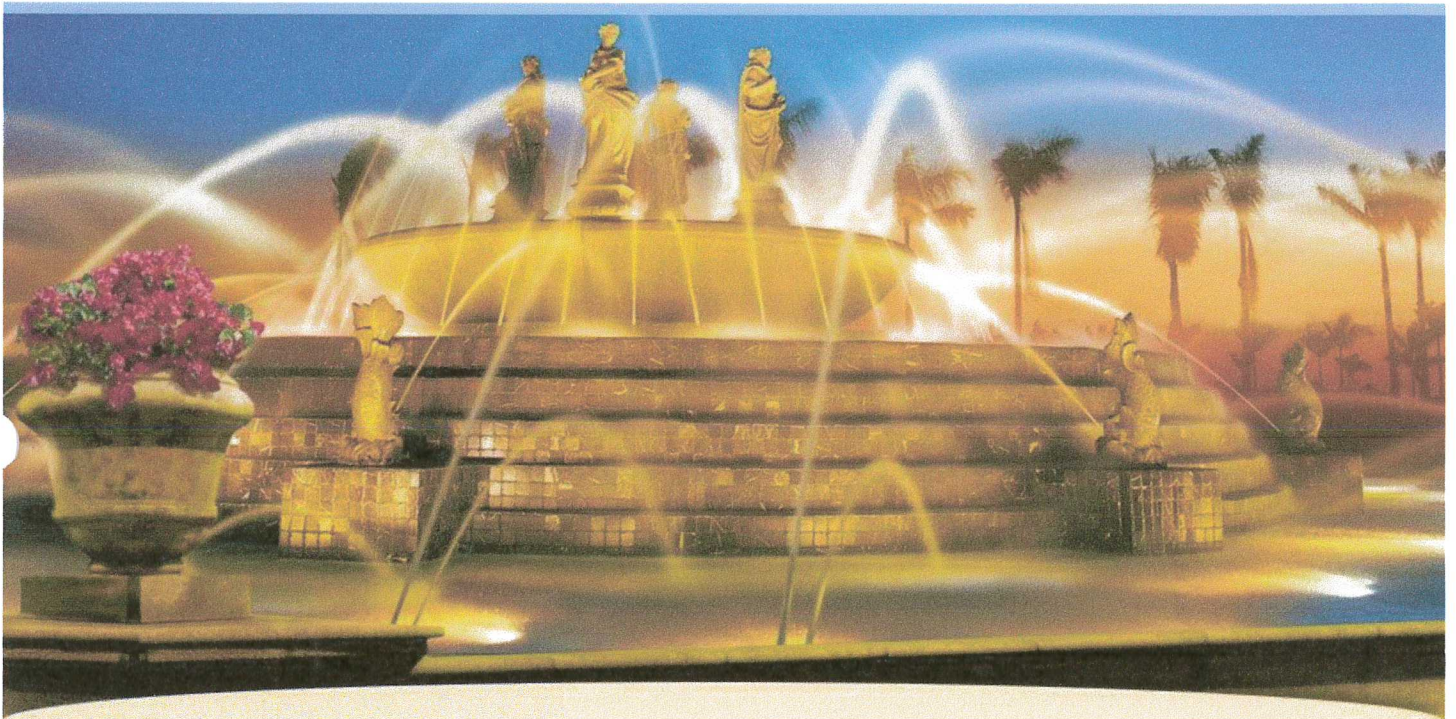


MIROMAR LAKES SHORELINE MANAGEMENT SYSTEM



FEBRUARY 2016

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MIROMAR LAKES
COMMUNITY DEVELOPMENT DISTRICT
SHORELINE OPERATIONS DEVELOPMENT DISTRICT

The following report contains information pertaining to related subjects of the Miromar Lakes Surface Water Management System:

1. Miromar Lakes Analysis of South Florida Water Management Permits
2. Response to South Florida Water Management District – Notice of Inspection
3. Miromar Lakes Subdivision Bank Erosion, HOA Drainage Installations and Corrective Modifications and Financial Impacts Spreadsheet
4. Miromar Lakes Subdivision Photos and Maps
5. Littoral Shelf Plantings and Lake Barriers
6. Turbidity Barriers

The Miromar Lakes Community Development District (CDD) District Professional Staff has performed an assessment of current conditions, completed field measurements and prepared an analysis of corrective construction methods relevant to compliance of the CDD permits issued by the South Florida Water Management District.

In the Staff's investigation of the erosion of the existing lake banks, it is evident that both the Homeowner Associations' (HOA's) Lake Maintenance Easement (LME) and the District's maintenance responsibilities are recommended to be addressed over a reasonable period of time to be determined to comply with the various water management permits issued by the South Florida Water Management District (SFWMD). Significant lengths of the existing lake banks have been impacted, both above and below the mean water level (elevation), which are primarily a result of windblown wave action, water level fluctuations, along with drainage and rain water leader installations within the lakes and ponds. The lake maintenance easement slopes within many of the communities have deteriorated and have been compromised in many instances by the installation of yard drains installed by various HOA contractor(s) as these installations are located at the top of the lake bank slopes.

This report provides the linear footage per subdivision of the amount of lake bank (shoreline) that will require corrective action or reconstruction, an explanation as to the material required for correction of lake bank erosion, method(s) to facilitate the corrections to the existing slopes, and lake barrier and littoral shelf plant installations to comply with current SFWMD permits. The report also contains the estimated fiscal impact to provide these community improvements. Finally, as part of the settlement agreement with Alico, an estimate of the suggested turbidity screen installation charges (per deployment and storage) in response to the Alico lawsuit settlement agreement.

SECTION 1

Miromar Lakes Analysis of South Florida Water Management Permits



MEMORANDUM

To: James Ward, Miromar Lakes CDD District Manager
From: Charles L. Krebs, P.E. – M.L. CDD District Engineer
Date: January 4, 2016
Subject: Summary of SFWMD Permit Memo

HM Project No. 2003.022

The report provided by Glenn Smith's office is a summary of the general and special conditions associated with 28 separate South Florida Water Management District Permits issued for the Miromar Lakes Communities. A majority of the applications have been transferred to the Miromar Lakes CDD as the operation and maintenance entity.

The report is broken down into General Conditions, Special Conditions and the Urban Stormwater Management Program.

The General Conditions are conditions that are included with most permits. These conditions include but are not limited to; duration of construction, notice of commencement of construction, turbidity control, placement of the permit on the job site, completion of construction, water use permits, hold harmless and sale of the property.

The specific conditions are conditions that are directly related to the individual application. These conditions include but are not limited to; information on approved control structures, erosion controls during construction, water quality, lake slopes, design elevations, wetland monitoring and references to the Urban Stormwater Management Program.

The Urban Stormwater Management Program is a document that is included in the permit review process. It is used to outline best management practices (BMP's) used during and after construction to help improve and maintain water quality. These include nutrient and pesticide management, street sweeping, solid waste management, operation and maintenance of the stormwater management system, water quality testing and construction activities.

The Urban Stormwater Management Program has traditionally been used as a guideline for applicants who may be new to the requirements of operating and maintaining a stormwater management system.

Lastly, the memo provides the following conclusion;

"In summary, as the operating entity, the CDD would be responsible for compliance with all of the General and Special Conditions outlined above. This includes the continuing obligation to do such things as correct any erosion, shoaling or water quality problems that result from the operation of the surface water management system, maintain lake side slopes at certain depths and provide routine maintenance of all of the components of the surface water management system. Further, as per the SFWMD's Non Compliance Letter, the SFWMD is holding the CDD responsible – as the operating entity – for defects and issues stemming from the initial construction as well as non-permitted modifications made by individual homeowners....."

**MEMORANDUM ANALYZING THE RESPONSIBILITIES OF MIROMAR LAKES CDD
AS THE OPERATING ENTITY UNDER CERTAIN SOUTH FLORIDA WATER
MANAGEMENT DISTRICT PERMITS**

A. INTRODUCTION

The purpose of this Memorandum is to detail Miromar Lakes CDD's obligation as the "operating entity" under the permits referenced in Alico's May 18th letter ("May 18th Letter"); the permits referenced in the December 7, 2011 Conversion to Operation Phase; transfer to Operating Entity letter ("Transfer Letter"); and the permits referenced in the September 18, 2015 Notice of Inspection – Non Compliance letter from the South Florida Water Management District ("Non Compliance Letter"). A copy of the May 18th Letter is attached hereto as **Attachment "1,"** a copy of the Transfer Letter is attached hereto as **Attachment "2,"** and a copy of the Non Compliance Letter is attached hereto as **Attachment "3."** For reference, below is a complete list of all the permits addressed in this Memorandum:¹

1. Application No. 951122-7 ("Permit 1")
2. Application No. 991101-14 ("Permit 2")
3. Application No. 000901-10 ("Permit 3")
4. Application No. 001023-17² ("Permit 4")
5. Application No. 010618-11 ("Permit 5")
6. Application No. 010702-21 ("Permit 6")
7. Application No. 010716-14 ("Permit 7")
8. Application No. 011120-3 ("Permit 8")
9. Application No. 020617-12 ("Permit 9")*
10. Application No. 021203-5 ("Permit 10")*
11. Application No. 030128-2 ("Permit 11")*
12. Application No. 030411-5 ("Permit 12")
13. Application No. 031222-5 ("Permit 13")
14. Application No. 040223-27 ("Permit 14")
15. Application No. 040224-23 ("Permit 15")
16. Application No. 040309-22 ("Permit 16")
17. Application No. 040326-26 ("Permit 17")*
18. Application No. 040826-18 ("Permit 18")*
19. Application No. 041027-17 ("Permit 19")
20. Application No. 041216-10 ("Permit 20")
21. Application No. 050518-18 ("Permit 21")
22. Application No. 050928-3 ("Permit 22")

¹ The Permits listed in this Memorandum are Permits that the SFWMD appears to consider that the CDD is the operating entity, regardless whether any other entity is specifically designated within the Permit (*see* Permits 1–3, 5–8, 12 and 19, wherein those Permits specifically designate the Miromar Lakes Master Association, Inc., the Miromar Lakes Homeowner Association or the Miromar Lakes Property Owners Association as the operating entity).

