases

Diseases can adversely affect turf grasses and are generally a result of poor nutrition, soil compaction, extreme temperatures, drought and/or excessive rainfall. In addition, turfgrasses are injured physically by divots, shoe spikes, golf cart tires and hydraulic fluid leaks. Injury from physical means often resemble diseases. Most turfgrass diseases are caused from fungal parasites or pathogens. Diseased turf grasses display bleached leaves, discolored spots or lesions on the leaves and/or depressed circular areas of blighted turf grass.

The biological control of turfgrasses consists of utilizing other living organisms to prevent or suppress the pathogen growth in plants, thatch or soils. Microorganisms suppress pathogens by occupying space and preventing contact, reducing the availability of shared energy sources, and

by producing toxins that restrict pathogens' growth rate. Biological controls include certain composts that can also suppress some turfgrass diseases.

4.34 Pest Control Requirements

An Integrated Pest Management Plan shall be prepared and submitted to SAWS and TCEQ for approval as part of the WPAP. In the event SAWS withholds its approval, SAWS and the Developer or any Successor shall utilize good faith efforts to reach a mutually agreeable solution to the issue(s) of concern identified by SAWS as promptly as practicable. An integrated pest management system relies on preventing and controlling pests (e.g., weeds, diseases, insects) in which monitoring is utilized to identify pests, action thresholds are identified, management options are evaluated, and the most environmentally-beneficial control is implemented. For purposes of this PLAN, all references to "pesticides" shall include fungicides, insecticides, nematicides, herbicides and any other chemicals used to control pests, weeds, or disease. The Integrated Pest Management Plan shall include the following general pest and disease control components:

- Documentation of action thresholds and turfgrass quality guidelines.
- Maintaining permanent paper or electronic records of practices and their relative success.
- Identification of application rates, time of application, and method of application to meet quality goals. The information shall be specific to each WQ Management Zone.
- Selecting appropriate pesticides based on label information and chemical and site characteristics limiting mobility.
- Reducing the frequency, extent of application, and the amounts of pesticide applied. Reducing the frequency and extent of application is accomplished by using lower rates of application and alternate pest and disease control.
- Using buffer zones and appropriate set backs from Sensitive Features.
- Controlling the timing of pesticide application in relation to precipitation.
- Maintaining healthy, dense turfgrass.
- Using appropriate pesticide technology for application, clean-up, and disposal of containers.
- Provide staff training on the Edwards Aquifer in general, and practices to be employed to prevent degradation thereof. Training will be performed annually.
- A Texas Licensed Pesticide Applicator shall be employed.
- Covered chemical mixing center with spill containment.

- Mix only amount of pesticide required for affected area.
- No tractor boom spray application of chemicals during windy conditions without a spray shroud.
- Store chemicals in temperature controlled facility if recommended by manufacturer with access limited to authorized personnel.
- Maintain chemical inventory and keep records of chemical use to balance inventory.
- When appropriate, utilize insect traps to aid in determining what pests are present.

4.34.1 Least Toxic Pest Control Strategy

The Integrated Pest Management Plan shall provide for use of the least toxic control approach to address pest problems. This approach requires that once an action threshold for a specific pest is reached, the least toxic, effective control available will be used to reduce the pest population to acceptable levels. The control measures set forth in the Integrated Pest Management Plan shall provide for the introduction of natural pest enemies (e.g., parasites and predators), utilizing syringing techniques, improving air movement, soil, aerification techniques and mechanical traps prior to chemicals. The Integrated Pest Management Plan shall provide that chemical control strategies shall be utilized only when other strategies are not effective.

The Integrated Pest Management Plan shall identify the combination of control strategies that will be utilized to suppress pest populations with minimal environmental impact. Control measures include biological, cultural, physical, mechanical and chemical methods. The Integrated Pest Management Plan must include a hierarchy of agronomic, cultural, biological, mechanical and chemical controls.

4.34.2 Selection of Pesticides

A list of all proposed pesticides shall be included in the Integrated Pest Management Plan, along with the proposed maximum application rate, which shall not exceed manufacturer's recommendations.

Table 1 identifies pesticides currently commercially available and their leaching potential. The selection of pesticides shall be based on leaching potential, soil pH, volatization, microbial decomposition and photodecomposition. Only pesticides approved by SAWS in writing in the Integrated Pest Management Plan and updates made available to SAWS thereof, may be applied to the Golf Courses. This PLAN shall not be construed as authorizing the use of the pesticides set forth in Table 1.

Table 1 PESTICIDE LEACHATE POTENTIAL CHART

Fungicides			
Aliette	Fosetyl-AL	25	17.4
Banner	Propiconazole	45	1.5
Banol	Propamocarb	51	7.24
Bayleton	Triadimefon	43	1.3
Chipco	Iprodione	33	2.5
Cleary's 3336	Thiophanate methyl	31	2.7
Curalan	Vinclozolin	20	2.7
Daconil	Chlorothalonil	46	19.6
Dyrene	Anilazine	31	5.4
Fore	Mancozeb	36	8.7
Koban	Etridiazole	65	6.5
Manzate	Maneb	56	13
Rubigan	Fenarimol	51	2
Sugdue	Metalaxyl	50	1.36
Terraneb	Chloroneb	51	7
Insecticides or Nematicides			
Astro	Permethrin	12	0.9
Award	Fenoxycarb	19	1.5
Baygon	Propoxur	76	8.1
Crusade	Fonofos	37	3.9
Mocap	Ethoprop	55	4.9
Nemacur	Fenamiphos	36	10
Oftanol	Isofenphos	44	1.9
Orthene	Acephate	36	3
Proxol	Trichlorfon	52	8.16
Sevin	Carbaryl	39	2.1
Tempo	Cyfluthrin	0	0.09

Triumph	Izazofos	44	2
Turcam	Bendiocarb	38	4.1
Herbicides			
Aatrex	Atrazine	52	2
Acclaim	Fenoxaprop	0	0.18
Asulox	Asulam	47	2
Balan	Benefin	36	3
Banvel	Dicamba	54	0.5
Barricade	Prodiamine	1	0.75
Basagran	Bentazon	36	2
Betasan	Bensulide	44	10
Devrinol	Napropamide	46	3
Dimension	Dithiopyr	20	0.5
Gallery	Isoxaben	44	1
Illoxan	Diclofop-methyl	10	1.5
Image	Imazaquin	58	0.5
Kerb	Pronamide	34	1.5
MCPP	Mecoprop	61	1.75
Methar	DSMA	41	5
MSMA	MSMA	27	3
Pedulum	Pendimethalin	18	3
Pennant	Metolachlor	22	4
Princep	Simazine	54	2
Prograss	Ethofumesate	41	1
Ronstar	Oxadiazon	36	3
Roundup	Glyphosate	36	4
Sencor	Metribuzin	48	0.5
Surflan	Oryzalin	44	3
Treflan	Trifluralin	32	3

Tupersan	Siduron	64	10
2,4-D	2,4-D	41	0.75
Index: scale 0 to 100, 0 = very low leaching potential and 100 = very high leaching potential. Rough guideline: pesticides with a PLP Index <40 have a low leaching potential compared to those with a PLP Index >70, indicating that potential leaching is a concern. Rate: The maximum recommended application rate expressed as pound(s) active ingredient per acre.			

4.34.3 Specific BMPs for Pesticide Applications

The Integrated Pest Management Plan shall include the following specific BMPs for pesticide applications to meet environmental goals:

4.34.3.1 Management Options

Management options for control of pests and diseases shall include a well-balanced program of cultural, mechanical, structural, biological and chemical control practices. Using a combination of practices (1) reduces the reliance on pesticides to control pests and diseases; (2) reduces local resistance of pests and diseases to specific compounds; and (3) reduces site loading with chemical compounds.

4.34.3.2 Action Thresholds

Action levels for pests shall be included in the Integrated Pest Management Plan. Establishing action thresholds permits control of pests and reduces the total quantity of pesticides applied in a given area. Another factor includes the use of turfgrass species and cultivars resistant to known pests and diseases. Early detection of pest problems allows for proactive use of alternate control options. Applying pesticides only when and where necessary significantly decreases chemical loading and adverse effects on water quality and the environment.

4.34.3.3 Follow Labels

Pesticides shall be applied only by or under the direct supervision of properly registered, certified, and trained personnel and only in accordance with label instructions. All pesticide use shall comply strictly with local, state, and federal regulations.

4.34.3.4 Buffer Zones

The Integrated Pest Management Plan shall provide for no pesticide or fertilizer applications in Sensitive Feature buffer zones. In addition to the general buffer zone criteria, the Integrated Pest Management Plan shall prohibit the application of persistent and mobile pesticides in areas near surface water, Sensitive Features, steep slopes, offsite drainage ways, impervious surfaces (e.g., cart paths), or on thin soils that results in off-site migration of any analyte in excess of any Trigger Level.

4.34.3.5 Frequency, Amount and Location of Applications

The Integrated Pest Management Plan shall minimize the frequency and extent of pesticide applications. Reducing the frequency and extent of pesticide applications to turfgrass are two of the most effective practices used to reduce potential adverse effects on the environment and water quality. Combining cultural and mechanical practices with chemical control reduces the frequency of chemical applications.

Proper application rates, equipment selection and calibration, and careful application to the target site ensures effective use of the applied pesticide. When appropriate, spot applications shall be used to reduce the amount of chemical applied to turfgrass and to limit total environmental loading.

Controlling the timing and amount of a pesticide application in relation to local environmental conditions, especially rainfall, determines the potential for off site movement and onsite decomposition. In order to reduce losses of pesticides, the Integrated Pest Management Plan shall restrict pesticide applications prior to anticipated storm events that would exceed the capacity of the Retention/Closed Loop Irrigation System. The conveyance structures within the Retention/Closed Loop Irrigation System will be designed to convey a ten (10) year frequency storm event.

Drift losses of pesticides can be deposited offsite and potentially affect water quality. Drift losses of applied pesticides shall be minimized by (1) determining wind speed and direction; (2) assessing air turbulence or stability; (3) optimizing droplet density and size distribution; (4) evaluating evaporation rate; (5) controlling the height and swath pattern of spray delivery; (6) controlling volume and amount of pesticide carrier solution; and (7) controlling the proximity of application to sensitive areas with nontarget organisms. Loss of wildlife or aquatic species shall be avoided by restricting application of chemicals with high toxicity during critical migratory or lifestage periods.

4.34.3.6 Risk Assessment

Assessment of potential offsite transport of chemicals by runoff or leaching loss prior to application provides essential information on selection of pesticides appropriate for a specific site. The Integrated Pest Management Plan shall identify the pesticides proposed for application to the Golf Courses and areas on which application is proposed. The Integrated Pest Management Plan shall prohibit the application of pesticides in buffer zones for Sensitive Features.

4.34.3.7 Equipment Maintenance and Calibration

Proper equipment maintenance and calibration is essential for even applications at the intended volumes. All label instructions, storage requirements, and regulations shall be followed to insure safe handling of pesticides. Proper mixing, handling, and loading prior to application will reduce fill-site contamination. Closed systems for loading and mixing pesticides shall be used to

prevent contamination of the site and nearby waters. Good housekeeping practices shall be used in loading areas to ensure that any spilled pesticides are not exposed to surface runoff or leaching.

4.34.3.8 Proper Disposal

Proper disposal of unused chemicals and containers will ensure safety of the user, water resources, and non-target organisms. Pesticide applicators shall avoid chemical exposure by safe handling practices including use of protective clothing, respirators, gloves, and shoes.

