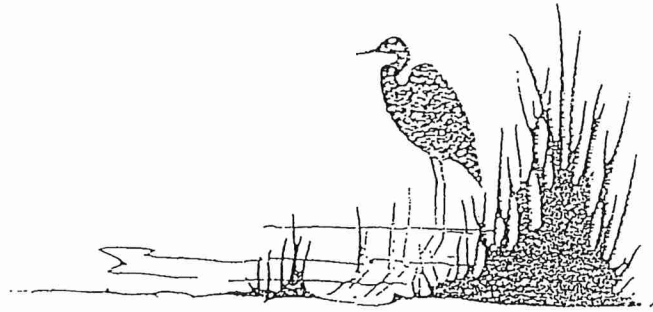


MANAGEMENT PLAN FOR TWIN RIVERS II PRESERVE

NOTE: Twin Rivers II Preserve (34 acres) includes Parcel #2 (24 acres) of the original Twin Rivers Planned Unit Development (PUD). Parcel #2, which was intended as Medium Density Residential development was sold to the City of Oviedo to preserve its unique wetland elements as part of what became River Woods Park which was developed and is maintained by the city.



OVIEDO, FLORIDA

Revised Sept. 2020

95-020-056

Prepared By

CITY OF OVIEDO

In Association with the

SPECIAL NEIGHBORHOOD IMPROVEMENT DISTRICT

rec. 4-17-002
* remove one deck or
playground - Mr
major changes

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1. INTRODUCTION

This management plan is intended to provide guidance for the future use and management of the Twin Rivers 2 Preserve site. The site is currently proposed for acquisition as a conservation and passive recreation area by the Special Neighborhood Improvement District (SNID). The SNID was created under the authority of Ordinance 960, adopted by the City of Oviedo, after residents from the adjacent Twin Rivers and Alafaya Woods subdivisions requested preservation of the site. Funds will be provided from a non-ad valorem special assessment or an ad valorem property tax levied against every residence in the Special Neighborhood Improvement District with matching funds provided by the Florida Communities Trust's (FCT) Preservation 2000 Program. This project has received Conceptual Approval from FCT and the City of Oviedo is beginning acquisition activities.

The site is the last undeveloped phase of the Twin Rivers subdivision, which is part of the Riverwood Development of Regional Impact (DRI), a mixed use project begun in 1986. The Riverwood DRI straddles the Big and Little Econlockhatchee Rivers. The Twin Rivers 2 Preserve is situated in Section 23, Township 21 South, Range 31 East in Seminole County. It is identified by parcel number 23-21-31-300-0010-0000. The 34.3 acre site is located west of the junction of the Little Econlockhatchee River and an unnamed tributary that drains from Long Lake to the river. The site borders the Little Econlockhatchee River floodplain and contains 2.2 acres of contiguous jurisdictional wetlands and 32.1 acres of uplands.

The last remaining upland habitats along the Little Econlockhatchee River are found within the Twin Rivers 2 property. The vegetation of The Twin Rivers 2 Preserve can be divided into four different classifications. The eastern boundary, or 30 percent, of the site is Forested Wetlands. The central portion of the site contains Sand Pine Scrub and occupies approximately 20 percent of the property. The northern 30 percent of this site is dominated by Pine Flatwoods. The southern 20 percent is classified as Mesic Forest. This diverse habitat is home to various threatened species and vegetation. The uplands provide nesting and feeding areas for wildlife species that migrate between the wetlands of the Little Econlockhatchee River and the upland areas. Sand pine scrub found on the site is the last remaining community in this area and home to many gopher tortoises.

Wetland areas on the site are located within the Riparian Habitat Protection Zone. These high quality wetlands provide habitat and food sources for a variety of wetland dependent and aquatic wildlife species.

Preservation of the site further improves the viability of the

Little Econlockhatchee River basin by creating an eco-system comprised of diverse upland and wetland communities.

The Big and Little Econlockhatchee Rivers have been designated as *Outstanding Florida Waters*. According to the Water Management Lands Trust Fund, Save Our Rivers Five-Year Plan, 1994 produced by SJRWMD, "The Econ River arises from a broad system of wetlands southeast of Orlando. Its largest single tributary is the Little Econ River which is heavily impacted by urbanization." It continues "Other acquisitions in the Econ and Wekiva River basins would aid in the preservation of high water resource and environmental values in areas of rapid urbanization."

The State, Seminole County and Orange County are attempting to create a greenway and state forest along the Little and Big Econlockhatchee Rivers. The Summer of 1995 witnessed the opening of the Big-Little Econ State Forest north of Oviedo, the completion of a canoe launch site by Seminole County just north of CR 419, and the submittal of an application by Orange County to the Orlando Metropolitan Planning Organization's Bicycle-Pedestrian program to create a trail along the Little Econlockhatchee River in Orange County. Both Seminole County and Orange County have and are pursuing acquisition of other sites along the Big and Little Econlockhatchee Rivers to establish a greenway. Management of this site as a conservation and passive recreation area will further this effort.

Land between the Little Econlockhatchee River and the Twin Rivers 2 Preserve is currently owned and managed by the SJRWMD. The Twin Rivers 2 Preserve buffers the Little Econ River from existing residential subdivisions that abut the site's west and northern property line. The Twin Rivers 2 Preserve will provide many with access to Florida's natural wilderness. The creation of a conservation, open space, and passive recreation areas, will preserve the beauty of the Little Econlockhatchee River basin in its natural state for future generations to enjoy and learn from.

2. PURPOSE

The purpose and objective of the Twin Rivers 2 Preserve is to add 34.3 acres of environmentally sensitive lands to the Little Econlockhatchee River corridor as a conservation and passive recreation area that will further create and expand a greenway along the Econlockhatchee River.

The future uses of the project site are passive recreation, outdoor education and conservation. Existing trails will be maintained for access. Passive recreation facilities will include

picnic structures, hiking trails, and boardwalks. Information boards will be placed along the hiking trails explaining the different habitats on the site. Facilities will be developed that allows access for observation and appreciation of the significant natural resources on The Twin Rivers 2 Preserve without causing harm to those resources.

The following is a prioritized list of management objectives and procedures for The Twin Rivers 2 Preserve.

- 1) Provide passive outdoor recreational facilities which include hiking trails, boardwalks, and interpretive signage. Develop these facilities in a manner that encourages the general public reasonable access for observation and appreciation of the natural resources on the project site without causing harm to those resources.
- 2) Complete a vegetative survey of the vegetative communities and plant species on the site. The survey shall be utilized during development of the site to insure the protection, restoration, and preservation of the natural resources of the Twin Rivers 2 Preserve. The study was completed on September 30, 1996.
- 3) Preserve and manage the xeric oak, sand pine scrub, pine flatwoods and freshwater hardwood swamp communities to ensure the long-term viability of these communities.
- 4) Sufficiently buffer the listed animal species and their habitats to protect them from the adverse impacts of adjacent land uses.
- 5) Coordinate with the Game and Fresh Water Fish Commission on the management of the site to protect the listed species and listed species habitat, including the gopher tortoise. Periodic surveys of listed species utilizing the site shall be performed. Develop informational signs regarding the protection of the listed animal species and their habitat.
- 6) Restore approximately 4 acres of the site by replanting some of the cleared trails and the perimeter of the detention pond with native vegetative species. Monitor for any recurrence of invasive exotic vegetation.
- 7) Coordinate with the Division of Forestry and Game and Fresh Water Fish Commission on the development of a prescribed burn plan for the site. Perform a vegetation analysis to determine the need for a prescribed burning regime to maintain natural

fire-dependent vegetative communities.