² This Permit was not referenced in any of the three Letters. However, when Permit 2 was transferred to the CDD as the operating entity, Permit 4 was also transferred. Therefore, Permit 4 is included in the Memorandum for reference purposes.

- 23. Application No. 051004-9 (“Permit 23”)
- 24. Application No. 060131-1 (“Permit 24”)
- 25. Application No. 070209-10 (“Permit 25”)*
- 26. Application No. 080625-6 (“Permit 26”)*
- 27. Application No. 080912-9 (“Permit 27”)*
- 28. Application No. 090903-26 (“Permit 28”)*

The Permits marked with an “*” are those Permits that are referenced in all three Letters.

As a preliminary matter, Application No. 951122-7 (*i.e.*, Permit 1) is the application for the conceptual approval for the surface water management system serving 1481.1 acres of residential, commercial and golf course development within Miromar Lakes, which application was approved and assigned Standard General Permit No. 36-03568-P. All of the subsequent Permits referenced in this Memorandum are modifications to this initial Permit.

A review of the South Florida Water Management District’s (“SFWMD”) online database shows that the majority of the Permits have been transferred from the permittee to the CDD, as the operating entity. As the operating entity, the CDD is responsible for maintaining and operating the surface water management system in accordance with all of the General and Special Conditions set forth in the Permits and outlined below. Further, the Transfer Letter specifically provides that the CDD, as the operating entity, has assumed the following responsibilities:

As a condition of transfer, you have agreed that the operating entity will be perpetually bound by all terms and conditions of the permit, and all compliance requirements, including but not limited to maintenance of mitigation areas (see attached map). Authorization for any proposed modification to the project shall be applied for and obtained prior to conducting such modification.

B. ANALYSIS

General Conditions:

With respect to the General Conditions, a review of the Permits 1 - 26 show that – with some slight variation (noted in the footnotes below) – all of the Permits contain the same General Conditions.³ These Conditions are as follows:

1. **All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit.** Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373. F.S.

³ At the time of writing this Memorandum, this firm has not been able to obtain a copy of the General and Special Conditions within Permit 27. Further, Permit 28 was approved in a form that the SFWMD refers to as a “Letter Modification.” In this situation, the Permit is simply approved with a short form letter that provides that the General and Special Conditions previously approved are still applicable. Thus, the analysis below would also apply to Permit 28, although not explicitly listed.

2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. **Activities approved by this permit shall be conducted in a manner which does not cause violations of State water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of State water quality standards.** Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual; A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C. unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. **The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.**
4. The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource Permit Construction Commencement Notice Form Number 0960 indicating the actual start date and the expected construction completion date.
5. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an annual status report form. Status report forms shall be submitted the following June of each year.
6. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a professional engineer or other individual authorized by law, utilizing the supplied Environmental Resource/Surface Water Management Permit Construction Completion/Certification Form Number 0881A,⁴ or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C. The statement of completion and certification shall be based on onsite observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings are discovered during the certification process, the certification must be accompanied by a copy of the approved permit

⁴ The earlier Permits reference Form Number 0881, not 0881A.

drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations shall be certified by a registered surveyor.⁵

7. **The operation phase of this permit shall not become effective: until the permittee has complied with the requirements of condition (6) above,** and submitted a request for conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 0920; the District determines the system to be in compliance with the permitted plans and specifications; and the entity approved by the District in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, accepts responsibility for operation and maintenance of the system. **The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective.** Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Section 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.
8. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. **Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.**
9. **For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents** required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit applications within the South Florida Water Management District, prior to lot or units sales or prior to the completion of the system, whichever comes first. **Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State, county or municipal entities. Final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.**
10. **Should any other regulatory agency require changes to the permitted system, the**

⁵ The earlier Permits contained a very similar version of this condition, however those Permits did not contain a reference to the Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C., which was added to the General Conditions for the later Permits.

permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.

11. **This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit.** This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C.
12. The permittee is hereby advised that Section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the State, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
13. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.
14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.
15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding, unless a specific condition of this permit or a formal determination under Section 373.421 (2), F.S., provides otherwise.
16. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.
17. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.
18. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the appropriate District service center.
19. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

All emphasis in above General Conditions was supplied, and is not contained within the text of the Permits.

Comments: Conditions Nos. 4 – 7 and 13 appear to relate to construction, and would have been the obligation of the original permittee, not the CDD as the operating entity. Further, Charlie Krebs has reviewed the above General Conditions and advised that same are non-controversial items that either (i) work themselves out when the project is completed; (ii) are standard maintenance requirements; or (iii) are conditions that allow SFWMD staff to inspect the site to make sure it is working as approved. *See Attachment “4.”*

Special Conditions:

In addition to the General Conditions outlined above, each Permit likewise contains a set of Special Conditions applicable to that application. **As the operating entity, the CDD would be responsible for compliance with the Special Conditions listed below.** Similar to the General Conditions, there is overlap in many of the Special Conditions contained within each Permit. With that, below is a combined list of all of the Special Conditions listed within Permits 1 – 26. Underneath each Condition is a listing of which Permit(s) specifically contains that provision.

- **Construction Phase:** Permits 3 and 5 - 26 reference a construction phase deadline.
- **Operating Entity:** Permits 9 – 11, 13 – 18 and 20 – 26 list the CDD as the operating entity within the Special Conditions. Permits 1, 2, 3, 5 - 8, 12 and 19 list the Miromar Lakes Master Association, Inc., the Miromar Lakes Homeowner Association or the Miromar Lakes Property Owners Association as the operating entity in the Special Conditions; further, the online SFWMD database shows the Miromar Lakes Master Association as the operating entity for Permit 1. With respect to Permit 27, this firm has not yet obtained a copy of the General and Special Conditions; therefore, it cannot confirm that the Special Conditions do in fact list the CDD as the operating entity. With respect to Permit 28, the Letter Modification approval of the Permit does not provide which entity is required to be the operating entity (*see footnote 2*); however, the Transfer Letter does list Permit 28 as a Permit in which the CDD is the operating entity. With respect to Permit 4, the Special Conditions do not list a specific entity that shall be the operating entity. However, the online SFWMD database shows that the CDD is listed as the operating entity for Permit 4.
- The Discharge Facilities referenced in the Permits are as follows:

Permit 1:

BASIN: 1:

1-6' W X 2.25' H Rectangular Notch Weir with Crest at Elev. 17 .85' NGVD.

1-6 ' W X .35' H V- Notch with Invert At Elev. 17.5' NGVD.

1900 Lf of 3.5' Dia. RCP Culvert.

Receiving Body: Basin 2

Control Elev: 17.5 Feet NGVD. /17.5 Feet NGVD Dry Season.

BASIN: 2:

1-6' W X 2.85' H Rectangular Notch Weir with Crest At Elev. 17.25' NGVD.

1-6' W X .5' H V- Notch with Invert At Elev. 16.75' NGVD.

1500 Lf of 3.5' Dia. RCP Culvert.

Receiving Body: Basin 3

Control Elev: 16.75 Feet NGVD. /16.75 Feet NGVD Dry Season.

BASIN: 3:

1-8' W X 3.8' H Rectangular Notch Weir with Crest At Elev. 16.4' NGVD.

1-8' W X .4' H V- Notch with Invert At Elev. 16' NGVD.

250 Lf of 4' Dia. RCP Culvert.

Receiving Body: I-75 Swale

Control Elev: 16 Feet NGVD. /16 Feet NGVD Dry Season.

BASIN: 4:

1-.32' Dia. Circular Orifice with Invert At Elev. 16' NGVD.

100 Lf of 3' Dia. RCP Culvert.

Receiving Body: Adjacent Slough System

Control Elev: 16 Feet NGVD. /16 Feet NGVD Dry Season.

BASIN: 6a. STRUCTURE NO . 1:

1-145 Deg. V- Notch with Invert At Elev. 18' NGVD.

Receiving Body: 244.2 Acre Borrow Pit Lake

Control Elev: 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6a. STRUCTURE NO. 2:

1-140 Deg. V- Notch with Invert At Elev. 18' NGVD.

Receiving Body: 244.2 Acre Borrow Pit Lake

Control Elev: 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6a. STRUCTURE NO. 3:

1-147 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body: 244.2 Acre Borrow Pit Lake

Control Elev: 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6a. STRUCTURE NO. 4:
1-163 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body: 244.2 Acre Borrow Pit Lake

Control Elev: 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6b:
1-22' W X 1.78' H Rectangular Notch Weir with Crest At Elev. 18.22' NGVD.
1-22' W X .22' H V- Notch with Invert At Elev. 18' NGVD.