4.34.3.9 Chemigation

The Integrated Pest Management Plan shall identify whether chemigation is proposed for use at the Golf Courses and the extent of such proposed chemigation. The Integrated Pest Management Plan shall require the use of anti-back-siphoning devices in the equipment to reduce the potential for pesticide contamination of groundwater and other water supplies during irrigation. Soil and water treatment materials should be applied through irrigation equipment only when appropriate and when specific label instructions are available. Environmentally safe chemigation practices that shall be included in the Integrated Pest Management Plan include:

- Flushing of injection equipment to prevent accumulation of treatment materials.
- Flushing the irrigation system after injection.
- Using properly calibrated equipment.
- Preventing runoff of the mixture of irrigation water and treatment materials..
- Avoiding application to permanent surface water, semi-permanent standing water, or near sensitive areas.
- Periodic monitoring of equipment to ensure proper application to the intended target.

4.34.3.10 Periodic Review

Periodic review of the success of pest and disease management strategies and program is essential. The Integrated Pest Management Plan shall provide for periodic review of (1) management objectives; (2) the success of control practices; (3) new problems; and (4) results of water and soil monitoring programs. All reviews and results shall be made available to SAWS.

4.34.3.11 Recordkeeping

Detailed records shall be kept for not less than three years identifying all types, amounts and locations of pesticides applied to the Golf Courses.

4.35 Nutrient Practices

Fertilizers applied to Golf Courses contain nutrients (e.g. nitrogen, phosphorus and potassium). These are the primary nutrients most often applied to turf grass. Nitrate is the nutrient posing the most significant threat to water quality. Phosphorus losses are associated with sediment transport and are, therefore, a factor during the construction of the Golf Courses. Nitrogen can be

transported by surface runoff, especially if applied prior to a rain event of if there is excess irrigation. As the time between application of the product and runoff increases, the amount of nitrogen subject to transport decreases.

Healthy turfgrass roots are ideally suited to allow for uptake of these nutrients from the soils. Healthy turf grasses have root systems that are extensive, fibrous and contain a large surface area. All nutrients are mobile inside plants, but the mobility in soil varies among the nutrients. Soils rarely supply the needed nitrogen to support high quality, wear resistant turf. The amount of nitrogen required varies by the type of turfgrass. Excess nitrogen fertilization will result in poor turf grass rooting which allows for a greater susceptibility for disease to attack the plant.

Turfgrasses deficient in nitrogen often appear stunted, with short leaves and lack of color. Older leaves may first turn pale green in color, followed by a yellow color as the deficiency symptoms progress toward the base of the blades.

Phosphorus is very important in the transfer and storage of energy within the turfgrass. In addition, phosphorus-containing compounds have an effect on the genetic information. Phosphorus is relatively immobile in most soil types and therefore is less likely to move in soil solution and leach, as compared to nitrogen. However, phosphorus use can pose a threat to the quality of surface water if fertilizers are not applied properly and in the correct locations.

Potassium is associated with several processes of turfgrass. It activates enzymes, is involved with photosynthesis and helps regulate the stomates on the exterior of the turf grass, which is responsible for releasing water from the plant into the atmosphere. Turfgrasses with low potassium are not very tolerant to the stress of either high or low temperatures or even drought.

4.35.1 Required Nutrient Practices

A Nutrient Management Plan shall be submitted with the WPAP (as part of the Integrated Pest Management Plan or otherwise) to SAWS for review and approval. In the event SAWS withholds its approval, SAWS and the Developer or any Successor shall utilize good faith efforts to reach a mutually agreeable solution to the issue(s) of concern identified by SAWS as promptly as practicable. The Nutrient Management Plan shall incorporate the following BMPs:

- Identification of application rates, time of application, and method of application to meet quality goals. The information shall be specific to each WQ Management Zone.
- Use of soil and tissue tests to establish proper application rates.
- Use of nutrient application history or credits for all sources of nitrogen.
- Sampling to analyze soils to determine chemical content and to set fertilizer application rates so as to correspond to nutrient uptake.
- Monitor and maintain an appropriate thatch level.

- Conduct top dressing to manage a viable thatch layer.
- Periodic soil aerification. Penetrations into soil profile shall not exceed the depth of the constructed soil profile.
- Establish nutrient budgets for all sources of nitrogen and phosphorus.
- Minimize the total input of fertilizers.
- Utilize buffer zones from Sensitive Features.
- Control the timing of fertilizer applications in relation to precipitation events.
- Use of appropriate application technology including multiple low rate applications, appropriate granular and liquid formulations, proper equipment calibration and maintenance, proper disposal of unused fertilizer, and no intentional application to bare soil (except during the planting and grow-in period).
- Maintenance of healthy turfgrass using appropriate irrigation, pest, and compaction control strategies.

4.35.2 Establish Nutrient Budgets

The Nutrient Management Plan shall include complete nutrient budgets for each WQ Management Zone fairway, green, and tee. The budgets shall include the following components:

- Quantifying the total input of fertilizers and nutrients: inorganic, organic, and irrigation water.
- Use of soil tests, tissue tests, and application history or nutrient credits to establish proper application rates. Clipping management is a part of nutrient credits.

The timing of fertilizer application will depend on weather conditions and stage of turfgrass development. Fertilizers are to be applied only commensurate with turfgrass need. Nitrogen or phosphorus applied in excess of turfgrass uptake ability can be lost in runoff, interflow, drainage, or leachate and is prohibited.

4.35.3 Reduction of Fertilizer Input

Fertilizer applications shall be based on need. Using appropriate (and not excessive) rates of nitrogen and phosphorus to maintain nutrient levels to sustain turfgrass quality is one of the primary BMPs to protect water resources. The following are additional general requirements that shall be followed concerning the timing of fertilizer applications that shall be incorporated into the Nutrient Management Plan:

- The optimum time of application depends on turfgrass species and weather, soil conditions, and chemical formulation of the fertilizer. Application of nitrogen after turfgrass uptake of nitrogen has ceased is prohibited.
- Fall applied inorganic nitrogen and residual soil nitrates are at risk of leaching past the root zone during the fall, winter and early spring, especially on areas with dormant bermuda grass. Fall or winter application of water-soluble nitrogen shall only be used on areas overseeded with cool season grasses or by liquid feeding to encourage extended fall growth and early green up in the spring.
- When appropriate, light irrigation or "watering-in" after application shall be employed to reduce runoff and leaching losses of fertilizers.
- Application of fertilizer in excess of manufacturers' recommendations is prohibited.
- Drift losses of nutrients can be deposited offsite and potentially affect water quality. Drift losses of applied nitrogen shall be minimized by (1) determining wind speed and direction; (2) assessing air turbulence or stability; (3) optimizing droplet density and size distribution; (4) evaluating evaporation rate; (5) controlling the height and swath pattern of spray delivery; and (6) controlling volume and amount of applied nutrient carrier solution.

4.35.4 Turf/Leaf Tissue Analysis

The Nutrient Management Plan shall require turf grass/leaf tissue analysis on not less than a quarterly basis. Analytical results shall be made available to SAWS.

Plant tissue samples shall identify the amount of nitrogen and phosphorus in plants. This data, combined with an evaluation of the aesthetics of the turf and regular soil tests, will determine the appropriate fertilizer application rates which will based upon nutrient deficiencies.

Fairway plant tissue parameters to be analyzed shall include, at a minimum, phosphorus and nitrogen. Sampling results shall be incorporated into the nutrient budgets.

4.35.5 Soil Analysis

Applications of fertilizers at rates higher than those recommended by soil tests, plant tissue analysis, or those estimates based on realistic growth requirements, increases the risk of off-site nutrient movement by surface runoff or leaching. Nutrient movement by surface runoff or leaching shall not exceed Trigger Levels. Soil tests shall be taken regularly to determine specific nutrient requirements. All soil testing results shall be made available to SAWS

Fertilizer applications shall be based on plant tissue analysis, soil tests, soil temperatures, conditions of turf grass, and weather conditions. Soil test results will aid in the development and modification of the nutrient budget.

4.35.6 Use of Slow Release Formulations of Nitrogen

The Golf Courses shall use BMP's to manage turfgrass fertility requirements with appropriate

combinations of slow release, organic and inorganic fertilizers, as well as light applications of liquid applied nutrients to minimize leachate and runoff. Liquid fertilizer solutions are ideally suited to multiple low rate applications and minimize the possibility of runoff or leaching losses. Liquid feeding of plants eliminates the need for "watering-in", that results in conserving water. Fertigation is the concept of applying low rates of fertilizers through the irrigation system, improving the efficiency of water and should be included in the management plan.

4.35.7 Buffer Zones and Set Backs

The Design Plan shall include the use of buffer zones adjacent to surface water areas and areas with Sensitive Features. Buffer zones of untreated vegetation, especially riparian vegetation, are extremely effective for removal of nutrients in runoff, interflow and percolating water.

No pesticide and fertilizer applications shall occur in the flood plain, Sensitive Feature or flood plain buffer zone areas, except as may otherwise be approved in writing by SAWS.

In addition to the general buffer zone criteria, the application of mobile nitrogen fertilizers in areas near surface water, recharge features, steep slopes, offsite drainage ways or on thin soils that results in off-site migration of an analyte in excess of any Trigger Level is prohibited.

4.35.8 Control the Timing of Fertilizer Applications in Relation to Precipitation Events

Research on turfgrass and water quality demonstrates that major runoff and leaching losses of nitrogen, phosphorus, and pesticides will occur if rain events occur on the day of application or the day after application. The Nutrient Management Plan shall restrict fertilizer application prior to anticipated storm events that would exceed the capacity of the Retention/Closed Loop Irrigation System.

When appropriate, light irrigation or "watering-in" after application shall be utilized to reduce the risk of runoff and leaching losses of fertilizer.

4.35.9 Use Appropriate Application Technology

Application techniques that reduce surface and leaching losses must be included in the Nutrient Management Plan. These techniques include:

- When applicable, "watering in" of fertilizer reduces fertilizer losses in runoff and enhances soil adsorption.

- Frequent applications at reduced rates. This practice reduces the total load of nitrogen available for surface and subsurface losses and increases the efficacy of turfgrass uptake.

- Granular formulations shall be used in combination with surface applied liquid formulations of nitrogen.

- Intentional application of fertilizers after grow in shall not occur on bare soil surfaces.

- Maintenance and calibration of all application equipment, which is essential to provide for proper placement and rate of nutrient delivery. Improper calibration and equipment maintenance will result in over- or under-application and uneven distribution of nutrients and are prohibited.

- Maintenance of clean loading pads and clean up of any fertilizer spills in the maintenance areas is required.

- Granular fertilizer sacks, liquid fertilizer containers, and unused fertilizer shall be disposed of in accordance with all applicable regulatory requirements. Plastic containers shall be triple rinsed prior to disposal.

4.35.10 Recordkeeping

Detailed records shall be kept identifying all forms and sources of nutrients applied to all turfgrass in order to determine loading rates of fertilizer application. Records of nutrient applications shall include:

- Types and amounts of commercial fertilizers.

- Whether clippings are returned to fairways and roughs from tees and greens.

- Available nutrients in irrigation water. The amount of irrigation water for a given area and concentration of the nutrient in the water is needed to determine the total mass of nutrient applied.

4.36 Turf Grass Management

The goal of irrigation is to provide the minimum amount of water required to produce the desired playing characteristics. Among the factors that are important to water need are grass selection and installation, plants in non-turf areas, irrigation zoning, determining when to water, and maintenance.

4.36.1 Turf Selection and Installation

The Design Plan shall identify all proposed turfgrasses for the Golf Courses.

All turf areas on the Golf Courses shall have not less than 8 inches of friable soil..