- 8) Coordinate management of the site with the land managers of adjacent conservation and recreation lands.
- 9) Coordinate management of the site with the St. Johns River Water Management District's Resource Management Plan for the Econlockhatchee River system.
- 10) Coordinate with the St. Johns River Water Management District and other public and private entities to establish a greenway/wildlife corridor management strategy for the Econlockhatchee River system as promoted in the City of Oviedo's Econlockhatchee River Protection Ordinance.
- 11) Determine the presence, if any, of archaeological sites prior to the commencement of any proposed development activities.
- 12) Promote access to the site by pedestrians, bicyclists and persons on non-motorized vehicles, except in areas where resource protection considerations limit access.
- 13) The terms and conditions of the FCT award shall not conflict with any requirements imposed by future awards of grant programs sought by the City of Oviedo or the Special Neighborhood Improvement District Board of Directors.

The Twin Rivers 2 Preserve will further the goals of the Land Use, Conservation, Recreation & Open Space, and the Drainage and Natural Groundwater Aquifer Recharge Elements of the City of Oviedo Comprehensive Plan.

Due to the environmental sensitivity of the site and its close location to the Little Econlockhatchee River, management of the Twin Rivers 2 Preserve will meet the goals of the Conservation and Recreation elements of the Comprehensive Plan. A conservation, open space, and passive recreation site will be readily accessible to the Twin Rivers and Alafaya Woods subdivisions. It will preserve the site's vegetative communities and plant species in their natural state for future generations to enjoy and learn from.

The Conservation Element of the Comprehensive Plan states that areas of local significance will be designated for acquisition as permanent open space. Goal 5.1 is to "...appropriately use, manage, protect, restore, and conserve the valuable resources within the City of Oviedo". Policies 5-1.2.1 and 5-1.2.2 of the Conservation Element stress protection and maintenance of the 10 year and 100 year floodplain. Policy 5-1.2.4 defines the

Econlockhatchee River Protection Area and regulates development within the area in accordance with the Econlockhatchee River Protection Ordinance (No. 852). Policy 5-1.2.6 defines protection and conservation of wetlands. Each policy strictly limits development in these areas. However, they do allow water-related and passive recreation facilities.

The Recreation & Open Space Element "provides a mechanism for protecting natural resources and maintaining various environments for future generations." Goal 6.1 will "provide and maintain a recreation and open space system that will meet the present and future needs of the citizens of the City of Oviedo and protect, enhance and improve the natural environment within the city. Policy 6-1.1.3 defines open space as an area that is left in its natural wooded state, except for the cutting of trails for walking or jogging, is capable of being used and enjoyed for purposes of informal and unstructured recreation and relaxation, and is legally and practically accessible to the public.

The Land Use Element recognizes the need to "provide for the preservation of viable, functional wetlands, protection of rare habitat areas and maintenance of flood storage capacity without destruction of native vegetation." The Conservation land use classification is "A category to protect the natural resources within the City of Oviedo and provide permanent open space." Objection 1-1.8 is "To protect the City's natural resources by establishing an acquisition program, by requiring conservation easement over wetlands and habitat areas..."

The Drainage and Natural Groundwater Aquifer Recharge Element recognized the high recharge capabilities of the Little Econlockhatchee River Basin. Policy 4-3.3.9 which states "The City shall protect the functions of natural drainage features by acquiring and preserving conservation areas and by revising the Land Development Code to protect natural wetlands..."

The elements City of Oviedo Comprehensive Plan recognize the significance of and provide for the management of the Twin Rivers 2 Preserve.

The Twin Rivers 2 Preserve site will be managed only for the conservation, protection and enhancement of natural and historical resources, and for passive, natural resource-based public recreation compatible with those goals.

The Twin Rivers 2 Preserve site will be identified in all signs, literature, and advertising as being publicly owned and

operated as a passive, natural resource-based public outdoor recreational site.

Once the Twin Rivers 2 Preserve is acquired, the City will process a comprehensive plan land use amendment within one year to change the site's land use designation to conservation or public land use.

3. SITE DEVELOPMENT, IMPROVEMENT AND ACCESS

Written approval will be obtained from the FCT before undertaking any site alteration or physical improvements that are not addressed in this Management Plan.

1) EXISTING PHYSICAL IMPROVEMENTS

The subject site remains undeveloped and in its natural state except for the following development activities that have occurred on the site:

A) An unpermitted retention pond was partially constructed outside on the eastern boundary of the site.

B) Proposed road right-of-ways have been cut at the west and northeast boundary.

C) Trails have been cleared across the site.

D) An upland area was selectively logged and grazed around 1980.

No known physical improvements were constructed within the property. Water and sewer systems terminate at the property boundary but can be extended into the site.

2) FUTURE PHYSICAL IMPROVEMENTS

Future physical improvements will be determined by the Twin Rivers - Alafaya Woods Special Neighborhood Improvement District and the City of Oviedo. The City ordinance creating the Neighborhood Improvement District specifically restricts use of the Twin Rivers 2 Preserve to passive recreation or conservation activities, as defined by the City's Comprehensive Plan and Land Development Code.

The Little Econlockhatchee River has been designated an Outstanding Florida Water. The acquisition will create a greenway

adjacent to the Little Econlockhatchee River corridor. The improvements will promote the creation of a greenway.

The most intensive use of the site will be for passive recreation facilities. These facilities can include hiking trails, boardwalks, and interpretive signage.

2.1) Signs

Temporary signs will be installed at the north entrance to the site within one month of acquisition, and at the west entrance when land is acquired to connect the site to McCully Court. The signs will identify the Twin Rivers 2 Preserve as a natural area and future passive recreation site.

(A) A dedication sign or monument will be erected at one or both of the entrances designating the Twin Rivers 2 Preserve as a natural area open to the public and as having been purchased with funds from the Florida Communities Trust's (FCT) Preservation 2000 Program and the Twin Rivers - Alafaya Woods Special Neighborhood District special assessment. This marker(s) will be installed within twelve months of acquisition.

(B) At entrances a permanent preserve sign will be constructed and will post the following information: 1) name of the preserve; 2) governing organization; 3) project is open to the public during these hours 4) prohibited activities (hunting, swimming, plant removal, etc.); 5) funding sources; 6) the preserve is publicly owned and operated as a natural conservation and outdoor passive recreation area; and 7) the site was purchased with funds from the Florida Communities Trust and the Special Neighborhood Improvement District.

(C) Perimeter signs will be installed along the boundary stating that the site is a protected natural area. These signs will be installed within six months of acquisition.

(D) Small general information signs will be posted along the trails for plant identification or numbers corresponding to an interpretive guide. Where feasible, education signs will also incorporate the Braille language for the sight-impaired.

(E) An orientation panel will be constructed adjacent to the kiosk or rest area near the northern entrance. It will provide a map of the preserve and outline the walking trails. It will also detail other recreational features at the site including picnic tables and observation sights. The panel will also explain the vegetative species on the site, devoting a section to the rare,

threatened and/or endangered species and community types.

(F) Temporary plant identification signs may be placed in front of selected vegetation at various times of the year to highlight it for visitors. The signs will not disturb or destroy the selected plant species.

(G) Trailhead signs will be placed at the beginning of each trail. They will coordinate to the map on the three-sided orientation panel.

2.2) Parking Areas & Bike Racks

A parking area will be constructed at the end of Hart Branch Court in the Twin Rivers Section I subdivision. The road dead-ends at the northern entrance to the site.

A second parking area will be constructed at the end of the McCully Court cul-de-sac, in the Alafaya Woods Phase 12B subdivision, subject to acquisition of the connecting parcel (.07 acres) by the Special Neighborhood Improvement District and the City of Oviedo. This will provide an western entrance into the preserve.