10 Lf of 4' Dia. RCP Culvert.

Receiving Body: Adjacent Slough System

Control Elev: 18 Feet NGVD. /18 Feet NGVD Dry Season.

Permit 2:

BASIN: 1:
1-6' Wide Sharp Crested Weir with Crest At Elev. 18.15' NGVD.
1-6' W X .65' H V-Notch with Invert At Elev. 17.5' NGVD.

1670 Lf Of 4' Dia. RCP Culvert.

Receiving Body: Basin 2

Control Elev 17.5 Feet NGVD. /17.5 Feet NGVD Dry Season.

BASIN: 2:
1-6' Wide Sharp Crested Weir with Crest At Elev. 17.58' NGVD.
1-6' W X .83' H V-Notch with Invert At Elev. 16.75' NGVD.

1650 Lf Of 4' Dia. RCP Culvert.

Receiving Body: Basin 3

Control Elev 16.75 Feet NGVD. /16.75 Feet NGVD Dry Season.

BASIN: 3:
1-8' Wide Sharp Crested Weir with Crest At Elev. 16.46' NGVD.
1-8' W X .46' H V-Notch with Invert At Elev. 16' NGVD.

290 Lf Of 4' Dia. RCP Culvert.

Receiving Body: I-75 Swale

Control Elev 16 Feet NGVD. /16 Feet NGVD Dry Season.

BASIN: 4:

1-.32' Dia. Circular Orifice with Invert At Elev. 16' NGVD.

100 Lf of 3' Dia. RCP Culvert.

Receiving Bod : Adjacent Slough System

Control Elev 16 Feet NGVD. /16 Feet NGVD Dry Season.

BASIN: 5:

2-9' Wide Sharp Crested Weirs with Crest At Elev. 19' NGVD.

2-9' W X 1' H V-Notches with Invert At Elev. 18' NGVD.

2-6' Dia. RCP Culverts Each 50' Long.

Receiving Body: Existing Lake

Control Elev: 18 Feet NGVD. /18 Feet NGVD Dry Season.

Basin: 6, Structure No. 1:

1-22' W X 1.78' H Sharp Crested Weir with Crest At Elev. 18.22' NGVD.

1-22' W X .22' H V-Notch with Invert At Elev. 18' NGVD.

Receiving Body Adjacent Slough System

Control Elev : 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6, STRUCTURE NO. 2:

1-140 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body: Lake 6

Control Elev : 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6, STRUCTURE NO. 3:

1-20 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body : Lake 6

Control Elev : 18 Feet NGVD. /18 Feet NGVD Dry Season.

Basin: 6, Structure No. 4:

1-135 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body : Lake 6

Control Elev : 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6, STRUCTURE NO. 5:
1-20 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body : Lake 6

Control Elev : 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6, STRUCTURE NO. 6:
1-20 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body : Lake 6

Control Elev : 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6, STRUCTURE NO. 7:
1-20 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body : Lake 6

Control Elev : 18 Feet NGVD. /18 Feet NGVD Dry Season.

BASIN: 6, STRUCTURE NO. 8:
1-20 Deg. V-Notch with Invert At Elev. 18' NGVD.

Receiving Body: Lake 6

Control Elev 18 Feet NGVD. /18 Feet NGVD Dry Season.

Permit 3: Through previously permitted facilities.

Permit 4: Through previously permitted facilities.

Permit 5: No reference.

Permit 6: Through previously permitted facilities.

Permit 7: Through previously permitted facilities.

Permit 8: Through previously permitted facilities.

Permit 9:

CS#1:

1-1.0'W x 0.6'H rectangular bleeder with invert at elevation 10.0' NGVD.
360 LF of 36" RCP.

CS#2:

40 LF of 18" RCP.

CS#3:

1-0.25' Circular orifice with invert at elevation 10.0' NGVD.

42 LF of 18" RCP.

Control elevation: 18.0' NGVD.

Permit 10: References previously permitted facilities.

Permit 11: References previously permitted facilities.

Permit 12: Through previously permitted facilities.

Permit 13:

Lake 5/6 North

(1) One 22-foot wide by 1.78 High Sharp Crested Weir with crest elevation at 18.22 feet NGVD.

(1) One 22-foot Wide by 0.22-foot High V-notch with the invert at 18.0 feet NGVD.

Lake 5/6 South

(1) One 98-foot wide by 3-foot High rectangular with the invert at 18.00 feet NGVD.

Receiving Body: Adjacent slough System

Control elevation: 18.00 feet NGVD.

Permit 14: Through previously permitted facilities.

Permit 15: Through previously permitted facilities.

Permit 16: Through previously permitted facilities.

Permit 17: References previously permitted facilities.

Permit 18: No reference.

Permit 19: Through previously permitted facilities.

Permit 20: References previously permitted facilities.

Permit 21: References previously permitted facilities.

Permit 22: References previously permitted facilities.

Permit 23: Through previously permitted facilities.

Permit 24:

Structure: CS-1

1 - 3.00" dia. CIRCULAR ORIFICE with invert at elev. 18.00' NGVD.

112 LF of 36" dia. REINFORCED CONCRETE PIPE culvert.

1 - 4.25' W X 5.33' L Mod. FDOT type "J" drop inlet with crest at elev. 19.25' NGVD.

Receiving body: EXISTING LAKE NO. 6

Control elev: 18.00 feet NGVD.

Structure: CS-2

1 - 3.00" dia. CIRCULAR ORIFICE with invert at elev. 18.00' NGVD.

140 LF of 36" dia. REINFORCED CONCRETE PIPE culvert.

1 - 4.25' W X 5.33' L Mod. FDOT type "J" drop inlet with crest at elev. 19.25' NGVD.

Receiving body: EXISTING LAKE NO. 6
Control elev: 18.00 feet NGVD.

Permit 25: References previously permitted facilities.

Permit 26: References previously permitted facilities.

Comment: Charlie Krebs advised that this structure information is standard on any permit that proposes a new control structure. That information is used at the time of certification to insure the structure was constructed as approved. *See Attachment "4."*

- The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.
 - This condition appears in Permits 1 – 26.
- Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in the receiving water.
 - This condition appears in Permits 1 – 26.

Comment: The early Permits have slightly different language. In those Permits, instead of stated "Measures shall be taken...to insure...violations do not occur," those Permits state "Measures shall be taken...to insure...problems are not created..."

- The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
 - This condition appears in Permits 1 – 26.
- Lake side slopes shall be no steeper than 4:1 (horizontal: vertical) to a depth of two feet below the control elevation. Side slopes shall be nurtured or planted from 2 feet below to 1 foot above control elevation to insure vegetative growth, unless shown on the plans.
 - This condition appears in Permits 1, 2, 5, 6, 9, 13 - 18, 20, 22 - 26

Comment: Although this condition is not specifically listed in Permits 8, 10 – 12, 17, 19 and 21, those Permits all contain a provision incorporating the previously listed Special Conditions. Therefore, this condition arguably also applies to Permits 8, 10 – 12, 17, 19 and 21, even if not explicitly stated.

- Facilities other than those stated herein shall not be constructed without an approved modification of this permit.
 - This condition appears in Permits 1 – 26.

- A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.
 - This condition appears in Permits 8 – 24, 26

Comment: Although this condition is not specifically listed in Permit 25, that Permit contains a provision incorporating the previously listed Special Conditions. Therefore, this condition arguably also applies to Permit 25, even if not explicitly stated.

- The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.
 - This condition appears in Permits 8 - 26
- Elevation Requirements

Permit 1:

- | | |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. MINIMUM BUILDING FLOOR ELEVATION: | BASIN: 1 - 21.50 FEET NGVD.
BASIN: 2 - 21.50 FEET NGVD.
BASIN: 3 - 21.50 FEET NGVD.
BASIN: 5 - 22.00 FEET NGVD.
BASIN: 4 - 22.00 FEET NGVD.
BASIN: 6 - 22.00 FEET NGVD. |
| 2. MINIMUM ROAD CROWN ELEVATION: | BASIN: 1 - 19.50 FEET NGVD.
BASIN: 2 - 18.75 FEET NGVD.
BASIN: 3 - 18.30 FEET NGVD.
BASIN: 5 - 20.00 FEET NGVD.
BASIN: 4 - 18.80 FEET NGVD.
BASIN: 6 - 20.00 FEET NGVD. |
| 3. MINIMUM PARKING LOT ELEVATION: | BASIN: 1 - 18.90 FEET NGVD.
BASIN: 2 - 18.60 FEET NGVD.
BASIN: 3 - 18.30 FEET NGVD.
BASIN: 4 - 18.80 FEET NGVD.
BASIN: 5 - 18.60 FEET NGVD.
BASIN: 6 - 19.00 FEET NGVD. |

Permit 2:

- | | |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. MINIMUM BUILDING FLOOR ELEVATION: | BASIN: 1 - 21.50 FEET NGVD.
BASIN: 2 - 21.50 FEET NGVD.
BASIN: 3 - 21.50 FEET NGVD.
BASIN: 5 - 22.00 FEET NGVD.
BASIN: 4 - 22.00 FEET NGVD. |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|

Permit 24:

- Minimum building floor elevation: 22.00 NGVD.
- Minimum road crown elevation: 20.00 NGVD.

Permit 25 - 26: none referenced

Comment: Charlie Krebs has advised that these elevations measurements are standard on permit applications. The elevations are established for each application; however, the elevations don't always show up in the final approved permit. When this happens he advised that one would refer to the actual staff report for that application to obtain this information. See Attachment "4."