Any off-site sources for fill dirt transported to the Golf Courses shall be sampled for pollutants prior to delivery of the fill dirt to the Golf Courses.

Sodding is more desirable than plugging for turf establishment because it reduces the water required to establish the grass and it reduces the threat of erosion during establishment of grass coverage. Where appropriate because of steep slopes or other water quality risk factors, solid sodding or other erosion control techniques are required to prevent erosion.

4.36.2 Non-Play Areas

Non-play areas that surround the fairway and roughs will be left as native Hill Country habitat except for professional tournament operation areas. Native wildflowers may be added for additional beauty. With appropriate turf selection and management, non-play areas of the Golf Course may perform their function without irrigation. The Golf Courses shall not irrigate non-play areas in critical drought management periods, except as necessary to accommodate a professional golf tournament held at the Golf Courses.

Measures that shall be utilized to preserve the non-play areas include:

- The non-play preserved areas shall be protected during all phases of construction to protect root-zones and prevent compaction of soil.
- There will be a few understory plants that will be undesirable in the non-play areas. These shall be cleared only with hand tools or otherwise to prevent compaction of soils.
- Written procedures for management of non-play native areas shall be established.

4.36.3 Irrigation Plan

An Irrigation Plan shall be included within the WPAP. The Irrigation Plan shall identify BMPs for irrigation operations within each WQ Management Zone. Control and management of irrigation timing, rate, and frequency is a critical component for controlling both runoff and leaching of water from turfgrass and shall be addressed in the Irrigation Plan. If the application

of irrigated water does not exceed soil infiltration and storage capacity, runoff and leaching do not occur.

The Irrigation Plan shall include guidelines for water management based on irrigation water quality suitability, soil chemistry tests, and seasonal parameters to prevent the long term degradation of the soil.

4.36.4 Irrigation Schedules

The Irrigation Plan shall utilize programmable irrigation control systems to meet the needs of the plant materials in order to prevent overwatering. Modern irrigation technologies shall be utilized to provide highly efficient water usage. The Irrigation Plan shall require use of an on-site weather station to compute the ET loss from the turfgrass daily. Irrigation head placement shall be designed to provide complete coverage of the Golf Course turf areas. Replacement irrigation will be based on ET as determined by the on-site weather station and shall utilize best management practices to conserve water. Actual irrigation rates must be recorded and a report summarizing irrigation practices shall be made available to SAWS annually upon request. Depending on the quality of irrigation water provided by SAWS, occasional rates above ET may be required to improve soil chemistry and structures.

The Irrigation Plan shall establish irrigation schedules and volume based on need. Irrigation schedules shall minimize evaporation and reduce the potential for disease. Irrigation scheduling and control of irrigation volume effectively conserves water resources and protects water quality. Use of calendar irrigation methods are prohibited. Manipulation of irrigation volume, timing, flushing, and rate of application are the principal components of irrigation scheduling. The irrigation plan shall include BMPs for managing salt accumulation in the soil due to poor irrigation water quality as determined by water suitability analysis.

Controllers shall be used to control irrigation systems. Controllers are electrical timing devices used to open or close valves that regulate flow of water to sprinkler heads. Optimal conservation of irrigation water is achieved by connecting effective moisture sensing devices to irrigation system controllers.

4.36.5 Irrigation Zoning

The Golf Course irrigation systems shall be designed so as to allow individual sprinkler zones to operate independently. The irrigation systems shall be designed to operate based on ET in accordance with the following criteria:

- The Golf Courses shall utilize an onsite weather station to calculate ET.
- The weather station shall interface with the irrigation system to operate the zones based on water need determined by the ET rate.
- Best Management Practices shall be employed to conserve water and prevent over-watering in connection with all irrigation operations.

4.36.6 Water Conservation

The Irrigation Plan shall provide for the efficient management and conservation of water supplies to prevent unnecessary depletion of local water resources. As noted above, the plan shall include specific routine irrigation schedules based on replacing ET loss. Occasional rate above ET may be required to maintain soil structure.

Water conservation shall also be achieved by minimizing the amount of acreage to be irrigated for Golf Course purposes. Specifically, not more than an average of 120 acres of each Golf Course envelope shall be irrigated.

Irrigation of the Golf Courses shall be subject to all conservation provisions set forth in the City of San Antonio City Code, Sections 34-271 through 34-350, as amended from time to time, but as applied in accordance with the Water Provision Agreement, by and between SAWS and the Developer, as such application is authorized by the Services Agreement.

The Irrigation Plan shall also establish an overall water conservation strategy. Water conservation plans target conservation of water on a continuous basis using the following general strategies:

- Establish lower boundary for deficit irrigation strategy based on rainfall and seasonal growth patterns (e.g. reduce percentage of ET replacement).

- Establish priority turfgrass areas requiring irrigation. Greens and tees have the highest priority followed by fairways, roughs, ornamental plantings, and unmanaged/natural areas. Irrigation priorities should be established prior to emergency conditions.

- Reduce total area irrigated and total volume applied to irrigated areas during water shortage conditions.

4.36.7 Audubon International .

The Golf Courses shall comply with the principles, precepts and guidelines adopted by the. Audubon International Cooperative Sanctuary Certification Program.

4.36.8 Irrigation System Maintenance

Maintenance is critical to efficiently and effectively utilize irrigation water. The Irrigation Plan shall provide for regular inspection of irrigation systems to identify leaks and to monitor water usage. The Irrigation Plan shall specify the frequency of regular mechanical performance evaluations to detect problems such as worn nozzles, leaking valves/heads, valve operation, satellite controller security and pump station operation.

Golf Course staff will be trained to identify leaks and malfunctioning irrigation heads. A formal system shall be established to report conditions and initiate repair work immediately. The inspection will be documented in a report completed and retained on site and made available for review by SAWS upon request.

An annual irrigation system analysis is required to be completed each May 1. It is a zone by zone analysis of the irrigation system that at a minimum includes a review of the following elements: (1) design appropriateness for current landscape requirements: (2) irrigation sprays and heads; (3) precipitation rates expressed in inches per hour; and (4) annual maintenance plan that includes system maintenance, landscape maintenance, and a basic summer and winter irrigation scheduling plan.

4.36 Wellhead Protection

An established and effective Wellhead and Source Water Protection Program is an essential element in the protection of groundwater resources. The amendments to the federal Safe Drinking Water Act of 1986 provide for groundwater protection through the Wellhead and Source Water Protection Program, prevention approaches, and a source water protection assessment program.

At the time of submission of the WPAP, a detailed Wellhead and Source Water Protection Plan ("Wellhead Protection Plan") shall be submitted to SAWS for review and approval. The Wellhead Protection Plan must include BMPs that meet or exceed all set-back distances required by all applicable regulatory authorities for potential sources of contamination. Potential sources of contamination are identified in Table 2. An emergency contingency procedure shall be included in the Wellhead Protection Plan to address the response, containment and remediation of any hazardous materials spilled.

The Wellhead Protection Plan shall also identify and protect the general geology and occurrence of groundwater in the area, land use, and shall include an inventory of historical and present potential sources of contamination within one-quarter mile of each well.

Any abandoned wells not utilized by SAWS for water quality monitoring purposes located at the Golf Courses must be identified in the Wellhead Protection Plan and shall be plugged in accordance with Chapter 34, Article VI, Section 34-566 through 590 of the City of San Antonio Code and Title 16, Texas Administrative Code, and shall be plugged in accordance with TEX.OCC.CODE ANN. § 1901.255 et seq., any applicable rules promulgated thereunder, and Title 30 Texas Administrative Code Chapter 213.

4.37.1 Methodology

The Wellhead Protection Plan shall include the following minimum elements:

- Delineation and location of each well located at each of the Golf Courses.

- Inventory of potential sources of contamination within the delineated areas.

4.37.2 Delineation

The delineation of Wellhead Protection Areas ("WHPAs") is an important means for safeguarding water supplies. As defined in the 1986 Safe Drinking Water Act amendments: a WHPA is the surface and subsurface area surrounding a water well or well-field through which contaminants are reasonably likely to move toward and reach such water well or well-field. The Wellhead Protection Plan shall include an initial delineation of one-quarter mile around each well. Conditions of both surface and groundwater flow patterns must be noted in the delineation of each well site.

4.37.3 Inventory

The Wellhead Protection Plan shall locate all well locations and shall inventory all potential sources of contamination within one-quarter mile of the Golf Courses using a Global Positioning Satellite system. The GPS information shall be made available to SAWS in a format for downloading into a SAWS Geographic Information System ("GIS") where it can be used for mapping and/or for reference and analysis. The Wellhead Protection Plan shall be updated promptly to identify any new well locations and/or possible sources of contamination.

Table 2

POTENTIAL SOURCES OF GROUND WATER QUALITY DEGRADATION

Potential Ground Water Quality Pollution Sources that Originate on the Land Surface
• Aboveground storage tanks • Accidental spills • Animal feedlots • De-icing salt usage and storage • Dumps • Fertilizers and pesticides • Grain storage bins • Industrial activities • Infiltration of polluted surface water • Land disposal of either solid or liquid wastes • Particulate matter from airborne sources • Stockpiles • Surface runoff
Potential Ground Water Quality Pollution Sources that Originate in the Ground Above the Water Table
• Artificial recharge • Graveyards • Holding ponds and lagoons • Leakage from underground storage pipelines • Leakage from underground storage tanks • Sanitary landfills • Septic tanks, cesspools, and privies • Sumps and dry wells • Waste disposal in excavations
Potential Ground Water Quality Pollution Sources that originate Below the Water Table
• Abandoned wells • Drainage wells and canals • Exploratory wells • Improperly constructed or deteriorated water wells • Mines • Secondary recovery • Underground storage tanks • Waste disposal in well excavations • Well disposal of wastes

5.0 WATER QUALITY MONITORING PLAN

The Golf Courses shall be subject to comprehensive water quality monitoring in accordance with the framework set forth in this PLAN. As more fully set forth below, the Water Quality Monitoring Plan shall include irrigation lakes, non-Golf Course surface water, and groundwater

sampling and monitoring components. The Developer and its successors and assigns shall be responsible for performing the Golf Course irrigation lake sampling components of the Water Quality Monitoring Plan, while SAWS shall be authorized to perform monitoring of surface water in adjacent creeks and groundwater. Notwithstanding Developer's responsibility for performing sampling for Golf Course irrigation lakes in accordance with this PLAN, SAWS shall be authorized to enter the Property at any time with prior notice to perform sampling of irrigation lakes and/or groundwater wells within the Property. At the time of entry to the Golf Courses, SAWS shall endeavor to minimize any disruption or interference with Golf Course play and shall provide notice to any representative of the Golf Courses that may be present and, absent an emergency situation, SAWS shall not conduct any inspection during the conduct of any professional golf tournament being held at the Golf Courses.

The irrigation lake sampling components of the Water Quality Monitoring Plan shall be included in the WPAP(s) for the Golf Courses. These components shall provide for comprehensive sampling of Golf Course runoff after turf grow-in in the irrigation lake to ensure that water quality conditions resulting from Golf Course operations are detected prior to any adverse impact on the Edwards Aquifer, the Trinity Aquifer and other water resources. The minimum sampling parameters for the Golf Courses are established in Sections 5.3 and 5.4.