Stabilized parking will be provided for automobiles, and bicycles, and maintenance vehicles at both entrances. A eight foot stabilized path will be constructed from the parking areas into the preserve.

Bicycles have access to the preserve because the site is surrounded by residential subdivisions. Bike racks will be provided at each main entrance next to the vehicle parking. Bicycles, except for those used by designated City personnel, must remain in the parking area. They are not permitted on trails or preserve areas.

Access for the disabled will be designed according to Americans with Disability Act guidelines.

2.3) Trails

The primary feature for public access will be the existing trails on the site. The trails extend from the two main entrances and loop around the 34.3 acres site.

The handicapped-accessible trails will be at least eight feet wide to accommodate wheelchairs. The trails will be

constructed of six inches of packed crushed shell material, or similar material. The shell material will follow the standards set forth in Section 913, Shell Material, of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, 1991 edition.

The trails will be stabilized and mulched to allow easy access by pedestrians. Prior to construction, grading or stabilization, all trail locations will be surveyed to determine if any listed species or vegetative communities will be impacted. If any listed species will be impacted, the trails will be rerouted or the listed species will be relocated on the site.

All access trails and management roads will be available for public use.

2.4) Boundary & Management Roads

Boundary and management roads will be constructed and maintained on the site for access and to act as a firebreak. The boundary firebreak will be a clearing of approximately fifteen feet in width and will run along the western border of the preserve where it abuts residential neighborhoods in the Alafaya Woods subdivision. A ten foot wide utility easement located on property adjacent to the Project Site may also serve as all or part of the firebreak, limiting the extent of clearing. The clearing may be adjusted where trees are to be saved. Prior to clearing the firebreak, a listed species survey will be performed. Any listed species present within the proposed firebreak area will be relocated on the preserve. The boundary road will provide numerous benefits, including more rapid access in the event of a wildfire, protection of the adjacent areas from wildfire, and facilitation in monitoring dumping and other illegal activities along the preserve edge.

A management road will be constructed over an existing trail on the site available for public pedestrian use. If any widening or clearing is necessary, a listed species survey will be completed. Any listed species within the proposed road area will be relocated on the site. The purpose of this road will be to separate the site into two major management blocks. The road will provide access into the interior of the preserve and function as a firebreak in the event of a wildfire. This will reduce the chance that the entire preserve would burn during a wildfire event. Boundary and management roads will be constructed within eighteen months of acquisition.

2.6) Fencing and Gates

Due to the incidence of illegal access, dumping, and the potential for poaching the native plants and wildlife, the two main entrances to the Twin Rivers 2 Preserve will be fenced and gated to preclude the possibility of illegal access. A fence not to exceed six feet and a twelve foot wide main swing gate will be installed. The fence will extend a distance of 30 feet from each side of the Hart Branch Court and the proposed McCully Court entrances.

2.7) Picnic Tables & Benches

Picnic Tables will be located within the upland areas of this site adjacent to the hiking trails. A total of six picnic tables will be installed in two picnic areas within the site. The weather resistant tables will be placed on a bed of mulch in existing cleared areas to avoid destruction of any vegetation. Trash cans will be located at each picnic area. Several picnic tables may be placed in one location to accommodate larger groups. A picnic table near the northern entrance will be placed on a stabilized surface so as to be handicapped accessible.

A total of ten benches will be placed along the hiking trails and management roads throughout the site. The benches will be placed in areas where the trails cross or the trails are wide and flat so the benches will not impact any native or listed species or disturb vegetation.

2.8) Kiosk

A covered kiosk will be constructed at each entrance along trails entering the project site in areas that were previously cleared. These structures will provide a shaded resting area for visitors and a place to install maps of the site and environmental educational material.

2.9) Play area

A play area will be designated in an upland area of the site. The Master Site Plan demarcates a general location for the playground. The play area will be located on less than 1/4 acre of uplands, away from any habitat or wetlands. The play area equipment will be suitable for toddlers.

3.0) Education Area

An Education Area will be constructed near the playground area. It will consist of two rows of benches set in a semi-circle. This arrangement will facilitate a classroom setting where an instructor could lecture to an assembled group of students or guests.

3.1) Water Line

An eight inch city water line will be installed from McCully Court to Hart Branch Drive following a proposed trail shown on the Master Site Plan. It is a necessary loop in the city water system that has been a planned improvement since the development of the Twin Rivers subdivision. The City of Oviedo Utilities Department will coordinate with the Special Neighborhood Improvement District and time the construction with the preserve improvements. The water line will follow one of the stabilized paths and will not disrupt any of the tortoise habitat or preservation areas. Installation of this water line is necessary to protect the public health in adjacent residential areas.

3.2) 18 Hole Disc Golf Course

An 18 Hole Disc Golf Course may be constructed within the boundaries of the project site. Once implemented, this element will provide 18 holes of disc golf for recreational use. The proposed course layout will be created while leaving the existing trails intact.

3.3) Boardwalk

A boardwalk may be constructed along a portion of the eastern boundary of the Project Site, just west of the retention pond. If implemented, the boardwalk will be built over low areas on the existing trails to prevent further disturbance or destruction of vegetation. Topography of this area shows a gradual decline toward the river. During various times of the year, or after heavy rains, portions of the existing trails are underwater. Anybody utilizing the trails at this time is forced to hike through vegetation and brush along the trail to avoid the water. The boardwalk will be constructed of pressure-treated wood, or similar material, and have a non-skid surface. Construction of the

Approved to add an 18 hole disc golf. Approved on 7/13/2020 by RV

boardwalk will require approval from SJRWMD, DEP, and the Army Corps of Engineers.

3.4) Public Restroom

One or more bathrooms that are handicapped accessible will be installed in the playground and picnic area located near the north entrance to the Project Site. The path leading to the facilities will be at least eight feet wide and constructed of the stabilized shell material. This path will allow access to handicapped persons and for periodic maintenance of the facilities.

3) MASTER SITE PLAN

A Master Site Plan has been prepared that clearly identifies the boundary of the Project Site. The Master Site Plan also illustrates the preservation areas, gopher tortoise protection areas, existing improvements, proposed improvements, fireberm, burn and herbicide areas. Please see Exhibit "A".

4) PROPOSED ALTERATIONS OF LAND OR VEGETATION

The proposed alterations to the land and vegetation will be consistent with the Master Site Plan, the management objectives of the Conceptual Approval Agreement, and the Vegetative Survey of the Project Site.

Passive recreational facilities, which include hiking trails, picnic areas, observation areas, educational signage and rest areas, will be constructed in accordance with the vegetative survey of the site.

The protection of listed plant and animal species will be coordinated with the proposed improvements to the Project Site. According to the Priority Schedule - Twin Rivers 2 Preserve (please see Exhibit "P") numerous activities will be completed before any construction of the preserve facilities or improvements occur. These activities include the installation of security fencing, boundary signs, coordination with state agencies including the FGFWFC and the Division of Forestry, completion of a final site plan, permitting, resource management, and reforestation/restoration activities.

All urban plant debris will be removed from the site by prescribed burns, herbicide and physical removal.

5) IDENTIFICATION OF REQUIRED PERMITS OR APPROVALS

The following permits will be required for the site improvements and vegetation removal:

- 1) Building permits from the City of Oviedo Building Department for the installations of signs, fences, and any permanent structures.
- 2) Site Plan Permit from the City of Oviedo Planning Department.
- 3) Environmental Level II Permit issued by the City of Oviedo Planning Department.
- 4) Right-of-Way Level I Permit issued by the City of Oviedo Engineering Department if applicable.
- 5) SJRWMD MSSW Permit if applicable.
- 6) FGFWFC Permits to remove or relocate listed species, where applicable.
- 7) FDEP water line extension permit to install an eight inch water line through the site.