- This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.
 - This condition appears in Permits 13 – 26.
- The permittee acknowledges, that pursuant to Rule 40E-4.1 01(2), F.A.C., a notice of Environmental Resource or Surface Water Management Permit may be recorded in the county public records. Pursuant to the specific language of the rule, this notice shall not be considered an encumbrance upon the property.
 - This condition appears in Permit 26
- All special conditions and exhibits previously stipulated by permit number 36-03568-P remain in effect unless otherwise revised and shall apply to this modification.
 - This condition appears in Permits 2 – 6, 8 – 19, 21 – 25.
- The exhibits and special conditions in this permit apply only to this application. They do not supersede or delete any requirements for other applications covered in Permit No. 36-03568-P unless otherwise specified herein.
 - This condition appears in Permit 26.
- Dewatering shall not commence prior to obtaining a District permit authorizing the dewatering activity.
 - This condition appears in Permits 23, 24.

Comment: Permits 25 and 26 incorporate earlier imposed Special Conditions; therefore, this condition would apply to Permits 25 and 26. Notwithstanding the foregoing, see also General Condition 13 above, which Condition applies to all of the Permits and provides: "The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule"

- Prior to completing the final lake connection between existing Lake No. 5 (Basin 5) and Lake No.6 (Basin 6) all reclamation activities required in Permit No. 36-00681-S and Permit No. 36-03568-P/ Application No. 031222-5 shall be completed.
 - This condition appears in Permit 24.
- All commercial/industrial parcels shall provide a minimum dry pre-treatment volume of 1/2 inch of runoff prior to discharge into the master surface water management system.
 - This condition appears in Permit 12.

Comment: Permits 13 – 19 and 21 – 26 contain a provision incorporating previously stipulated Special Conditions. Therefore, this Condition would likewise apply to Permits 13 – 19 and 21 – 26.

- Drainage Plans & Detail Sheets:

Permit 3:

Plan sheet 1 of 1 by Banks Engineering, Inc. Signed and sealed by Samuel w. Marshall, P.E., on 9/1/2000 is incorporated by reference into this general permit and will be retained in the permit file.

Permit 4:

Plan sheet B, signed, sealed and dated November 20, 2000, Plan sheet 4, signed, sealed and dated on November 11, 2000, and Plan sheet 11, signed, sealed and dated on November 7, 2000, by Samuel Whiting Marshall II is incorporated by reference into this general permit and will be retained in the permit file.

Permit 5:

Plan sheets 5 of 12 and 12 of 12, by Hole Montes, sign, sealed and dated 6/18/01 by Charles I. Krebs, P.E. are incorporated by reference into this general permit modification and will be retained in the permit file.

Permit 6:

Plan sheets 4 and 6 through 14, signed, sealed, and dated on July 2, 2001 by Carl A. Barraco. P.E. are incorporated by reference into this general permit modification and will be retained in the permit file.

Permit 7:

Plan sheet 5 of 7 dated 8/6/01 and sheet 6 of 8 dated 7 /13/01 by Hole Montes Engineers signed and sealed by Richard E. Brylanski. P .E. are incorporated by reference into this general permit modification and will be retained in the permit file.

Permit 8:

Reference is made to Exhibit Nos. 7, 8. and 9 by Hole Montes Engineers, consisting of drainage plans and detail sheets. The drawings have been signed and sealed by Richard Brylanski, P.E., on 11/19/2001 and have been included in this permit by reference (please see permit file)

Permit 9:

Drainage plans and detail sheets 4, 6B, 7-14 of 18 by Hole Montes, signed and sealed on August 30, 2002 by Charles L. Krebs, P.E., have been included in this permit by reference (please see permit file).

Permit 10:

Drainage plans and detail sheets. 5, 7 and 8 of 10, by Hole Montes, signed and sealed on November 25, 2002 by Charles L. Krebs, P.E., have been included in this permit by reference (please see permit file).

Permit 11:

Drainage plans and detail sheets 5-7 and 9 of 11 by Hole Montes, signed and sealed on January 28, 2003 by Charles L. Krebs, P.E., have been included in this permit by reference (please see permit file).

Permit 12:

Plan sheets 2 & 3 and plan sheets 4 & 7, signed, sealed and dated by Charles L. Krebs, P.E. on May 23, 2003 and on June 30, 2003 respectively, are incorporated by reference into this Environmental Resource Permit modification and will be retained in this permit file.

Permit 13: None referenced.

Permit 14:

Plan sheets 2 and 4 through 9 signed, sealed, and dated February 13, 2004 by Charles L. Krebs, P.E. of Hole Montes, Inc. are incorporated by reference into this permit and will be retained in the permit file.

Permit 15:

Drainage plans and detail sheets 3, 4, 5, 8, 9 and 13 of 13, by Hole Montes, Inc., signed and sealed February 23, 2004 by Charles L. Krebs, P.E., have been included in this permit by reference (please see permit file).

Permit 16:

Plan sheets 5, 6, 8, 9, 10, and 11 dated April 29, 2004 and plan sheet 6A dated May 21, 2004 all signed and sealed by Charles L. Krebs, P.E. of Hole Montes, Inc. are incorporated by reference into this permit and will be retained in the permit file.

Permit 17:

Plan sheets 5, 6A, 68, and 11 signed, sealed, and dated by Charles L. Krebs, P.E. of Hole Montes on June 21, 2004 are incorporated by reference into this permit and will be retained in the permit file.

Permit 18:

Plan sheets 5, 6, 8, 9, 10, and 11 signed, sealed, and dated by Charles L. Krebs, P.E. of Hole Montes, Inc. ' on August 26, 2004 are incorporated by reference into this permit and will be retained in the permit file.

Permit 19:

Plan sheets 2, 3A, 3B, 5 through 9, signed, sealed and dated by Charles L. Krebs, P.E. on December 17, 2004 are incorporated by reference into this Environmental Resource Permit modification and will be retained in this permit file.

Permit 20:

Plan sheets 1 through 3 and 6 through 14 all signed, sealed, and dated by Charles L. Krebs, P.E., on March 17, 2005, from Hole Montes, Inc. have been included in this permit by reference (please see permit file).

Permit 21:

Plan sheets 1,2,3,4,6, 7 and 8 dated May 5, 2005 and plan sheet 5 dated July 26, 2005 all signed and sealed by Anthony A. Acri, P.E. of Acri Engineering are incorporated by reference into this permit and will be retained in the permit file

Permit 22:

Plan sheets 1, 4, 5, 7, 8, and 9 signed, sealed, and dated by Charles L. Krebs, P.E. of Hole Montes, Inc. on September 27, 2005 are incorporated by reference into this permit and will be retained in the permit file

Permit 23:

Plan sheets 5, 6, 8, 9, 10, 11 and 14 signed and sealed by Charles L. Krebs, P.E. of Hole Montes, Inc. on January 13, 2006 are incorporated by reference into this permit and will be retained in the permit file.

Permit 24:

Plan sheets 4 and 5 dated April 25, 2006 and plan sheets 7, 8, 9, 10, 11, 12, 13, 14 and 20 dated March 28, 2006 all signed and sealed by Charles L. Krebs, P.E. of Hole Montes, Inc. are incorporated by reference into this permit and will be retained in the permit file.

Permit 25: none referenced.

Permit 26: none referenced.

The following Special Conditions relate to the Stormwater Pollution Prevention Plan(s) and Urban Stormwater Management Program(s).

The later Permits incorporate by reference the terms and conditions set forth in various Stormwater Pollution Prevention Plan(s) and Urban Stormwater Management Program(s).

As background, the stated purpose of the Urban Stormwater Management Program is to improve the quality of stormwater runoff by reducing the generation and accumulation of potential stormwater runoff contaminants at or near the respective sources for each constituent, along with significant structural components of the primary stormwater treatment system. Specific pollution prevention guidelines are provided in the following areas: (1) nutrient and pesticide management; (2)

street sweeping; (3) solid waste management; (4) operation and maintenance of the stormwater management and treatment system; (5) routine water quality testing; and (6) construction activities. Detailed below are those Permits that specifically incorporate the Urban Stormwater Management Program. It should be noted that in those Permits that reference the Urban Stormwater Management Program, identical versions of the Program are attached. A copy of a sample Urban Stormwater Management Program is attached hereto as **Attachment "5."** * See Charlie Krebs comments below on the Urban Stormwater Management Program.

Further, the Stormwater Pollution Prevention Plan(s) relate generally to construction activities, and serve to minimize activities contamination that may be caused by erosion and sedimentation during the construction process. Unlike the Urban Stormwater Management Program, each Permit that references a Stormwater Pollution Prevention Plan attaches a site specific Plan to the Permit. Additionally, some of the Permits reference the Pollution Plan as a "Construction Pollution Plan" versus a Stormwater Pollution Plan. Regardless, the intent behind the various Plan(s) appears to be similar. The Plans generally include provisions relating to soil stabilization, structural erosion controls, waste collection disposal, spill prevention and maintenance, and inspection procedures to maintain erosion and sediment controls. Copies of sample Stormwater Pollution Prevention Plans are attached hereto as **Composite Attachment "6."**

- The Permittee shall utilize the criteria contained in the Stormwater Pollution Prevention Plan(s) and on the applicable approved construction drawings for the duration of the projects construction activities.
 - This condition appears in Permits 13, 16 – 21, 23 – 25.
- The Urban Stormwater Management Program shall be included as part of the facilities operating procedures.
 - This condition appears in Permit 20.
- The Urban Stormwater Management Program shall be included as part of the (Homeowners documents/Articles of incorporation/Property Owners Association documents) prior to being recorded. Prior to recording of the Home Association Documents the amended documents shall be submitted to the Enforcement and Compliance section at the Fort Myers Lower West Coast Service Center for approval.
 - This condition appears in Permit 13 and 16.
- The Permittee shall utilize the criteria contained in the Urban Stormwater Management Program for post construction activities.
 - This condition appears in Permits 17 – 19, 21, 23 – 25.
- The respective Stormwater Pollution Prevention Plan(s) and the Urban Stormwater Management Program are incorporated by reference and shall be retained in the permit file.
 - This condition appears in Permit 13, 16 – 18, 21, 23, 24.