The minimum parameters to be sampled in the irrigation lakes sampling components of the Water Quality Monitoring Plan are identified in the tables set forth in this Article V. With respect to fertilizers and pesticides, however, the parameters to be monitored shall be based on the specific compounds applied to the Golf Courses. In identifying such compounds, the owner or owners of each Golf Course shall identify the manufacturers' Material Safety Data Sheets ("MSDS") for the insecticides, herbicides, fungicides, algaecides and other materials to be applied to the Golf Courses and shall develop a list of proposed analytes, subject to SAWS' approval, from these MSDS sheets. This method will provide for the sampling of indicator metals and other materials that may be present in the insecticides, herbicides, fungicides, algaecides and other materials applied to the Golf Courses. A copy of all such MSDS sheets shall be furnished to SAWS upon request. SAWS shall approve the proposed list of analytes to be sampled, and may change the analytes from time to time, based on the leachate potential and other water quality risk factors presented by the compounds proposed for application to the Golf Courses.

The Water Quality Monitoring Plan set forth herein includes specific "Trigger Levels" for Corrective Action. Trigger Levels will be based upon specified percentages of the following regulatory standards as follows:

- Golf Course Trigger Levels: Trigger Levels for the irrigation lakes within the Golf Courses shall be the maximum contaminant level ("MCL") of regulatory standards established under the Safe Drinking Water Act, if any. In the event that the Safe Drinking Water Act does not specify an MCL for a compound, then the Trigger Level shall be equal to the Texas Risk Reduction Program ("TRRP") tier 1 residential protective concentration levels (PCL) (Title 30 Texas Administrative Code Chapter 350). In the event that a compound is not addressed by the Safe

Drinking Water Act or the TRRP, then the Trigger Level shall be equal to the Texas Surface Water Quality Standards ("TSWQS"). The applicable MCL, TRRP or TSWQS standards are hereinafter referred to collectively as the "Regulatory Standards."

- Non-Golf Course Trigger Levels: Trigger Levels for surface water within adjacent creeks shall be thirty percent (30%) of Regulatory Standards.

- Groundwater Trigger Levels: For groundwater, Trigger Levels shall be twenty percent (20%) of Regulatory Standards.

- In the event that natural background concentrations and/or upgradient/upstream concentrations approach or exceed the above referenced Trigger Levels, new Trigger Levels will automatically be established reflecting the intent of this PLAN and compliance will be based on the adjusted Trigger Levels. Background concentrations will be determined using the Upper End Statistic Method by using the 95% Upper Tolerance Limit (95% UTL) as described in 30 TAC Chapter 335, or SAWS approved method.

5.1 Responsibility for Monitoring

Except as otherwise set forth in this PLAN, the Developer shall be responsible for acquisition and proper construction and installation of all water quality sampling devices and equipment required under the irrigation lake sampling components of the Water Quality Monitoring Plan at its sole cost and expense. The Developer and its successors shall provide as much prior notice to SAWS as practicable of each sampling event as required by the Monitoring Plan, so that an authorized representative of SAWS may be present to observe such sampling event and take "split samples at SAWS' discretion. SAWS shall be responsible for all costs and expenses that it incurs in connection with such observation and/or sampling.

Responsibility for sampling may be assigned by the Developer to successive owners, lessees and operators of anyone or more of the Golf Courses, provided prior notice and a copy thereof are furnished to SAWS, and provided further that SAWS approve such assignment. SAWS and the City hereby consent to the assignment of responsibility for the water quality monitoring components of this PLAN to Marriott in accordance with the terms and conditions of the Services Agreement, so long as Marriott retains a Golf Course operator, which has a demonstrated history of environmental sensitivity in the operation and maintenance of high quality Golf Courses. For purposes hereof, PGA TOUR Golf Course Properties, Inc. or an entity controlled by PGA TOUR Golf Course Properties, Inc. operating a "Tournament Players Club" shall be an acceptable operator. Notwithstanding any provision in this PLAN or the Services Agreement to the contrary, all sales, leases or operating agreements the subject of which is anyone or more of the Golf Courses shall expressly provide that the purchaser, lessee or operator (as applicable) covenants and agrees to comply with the Water Quality Monitoring Plan.

In addition to the scheduled sampling components of the Water Quality Monitoring Plan to be performed by the Developer and/or subsequent owners, lessees or operators, SAWS shall have the right to enter the Property at any time with prior notice to perform water quality sampling and monitoring of surface water in creeks and groundwater wells located on the Property. SAWS shall minimize any disruption of Golf Course play caused by any such entry; provided, however, that absent an emergency situation, SAWS shall not conduct any inspection during the conduct of any professional golf tournament at the Golf Courses. A representative of the Golf Courses may be present to observe such events. SAWS shall be responsible for all costs and expenses that it incurs in connection with its sampling and monitoring activities. The Developer and/or other authorized representative(s) of the Golf Courses shall be authorized to take "split samples" at the same time as SAWS performs such sampling and monitoring, provided all costs and expenses incurred by such persons shall be their sole responsibility and SAWS shall have no responsibility therefore.

SAWS shall be authorized to construct, at its sole cost and expense, groundwater monitoring wells, provided such wells shall be located in areas adjacent to the Golf Course that do not unreasonably interfere with play on the Golf Courses and do not unreasonably interfere with Developer's construction of improvements within the Property. SAWS and the Developer shall coordinate in good faith concerning the proposed location(s) of any such monitoring wells.

The Developer agrees on behalf of itself and its successors and assigns that it shall not plug any groundwater well(s) on the Property (whether in existence or constructed hereafter), or take any other actions which may prevent SAWS from utilizing such wells for groundwater monitoring purposes, without SAWS' prior written consent.

The person(s) or entities responsible for water quality sampling and monitoring hereunder shall be responsible for maintaining all water quality sampling and monitoring devices and locations in proper operating condition at all times.

5.2 Annual Payment by Developer For Water Quality Monitoring

The Developer agrees to pay to SAWS a sum equal to $100,000 per year during the term of the Services Agreement. The initial payment shall be made within thirty (30) days of the effective date of the Services Agreement, and shall thereafter be paid on or before December 31 of each year that the Services Agreement remains in effect. Upon expiration of the Services Agreement, Developer's and any successive Golf Course owner's obligation to pay the annual $100,000 payment to SAWS shall terminate simultaneously therewith. The purpose of the foregoing financial contribution is to contribute to certain costs that may be incurred by SAWS under this PLAN, including administrative, review, monitoring, and investigation costs.

As set forth in the Services Agreement, the Developer and each successive owner of the Golf Courses, or any portion thereof, shall be jointly and severally liable for annual payment of the $100,000 sum.

5.3 Sampling Protocol

Sample collection methods, documentation, handling and analysis will be conducted in accordance with standard scientific methods recognized by EPA. The Water Quality Monitoring Program may include a combination of automatic sampling devices and hand collected samples.

All samples shall be analyzed by State-approved laboratories. The Developer shall submit samples only to laboratories that utilize detection limits that are lower than the applicable Regulatory Standard for each analyte. Quality assurance/quality control samples shall be submitted to the laboratory with each sample. The testing laboratories' quality assurance/quality control data, together with the analytical reports, shall be furnished to SAWS upon request.

5.4 Golf Course Irrigation Lake Sampling

Because this PLAN includes a Retention/Closed Loop Irrigation System to be incorporated in the design, operation, and construction of the Golf Courses, stormwater runoff from the Golf Courses will be directed to the irrigation lakes for retention and re-application through the irrigation system.

All irrigation lakes on each Golf Course shall be sampled bi-monthly (i.e., every other month) for the first two years, and four times per year thereafter. The Water Quality Monitoring Plan shall also require that all irrigation lakes, ponds and water features constructed on the Golf Courses be monitored on a regular basis for leakage. Any leakage or leaching into sub-surface water resources, which is detected, shall be immediately reported to the SAWS Resource Protection and Compliance Department Director. Immediate action shall be taken by the Developer to stop the leakage, and depending upon surrounding circumstances, including the quality of irrigation water within the irrigation lake(s) and the potential quantity of irrigation water that may have leaked, SAWS may require Corrective Action in accordance with Section 6.4 of this PLAN.

The following table summarizes the minimum requirements to be included in the Water Quality Monitoring Plan for parameters to be sampled, sampling frequency, and Corrective Action Trigger Levels for Golf Course irrigation lake sampling:

Table 3 IRRIGATION LAKE SAMPLING REQUIREMENTS

IRRIGATION LAKE SAMPLING						
				Sample Frequency		
	Regulatory Standard (A)	Units	Trigger Level (B)	First Year (J)	Second through Fifth Years	Sixth Year and Forward (H)
General Quality Parameters						
Temperature	N/A	°F	NA	Bi-Monthly	4 Times/Year	TBD
PH	6.5-8.5 (D)	S.U	NA	Bi-Monthly	4 Times/Year	TBD
Conductivity, Specific	NA	µS/cm	NA	Bi-Monthly	4 Times/Year	TBD
Total Suspended Solids	NA	mg/l	NA	Bi-Monthly	4 Times/Year	TBD
Nutrients						
Nitrate-N	10	mg/l	10	Bi-Monthly	4 Times/Year	TBD
Nitrite-N	1	mg/l	1	Bi-Monthly	4 Times/Year	TBD
Nitrate-nitrite-N	10 (E)	mg/l	10	Bi-Monthly	4 Times/Year	TBD
Ammonia-N	30 (F)	mg/l	30	Bi-Monthly	4 Times/Year	TBD
Sulfate	200 (G)	mg/l	200	Bi-Monthly	4 Times/Year	TBD
Phosphorus (J)						
Pesticides						
Insecticides	C	mg/l	B	Bi-Monthly	4 Times/Year	TBD
Herbicides	C	mg/l	B	Bi-Monthly	4 Times/Year	TBD
Fungicide	C	mg/l	B	Bi-Monthly	4 Times/Year	TBD
Algaecides	C	mg/l	B	Bi-Monthly	4 Times/Year	TBD
Key Code						
A. MCLs, TCEQ Tier 1 Residential Groundwater Ingestion PCLs, or TSWQS						
B. Trigger Levels are Regulatory Standards. Trigger Levels may be adjusted to reflect the base quality of irrigation water provided by SAWS.						
C. Chemical Specific Per Compound Applied						
D. EPA Secondary Drinking Water Standard						
E. EPA MCL						
F. EPA Lifetime Health Advisory						
G. TCEQ Secondary MCL						
H. To Be Determined by SAWS - Historical record will be assessed and a determination will be made for future sampling analysis requirements; provided, however, that sampling requirements shall not be more frequent than applicable in years three through five without Developer's consent.						
J. "Bi-monthly" sampling shall be performed once every two months.						

5.5 Golf Course Leachate Sampling

Because the Retention/Closed Loop Irrigation System as defined in this PLAN requires a clay or synthetic liner to be included in the construction of the Golf Courses, leachate sampling is not required.

5.6 Non-Golf Course Surface Water Monitoring

SAWS shall be authorized to enter the Property at all times to perform sampling of surface water of creeks to evaluate the quality of surface water upstream of the Golf Course areas and the quality of surface water downstream of the Golf Course areas. In connection therewith SAWS shall be authorized to install monitoring stations and related improvements. SAWS shall be responsible for all costs and activities associated with monitoring with surface water in non-Golf Course areas. An authorized representative of the Developer or its successors may be present and take "split samples" at the same time as SAWS performs its sampling and monitoring, provided SAWS shall have no responsibility for any costs or expenses incurred by the Developer or its successors in connection with such sampling.

The Developer consents to the installation by SAWS of a surface water quality monitoring station "upstream" of the Golf Courses at a location to be selected by SAWS, for purposes of analyzing the quality of surface water prior to entering the development. SAWS shall select a site that does not materially interfere with construction activities by Developer. SAWS shall pay all costs and expenses associated with the installation of the monitoring station utilizing Developer's annual financial contribution (as set forth in Section 5.2 of this PLAN) or other available funds.