The City of Oviedo and the Twin Rivers - Alafaya Woods Neighborhood Improvement District Board of Directors will provide Florida Communities Trust with copies of all required licenses and permits prior to the initiation of any site construction or restoration work.

6) COORDINATE PROTECTION OF LISTED PLANT & ANIMAL SPECIES WITH PROPOSED ALTERATIONS

The proposed alterations to the land and vegetation will be closely supervised to ensure the protection of all listed plant and animal species on the site. The vegetative survey, entitled "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District", took into account the proposed passive recreational facilities that will be constructed and recommended possible locations for the facilities.

A copy of the survey, which is further described in Section 4.2, Timing and Extent of Vegetative Community Survey, is attached. Please see Exhibit "B".

7) PLACEMENT OF SIGNS

The placement of signs at the entrances to the Project

Site and throughout the preserve are detailed in Paragraph 2.1 in Section 2, Future Physical Improvements (see Page 10).

8) BIKE RACKS

Entry to the preserve by bicyclists is permitted. However, bicycles must be placed in the racks provided. Bicycles, except for those used by designated City personnel, are not permitted in the other portions of the preserve. The location of the bike racks at the entrances will be shown on the site plan. Signs will be placed at the racks prohibiting bike riding in the preserve.

9) ACCESS TO THE SITE

Two paved public neighborhood roads terminate at the site's boundaries. One allows access from the Twin Rivers Section I subdivision to the north, the other from the Alafaya Woods Phase 12B subdivision to the east. In Alafaya Woods, the McCully Court cul-de-sac connects to a tract of land (.07 acres) that was to be the entrance road into the site if it was developed as a residential subdivision. However, this tract of land is not part of the Twin Rivers 2 Preserve. It is a separate parcel of land that the District will try to purchase at a later date. Acquisition of this small parcel of land, however, is not essential to provide access to the Project Site as access exists from Hart Branch Drive to the north.

10) AMERICAN WITH DISABILITIES ACT

Proposed public-use facilities (i.e., trails, parking areas, picnic areas, kiosk, boardwalks) will fulfill the American with Disabilities Act (ADA) requirements.

EASEMENTS, CONCESSIONS, AND LEASES

11) EXISTING & PROPOSED EASEMENTS

There are no existing easements, concessions, or leases for the Project Site.

A proposed utility easement will be dedicated in conjunction with the construction of the city water line.

12) NOTICE OF EASEMENTS, CONCESSIONS & LEASES

If the Twin Rivers 2 Preserve is to be subject to any of the following activities or interests, the City of Oviedo or the

Twin Rivers - Alafaya Woods Neighborhood Improvement District Board of Directors will provide FCT with at least 60 days prior written notice and information regarding any lease of any interest, the operation of any concession, any sale or option, any use other than by a member of the public, and management contracts of the site with non-governmental persons or organizations.

13) INFORMATION REGARDING PROPOSED EASEMENTS, CONCESSIONS & LEASES

The City of Oviedo or the Twin Rivers - Alafaya Woods Neighborhood Improvement District Board of Directors will provide FCT with information concerning what type of proposed lease agreement is being considered, what type of fees would be charged at the facility, whether the facility is a nonprofit facility, and any other financial information concerning the organization or the lease. This information will be placed as an attachment to the Management Plan.

4. KEY MANAGEMENT ACTIVITIES

1) MAINTENANCE

1.1) Identification of Personnel

The Special Neighborhood Improvement District will enter into an agreement with the City of Oviedo for maintenance of the Project Site. The personnel will be employed by the City of Oviedo Recreation and Parks Department and will be responsible for all aspects of property maintenance.

1.2) Maintenance Activities

Maintenance activities will include site clean-up on a regular basis, trash removal, and upkeep of all site facilities. Trash removal will coordinate with the surrounding neighborhoods. The maintenance personnel will empty the trash cans and pick up any waste along the trail. The trash cans will be placed at the curb on regularly scheduled garbage pick-up days.

Terms and conditions on the management of the Twin Rivers 2 Preserve will be covered in the Twin Rivers II Preserve Management Agreement. This agreement will be entered into between the City of Oviedo and the Board of Directors of the Twin Rivers -- Alafaya Woods Special Neighborhood Improvement District. A copy of the draft agreement, as of January 21, 1997, is attached as Exhibit "C". The maintenance agreement will require that the property be

maintained consistent with the approved Management Plan and the Conceptual Approval Agreement. At a future date when the Special Neighborhood Improvement District dissolves, the City will continue maintenance of the Project Site through the Recreation and Parks Department.

2) SECURITY

2.1) Measures to Protect the Site & Public

The following measures and design features will be employed to protect the site and reduce the potential of vandalism, and theft.

A swing gate approximately twelve foot wide swing gate will be installed at each entrance to the Preserve. The gate will remain open during the site's hours of operation. To protect the Project Site from vandalism and trespassing when the preserve is closed, the gates may be locked when necessary by public safety or recreation personnel. In addition to the two gates, approximately thirty feet of six foot high fence will be erected on each side of the two gates. The one hundred and twenty feet of fencing will impede people from simply circumventing the gate and entering the property.

During the hours of operation, the Project Site will be regularly patrolled by the City of Oviedo Police Department. A uniformed officer will walk the trails on a regular basis similar to other parks in the City of Oviedo. The City's Police Department will also patrol the site after hours to protect the site from trespassers and any possible vandalism.

3) STAFFING

3.1) Identification of Permanent & Volunteer Staff

Employees of the City of Oviedo's Parks and Recreation Department will perform regular maintenance at the preserve. Several organizations, which include the Florida Native Plant Society, the Boy Scouts of America, Rollins College, and the University of Central Florida, have contacted the City with regards to utilizing the preserve. Interest has been expressed regarding constructing recreational facilities; protecting, propagating and relocating the listed species; and using the site to educate students. Once the site is acquired by the City, the above listed and other groups will be contacted.

4) NATURAL RESOURCE PROTECTION

4.1) Natural Resources in Need of Protection

The natural resources to be preserved and protected include all listed plant and animal species and the various vegetative communities, and the Little Econlockhatchee River. The proposed passive recreation improvements will take into account the location of the natural resources and all efforts will be made to protect them while still allowing the public to enjoy and learn about the various plants and animals.

Section 224 of the City of Oviedo Land Development Code, Econlockhatchee River Protection Overlay Standards Classification, please see Exhibit "D", will be followed during the development and management of the Project Site.

The existing trail that runs to the southern portion of the Project Site and allows direct access to the river will be closed off to prevent any further destruction to the wetland vegetation. The creation of the firebreak on the western boundary and security fencing will prevent the dumping of trash or yard waste on the Project Site by stopping unauthorized access to the site.

The eastern and southern portions of the site border and include wetlands of the Little Econlockhatchee River. The Riparian Habitat Protection Zone, as detailed by the St. Johns River Water Management District, is part of the site. All wetland plants and species within this area will be preserved except where boardwalks are approved by state agencies. The Master Site Plan, please see Exhibit "A", includes preservation areas that will be protected and left in their natural state. Areas of the preserve designated as tortoise habitat areas will also be sectioned off and protected.

The proliferation of native plants, trees, and flowers on the site will be improved by the removal of exotic and invasive species through prescribed burns and herbicides.

Listed plant species growing in or along the side of existing the paths will be isolated, relocated or protected with barricades.

Actions will be taken to buffer the Project Site from potential encroachments and impacts associated with the adjacent residential land uses. These activities include the installation of security fencing at the two entrances, boundary

signs, creation of the fifteen-foot wide firebreak along the western and northern boundaries of the Project Site, herbicide application along the western and northern boundaries to prevent the encroachment of invasive landscape plants, and monitoring of the site by public safety, maintenance, or environmental personnel.