Comment: Permits 1 and 3 - 16 do not contain any provision incorporating any later Special Condition. Therefore, this specific condition would not pertain to Permits 1 and 3 – 16.

Although this condition is not specifically listed in Permit 22, Permit 22 contains a provision incorporating the previously listed Special Conditions. Therefore, this condition arguably also applies to Permit 22, even if not explicitly stated. Further, shown below, Permit 20 does incorporate the Urban Stormwater Management Program; however, instead of stating that this Program is for use for post construction activities, it states that the Program is to be included as part of the facilities operating procedures.

Charlie Krebs has provided comments on both the Stormwater Pollution Prevention Plan and Urban Stormwater Management Program as follows:

- “During the permitting process with SFWMD we were using the boilerplate forms given to us by SFWMD for the Urban and Stormwater Pollutions plans. We did not modify the forms given to us by SFWMD as most agencies do not let you modify their forms. We would add our project’s information to the forms where there were blanks. I had a conversation with Beccagayle Reide, P.E. at the Fort Myers office of SFWMD regarding the Stormwater Pollution Plan and the Urban Stormwater Plans. It was explained to me that District staff understood that the forms were boilerplates given to the consultants. These forms were not always modified by the consultants to fit each application. If there were not specific conditions called out in the permit for items like water monitoring or similar actions, then SFWMD staff would not be expecting annual reports to update staff on items in either of the plans. If in the future these plans created a problem we could modify the approvals to replace the plans with ones that better fit the applications.”
- “Most of the [Stormwater Pollution Plans and Urban Stormwater Management Programs] dealt with monitoring construction related activities which would have ended when the projects were completed and certified with SFWMD. The Urban Stormwater Plans could be understood to be a continuing obligation by the applicant or the operating entity. There are the normal conditions about maintaining the system, littorals and lake slopes. These are conditions that are expected and are the basis for any maintenance activities the operating entities use to keep the system in compliance with the permit.”

A copy of the email with Mr. Kreb’s quoted comments is attached hereto as **Attachment “4.”**

Further, noted above, the Urban Stormwater Management Program contains items such as a requirement to sweep the streets. In response to this, Mr. Krebs pointed out that most of the roads are not owned or maintained by the CDD, so the CDD does not provide street sweeping. There is one road the CDD does own, which is located on a portion of the north access road to the FGCU. It is believed that the easement agreement puts the maintenance responsibility for this road on the university, but this needs to be confirmed with Greg Urbancic, Esq. Additionally, noted above, Charlie Krebs advised that in prior conversations with the SFWMD, the SFWMD took the position that the conditions within the Urban Stormwater Management Program (such as street sweeping) were boilerplate and, if not explicitly listed as a Special Condition (which it is not), the operating entity would not be responsible for compliance. *See Attachment “4.”* However, the terms of the Special

Conditions explicitly incorporate compliance with the Program, therefore it is arguable that all of the terms could be enforced against the CDD if desired.

The following Special Conditions are listed only within Permit 1. However, Permits 3 – 6, 8 – 19 and 21 – 26 contains Special Conditions incorporating previously referenced Special Conditions. Thus, the following Special Conditions are likewise applicable to Permits 3 – 6, 8 – 19 and 21 – 16.

- Upon submittal of an application for construction authorization the permittee shall furnish to this District documentation of ownership.
- Upon submittal of an application for construction approval involving wetland impacts or proposed mitigation. The permittee shall submit a work schedule. Subject to SFWMD staff review and approval. Specifying calendar dates for each mitigation. Monitoring and maintenance task. Including starting and completion dates.
- Upon submittal of an application for construction approval, the permittee shall stake and rope the wetlands and associated upland buffer zones within the proposed phase construction areas). The staking and roping shall be subject to the approval of SFWMD environmental staff. The permittee shall modify the staking and roping if SFWMD staff determines it is insufficient. Staking and roping shall remain in place until all adjacent construction activities are complete.
- Upon submittal of an application for construction approval, the permittee shall submit draft copies of preliminary plats, deed restrictions, conservation easements or other documentation which dedicates the wetland preservation/mitigation areas, upland buffer zones, and/or upland preservation areas as conservation and common areas. Restrictions for the use of the conservation/common areas shall stipulate:
- The wetland preservation/mitigation areas, upland buffer zones, and/or upland preservation areas are hereby dedicated as conservation and common areas. The conservation/common areas shall be the perpetual responsibility of Miromar Lakes Master Association, Inc. and may in no way be altered from their natural state as documented in permit file. with the exception of permitted restoration activities, activities prohibited within the conservation areas include, but are not limited to: construction or placing soil or other substances such as trash: removal or destruction of trees, shrubs, or other vegetation - with the exception of exotic/nuisance vegetation removal: excavation, dredging, or removal of soil material: diking or fencing: and any other activities detrimental to drainage, flood control, water conservation, erosion control, or fish and wildlife habitat conservation or preservation.
- The SFWMD reserves the right to require remedial measures to be taken by the permittee if wetland and/or upland monitoring or other information demonstrates that adverse impacts to protected, conserved, incorporated or mitigated wetlands or uplands have occurred due to project related activities.
- Any future changes in land use or treatment of wetlands and/or upland buffer/compensation areas may require a surface water management permit modification and additional environmental review by District staff. Prior to the permittee instituting any future changes

not authorized by this permit, the permittee shall notify the SFWMD of such intentions for a determination of any necessary permit modifications.

-This condition appears in Permit 2.

- Each application for construction of future phases of the permit shall be accompanied by an updated summary and map which shows the location and acreage of the wetland (s) impacted to date, and the existing mitigation areas for the entire project.
- A wetland monitoring program and maintenance program shall be implemented in accordance with exhibit (s) 4, and 8-37. The monitoring program shall extend for a period of 5 years with annual reports submitted to SFWMD staff. At the end of the first monitoring period the mitigation areas shall contain an 80% survival of planted vegetation. The 80% survival rate shall be maintained throughout the remainder of the monitoring program. At the end of the 5 years monitoring program the mitigation area (s) shall contain an 80% survival of planted vegetation and an 80% coverage of desirable obligate and facultative wetland species.
- A baseline wetland monitoring report shall be conducted in accordance with exhibit (s) 4, and 8-37.
- A time zero wetland monitoring report shall be conducted in accordance with exhibit (s) 4, and 8-37 for all created wetlands and shall include a survey of the areal extent and cross sectional elevations of the created wetland areas. Panoramic photographs, and a description of planted species sizes and densities or mulching methodology.
- Activities associated with implementation of the wetland mitigation, monitoring and maintenance shall be in accordance with the following work schedule. Any deviation from these time frames shall require formal SFWMD approval. Such requests must be made in writing and shall include (1) reason for the modification: (2) proposed start/finish dates: and (3) progress report on the status of the existing mitigation efforts.

Completion date	Activity
May 14, 1999	Submit water level monitoring plan to SFWMD for review

- Endangered species, threatened species, or species of special concern have been observed onsite and/or the project contains suitable habitat for these species. It shall be the permittee's responsibility to coordinate with the Florida game and fresh water fish commission and/or U.S. fish and wildlife service for appropriate guidance, recommendations, and/or necessary permits to avoid impacts to listed species.
- If the project design is changed as a result of other agency requirements, an environmental resource permit modification may be required. The permittee shall notify SFWMD staff of design changes required by other agencies for a determination of any necessary permit modifications.
- A maintenance program shall be implemented for the mitigation areas and upland preserves on a regular basis to ensure the integrity and viability of these areas as permitted.

Maintenance shall be conducted in perpetuity to ensure that the mitigation areas and upland preserves are free of exotic vegetation as currently defined by the Florida exotic pest plant council immediately following a maintenance activity and that exotic and nuisance species shall constitute no more than 5% of total cover.