5.7 Groundwater Monitoring

SAWS shall be authorized to enter the Property at all times to perform groundwater monitoring utilizing all groundwater wells that may exist or be constructed from time to time on the Property. In addition, SAWS shall be authorized to construct additional groundwater monitoring wells on the Property; provided, however, such wells must be constructed at locations that do not materially interfere with play on the Golf Courses, use of the Golf Courses as the host site of a professional golf tournament or construction of improvements by Developer and its successors. SAWS shall be responsible for payment of all costs and expenses incurred by SAWS in connection with groundwater monitoring, and the Developer shall have no responsibility therefore.

The Developer agrees on behalf of itself and its successors and assigns that it shall not plug any groundwater well(s) on the Property (whether in existence or constructed hereafter), or take any other actions which may prevent SAWS from utilizing such wells for groundwater monitoring purposes, without SAWS' prior written consent.

6.0 CORRECTIVE ACTION

This PLAN is intended to ensure that there is no degradation of surface water or groundwater quality as a result of the construction and operation of the Golf Courses within the Property. To

achieve this result, substance-specific numerical standards for analytes shall serve as "Trigger Levels" for purposes of triggering the need for Corrective Action. Trigger levels are intended to be used as a management tool and exceeding Trigger Levels do not constitute violations subject to enforcement in and of themselves. The applicable Trigger Levels shall be based on a specified percentage of the applicable Regulatory Standards for the analytes as follows:

6.1 Golf Course Trigger Levels

The level of analytes in the irrigation lakes sampled within the Golf Courses shall not exceed Regulatory Standards. The Golf Course Trigger Levels shall not be applicable to surface water runoff that is undergoing proper capture and treatment within the Golf Course areas. Where analytes in irrigation water provided by SAWS exceeds Regulatory Standards, Trigger Levels will be automatically adjusted.

6.2 Non-Golf Course Trigger Levels

The level of analytes in surface water monitored by SAWS in adjacent creeks shall not exceed thirty percent (30%) of Regulatory Standards. Where background samples exceed thirty percent (30%) of Regulatory Standards, the Trigger Levels will automatically be adjusted to reflect background concentrations.

6.3 Groundwater Trigger Levels

The level of analytes in groundwater monitored by SAWS shall not exceed twenty percent (20%) of Regulatory Standards. Where background samples exceed twenty percent (20%) of Regulatory Standards the Trigger Levels will automatically be adjusted to reflect background concentrations.

6.4 Corrective Action Plan

In the event that any water quality sampling required by this Plan or monitoring by Developer as required by the PLAN or SAWS indicates the presence of any Golf Course related constituent above Trigger Levels, then immediate Corrective Action shall be taken by Developer and continued until the constituent(s) stabilize to approved cleanup levels, in accordance with the phased procedures hereinafter set forth.

6.4.1 Notice

In the event that any water quality sampling required by this PLAN performed by Developer indicates the presence of any analyte above applicable Trigger Levels, then the Developer shall provide immediate written notice thereof to SAWS, along with a copy of the analytical results. In the event that any water quality sampling performed by SAWS indicates the presence of any analyte above applicable Trigger Levels, then SAWS shall provide immediate written notice to the Developer, along with a copy of the laboratory analyses reports.

6.4.2 30 Day Period for & Establishing No Responsibility

Upon receipt of sampling results that indicate the presence of any analyte above applicable non-Golf Course or groundwater Trigger Levels (or the receipt of written notice thereof from SAWS based on SAWS' sampling), the Developer shall have thirty (30) days to determine if the source is caused by the Golf Courses or by another source.

SAWS acknowledges that notwithstanding Developer's best efforts, it may not be possible for Developer to complete its investigation of the cause for the existence of an analyte above a Trigger Level. In that event, before the expiration of the thirty day period, Developer may submit to SAWS a description of the efforts undertaken to determine the source of any analyte exceeding Trigger Levels, and a description of the investigative effort Developer proposes to perform, but which it has been unable to complete. Developer may request additional time, not to exceed twenty additional days, in which to complete its determination. SAWS may, but is not obligated to grant an extension of time following such a request.

6.4.3 Phase I Corrective Action Plan

In the event that the evidence gathered during the period provided in section 6.4.2 does not show that the elevated constituents identified by sampling are unrelated to Golf Course operations, then SAWS shall notify the Developer in writing. Thereafter, the Developer shall have thirty (30) days to prepare and submit to SAWS "Phase I" of a Corrective Action Plan for review and approval. Any applicable phase of the Corrective Action Plan shall also be submitted to TCEQ to the extent that the agency has jurisdiction. The Phase I Corrective Action Plan submitted to SAWS shall include the following minimum components, except as otherwise determined not applicable by SAWS:

Phase I Corrective Action Plan Requirements:

- Subsequent sampling to confirm presence of elevated constituent(s);
- Identification of potential source;
- Continued monitoring of the constituent of concern;
- A procedure specifying subsequent samplings and analysis which shall be tailored for the purpose of specifically identifying the Golf Course operation practices and procedures which have the potential to have contributed to the resulting elevated constituents;
- A proposed timeframe by which Phase 1 sampling shall terminate and Phase II of the Corrective Action Plan shall commence; and

- Any components required by SAWS in its written notice to Developer, including by way of example and not in limitation, any Golf Course related management practice modifications.

The Phase I Corrective Action Plan requirements, including any modifications thereto required by SAWS in connection with its approval, shall be implemented immediately upon receipt of SAWS' approval.

In the event that Phase I sampling does not confirm the existence of an analyte above Trigger Levels or demonstrates that the constituent is not Golf Course-related, then the Developer shall provide such sampling results to SAWS for review and approval. Upon receipt of written approval from SAWS, Phase I of the Corrective Action Plan shall terminate and the Developer shall have no further responsibility for compliance therewith.

6.4.4 Phase II Corrective Action Plan

Upon the completion or expiration of Phase I of the Corrective Action Plan, the Developer shall immediately submit to SAWS a Phase II Corrective Action Plan for review and approval. The Phase II portion of the Corrective Action Plan shall be based on the investigative findings produced in the Phase I portion of the Corrective Action Plan, and shall be designed to eliminate the potential source(s) of the elevated constituent identified and confirmed by subsequent sampling in Phase I. The Phase II Corrective Action Plan shall include the following minimum components, as applicable:

Phase II Corrective Action Plan Requirements:

- Continued monitoring of the constituent of concern;
- Modification of fertilizer application, nutrient application, irrigation rates and other management practices to address the constituent of concern;
- Structural remediation shall take place as necessary;
- Proposed schedule for implementation and completion of Phase II Corrective Action; and
- Proposed level(s), which shall be no less stringent than the applicable Trigger Level or as otherwise approved in writing by SAWS.

The Phase II Corrective Action Plan components, including any modifications thereto required by SAWS in connection with its approval, shall be implemented immediately upon approval of SAWS.

If a complete Phase I or Phase II Corrective Action Plan is not timely submitted to SAWS or any deficiencies in the above-referenced components identified by SAWS are not addressed or

incorporated into the applicable phase of the Corrective Action Plan, then SAWS shall have the right to initiate the procedures for Enforcement as detailed in Section 7 of this PLAN.

6.4.5 Phase III Corrective Action Plan

If constituent concentrations do not decrease to approved cleanup levels after implementation of the management practice modifications set forth in the approved Phase II Corrective Action Plan, then Developer shall commence Phase III of the Corrective Action Plan immediately upon the expiration of Phase II Corrective Action Plan. The Phase III Corrective Action Plan shall include the following minimum components, as determined and approved by SAWS:

- A comprehensive evaluation of the potential source medium and source location shall be conducted in a manner and according to a schedule approved by SAWS and any other regulatory authority with jurisdiction. Additional sampling shall be performed and modeling shall be utilized, as necessary to identify the source of the contamination.

- In the event that the Phase II management practice modifications do not timely lower concentrations to target levels, then SAWS may require as part of Phase III the preparation and implementation of a formal remediation plan to be approved by SAWS. Remediation shall be undertaken in accordance with the methodology set forth in the TCEQ's Texas Risk Reduction Program for residential property, or other methodology reasonably required by SAWS in the event that TCEQ's Texas Risk Reduction Program for residential property does not provide for remediation under the circumstances. Except as otherwise determined by SAWS, the target levels to be achieved in connection with any such remediation plan shall be below the specified percentage of Regulatory Standards that triggered Corrective Action, as identified in Sections 6.1 through 6.3 above. Upon request by Developer that SAWS impose a different target level, SAWS will consider the quality of water supplied by SAWS for irrigation and other factors that may be relevant to the appropriate cleanup level.

6.5 Responsibility for Corrective Action

The Developer shall be responsible for all corrective action hereunder required as a result of sources from the Golf Courses. Responsibility for corrective action may be assigned by Developer to successive owners, lessees and/or operators of anyone or more of the Golf Courses provided prior notice and a copy of such assignment is furnished to SAWS, and provided further that the prior approval of the City and SAWS is received for such assignment. The City and SAWS hereby consent to the assignment of responsibility for corrective action under this PLAN by the Developer to Marriott in accordance with the terms and conditions of the Services Agreement (as hereinafter defined); provided, that, as a condition to any such assignment, Marriott shall retain a Golf Course operator which has a demonstrated history of environmental sensitivity in the high quality operation and maintenance of Golf Courses to operate and maintain the Golf Courses. For purposes hereof, PGA TOUR Golf Course Properties, Inc. or an entity

controlled by PGA TOUR Golf Course Properties, Inc. operating a "Tournament Players Club" shall be an acceptable operator.

Notwithstanding any provision in this PLAN or the Services Agreement to the contrary, all sales or leases of any one or more of the Golf Courses shall expressly provide that the purchaser or lessee (as applicable) covenants and agrees to comply with and assume the corrective action obligations set forth herein.

All corrective action shall be at the sole cost and expense of the Developer and successive owners, lessees and operators of the Golf Courses (except to the extent that that an authorized representatives of the City and SAWS have released the Developer from all or a portion of its corrective action obligations).

SAWS acknowledges and agrees that the Developer shall have no responsibility to perform corrective action for contamination unrelated to Golf Course construction or operations.

ENFORCEMENT

7.0 Enforcement

The Developer acknowledges and agrees that it is contractually obligated to comply with the applicable provisions of this PLAN and all operation plans approved by SAWS pursuant hereto, including the WPAP. Further, these obligations shall run with the land and shall be binding on any subsequent owner, lessee, and operator of the Golf Courses. In addition to any rights at law or in equity that may be available to SAWS or the City of San Antonio, the Developer agrees, as a matter of contract and on behalf of its respective successors and assigns, that any failure to comply with this PLAN or an operation plan approved by SAWS shall entitle the City and/or SAWS to exercise one or more of the enforcement rights described below.

Notwithstanding any provision in this PLAN or the Services Agreement to the contrary, all sales or leases of anyone or more of the Golf Courses shall expressly provide that the purchaser or lessee (as applicable) covenants and agrees to comply with; and be subject to, the enforcement provisions set forth herein. Upon assignment to Marriott, SAWS and the City shall release the Developer from enforcement action only in accordance with the terms and conditions set forth in the Services Agreement.

7.1 Termination of Services Agreement

At any time prior to an authorized assignment of Developer's rights under this PLAN ~~to Marriott~~, failure by Developer to submit any operation plan required pursuant to this PLAN, commencement of construction of the Golf Courses prior to approval by SAWS, or failure to perform and complete any Corrective Action Plan requirements, including remediation of any environmental contamination caused by Golf Course construction or operations, may constitute a material breach of the Services Agreement and shall entitle the City to terminate the Services Agreement, or perform any and all other actions authorized under the Services Agreement for breach thereof.