4.2) Timing & Extent of Vegetative Community Survey

A survey of the vegetative communities on the Project Site was prepared for the City of Oviedo. The survey took place over the course of several weeks during the late summer and early fall of 1996. The survey was completed on September 30, 1996.

A copy of the survey, entitled "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District", is attached. Please see Exhibit "B".

The survey utilized the Cover and Forms Classification System of the Department of Transportation to divide the Project Site into four vegetative communities. They are Pine Flatwoods (411), Xeric Oak (421), Clearcut or Altered Areas (451) and Freshwater Hardwood Swamp (621). The vegetative communities are detailed in the Vegetation Analysis Plant Communities Map, attached as Appendix 1 of the survey. Please see Exhibit "E".

As stated in the survey, "Pine Flatwoods (411) is the predominant habitat at the site and is characterized by low, flat topography and relatively poorly drained acidic, sandy soil sometimes underlain by an organic horizon." It continues, "The Pine Flatwoods is further broken down into mesic longleaf pine flatwoods and hydric pond pine flatwoods."

The survey continues, "The Xeric Oak (421) habitats on the site occur at higher elevations with good drainage and more fertile soils." The roadway cuts on the Project site have allowed the soils to drain towards the detention pond. The Xeric Oak communities are located in the central region of the Project Site and extend to the western boundary.

The Clearcut or Altered Areas (451) are located adjacent to the northern entrance of the Project Site. These areas include the existing roads throughout the site and range in width from twenty to fifty feet.

The Freshwater Hardwood Swamps (621) are situated in the southern half of the Project Site. As stated in the survey, "These forested wetlands are located in depressed areas with

impermeable soils from the hardpan layers under the low groundwater table."

4.3) Actions to Protect Vegetative Communities on Site

The Pine Flatwoods is the principal vegetative community on the Project Site. The survey stated that other trees, invasive species, and saw palmettos (*Serenoa repens*) have overgrown within this community due to the absence of fire. As stated "Proper management and prescribed burning techniques should improve conditions within the Pine Flatwoods at the site and allow the flatwoods to return to their natural conditions."

The Xeric Oak communities will be enhanced by the removal of thick vegetation under the trees and the use of herbicides to remove the exotic and invasive plants. Fire breaks will be cut around the Xeric Oak habitat to protect it from initial prescribed burns.

The Clearcut or Altered Areas will require herbicide and prescribed burns to remove the invasive exotic species and prepared the areas for replanting. The roadways throughout the site have slowly eroded. The erosion will be slowed by cross berming the trails and filling in any holes.

The Freshwater Hardwood Swamps will be protected by restricting public access to these areas. Any existing trails will be blocked off and signs will be posted to notify the public of this environmentally sensitive area. The encroachment of Laurel oaks, pond pines, and cabbage palms into this area will be halted. Wax myrtles will be removed.

Due to the fact that the vegetative survey took place in September, additional site visitations may occur in the winter, spring, and summer to catalog species that appear on the site over an entire year. Coordination with local community colleges or universities could produce educational programs that will also assist in the cataloging of species on the site.

4.4) Timing & Extent of Plant Species Survey

The vegetative survey contains extensive catalogs of the existing plant species on the site.

Catalog A in Appendix 2, Vegetation Analysis & Plant Lists, lists the Common Name, Scientific Name and the Area each plant was located in on the site visit of September 30, 1996. The

list encompasses some two hundred different species of plants. Please see Exhibit "F".

Catalog B in Appendix 2, Vegetation Analysis & Plant Lists, lists the Genus/Species, Listed Status, Invasive/Non-Invasive, Native/Non-Native, Habitat, Phenology (Seasonality), and Reference Citation for the plant species on the Project Site. Please see Exhibit "G".

Catalog C in Appendix 2, Vegetation Analysis & Plant Lists, lists the Scientific Name, Common Name and Section each plant is located in on the Project Site. Please see Exhibit "H".

Catalog D in Appendix 2, Vegetation Analysis & Plant Lists, include the Plant Family and Genus and Species List for the Project Site. Please see Exhibit "I".

4.5) Actions to Protect Listed Plant Species on Site

The following is a inventory of the Listed Plant Species that were found on the Twin Rivers 2 Preserve site during the vegetative survey. The sector location column refers to the sectors on the Vegetation Analysis Plant Communities Map where the species are located. It is attached as Appendix 1 of the survey. Please see Exhibit "E".

COMMON NAME	SCIENTIFIC NAME	SECTOR LOCATION
Nodding Nixie	Apteria aphylla	N, Q
Swamp Fern	Blechnum serrulatum	N
Dwarf Sundew	Drosera brevifolia	K
Pink Sundew	Drosera capillaris	A, E, F, J, K, L

COMMON NAME	SCIENTIFIC NAME	SECTOR LOCATION
Green Fly Orchid	<i>Epidendrum conopseum</i>	M, N
Rein Orchid	<i>Habenaria odontopetala</i>	N
Catesby's Lily	<i>Lilium catesbei</i>	C, M, N
Clubmoss	<i>Lycopodium carolinianum</i>	E
Nodding Clubmoss	<i>Lycopodium cernuum</i>	A, F, J, L, Q
Cinnamon Fern	<i>Osmunda cinnamomea</i>	A, C, E, H, J, K, M, N, Q
Yellow Butterwort	<i>Pinguicula lutea</i>	E
Butterwort	<i>Pinguicula</i> sp.	A
Yellow Batchelor's Button	<i>Polygala rugelii</i>	A, E, J, K, M, N
Swamp Honeysuckle	<i>Rhododendron viscosum</i> var.	C, K, M, Q
Hooded Pitcher Plant	<i>Sarracenia minor</i>	K, N
Wild Pine	<i>Tillandsia fasciculata</i> v.	M, N
Air Plant	<i>Tillandsia setacea</i>	F, N
Shoestring Fern	<i>Vittaria lineata</i>	N
Netted Chain Fern	<i>Woodwardia areolata</i>	C, N

A Listed Plant Species map which pinpoints the locations of the above listed species has been prepared. Please see Exhibit "J".

Every effort will be made to locate and protect the listed species on the Project Site. The plants will be shielded from public access and no improvements will be constructed near the listed species. Any invasive and/or exotic species growing near the plants will be removed. Actions to protect the vegetative communities and the individual listed plant species on the site will be coordinated to prevent any conflict.

4.6) Timing & Extent of Wildlife Survey

A wildlife survey on the Project Site was prepared for the City of Oviedo. The survey took place over the course of

several weeks during the late summer and early fall of 1996. The survey was completed on September 30, 1996. The wildlife survey was incorporated with the "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District", is attached. Please see Exhibit "B".

As stated in the report, "Animal species were surveyed on the site. Gopher tortoise (*Gopherus polyphemus*) is the only listed species presently identified as a resident (Appendix 5, photo 17). In addition to seeing many burrow locations for gopher tortoise, we actually found a male about twelve inches in length, a female about eleven inches in length, and a juvenile about six inches long in various sectors...four gopher tortoise eggs were found above round with a buried nest near them containing an undetermined amount of eggs since the nest was not disturbed. This proves that the site is a viable and on-going habitat for these creatures." Active, inactive and abandoned gopher tortoise burrows were mapped in Appendix 4, Listed Animal Survey, Gopher Tortoise Burrows. Please see Exhibit "K".

The survey continues, "Several reptiles were found, including rough green snake (*Opheodrys aestivus*), approximately eighteen inches long...an eastern glass lizard was seen...No sighting of eastern indigo snake (*Drymarchon corais couperi*) was made on the project, but there is suitable habitat here for this species to occur. The five-lined skink (*Emcees fasciatus*) was observed on several occasions."