- Upon submittal of an application for construction approval, the permittee shall submit for review and approval an executed (signed) conservation easement for the areas designated as conservation area on exhibit 5. The conservation easement shall be granted to the District using the approved form attached hereto as exhibit 6. Any proposed changes to the approved form must receive prior written consent from the District.
- A fox squirrel management plan shall be implemented on Miromar Lakes in accordance with exhibit 7. Any selective clearing (utilizing such methods as chopping, mowing and/or bush-hogging) of the ground cover stratum within the conservation areas and any pruning and/or thinning of canopy and subcanopy vegetation within the conservation areas, as discussed in the fox squirrel management plan, shall receive approval from SFWMD post permit compliance staff prior to conducting such activities. Any modifications to this management plan shall require approval from SFWMD staff.
- The permittee shall preserve, enhance and manage 122.5 acres of priority 1 panther habitat within or adjacent to an ongoing public acquisition program. In lieu of fee simple purchase, the permittee may elect to provide funding to the District for purchase, restoration and long term management of 122.5 acres within the crew boundaries. If the permittee elects to purchase and preserve lands, these may be transferred to the appropriate agency with funding for restoration and long term management activities for incorporation into the ongoing acquisition program. Upon submittal of an application for construction approval, the permittee shall provide details regarding purchase of the 122.5 acres.
- A wetland water level monitoring program shall be instituted on the project site, with at least two piezometers located north of Ben Hill Griffin Parkway and at least two piezometers located south of Ben Hill Griffin Parkway. Water level data shall be recorded at least twice a day. As is currently provided by the treeline avenue water level monitoring program. Monitoring data shall be submitted to the SFWMD quarterly in conjunction with rainfall data from the site. Submitted reports shall include a discussion of alterations to baseline water elevations and durations. Within 30 days from issuance of the conceptual permit for Miromar Lakes, the permittee shall submit a wetland water level monitoring plan, which shall be subject to review and approval by SFWMD staff. The water level monitoring program shall commence within 30 days of receiving approval from SFWMD staff on the water level monitoring program. The program shall continue until the Miromar Lakes mitigation plan has been deemed successful by District staff.
- A wetland mitigation program for Miromar Lakes shall be implemented in accordance with exhibits 4 and 8-37. The permittee shall enhance 171.48 acres of forested wetlands, 5.72 acres of herbaceous/shrub wetlands, 2.09 acres of other surface waters and preserve 7.38 acres of upland compensation areas.

- Prior to commencement of construction in those areas, the permittee shall submit plans for permit modification that provide a minimum of 1/2" dry pretreatment for all stormwater runoff within basin 5 and for all commercial tracts in other basins prior to discharge to the lake system.
- This conceptual approval does not authorize any construction activities, prior to receiving District approval for construction and operation for basins 5 and 6. The borrow pit lakes currently included in the permit authorization for Florida Rock Industries, Inc. (permit no. 36-00681-s) must be reclaimed per the requirements of that permit.

The following Special Conditions are listed only within Permit 2. However, Permits 3 – 6, 8 – 19 and 21 – 26 contains Special Conditions incorporating previously referenced Special Conditions. Thus, the following Special Conditions are likewise applicable to Permits 3 – 6, 8 – 19 and 21 – 16.

- SILT SCREENS, HAY BALES OR OTHER SUCH SEDIMENT CONTROL MEASURES SHALL BE UTILIZED DURING CONSTRUCTION. THE SELECTED SEDIMENT CONTROL MEASURES SHALL BE INSTALLED LANDWARD OF THE UPLAND BUFFER ZONES AROUND ALL PROTECTED WETLANDS. ALL AREAS SHALL BE STABILIZED AND VEGETATED IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION INTO THE WETLANDS AND UPLAND BUFFER ZONES.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE PERIMETER OF THE PROTECTED WETLANDS AND BUFFER ZONES SHALL BE STAKED AND ROPED TO PREVENT ENCROACHMENT INTO THE WETLANDS. THE PERMITTEE SHALL NOTIFY THE SFWMD'S ENVIRONMENTAL COMPLIANCE STAFF IN WRITING UPON COMPLETION OF ROPING AND STAKING AND SCHEDULE AN INSPECTION OF THIS WORK. THE ROPING AND STAKING SHALL BE SUBJECT TO SFWMD STAFF APPROVAL. THE PERMITTEE SHALL MODIFY THE STAKING AND ROPING IF SFWMD STAFF DETERMINES IT IS INSUFFICIENT OR IS NOT IN CONFORMANCE WITH THE INTENT OF THIS PERMIT. STAKING AND ROPING SHALL REMAIN IN PLACE UNTIL ALL ADJACENT CONSTRUCTION ACTIVITIES ARE COMPLETE.
- THE SFWMD RESERVES THE RIGHT TO REQUIRE REMEDIAL MEASURES TO BE TAKEN BY THE PERMITTEE IF WETLAND AND/OR UPLAND MONITORING OR OTHER INFORMATION DEMONSTRATES THAT ADVERSE IMPACTS TO PROTECTED, CONSERVED, INCORPORATED OR MITIGATED WETLANDS OR UPLANDS HAVE OCCURRED DUE TO PROJECT RELATED ACTIVITIES.
- THE PERMITTEE SHALL BE RESPONSIBLE FOR THE SUCCESSFUL COMPLETION OF THE MITIGATION WORK, INCLUDING THE MONITORING AND MAINTENANCE OF THE MITIGATION AREAS FOR THE DURATION OF THE PLAN. THE MITIGATION AREA(S) SHALL NOT BE TURNED OVER TO THE OPERATION ENTITY UNTIL THE MITIGATION WORK IS ACCOMPLISHED AS PERMITTED AND SFWMD STAFF HAS CONCURRED.

- (1) A WETLAND MITIGATION PROGRAM FOR MIROMAR LAKES SHALL BE IMPLEMENTED IN ACCORDANCE WITH EXHIBIT(S) 3, 26 AND 28. THE PERMITTEE SHALL RESTORE/CREATE .41 ACRE OF FORESTED WETLANDS, ENHANCE 130.09 ACRES OF FORESTED WETLANDS, 47.11 ACRES OF HERBACEOUS/SHRUB WETLANDS, 2.09 ACRES OF OTHER SURFACE WATERS AND PRESERVE 6.97 ACRES OF UPLAND COMPENSATION AREA(S).
- A WETLAND MONITORING PROGRAM AND MAINTENANCE PROGRAM SHALL BE IMPLEMENTED IN ACCORDANCE WITH EXHIBIT (S) 28. THE MONITORING PROGRAM SHALL EXTEND FOR A PERIOD OF 5 YEARS WITH ANNUAL REPORTS SUBMITTED TO SFWMD STAFF. AT THE END OF THE FIRST MONITORING PERIOD THE MITIGATION AREA(S) SHALL CONTAIN AN 80% SURVIVAL OF PLANTED VEGETATION. THE 80% SURVIVAL RATE SHALL BE MAINTAINED THROUGHOUT THE REMAINDER OF THE MONITORING PROGRAM. AT THE END OF THE 5 YEARS MONITORING PROGRAM THE MITIGATION AREA(S) SHALL CONTAIN AN 80% SURVIVAL OF PLANTED VEGETATION AND AN 80% COVERAGE OF DESIRABLE OBLIGATE AND FACULTATIVE WETLAND SPECIES.
- A BASELINE WETLAND MONITORING REPORT SHALL BE CONDUCTED IN ACCORDANCE WITH EXHIBIT(S) 28.
- A TIME ZERO WETLAND MONITORING REPORT SHALL BE CONDUCTED IN ACCORDANCE WITH EXHIBIT(S) 28 FOR ALL CREATED WETLANDS AND SHALL INCLUDE A SURVEY OF THE AREAL EXTENT AND CROSS SECTIONAL ELEVATIONS OF THE CREATED WETLAND AREAS, PANORAMIC PHOTOGRAPHS, AND A DESCRIPTION OF PLANTED SPECIES SIZES AND DENSITIES OR MULCHING METHODOLOGY.
- THE WETLAND CONSERVATION AREAS AND UPLAND BUFFER ZONES AND/OR UPLAND PRESERVATION AREAS SHOWN ON EXHIBIT(S) 5, 26 AND 29 MAY IN NO WAY BE ALTERED FROM THEIR NATURAL STATE. ACTIVITIES PROHIBITED WITHIN THE CONSERVATION AREAS INCLUDE, BUT ARE NOT LIMITED TO: CONSTRUCTION OR PLACING OF BUILDINGS ON OR ABOVE THE GROUND; DUMPING OR PLACING SOIL OR OTHER SUBSTANCES SUCH AS TRASH; REMOVAL OR DESTRUCTION OF TREES, SHRUBS, OR OTHER VEGETATION - WITH THE EXCEPTION OF EXOTIC/NUISANCE VEGETATION REMOVAL; EXCAVATION, DREDGING, OR REMOVAL OF SOIL MATERIAL; DIKING OR FENCING; AND ANY OTHER ACTIVITIES DETRIMENTAL TO DRAINAGE, FLOOD CONTROL, WATER CONSERVATION, EROSION CONTROL, OR FISH AND WILDLIFE HABITAT CONSERVATION OR PRESERVATION.
- ACTIVITIES ASSOCIATED ' WITH IMPLEMENTATION OF THE WETLAND MITIGATION, MONITORING AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE FOLLOWING WORK SCHEDULE. ANY DEVIATION FROM THESE TIME FRAMES SHALL REQUIRE FORMAL SFWMD APPROVAL. SUCH REQUESTS MUST BE MADE IN WRITING AND SHALL INCLUDE (1) REASON FOR THE

MODIFICATION; (2) PROPOSED START/FINISH DATES; AND (3) PROGRESS REPORT ON THE STATUS OF THE EXISTING MITIGATION EFFORTS.