7.2 Termination of Golf Course Operations

Failure by Developer or its successors and assigns to perform and complete any Corrective Action Plan requirements, including remediation of any environmental contamination caused by Golf Course operations, may constitute a material breach of this PLAN and shall entitle SAWS to initiate enforcement action in accordance with Section 7.3 below, including termination of the operation of the Golf Courses (including, but not limited to, the suspension of application of all chemicals to the Golf Courses and the suspension of all play on the Golf Courses) until such time as SAWS determines that the environmental contamination related to Golf Course operation that is subject to Corrective Action Plan requirements has been fully remediated in accordance with the requirements of the applicable Corrective Action Plan.

7.3 Failure to Comply with Management Practices

In the event that the Developer or any subsequent owner, lessee, or operator of the Golf Course(s) fails to comply with any requirement set forth in this PLAN, an approved operation plan, or an approved phase of a Corrective Action Plan, then SAWS shall provide written notice and reasonable evidence of the alleged violation or failure to all potentially-responsible parties. The recipients of such written notice shall have thirty (30) days from the date of the notice to either: (i) demonstrate by clear and convincing evidence that no violation has taken place; or (ii) correct the violation or failure, and furnish written evidence of such corrective action to SAWS within said thirty (30) day period.

SAWS acknowledges that the nature of certain violations may not be subject to "cure" within thirty (30) days, either because the violation is disputed or an isolated event that is not ongoing in nature and cannot be "undone" (e.g., application of pesticides in a Sensitive Feature buffer zone) or because the nature of violation is such that notwithstanding the Developer's best efforts, the violation may not be corrected within ten days. In the event of the former circumstance, then SAWS shall be entitled to initiate any of the enforcement actions described in this PLAN immediately upon the expiration of the thirty (30) day period. In the event of the latter circumstance, then SAWS may, but shall not be required, to specify an alternative deadline for completion of corrective action by Developer or any Successor.

Pursuant to the provisions of this Section, SAWS shall be entitled to pursue one or more of the following enforcement actions:

- SAWS shall have the right, as a matter of contract, to institute mandatory changes in Golf Course management practices directly related to the violation. By way of example and not in limitation, if the violation relates to the application of pesticides, SAWS shall have the right to suspend further applications of pesticides in one or more areas of the Golf Courses.

- SAWS shall have the right to perform additional monitoring or sampling.

- SAWS shall have the right, as a matter of contract, to receive a payment upon expiration of the notice and cure period described above. Specifically, the Developer agrees on behalf of itself and its successors and assigns that SAWS will be damaged by any failure by Developer or any Successor to comply with the requirements of this PLAN or any operation plan, and further recognizes the delays, expense, and difficulties involved in proving in a legal proceeding the actual loss suffered by SAWS in the event of such failure or violation. Accordingly, the Developer agrees as a matter of contract that it (and any subsequent owners, lessees and operators) shall be responsible for payment to SAWS (for so long as each is a responsible party under the terms of this PLAN) the following sums for failure to comply with the applicable requirements of this PLAN approved by SAWS pursuant hereto, and each day such failure or violation continues after notification and the cure period shall be considered a separate incident:

Application of pesticides/fertilizers during prohibited weather conditions	$1,000
Application of pesticides/fertilizers in Sensitive Feature buffer zones	$5,000
Application of pesticide/fertilizer prohibited by law	$5,000
Unauthorized Damage or Destruction of Known Sensitive Feature	$10,000
Failure to cease Construction activities that impact, or failure to preserve, previously-unknown Sensitive Feature in accordance with TCEQ requirements	$10,000
Violation of WPAP requirement	$5,000
Failure to perform required sampling	$10,000
Violation of other management practices that are subject to an Approved Corrective Action Plan	$1,000

For isolated events that constitute violations under this PLAN and that are not subject to cure by their nature, the violation shall be construed to have occurred on the date of occurrence of the event in question. By way of example, in the event that Developer applies pesticides in a Sensitive Feature buffer zone on two consecutive days, two violations shall be deemed to have occurred, and Developer shall be required to pay to SAWS a total sum of $10,000 under this PLAN for such violations.

The foregoing contractual payments shall be joint and several obligations of the Developer and any subsequent owners, lessees and operators of the Golf Courses, except to the extent the Developer is expressly released therefrom by authorized representatives of the City and SAWS.

Notwithstanding any provision in this PLAN or the Services Agreement to the contrary, all sales or leases of anyone or more of the Golf Courses shall expressly provide that the purchaser or lessee (as applicable) covenants and agrees to make the contractual payments described herein in accordance with the terms of this PLAN.

In the event that SAWS determines that the evidence submitted by Developer or by a potentially responsible party does not demonstrate that no violation has taken place, or should SAWS determine that the evidence submitted by Developer or by a potentially responsible party does not demonstrate that a violation or failure has been corrected, or should Developer or any potentially responsible party disagree with any enforcement action permitted by this PLAN that is imposed by SAWS against any of them, then Developer or the affected potentially responsible party shall have the right to file a declaratory judgment or other appropriate action to contest and seek relief from any such determination or enforcement by SAWS.

The contractual payments shall not prevent SAWS, the City, or Developer from exercising any other rights that either entity may have under the laws of the State of Texas or that may be set forth in the City's ordinances, as amended from time to time, and shall in no manner be construed to relieve Developer or subsequent owners, lessees and operators from their Corrective Action obligations under this PLAN.

DEFINITIONS

8.0 Definitions

In addition to the terms defined in the text of this PLAN, the following definitions shall apply to defined terms, except when the context provides otherwise:

Abandoned Well: A well that has not been used for six consecutive months. A well is considered to be in use in the following cases: a non-deteriorated well which contains the casing, pump and pump column in good condition; or a non-deteriorated well which has been properly capped.

(AST): Above Ground Storage Tank System, defined as a non-vehicular device (including any associated piping) that is made of non-earthen materials, located on or above the ground surface and containing an accumulation of static hydrocarbons or hazardous substances, but excluding containers of gasoline, oil or household products used for normal household uses less than two gallons in size, and which are not otherwise prohibited under applicable laws and regulations.

(Ac-ft) Acre feet: The quantity of water required to cover one acre of land one foot deep; 325,851 gallons.

(BMP) Best Management Practice: An effective integration of stormwater management systems, with appropriate combinations of landscape conservation, enhancement, structural control, impervious operation, and effectiveness of structural controls, impervious cover, schedules of activities, prohibitions of practices, maintenance procedures and other management practices which provide an optimum way to convey, store and release runoff, so as to reduce peak discharge, remove pollutants, and enhance the environment

(BOD) Biochemical oxygen demand or biological oxygen demand: A measure of the amount of oxygen consumed in the biological processes that break down organic matter in water. The greater the BOD, the greater the degree of pollution.

Buffer Zone: Strip or area of vegetation used for removing sediment, organic matter, and/or other pollutants from runoff and wastewater

(COD) Chemical Oxygen Demand: A measurement of the oxygen required to oxidize all compounds, both organic and inorganic, in water.

Composite Sample: A series of water samples taken over a given time and weighted by flow rate or time.

CON Vault system: A containment system more particularly described in Exhibit C to this PLAN

Corrective Action: Those actions taken to verify the existence of a potential threat of possible degradation of the surface water or groundwater quality as a result of the construction and

operation of the Golf Courses, and, if so verified, to remove, remediate, or minimize such threat, pursuant to the requirements of this PLAN.

Corrective Action Plan: A plan submitted by Developer and approved by SAWS which is prepared in response to the Developer's obligation to perform Corrective Action under this PLAN, and which contains those phases and components described in Section 6.4.

Detection Limit: The lowest concentration of an analyte that can be determined with reasonable confidence.

Detention: The temporary storage of storm runoff, which is used to control the peak discharge rate and which provides gravity settling of pollutants.

Developer: Lumbermen's Investment Corporation

(EARZ) Edwards Aquifer Recharge Zone: Generally, that area where the stratigraphic units constituting the Edwards Aquifer out crop, and including the outcrops of other formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer.

(EPA) Environmental Protection Agency

Erosion: The wearing away of the land surface by running water, waves, or moving ice and wind, or by such processes as mass wasting and corrosion (solution and other chemical processes).

(E1) Evapo-transpiration: Evapotranspiration is loss of moisture through the processes evaporation from land and water surfaces and through transpiration by plants.

Fertilizer: Any of a large number of natural or synthetic materials, including manure and nitrogen, phosphorus, and potassium compounds, spread on or worked into soil to increase its capacity to support plant growth.

First Flush: At least the first one-half inch of runoff from a storm event that flushes off and contains a disproportionately large loading of the accumulated pollutants from impervious and non-impervious surfaces.

Grab Sample: A sample taken at the discretion of the sampler, as to the condition or event that it would represent.

Groundwater: Water in the Edwards Aquifer or Trinity Aquifer.

(ha) hectare: The land area equal to 10,000 square meters or 2.471 acres.

Herbicide: A chemical substance used to destroy or inhibit the growth of plants, especially weeds.

Hydraulic Gradient: In an aquifer, the rate of change of pressure head per unit distance from one point to another.

Impervious Cover: As defined in Sec. 34-907, City of San Antonio Code of Ordinances, impervious cover means roads, parking areas, buildings, pools, patios, sheds, driveways, private sidewalks, and other impermeable construction covering the natural land surface. "Percent impervious cover" shall be calculated as the area of Impervious Cover within the total site being developed, divided by the total areas within the development. Vegetated water quality basins, vegetated swales, other vegetated conveyances for overland drainage, and public sidewalks shall not be calculated as impervious cover.

Interflow: The lateral movement of water into the unsaturated zone during and immediately after a precipitation event.

(IPM) Integrated Pest Management

Irrigation return flow: Surface and subsurface water, which leaves the field following application of irrigation water.

Karst: An area of irregular limestone where erosion has produced sinkholes, fissures, underground streams, and caverns.

Material Safety Data Sheet: OSHA established guidelines for the descriptive data that should be concisely provided on a data sheet to serve as the basis for written hazard communication.

Milligrams per/liter (mg/L) A unit of concentration equal to one thousandth of a gram per one liter of water.

Miticide: An agent that kills mites.

Monitoring: Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, plants, and animals.

Nematodes: Any of several worms of the phylum Nematoda, having unsegmented bodies, cylindrical bodies, often narrowing at each end, and including parasitic forms such as the hookworm and pinworm.

Nitrate: Plant nutrient and inorganic fertilizer that enters water supply sources from septic (8' systems, animal feed lots, agricultural fertilizers, manure, industrial waste waters, sanitary - landfill and the garage dumps.

Non-point source: Diffuse pollution sources (e.g., without a single point of origin or not Introduced into a receiving stream from a specific outlet). The pollutants generally are carried off the land by storm water. Non-point sources can be divided into activities related to either land or water use including failing septic tanks, improper animal-keeping practices, and urban and rural runoff.

(NPDES) National Pollutant Discharge Elimination System Pesticide: A chemical used to kill pests, especially insects. (pET) Potential Evapo- Transpiration: The process that estimates actual water use by turf through measuring weather condition by means of a weather station.

Piezometer: A tube or monitoring well used to measure hydraulic head by determining the elevation of the water level in the tube or well.

Professional golf tournament: A PGA Tour event or a national competition, with no more than four (4) events per calendar year.

Recharge Feature: a naturally occurring or man-made feature that allows water to enter an aquifer.