"Three red-shouldered hawks (*Buteo lineatus*) were seen flying in Sector M and were also seem perching in Sector Q; however no nests were observed. A covey of 10 northern bob whites (*Colinus virginianus*) were seen at the south end of Sector N...Many song bird species were seen and heard on site but none are listed species." Also observed on the site were two female white-tailed deer (*Odocoileus virginianus*) and gray squirrels (*Sciurus carolinensis*).

Due to the fact that the wildlife survey took place in September, additional site visitations may occur in the winter, spring, and summer to catalog species that appear on the site over an entire year. Coordination with local colleges or a university could produce educational programs that will also assist in the cataloging of species on the site.

The wildlife survey states "The site area is marginal as a potential territory for scrub jays nesting but might furnish food if properly burned and managed for scrub habitat." During the reforestation and restoration phase of the site

development, the authors of the "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District" will be contacted to gain additional information on the type of trees and vegetative environment that will be conducive to reintroducing scrub jays to this area. Additional inquiries will be made in restoring the site to promote the habitats necessary to support other listed plant and animal species.

4.7) Actions to Protect Listed Animal Species on Site

Habitat areas of the Gopher Tortoise are outlined on the Master Site Plan, Exhibit "A". The "Tortoise Habitat Areas" will be protected from human disturbances or access. No paths, picnic tables, benches, kiosks, or observation tower will encroach into these areas. Any existing tree houses or deer stands in these areas will be removed.

4.8) Procedure to Forward Listed Species Information to the Florida Natural Areas Inventory

Florida Natural Areas Inventory have forwarded information to the City of Oviedo. The packet included a booklet on Tracking Lists of Special Plants and Lichens, Vertebrates, Invertebrates, and Natural Communities, a program summary and field report forms for rare plants and special animals. The forms will be completed as required, added as a supporting document to this management plan, and returned to the Florida Natural Areas Inventory.

4.9) Monitoring Activities on Site

The Twin Rivers 2 Preserve site will be monitored regularly after site acquisition. Improvements as detailed on the Master Site Plan will be scheduled and completed. Herbicide applications and prescribed burns will begin the process to remove the invasive and exotic species from the site.

As stated in the "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District, "In order to control these invasive exotic species, there are several things that need to occur. Some species need immediate application of herbicide. Some need to be cut and cleared. A well-planned long-term prescribed burning regime needs to be formulated with the various responsible State Agencies. Follow-up spraying on re-emergence of some weeds by both seeds and roots need to be applied. Lastly, but certainly not least, there need to be on-going management of the site by periodic visitation and follow-up treatments." After the initial applications, quarterly monitoring

inspections will be scheduled.

Various agencies, which include SJRWMD, Division of Forestry, and FGFWFC, have been contacted in reference to the management objectives and procedures for the preserve. Their coordination on the burns, buffering of vegetative and animal species, and site restoration will entail constant monitoring and long term site surveys and visitation.

5.0) Coordinate with FGFWFC for Guidance, Recommendations and/or Permits to avoid impact to Listed Species

Ms. Julie A. Hovis, Regional Nongame Wildlife Biologist, was contacted at FGFWFC. She expressed enthusiasm for the project. She forwarded the request for assistance to Mr. Steve Lau in the Vero Beach office. He will coordinate with the City of Oviedo on the management of the site to protect the listed species and listed species habitat. Please see the letter in Exhibit "L".

5) RESOURCE ENHANCEMENT

5.1) Identification of Natural Resources & Enhancement and Restoration Techniques

As listed in Section 4 of this Management Plan the following items are natural resources that will be identified, protected and restored.

The xeric oak, sand pine scrub, pine flatwoods and freshwater hardwood swamp communities will be preserved and managed to ensure the long-term viability of these communities.

The listed animal species and their habitats will be sufficiently buffered to protect them from the adverse impacts of adjacent land uses.

FGFWFC will coordinate on the management of the site to protect the listed species and listed species habitat, including the gopher tortoise.

Approximately 4 acres of the site will be restored by replanting some of the cleared trails and the perimeter of the detention pond with native vegetative species. The site will be monitored for any recurrence of invasive exotic vegetation.

The Division of Forestry and FGFWFC will be contacted to develop a prescribed burn plan for the site. A

prescribed burning regime will be generated to maintain natural fire-dependent vegetative communities.

Coordinate with SJRWMD regarding a greenway/wild-life corridor management strategy for the Econlockhatchee River system as promoted in the City of Oviedo's Econlockhatchee River Protection Ordinance.

5.2) Areas and Acres on Site to be Restored

The restoration and revegetation of the Twin Rivers 2 Preserve will be consistent with the "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District". Pages 19 through 22 outline nine recommendations for restoring the site. The team that prepared the report was aware that Florida Communities Trust required four acres of cleared area to be restored pursuant to the Conceptual Approval Agreement.

The four acres to be restored include areas around the detention pond, the cleared areas designated as 451 - Clearcut or Altered Areas on Appendix 1, Vegetation Analysis Plant Communities Map, and existing roadways that have eroded over the years

5.3) Detail of Restoration Techniques

The restoration techniques will be consistent with pages 19 through 22 of the "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District". See Exhibit "B".

After the area around the detention pond is cleared of invasive vegetation it will be planted with "pond pine and a mix of habitat suited wild flowers and herbaceous materials."

The 451 - Clearcut or Altered Areas will be burned and then planted with a mixture of "loblolly bay, titi, Walter's viburnum, and longleaf pine will enhance the surrounding area..."

The existing roadways that have eroded over the years will be stabilized with berms and fill. Some of the roadway cuts hold considerable moisture. These areas have allowed native plants to grow in the wet conditions. Several listed species in the roadways will have to be protected or relocated. In other wet areas a "light application of granular 6-6-6 fertilizer in the springtime" will restore the existing native vegetation.

5.4) Time Frame for Exotic Vegetation Eradication &

Revegetation Program

Invasive exotic species eradication of the Twin Rivers 2 Preserve will be consistent with the "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District". Pages 10 through 22 outline immediate and long-term treatment for controlling and removing exotic vegetation. Appendix 3, of the biological report, Vegetation Analysis Exotic Plants Map, highlights the species of greatest concern.

The report states "In order to control these invasive exotic species, there are several things that need to occur. Some species need immediate application of herbicide. Some need to be cut and cleared. A well-planned long-term prescribed burning regime needs to be formulated with various responsible State agencies. Follow-up spraying on re-emergence of some weeds by both seeds and roots needs to be applied. Lastly, but certainly not least, there needs to be on-going management of the site by periodic visitation and follow-up treatments."

The report details the location of numerous invasive species, including hairy red indigo (*Indigoera hirsuta*), bag pod (*Sesbania emerus*), primrose willow (*Ludwigia peruviana*), Torpedo grass (*Panicum repens*), native blackberry (*rubus cf. trivialis*), etc., and the exact method of eradication.

5.5) Monitoring Program to Prevent Reinfestation

As stated in the biological report of the site referenced above, seasonal inspections and monitoring will be necessary until the exotic vegetation is exterminated. Some species will need to be sprayed with herbicide, allowed to dry then physically removed or burned. Other species require spraying and then reinspection the following year for seed re-emergence and possible re-spraying.

A fire break will be cut along the west boundary of the site. An existing utility easement adjacent to part of the property will serve as a portion of the firebreak. The firebreak will preserve large native trees. This will buffer the surrounding neighborhoods from fires and will also prevent infestation of household landscaping plants such as ferns (*Nephrolepis* spp.), African Iris and Impatiens that were observed on the site.

The City will be working closely with various state agencies including SJRWMD, FGFWFC, the Division of Forestry, etc. with the implementation of the management plan. Monitoring of the

site will also follow any guidelines or procedures implemented by the various agencies.