COMPLETION DATE	ACTIVITY
APRIL 30, 2000	EXOTIC VEGETATION REMOVAL PHASE 1
JUNE 30, 2000	PLANTING MITIGATION AREA PHASE 1
JUNE 30, 2000	REMOVAL OF FENCE CROSSING SLOUGH AND TIE OFF OF FENCE ENDS TO BRIDGE ABUTMENTS
SEPTEMBER 30, 2000	TIME ZERO MONITORING REPORT PHASE 1
OCTOBER 31, 2000	SUBMITTAL OF DOCUMENTATION ON PRESERVATION OF 121 ACRES OF PRIORITY 1 HABITAT
OCTOBER 31, 2000	SUBMITTAL OF CONSERVATION EASEMENT
MARCH 31, 2001	MAINTENANCE ACTIVITIES PHASE 1
SEPTEMBER 30, 2001	FIRST MONITORING REPORT PHASE 1
MARCH 31, 2002	MAINTENANCE ACTIVITIES PHASE 1
APRIL 1, 2002	BASELINE MONITORING REPORT PHASE 2
APRIL 30, 2002	EXOTIC VEGETATION REMOVAL PHASE 2
MAY 30, 2002	CLEARING AND GRADING MITIGATION AREA PHASE 2
JUNE 30, 2002	PLANTING MITIGATION AREA PHASE 2
JUNE 30, 2002	PLANTING VEGETATION BARRIER BETWEEN MITIGATION AREA M-3 & BEN HILL GRIFFIN PRKY
SEPTEMBER 30, 2002	TIME ZERO MONITORING REPORT PHASE 2
SEPTEMBER 30, 2002	SECOND MONITORING REPORT PHASE 1
MARCH 31, 2003	MAINTENANCE ACTIVITIES PHASE 1
MARCH 31, 2003	MAINTENANCE ACTIVITIES PHASE 2
SEPTEMBER 30, 2003	THIRD MONITORING REPORT PHASE 1
SEPTEMBER 30, 2003	FIRST MONITORING REPORT PHASE 2
MARCH 31, 2004	MAINTENANCE ACTIVITIES PHASE 1
MARCH 31, 2004	MAINTENANCE ACTIVITIES PHASE 2
APRIL 1, 2004	BASELINE MONITORING REPORT PHASE 3
APRIL 30, 2004	EXOTIC VEGETATION REMOVAL PHASE 3
MAY 30, 2004	CLEARING AND REGRADING MITIGATION AREA PHASE 3
JUNE 30, 2004	PLANTING MITIGATION AREA PHASE 3
JUNE 30, 2004	PLANTING VEGETATION BARRIER BETWEEN MITIGATION AREA M-4 & BEN HILL GRIFFIN PRKY
SEPTEMBER 30, 2004	FOURTH MONITORING REPORT PHASE 1
SEPTEMBER 30, 2004	SECOND MONITORING REPORT PHASE 2
SEPTEMBER 30, 2004	TIME ZERO MONITORING REPORT PHASE 3
MARCH 31, 2005	MAINTENANCE ACTIVITIES PHASE 1
MARCH 31, 2005	MAINTENANCE ACTIVITIES PHASE 2
MARCH 31, 2005	MAINTENANCE ACTIVITIES PHASE 3
SEPTEMBER 30, 2005	FIFTH MONITORING REPORT PHASE 1
SEPTEMBER 30, 2005	THIRD MONITORING REPORT PHASE 2
SEPTEMBER 30, 2005	FIRST MONITORING REPORT PHASE 3
MARCH 31, 2006	MAINTENANCE ACTIVITIES PHASE 2
MARCH 31, 2006	MAINTENANCE ACTIVITIES PHASE 3
SEPTEMBER 30, 2006	FOURTH MONITORING REPORT PHASE 2

SEPTEMBER 30, 2006	SECOND MONITORING REPORT PHASE 3
MARCH 31, 2007	MAINTENANCE ACTIVITIES PHASE 2
MARCH 31, 2007	MAINTENANCE ACTIVITIES PHASE 3
SEPTEMBER 30, 2007	FIFTH MONITORING REPORT PHASE 2
SEPTEMBER 30, 2007	THIRD MONITORING REPORT PHASE 3
MARCH 31, 2008	MAINTENANCE ACTIVITIES PHASE 3
SEPTEMBER 30, 2008	FOURTH MONITORING REPORT PHASE 3
MARCH 31, 2009	MAINTENANCE ACTIVITIES PHASE 3
SEPTEMBER 30, 2009	FIFTH MONITORING REPORT PHASE 3

- ENDANGERED SPECIES, THREATENED SPECIES, OR SPECIES OF SPECIAL CONCERN HAVE BEEN OBSERVED ONSITE AND/OR THE PROJECT CONTAINS SUITABLE HABITAT FOR THESE SPECIES. IT SHALL BE THE PERMITTEE'S RESPONSIBILITY TO COORDINATE WITH THE FLORIDA GAME AND FRESH WATER FISH COMMISSION AND/OR U.S. FISH AND WILDLIFE SERVICE FOR APPROPRIATE GUIDANCE, RECOMMENDATIONS, AND/OR NECESSARY PERMITS TO AVOID IMPACTS TO LISTED SPECIES.

- IF THE PROJECT DESIGN IS CHANGED AS A RESULT OF OTHER AGENCY REQUIREMENTS, AN ENVIRONMENTAL RESOURCE PERMIT MODIFICATION MAY BE REQUIRED. THE PERMITTEE SHALL NOTIFY SFWMD STAFF OF DESIGN CHANGES REQUIRED BY OTHER AGENCIES FOR A DETERMINATION OF ANY NECESSARY PERMIT MODIFICATIONS.

- A MAINTENANCE PROGRAM SHALL BE IMPLEMENTED FOR THE MITIGATION AREAS AND UPLAND PRESERVES ON A REGULAR BASIS TO ENSURE THE INTEGRITY AND VIABILITY OF THESE AREAS AS PERMITTED. MAINTENANCE SHALL BE CONDUCTED IN PERPETUITY TO ENSURE THAT THE MITIGATION AREAS AND UPLAND PRESERVES ARE FREE OF EXOTIC VEGETATION (AS CURRENTLY DEFINED BY THE FLORIDA EXOTIC PEST PLANT COUNCIL) IMMEDIATELY FOLLOWING A MAINTENANCE ACTIVITY AND THAT EXOTIC AND NUISANCE SPECIES SHALL CONSTITUTE NO MORE THAN 5% OF TOTAL COVER.

- THE PERMITTEE SHALL PRESERVE 121 ACRES OF PRIORITY 1 PANTHER HABITAT IDENTIFIED IN THE DOCUMENT TITLED "FLORIDA PANTHER HABITAT PRESERVATION PLAN, SOUTH FLORIDA POPULATION" DATED NOVEMBER 1993 AND LOCATED ADJACENT TO PUBLICLY-OWNED NATURAL LANDS. THE PROPOSED PRESERVATION LANDS SHALL BE APPROVED BY THE DISTRICT AND THE FFWCC PRIOR TO THE PERMITTEE'S ACQUISITION OF ANY INTEREST IN THE PARCEL. THESE LANDS MAY BE PURCHASED IN FEE SIMPLE OR LESS THAN FEE SIMPLE. THE PERMITTEE SHALL ENCUMBER THE LAND THROUGH EITHER A DISTRICT APPROVED CONSERVATION EASEMENT OR RESTRICTIVE COVENANT INCORPORATING THE PROVISIONS OF SECTION 704.06, F. S. THE PERMITTEE SHALL BE RESPONSIBLE FOR MAINTAINING THE PARCEL IN ITS CURRENT ENVIRONMENTAL CONDITION.

BY JULY 31, 2000, THE PERMITTEE SHALL PLACE \$175,000 IN A TRUST FUND DEDICATED TO THE SPECIFIC PURPOSE OF PURCHASING INTEREST IN A MINIMUM OF 121 ACRES OF PRIORITY 1 PANTHER HABITAT LAND PURSUANT TO THIS CONDITION. FUNDING THE ESCROW ACCOUNT IS A DEMONSTRATION OF REASONABLE ASSURANCE THAT LANDS WILL BE PURCHASED. THE ACTUAL COST OF ACQUISITION AND MAINTENANCE MAY BE MORE OR LESS THAN THE AMOUNT HELD IN ESCROW.

IF THE SUBJECT LANDS ARE PROPOSED FOR DONATION TO A PUBLIC ENTITY FOR MANAGEMENT FOLLOWING PURCHASE, THE TRANSFER SHALL PROVIDE FOR THE LONG TERM MANAGEMENT OF THE PARCEL.

ANY ENCUMBRANCE IMPRESSED ON THE PARCEL PURSUANT TO THIS CONDITION SHALL ALLOW THE PARCEL OWNER TO CONTINUE EXISTING LAND MANAGEMENT PRACTICES AND USES WITHIN THE PARCEL IN ORDER TO MAINTAIN THE PARCEL IN ITS EXISTING CONDITION. FURTHER, THE CONSERVATION EASEMENT OR RESTRICTIVE COVENANTS MAY ALLOW WITHIN THE PARCEL INSTALLATION OF FENCING, AND HUNTING IN ACCORDANCE WITH THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION RULES.

NO LATER THAN OCTOBER 31, 2000, THE PERMITTEE SHALL SUBMIT FOR REVIEW AND APPROVAL THE CONSERVATION EASEMENT OR RESTRICTIVE COVENANTS. THE PERMITTEE SHALL RECORD THE CONSERVATION EASEMENT OR RESTRICTIVE COVENANTS IN THE PUBLIC RECORDS WITHIN 14 DAYS OF RECEIVING THE DISTRICT'S APPROVAL OF THE SUBMITTED INFORMATION. UPON RECORDATION, THE PERMITTEE SHALL FORWARD THE ORIGINAL RECORDED EASEMENT OR RESTRICTIVE COVENANTS TO THE NATURAL RESOURCE MANAGEMENT POST PERMIT COMPLIANCE STAFF IN THE FT. MYERS SERVICE CENTER.