Retention/Closed Loop Irrigation System – A Golf Course design that incorporates the capture of runoff of eighty five percent (85%) of the Golf Course irrigated area for reapplication to the Golf Course through the irrigation system.

pH: An expression of the intensity of the basic or acidic condition of a solution.

(PVC) Polyvinyl Chloride: A common thermoplastic resin, used in a wide variety of manufactured products.

Recharge Zone: Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the appropriate regional office and groundwater conservation districts.

(SAWS): San Antonio Water System

Sensitive Feature: Permeable geologic or manmade feature located on the Edwards Aquifer or Trinity Aquifer recharge zone or transition zone where a potential for hydraulic interconnectedness between the surface and the Edwards Aquifer exists, and rapid infiltration to the subsurface may occur. The determination of the sensitivity of any feature shall be made in accordance with TCEQ's June 6, 1999 "Instructions to Geologists for Geological Assessments" as amended or superseded from time to time.

Stomate: An opening on a leaf through which water evaporates.

Structural Controls: A range of pollution prevention best management practices ranging from vegetated buffers to on-site runoff detention and treatment facilities.

(TCEQ) Texas Commission on Environmental Quality

(TPDES) Texas Pollutant Discharge Elimination System

Tifdwarf: A hybrid drought resistant bermuda turf grass used extensively for Golf Course greens.

Tifway: A hybrid drought resistant bermuda turf grass used extensively for Golf Course fairways.

Trigger Levels: The level of analytes identified in water quality monitoring or sampling that triggers Corrective Action obligations of Developer, as more fully described in Section 5.0 and Sections 6.1 through 6.4.

(TSS) Total Suspended Solids: TSS represents the total amount of solid matter in a (representative water sample that is retained by a membrane filter. It includes all sediment and .other constituents that are fluid suspended.

(UST) Underground Storage Tank: Anyone or combination of underground storage tanks and any connecting underground pipes used to contain an accumulation of regulated substances, the volume of which, including the volume of the connecting underground pipes, is ten percent or more below grade.

Underdrain. Perforated pipe, usually surrounded by cloth or porous filter that collects excess groundwater and transports through gravity to a collection point (French drain).

Wetwell. A below ground holding tank designed for the catchment and transfer of stormwater run-off.

(WPAP) A water pollution abatement plan, as described in Chapter 213 of the TCEQ's rules.

EXHIBIT A

LEGAL DESCRIPTION OF THE LAND

TRACT NO. 1

1,817.4324 acres of land, Bexar County, Texas, consisting of 1,623.189 acres, being 180.972 acres of land out of the Heirs of William Brisbin Survey No. 89 1/2, 67.620 acres of land out of the Rompel, Koch & Voges Survey No. 1, 929.031 acres of land out of the E. Martin Survey No. 89, 89.250 acres of land out of the El Paso Irrigation Co. Survey No. 92 1/10, 356.166 acres of land out of the Adolpus Hernden Survey No. 478 1/3 and 0.150 of an acre out of the E. Valdez Survey No. 478 1/2, Bexar County, Texas, and being all of that certain 1,627.008 acre tract of land re-surveyed and found to contain under monumentation 1,623.189 acres of land, conveyed by J.J. McCullick, Trustee to Murray A. Winn, Jr., Thomas T. Winn and Randal W. Winn by deed dated August 20, 1973 and recorded in Volume 7167 on pages 586-588 of the Deed Records of Bexar County, Texas, and in all under fence 1,623.189 acres of land described more particularly by metes and bounds as follows:

BEGINNING at an iron pin and corner post found in the East line of Bulverde Road, for the Northwest corner of the above-described 1,627.008 acre tract, for the Northwest corner of the herein described 1,623.189 acre tract;

THENCE with the fence, a North line of the 1,627.008 acre tract, N 87^ 50' 00" E. 5,988.85 feet to an iron pin set at a corner post, for a re-entrant corner of the 1,627.009 acre tract, for a re-entrant of this tract;

THENCE with the fence, the Southwest line of the 1,627.008 acre tract, N. 25^ 05' 12" W. 3, 406.40 feet to a 4" steel post and N. 25^ 18' 04" W. 1,064.15 feet to an iron pin set at a corner post, for the West corner of the 1,627.008 acre tract, for the West corner of this tract;

THENCE with the fence, the Northwest line of the 1,627.008 acre tract, N 53^ 31' 36" E. 2,026.43 feet to an iron pin found at a corner post, for the North corner of the 1,627.008 acre tract, for the North corner of this tract;

THENCE with the fence, the Northeast line of the 1,627.008 acre tract, S. 55^ 52' 24" E. 3,325.69 feet to an iron pin set at a 36" Live Oak, S. 55^ 47' 33" E. 5,277.27 feet to a cedar post, and S. 51^ 41' 25" E. 244.53 feet to an iron pin found at a corner post, for the Northeast corner of the 1,627.008 acre tract, for the Northeast corner of this tract;

THENCE with the fence, the East line of the 1,627.008 acre tract, S. 05^ 30' 33" E. 1,478.86 feet to a 24" Live Oak, S. 09^ 56' 00" E 382.42 feet to a 36" dead Live Oak, S. 00^ 10' 35" E. 1,193.13 feet to a corner post, S 14^ 18' 24" W. 2,685.40 feet to a corner post and S. 14^ 33' 47" W. 2,366.39 feet to an iron pin and corner post found in the North line of Evans Road, for the Southeast corner of the 1,627.008 acre tract, for the Southeast corner of this tract;

THENCE with the North line of Evans Road, the South line of the 1,627.008 acre tract, N. 78^ 46' 47" W. 2,659.16 feet to an iron pin found and N. 69^ 59' 28" W. 42.27 feet to an iron pin and corner post found for the Southwest corner of the 1,627.008 acre tract, for the Southwest corner of this tract;

THENCE with the fence, the Southwest line of the 1,627.008 acre tract N. 24^ 59' 47" W. 1,274.56 feet to an iron pin found in concrete N. 25^ 06' 27" W. 450.07 feet to an iron pin found in concrete and N. 25^ 07' 30" W. 4,724.98 feet to an iron pin and corner post found for a re-entrant corner of the 1,627.008 acre tract, for a re-entrant corner of this tract;

THENCE with the fence, a South line of the 1,627.008 acre tract, S. 87^ 49' 00" W. 7,067.93 feet to an iron pin and corner post found in the East line of the aforesaid Bulverde Road, for a Southwest corner of the 1,627.008 acre tract, for the Southwest corner of this tract;

No. 448, Abstract 1089, County Block 4880, Bexar County, Texas and said 258.197 Acre Tract being the same tract of land conveyed to Gill Savings Association by Deed in Lieu of Foreclosure recorded in Volume 4826, Pages 1552-1576 of the Deed Records of Bexar County, Texas and said 258.197 Acre Tract being more fully described as follows:

BEGINNING at a found iron pin at an existing fence corner post on the east right-of-way line of Smithson Valley Road and being the northwest corner of a 1754.32 Acre Tract recorded in Volume 6967, Page 927 of the Deed Records of Bexar County, Texas also being the northwest corner of this tract;

THENCE: with the north line of the above mentioned 1754.32 Acre Tract, the following:

N. 81^ 56' 58" E., 3,053.28 feet to an iron pin found at a fence post for an angle point;

N. 81^ 56' 47" E., 6,664.34 feet to a fence post for an angle point;

N. 82^ 06' 11" E., 4,387.57 feet to a fence post for an angle point;

N. 85^ 11' 02" E., 1,051.00 feet to an iron pin found at a fence corner post for an interior corner;

N. 12^ 36' 34" E., 550.49 feet to an iron pin found at a fence corner post for an exterior corner;

S. 88^ 30' 33" E., 540.90 feet to an iron pin found for an interior corner and being the south line of a 1249.70 Acre Tract;

THENCE: N. 02^ 00' 48" W., 1.580.54 feet to an iron pin found for the most northerly corner of this tract;

THENCE: S. 29^ 43' 19" E., 2,024.00 feet to a fence post for a corner;

THENCE: with fence line the following:

S. 68^ 21' 52" W., 12.37 feet to a fence post;

S. 78^ 05' 05" W., 10.79 feet to an iron pin found;

S. 77^ 48' 22" W., 54.36 feet to an iron pin found at a fence corner post;

S. 01^ 44' 20"E., 87.63 feet to a fence corner post;

S. 60^ 40' 25" E., 69.88 feet to a fence corner post on the south line of the aforementioned 1754.32 Acre Tract;

THENCE: with fence line along the south line of said 1754.32 Acre Tract the following:

S. 56^ 39' 48" W., 1,447.64 feet to an angle point;

S. 56^ 55' 59" W., 290.63 feet to an angle point;

S. 56^ 38' 48" W., 1,414.12 feet to an angle point;

S. 56^ 38' 33" W., 2,874.22 feet to a fence corner post for the southwest corner of this tract;

THENCE: leaving the south line of said 1754.32 Acre Tract and with fence line the following:

N. 41^ 18' 08" W., 275.69 feet to a fence post;

N. 56^ 01' 07" W., 246.81 feet to a fence post;

N. 30^ 11' 39" W., 756.76 feet to a fence post;

N. 18^ 09' 39" W., 541.29 feet to an iron pin found;

N. 18^ 06' 15" W., 213.89 feet to a fence corner post;

S. 83^ 04' 23" W., 291.96 feet to a fence corner post;

N. 34^ 59' 36" W., 140.19 feet to a fence corner post;

N. 79^ 49' 47" W., 272.95 feet to a fence corner post;

N. 29^ 28' 15" W., 204.10 feet to an iron pin found;

N. 28^ 30' 33" W., 384.05 feet to an iron pin found for an interior corner of this tract;

THENCE: 60.00 feet south and parallel to the north line of said 1754.32 Acre Tract the following:

S. 81^, 56', 47" W., 6,684.18 feet to a Railroad spike found;

S. 81^, 56', 58" W., 3,076.80 feet to an iron pin found on the east right-of-way line of Smithson Valley Road for a corner of this tract;

THENCE: N 11^ 12' 30" E, 63.61 feet along the east right-of-way line of Smithson Valley Road to the POINT OF BEGINNING and containing 258.197 acres of land more or less.