5.6) Draft Burn Plan

The "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District" outlines Prescribed Burns on pages 16 through 19. The report recommends a multi phased burn program because of the vegetative communities on the site and the proximity of residential homes. The burn plan for the site will be consistent with the requirements of the report and will be prepared under the guidance of representatives of the Division of Forestry.

The fire break on the western boundary will be cut in preparation for the burns. Small burns in specific locations will be scheduled during the year to aid in the removal of invasive exotic species on the site.

5.7) Removal of Feral Animals

During the completion of the vegetative survey and various site visits, no sightings of wild pigs, dogs, or cats were observed. There will be on-going control of feral animals on the Project Site. The permanent preserve signs that will be erected at the preserve entrances will include a statement "All pets must be on a leash and controlled at all times." If City personnel assigned to monitor the site observe or are notified of the presence of any stray animals, Seminole County Animal Control will be notified.

6) ARCHEOLOGICAL AND HISTORICAL RESOURCE PROTECTION

6.1) Identification of Known Archeological or Historical Sites

Attached as Exhibit "M" is a letter received by the Florida Communities Trust from the Florida Department of State, Division of Historical Resources. The letter states that although the above-referenced Site Assessment Survey was completed for the Riverwood development, the actual Twin Rivers 2 Preserve site was not reviewed during that survey. The letter continues "Nevertheless, while the preserve tract does not appear to be in a high probability location for encountering potentially significant archaeological sites, the land manager should be aware of the possibility of encountering fortuitous finds. This needs to be at least minimally addressed in the management plan."

The Land Use Element of the Comprehensive Plan addresses the protection of historic and archaeological sites under Objective 1-1.6. It states that "Historic and archaeological sites shall be protected from destruction, removal, or alteration and from impacts of adjacent incompatible land uses through implementations" of several policies. Policy 1-1.6.2, Protection of Archaeological Sites, states "An archaeological evaluation of any potentially significant archaeological site shall be required prior to development approval." It continues "The developer shall notify the City and the Florida Department of State, Division of Historical Resources, to any archaeological findings discovered during land preparation or construction. Upon such a discovery, development plans may be altered according to requirements of the State Division of Historical Resources to preserve, remove, or conserve the archaeological findings."

If evidence is found to suggest an archaeological or historical resource at the Project Site, any operation in progress will stop at once and the City of Oviedo will immediately notify the Division of Historical Resources and take appropriate measures to protect the resources and comply with the provisions of Chapter 267.061(2)(a) and (b), Florida Statutes.

Therefore, throughout the proposed restoration and revegetation activities or during the installation of the proposed improvements, the City of Oviedo or the Special Neighborhood Improvement District Board of Directors will notify the responsible party of the possibility of locating or uncovering evidence of a historical or archaeological resource at the Project Site. A copy of the above referenced Comprehensive Plan Objective and Policies will be provided to any party employed by the City of Oviedo or the Special Neighborhood Improvement District Board of Directors prior to any initiation of work at the Project Site.

7) EDUCATION PROGRAM

7.1) Proposed Education Programs for the Site

A nature/education area is shown on the Master Site Plan. The purpose of this area is to provide a location for outdoor education programs related to conservation and nature activities. The nature/education area will encompass a small clearing where groups can meet during visits to the Twin Rivers 2 Preserve. Various organizations have already indicated an interest to use the facility to promote conservation education. This groups include the Boy Scouts of America, the Girl Scouts of America, Rollins College Environmental Studies Department, and the Oviedo Recreation Department. The site may also be useful to environmental classes

from local schools and from the University of Central Florida.

8) COORDINATED MANAGEMENT

8.1) Coordinate with the Division of Forestry on Prescribed Burns

Prior to implementing the Master Site Plan, a prescribed burn will be coordinated with the Division of Forestry. Due to the proximity of residential neighborhoods, the burn shall also be coordinated with the City of Oviedo Fire Department.

8.2) Coordinate with the FGFWFC on Protection of Listed Species

Prior to implementing the Master Site Plan, the FGFWFC shall be contacted and consulted regarding protection of listed species and to identify all necessary permits that may be necessary to relocate listed species if such relocation is necessary. The Master Site Plan and final site plan shall be coordinated with the FGFWFC.

Management of the Project Site will be coordinated with the St. Johns River Water Management District's Resource Management Plan for the Econlockhatchee River system.

9) GREENWAY MANAGEMENT

9.1) Identification of Resource Protection, Coordination among Agencies & Map comprising Greenway Network

The Twin Rivers 2 Preserve is presently located adjacent to a Greenway established along the Little Econlockhatchee River. The land comprising this Greenway is owned by the St. Johns River Water Management District (SJRWMD). Upon acquisition the site will increase the area of this Greenway as well as represent one of the last remaining upland areas along the Little Econlockhatchee River Greenway corridor.

Within thirty days of closing on the Project Site, the City of Oviedo will notify the East Central Florida Regional Planning Council, Seminole County, DEP Division of Trails and Greenways, the Cross Seminole Trail organization, and SJRWMD of the acquisition. Such notification will request that the various agencies incorporate the Project Site into their resource management plans and add it to their appropriate public information maps.

Presently, the SJRWMD does not have any established trails along this section of the Greenway. A connection from the preserve to a regional trail within the Greenway is feasible. No connection is shown in the Master Site Plan at this time because it is not known where the trail may be located or if it will be located on the opposite side of the river. Two maps identifying the preserves location within the Greenway Network and Cross Seminole Trail are provided in Exhibit "N".

Improvements to the preserve are positioned away from the Greenway with exception to a proposed observation tower and a trail which will allow preserve visitors to observe adjacent wetland systems and the Greenway corridor. As shown on the Master Site Plan, the southern half of the property and some areas adjacent to the existing Greenway are left undisturbed and designated for conservation lands.

A canoe launch facility was considered in the preparation of the Master Site Plan. However, after coordination with the SJRWMD regarding access to the river, the concept was not included in the plan because of the cost and permitting requirements. In addition, the location for the canoe launch facility was remote from the parking lot, creating a burdensome distance for most people to carry a canoe.

Within one year after acquisition of the site, the City shall process a land use amendment to the City Comprehensive Plan to change the land use of the property from Residential-PUD to Public and/or Conservation. The Master Site Plan is consistent with resource protection requirements of the City's Econlockhatchee River Protection Ordinance, Comprehensive Plan, and Land Development Code.

5. COST ESTIMATE AND FUNDING SOURCE

5.1) Identification of costs with the Management Plan, Improvements, Management Activities, & Resource Enhancement

Attached as Exhibit "O" is a detailed cost estimate for the Twin Rivers 2 Preserve improvements, management activities and resource enhancement.

Additional costs are anticipated for permitting, land use amendments, zoning change, and other associated activities.

To fund the amount appropriated for the development of the Project Site, the registered electors owning property in the Special Neighborhood Improvement District approved the levy of a

special assessment through a mail ballot referendum. The special assessment of up to \$60.00 annually, for not more than five to seven years, will be levied on each single family home in the district. The election followed the requirements of Section 163.514, Florida Statutes. The special assessment, collected annually, will finance a loan to be obtained from SunTrust Corporation.

Approximately \$40.00 to \$55.00 of the special assessment will be used to finance the approximate \$600,000 loan to purchase the Project Site. The remainder of the assessment will be allocated to preserve improvements and maintenance.

The assessments will be collected by the Seminole County Tax Collector on the 1998 tax bill. The City of Oviedo will reimburse the necessary costs until the funds become available.