TRACT NO. 3

A 785.4 acres, or 34,210,000 square feet, tract of land being the remainder of that 927.064 acre tract described in deed from Henry Van de Walle et al to Dan F. Parman in Volume 3089, Page 1393-1399 of the Official Public Records of Real Property of Bexar County, Texas, and conveyed to Peter Wolverton in Volume 5382, Page 756-764 of the Official Public Records of Real Property of Bexar County, Texas out of the E. Martin Survey 89, Abstract 524, County Block 4909, the E. Gonzales Survey 441, Abstract 288, County Block 4902, the Salvador Flores Survey No. 440, Abstract 243, County Block 4907, the Jil Jimenez Survey 358, Abstract 821 (Bexar) 682 (Comal), County Block 4905, the W. H. Hughes Survey No. 478, Abstract 345 (Bexar) 364 (Comal), County Block 4906, and the F. Valdez Survey No. 478 1/2, Abstract 787, County Block 4908, in Bexar and Comal Counties, Texas. Said 785.4 acres being more particularly described as follows:

BEGINNING: at a set 1/2" iron rod with yellow cap marked "Pape-Dawson" at the southernmost corner of this tract, on the south line of said 927.064 acre tract, at the southwest corner of a 99.900 acre tract out of said 927.064 acre tract, the southwest corner of said 99.900 acre tract and said 927.064 acre tract being S 64^40'20" E, a distance of 780.00 feet to a found 1/2" iron rod, S 65^48'16" E, a distance of 1696.16 feet to a found 1/2" iron rod;

THENCE: Along and with the south line of said 927.064 acre tract the following calls and distances:

N 65^40'20"W, at 29.25 feet passing the northeast corner of a 51.788 acre tract conveyed to John B. Webb in Volume 7002, Page 658-682 of the Official Public Records of Real Property of Bexar County, Texas, and continuing with the south line of said 927.064 acre tract for a total distance of 1636.13 feet to a found 1/2" iron rod;

N 49^15'20"W, a distance of 1274.99 feet to a found 1/2" iron rod at the northwest corner of said 51.788 acre tract, the northeast corner of a 1394.189 acre tract conveyed to Lumbermens Investment Corporation in Volume 5792, Page 1701-1709 of the Official Public Records of Real Property of Bexar County, Texas by deed N 50^51'38" W, 1276.71 feet;

N 50^09'55"W, a distance of 253.64 feet to a found 1/2" iron rod, by deed N 51^46'13"W, 246.49 feet;

N 54^11'40"W, a distance of 5267.86 feet to a found 1/2" iron rod in a 30" Live Oak, by deed N 55^47'33" W, 5276.83 feet;

N 54^16'26"W, a distance of 3325.13 feet to a found 1/2" iron rod at the southwest corner of the said 927.064 acres, the northwest corner of said 1394.189 acre tract, on the southeast line of a 1350.297 acre tract conveyed to the Poerner Family Partnership in Volume 4869, Page 292-312 of the Official Public Records of Real Property of Bexar County, Texas, by deed N 55^52'19" W, 3325.35 feet;

THENCE: N 54^59'55"E, a distance of 2448.93 feet to a found 1/2" iron rod at the northwest corner of said 927.064 acre tract, by deed N 53^24'02" E, 2449.06 feet;

THENCE: Continuing with the north line of said 927.064 acre tract the following calls and distances:

S 41^19'21"E, a distance of 1536.97 feet to a found 1/2" iron rod, by deed S 42^55'36" E, 1536.87 feet;

N 79^13'24"E, a distance of 849.81 feet to a found 1/2" iron rod, by deed N 77^37'30" E, 849.79 feet;

S 80^58'59"E, a distance of 1577.28 feet to a found 1/2" iron rod in 18" Cedar, by deed S 82^36'03"E, 1577.43 feet;

S 19^36'38"E, a distance of 238.56 feet to a found 1/2" iron rod in 17" Cedar, by deed S 21^16'00"E, 238.76 feet;

S 31^12'31"E, a distance of 408.74 feet to a found 1/2" iron rod in 20" Cedar, by deed S 32^46'48"E, 408.62 feet;

THENCE: S 38^28'19"E, a distance of 513.61 feet to a found 1/2" iron rod at the north corner of a 7.312 acre tract conveyed to John L. and Mary H. McClung in Volume 6934, Page 826-829 of the Official Public Records of Real Property of Bexar County, Texas, the north corner of that

40.955 acre tract out of said 927.064 acre tract conveyed to John O. Spice in Volume 6932, Page 279-286 of the Official Public Records of Real Property of Bexar County, Texas;

THENCE: Along and with the south line of said 40.955 acre tract the following calls and distances:

S 76^31'41"W, a distance of 408.43 feet to a set 1/2" iron rod with cap marked "Pape-Dawson", by deed S 74^57'31"W, 408.99 feet;

S 09^28'05"E, a distance of 244.99 feet to a found 1/2" iron rod, by deed S 11^10'57"E, 245.63 feet;

S 44^28'05"E, a distance of 310.27 feet to a found 1/2" iron rod, by deed S 46^10'57" E, a distance of 310.00 feet;

S 59^36'52"E, a distance of 289.82 feet to a found 1/2" iron rod, by deed S 61^10'57" E, 290.07 feet;

S 88^19'58"E, a distance of 1558.63 feet to a found 1/2" iron rod, by deed East 1558.42 feet;

S 66^02'47"E, a distance of 318.27 feet to a found 1/2" iron rod, by deed S 67^40'05" E, 318.43 feet;

S 88^18'36"E, a distance of 895.37 feet to a found 1/2" iron rod, by deed East 894.76 feet;

N 74^47'26"E, a distance of 418.72 feet to a found 1/2" iron rod, bent, by deed N 73^10'20"E, 417.94 feet;

S 88^07'27"E, at 626 feet passing the centerline of the Cibolo Creek and continuing for a total distance of 954.80 feet to a found 1/2" iron rod at the southeast corner of said 40.955 acre tract, on the east line of said 927.064 acre tract;

THENCE: Along and with the east line of said 927.064 acre tract the following calls and distances:

S 16^12'32"E, a distance of 527.73 feet to a set 1/2" iron rod with cap marked "Pape-Dawson" in the centerline of said Cibolo Creek, by deed S 17^50'29" E;

THENCE: S 63^21'01"E, a distance of 311.99 feet to a set 1/2" iron rod with cap marked "Pape-Dawson" on the northeast corner of the said E. Martin Survey, on the south line of the said W.H. Hughes Survey 478, from which a 60" Live Oak bears N 43^E, a distance of 32.6 feet (11 3/4 varas) called a double 20" Live Oak in the deed of 392.0 acres from Dierks to 4D Bar Ranch recorded in Document 98-06026868 of the Official Records of Comal County, by deed S63^15'29"E, 328.78 feet;

THENCE: S 10^13'15"E, along and with the west line of said 392.0 acres, called as southerly line of the Joseph Thompson Survey 758, a distance of 2453.77 feet to a set 1/2" iron rod with cap marked "Pape-Dawson" in the centerline of the Cibolo Creek, the northeast corner of the aforementioned 99.900 acre tract, by deed S 11^45'29"E;

THENCE: Along and with the north and west line of said 99.900 acre tract the following calls and distances:

S 79^50'41" W, a distance of 1149.13 feet to a set 1/2" iron rod with cap marked "Pape-Dawson", by deed S78^14'31"W, 1150.73 feet;

S 08^48'58" W, a distance of 1577.45 feet to a set 1/2" iron rod with cap marked "Pape-Dawson", by deed S 07^12'48" W, 1577.45 feet;

THENCE: S 24^19'11"W, a distance of 249.86 feet, by deed S 22^42'48" W, 250.00 feet, to the POINT OF BEGINNING and containing 785.4 acres in Bexar County, Texas. This is not a legal survey.

EXHIBIT B

GEOLOGIC MAP

Exhibit B

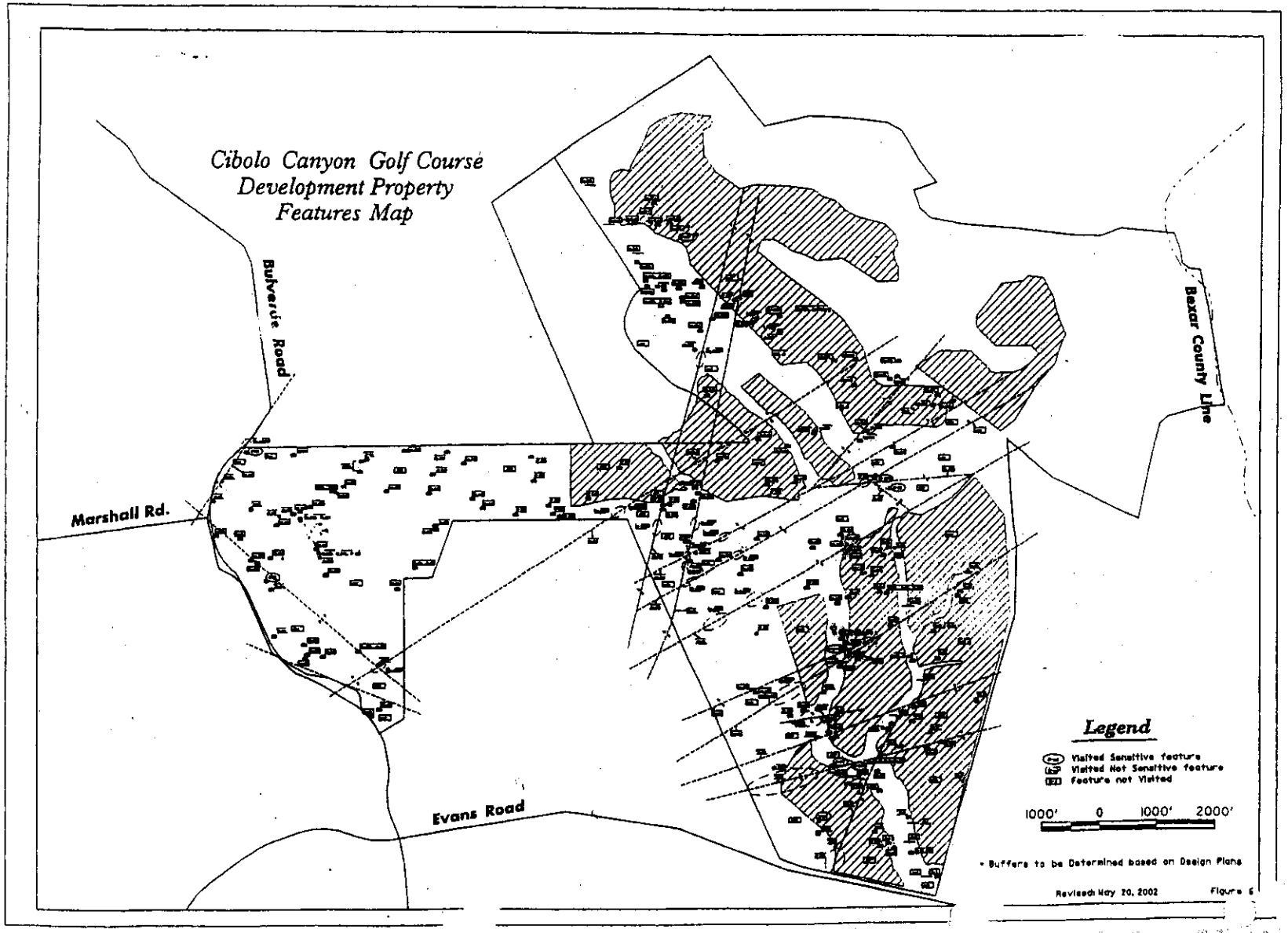

Cibolo Canyon Golf Course
Development Property
Features Map
Bulverde Road
Bexar County Line
Marshall Rd.
Evans Road
Legend
Visited Sensitive feature
Visited Not Sensitive feature
Feature not Visited
1000' 0 1000' 2000'
* Buffers to be Determined based on Design Plans
Revised May 20, 2002
Figure 5

EXHIBIT C

Con Vault Specifications

RECORDER'S MEMORANDUM
AT THE TIME OF RECORDATION. THIS
INSTRUMENT WAS FOUND TO BE INADEQUATE
FOR THE BEST PHOTOGRAPHIC REPRODUCTION
BECAUSE OF ILLEGIBILITY, CARBON OR
PHOTO COPY, DISCOLORED PAPER ETC.

Any provision herein which restricts the sale, or use of the described real property because of race is invalid and unenforceable under Federal law
STATE OF TEXAS, COUNTY OF BEXAR
I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me and was duly RECORDED in the Official Public Record of Real Property of Bexar County, Texas on:

FEB 2 4 2005

COUNTY CLERK BEXAR COUNTY, TEXAS

Doc# 20050038757 Fees: $184.00
02/24/2005 9:44AM # Pages 86
Filed & Recorded in the Official Public
Records of BEXAR COUNTY
GERRY RICKHOFF COUNTY CLERK