6. PRIORITY SCHEDULE

6.1) Identification of Time Line for Management Plan Implementation

The time line for the implementation of the Management Plan will begin with the acquisition of the Twin Rivers 2 Preserve site, which is tentatively scheduled for April-May 1997. Due to uncertain dates for FCT approval of the Management Plan and Purchase Agreement, the time line provides a general schedule of events, but by doing so it still retains a proper chronology and sequence for each activity.

As soon as closing occurs, the following activities will be initiated: execution of the maintenance agreement between the Special Neighborhood Improvement District and the City of Oviedo, placement of temporary signs at the entrances of the Project Site, installation of the security fencing and gates, final coordination with the various agencies, and completion of the final Master Site Plan.

The land use amendment and rezoning process will begin in July 1997 and will be completed by the end of the year. Permitting for the site improvements will begin in September 1997 and will be completed by January 1998.

The resource management process will begin with any necessary relocation of listed plant species in October 1997. This will occur after coordination with the state agencies has been completed. A multi-phase burn program will begin in February 1998.

Herbicide and exotic vegetation removal programs will be initiated around the same time. After the initial burns, spraying, and exotic vegetation removal, the reforestation and restoration activities will begin in April 1998. Construction and installation of the proposed preserve improvements will coincide with the restoration activities.

6.2) Graphic Display of Time Lines

Attached, please see Exhibit "P".

7. MONITORING AND REPORTING

7.1) Procedures to Evaluate Implementation of the Management Plan in Conjunction with the Annual Report

The Priority Schedule (see Exhibit "P") for the Twin Rivers 2 Preserve will be followed through the end of 1998. The schedule outlines activities that will require coordination with state agencies on permitting, burns, spraying, relocation of listed species, removal of exotic vegetation, final site plan design, and construction of the preserve improvements. The status of each of these activities will be documented on a continual basis to facilitate preparation of the Annual Report. Completion of the Project Site acquisition, land use amendment, and execution of the maintenance agreement will be chronicled in the Annual Report.

Quarterly or yearly monitoring as required by the vegetative survey and any of the state agencies will be completed and documented. The results of the reforestation and revegetation activities will be discussed and their degree of success described.

7.2) The City of Oviedo and the Twin Rivers - Alafaya Woods Neighborhood Improvement District Board of Directors acknowledges the responsibility for the preparation of an annual report that evaluates the implementation of this Management Plan. The annual report shall be due on the anniversary date the Project Plan was approved by FCT.

8. SUPPORTING DOCUMENTS

8.1) Master Site Plan

Attached, please see Exhibit "A".

8.2) Relevant Maps, Photographs, & Reports from Application

Not applicable.

8.3) Management Conditions of the Conceptual Approval Agreement

8.31) Page # in Management Plan where Special Conditions are Addressed

- Condition 1) Provide passive outdoor recreational facilities which include hiking trails, boardwalks, observation decks, and interpretive signage. Develop these facilities in a manner that encourages the general public reasonable access for observation and appreciation of the natural resources on the project site without causing harm to those resources.
See FUTURE PHYSICAL IMPROVEMENTS, Pages 10-15, and the MASTER SITE PLAN, Exhibit "A".
- Condition 2) Timing and extent of a vegetative survey of vegetative communities and plant species on the site. The survey shall be utilized during development of the site to insure the protection, restoration, and preservation of the natural resources on the Project Site.
See Section 4.2) through Section 4.5) Pages 20-24, and the "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District", Exhibit "B".
- Condition 3) Preserve and manage the xeric oak, sand pine scrub, pine flatwoods and freshwater hardwood swamp communities to ensure the long-term viability of these communities.
See Section 4.3), Pages 21-22.
- Condition 4) Sufficiently buffer the listed animal species and their habitats to protect them from the adverse impacts of adjacent land uses.
See Section 4.7), Page 25.
- Condition 5) Coordinate with the Game and Fresh Water Fish Commission on the management of the site to protect the listed species and listed species habitat, including the gopher tortoise.

See Section 5.0), Page 27, and Section 8.2), Page 31.

Periodic surveys of listed species utilizing the site shall be performed.

See Section 4.9), Page 26, & Section 5.5), Page 29.

Develop informational signs regarding the protection of the listed animal species and their habitat.

See Section 2.1), Paragraphs (D), (E), and (F), Page 11.

Condition 6) Restore approximately 4 acres of the site by replanting some of the cleared trails and the perimeter of the detention pond with native vegetative species. Monitor for any recurrence of invasive exotic vegetation.

See Section 5.2), Page 28, Section 5.3), Page 28, and Section 5.5), Page 29.

Condition 7) Coordinate with the Division of Forestry and Game and Fresh Water Fish Commission on the development of a prescribed burn plan for the site. Perform a vegetation analysis to determine the need for a prescribed burning regime to maintain natural fire-dependent vegetative communities.

See Section 5.6), Page 30, Section 8.1), Page 31, and the "Biological Report on Twin Rivers, Section II, Special Neighborhood Improvement District", Exhibit "B".

Condition 8) Coordinate management of the site with the land managers of adjacent conservation and recreation lands.

See Section 5.1), Page 27, Section 5.5), Page 29.

Condition 9) Coordinate management of the site with the St. Johns River Water Management District's Resource Management Plan for the Econlockhatchee River system.

See Section 5.1), Pages 27-28.

Condition 10) Coordinate with the St. Johns River Water Management District and other public and private entities to establish a greenway/ wildlife corridor management strategy for the Econlockhatchee River system as promoted in the City of Oviedo's Econlockhatchee River Protection Ordinance.

See Section 9.1), Pages 32-33.

Condition 11) Determine the presence, if any, of archaeological sites prior to the commencement of any proposed development activities.

See Section 6.1), Page 30.

Condition 12) Promote access to the site by pedestrians, bicyclists and persons on non-motorized vehicles, except in areas where resource protection considerations limit access.

See Section 2, Page 6, Section 2), Page 10, Section 2.1), Pages 10-11, Section 2.2) & Section 2.3), Page 12, and Section 2.7), Page 14.

Condition 13) The terms and conditions of the FCT award shall not conflict with any requirements imposed by future awards of grant programs sought by the City of Oviedo or the Special Neighborhood Improvement District Board of Directors.

See Paragraph 13), Page 7.

8.4) Copy of FL Natural Inventory Listed Species Reporting Forms (listed animal species and listed plant species)

Attached, please see Exhibit "Q".

8.5) Copy of the Exotic Pest Council's List of Florida's Most Invasive Species

Attached, please see Exhibit "R".

8.6) The Management Plan shall include a copy of the Grant Award Agreement and the recorded deed when the documents become available.

EXHIBITS

Exhibit A	Master Site Plan
Exhibit B	Survey
Exhibit C	Management, Improvement & Maintenance Agreement
Exhibit D	Section 224 of the City of Oviedo Land Development Code
Exhibit E	Vegetation Analysis Plant Communities Map
Exhibit F	Catalog A Appendix 2 Vegetation Analysis and Plant Lists
Exhibit G	Catalog B Appendix 2 Vegetation Analysis and Plant Lists
Exhibit H	Catalog C Appendix 2 Vegetation Analysis and Plant Lists
Exhibit I	Catalog D Appendix 2 Vegetation Analysis and Plant Lists
Exhibit J	Listed Plant Species Map
Exhibit K	Listed Animal Survey, Gopher Tortoise Burrows
Exhibit L	Coordination with FGFWC
Exhibit M	Letter from Florida Department of State, Division of Historical Resources
Exhibit N	Greenway Network and Cross Seminole Trail Maps
Exhibit O	Cost Estimate for Twin Rivers II Preserve
Exhibit P	Graphic Display of Time Lines
Exhibit Q	Florida Natural Inventory Listed Species Reporting Forms
Exhibit R	Exotic Pest Council's List of Florida's Most Invasive Species