WITHIN 90 DAYS OF PURCHASE OF THE PARCEL OR RECORDING OF THE ABOVE ENCUMBRANCE, THE PERMITTEE SHALL PROVIDE THE DISTRICT WITH A NARRATIVE REPORT PREPARED BY A WILDLIFE ECOLOGIST DESCRIBING THE EXISTING CONDITIONS OF THE PROPERTY. DISTRICT STAFF SHALL BE PROVIDED SUPERVISED ACCESS TO THE PROPERTY AFTER REASONABLE NOTICE TO THE PARCEL OWNER, SUCH ACCESS NOT TO BE UNREASONABLY WITHHELD.

- NO LATER THAN OCTOBER 31, 2000, THE PERMITTEE SHALL SUBMIT FOR REVIEW AND APPROVAL, TWO (2) COPIES OF THE FOLLOWING:
 1. PROJECT MAP IDENTIFYING CONSERVATION AREA
 2. BOUNDARY SKETCH AND LEGAL DESCRIPTION, WITH ACREAGE, OF CONSERVATION AREA, LABELED AS EXHIBITS TO THE CONSERVATION EASEMENT
 3. SIGNED CONSERVATION EASEMENT

THE ABOVE INFORMATION SHALL BE SUBMITTED TO THE NATURAL RESOURCE MANAGEMENT POST PERMIT COMPLIANCE STAFF IN THE DISTRICT SERVICE CENTER WHERE THE APPLICATION WAS SUBMITTED.

(B) THE PERMITTEE SHALL RECORD A CONSERVATION EASEMENT OVER THE REAL PROPERTY DESIGNATED ON ATTACHED EXHIBIT 29. THE EASEMENT SHALL BE GRANTED FREE OF ENCUMBRANCES OR INTERESTS WHICH THE DISTRICT DETERMINES ARE CONTRARY TO THE INTENT OF THE EASEMENT. THE CONSERVATION EASEMENT SHALL BE GRANTED TO THE DISTRICT USING THE APPROVED FORM ATTACHED HERETO AS EXHIBIT 29. ANY PROPOSED MODIFICATIONS TO THE APPROVED FORM MUST RECEIVE PRIOR WRITTEN CONSENT FROM THE DISTRICT.

(C) THE PERMITTEE SHALL RECORD THE CONSERVATION EASEMENT IN THE PUBLIC RECORDS WITHIN 14 DAYS OF RECEIVING THE DISTRICT'S APPROVAL OF THE SUBMITTED INFORMATION. UPON RECORDATION, THE PERMITTEE SHALL FORWARD THE ORIGINAL RECORDED EASEMENT TO THE NATURAL RESOURCE MANAGEMENT POST PERMIT COMPLIANCE STAFF IN THE SERVICE CENTER WHERE THE APPLICATION WAS SUBMITTED.

- A WETLAND WATER LEVEL MONITORING PROGRAM SHALL BE INSTITUTED ON THE PROJECT SITE, WITH AT LEAST TWO PIEZOMETERS LOCATED NORTH OF BEN HILL GRIFFIN PARKWAY AND AT LEAST TWO PIEZOMETERS LOCATED SOUTH OF BEN HILL GRIFFIN PARKWAY. WATER LEVEL DATA SHALL BE RECORDED AT LEAST TWICE A DAY, AS IS CURRENTLY PROVIDED BY THE TREELINE AVENUE WATER LEVEL MONITORING PROGRAM. MONITORING DATA SHALL BE SUBMITTED TO THE SFWMD QUARTERLY IN CONJUNCTION WITH RAINFALL DATA FROM THE SITE. SUBMITTED REPORTS SHALL INCLUDE A DISCUSSION OF ALTERATIONS TO BASELINE WATER ELEVATIONS AND DURATIONS. THE PROGRAM SHALL CONTINUE UNTIL THE MIROMAR LAKES MITIGATION PLAN HAS BEEN DEEMED SUCCESSFUL BY DISTRICT STAFF.
- A FOX SQUIRREL MANAGEMENT PLAN SHALL BE IMPLEMENTED ON MIROMAR LAKES IN ACCORDANCE WITH THE PREVIOUSLY APPROVED MANAGEMENT PLAN. ANY SELECTIVE CLEARING (UTILIZING SUCH METHODS AS CHOPPING, MOWING AND/OR BUSH-HOGGING) OF THE GROUND COVER STRATUM WITHIN THE CONSERVATION AREAS AND ANY PRUNING AND/OR THINNING OF CANOPY AND SUBCANOPY VEGETATION WITHIN THE CONSERVATION AREAS, AS DISCUSSED IN THE FOX SQUIRREL MANAGEMENT PLAN, SHALL RECEIVE APPROVAL FROM SFWMD POST PERMIT COMPLIANCE STAFF PRIOR TO CONDUCTING SUCH ACTIVITIES. ANY MODIFICATIONS TO THIS MANAGEMENT PLAN SHALL REQUIRE APPROVAL FROM SFWMD STAFF.

- BY JUNE 30, 2000 THE PERMITTEE SHALL REMOVE THE PORTION OF THE FENCE CROSSING THE SLOUGH AND TIE THE FENCE ENDS TO THE BRIDGE ABUTMENTS.
- IN CONJUNCTION WITH MITIGATION ACTIVITIES IN MITIGATION AREAS M-3 AND M-4, THE PERMITTEE SHALL PLANT VEGETATIVE BARRIERS IN THE FORM OF TREES AND SHRUBS (UP TO 15 FT HIGH) WHERE THE DEEP POOLS ARE LOCATED ADJACENT TO THE ROADWAY AS SHOWN ON EXHIBIT 26.
- THE FOLLOWING EXHIBITS ARE INCORPORATED BY REFERENCE INTO THE PERMIT:

EXHIBITS 6 THROUGH 18. PAVING, GRADING & DRAINAGE PLANS, PREPARED BY BANKS ENGINEERING AND DATED MAR 1, 99.

EXHIBIT 19. DRAINAGE SECTIONS, PREPARED BY BANKS ENGINEERING AND DATED 03-01-99.

EXHIBITS 20 & 21. PAVING, GRADING & DRAINAGE DETAILS, PREPARED BY BANKS ENGINEERING AND DATED FEB. 4, 1999

EXHIBIT 22. BARRIERS FOR FILL SLOPES, PREPARED BY BANKS ENGINEERING AND DATED FEB. 4, 1999

EXHIBIT 23. GOLF CART OVERPASS, PREPARED BY BANKS ENGINEERING AND DATED MAR 1, 99.

EXHIBIT 24. OFFSITE TURN LANE, PREPARED BY BANKS ENGINEERING AND DATED MAR 1, 99.

EXHIBIT 25. CLUBHOUSE TURN LANE IMPROVEMENTS, PREPARED BY BANKS ENGINEERING AND DATED MAR 1, 99.

EXHIBIT 26. WETLAND IMPACT AND MITIGATION PLANS, PREPARED BY W. DEXTER BENDER & ASSOCIATES AND DATED MARCH 02, 2000.

EXHIBIT 29, PAGES 6 & 8. SKETCH OF CONSERVATION EASEMENT AREA, PREPARED BY BANKS ENGINEERING AND DATE-STAMPED NOV 1, 99.

EXHIBIT 29 PAGES 9-15. LEGAL DESCRIPTION OF CONSERVATION EASEMENT AREA, PREPARED BY WILSON MILLER AND DATE-STAMPED NOV 1, 99.

THESE EXHIBITS MAY BE FOUND IN THE PERMIT FILE.

- PRIOR TO COMMENCEMENT OF CONSTRUCTION IN THOSE AREAS, THE PERMITTEE SHALL SUBMIT PLANS FOR PERMIT MODIFICATION THAT PROVIDE A MINIMUM OF 1/2" DRY PRETREATMENT FOR ALL STORMWATER

RUNOFF WITHIN BASIN 5 AND FOR ALL COMMERCIAL TRACTS IN OTHER BASINS PRIOR TO DISCHARGE TO THE LAKE SYSTEM.

- PRIOR TO CONSTRUCTION OF THE GOLF CART CROSSING OVER BEN HILL GRIFFIN PARKWAY, THE PERMITTEE SHALL SUBMIT AN APPLICATION FOR CONSTRUCTION AUTHORIZATION. IN ADDITION, THE PERMITTEE SHALL SUBMIT DOCUMENTATION OF APPROVAL OF THE PROPOSAL FROM LEE COUNTY.

C. CONCLUSION

In summary, as the operating entity, the CDD would be responsible for compliance with all of the General and Special Conditions outlined above. This includes the continuing obligation to do such things as correct any erosion, shoaling or water quality problems that result from the operation of the surface water management system, maintain lake side slopes at certain depths and provide routine maintenance of all of the components of the surface water management system. Further, as per the SFWMD's Non Compliance Letter, the SFWMD is holding the CDD responsible – as the operating entity – for defects and issues stemming from the initial construction as well as non-permitted modifications made by individual homeowners (all to be discussed in a separate Memorandum).

SECTION 2

Response to South Florida Water Management District - Notice of Inspection

Greenspoon

LAW

888-491-1120
www.gmlaw.com

From the desk of:
Glenn N. Smith, Esq.
PNC Center, Suite 1800
200 East Broward Boulevard
Fort Lauderdale, Florida 33301
Direct Phone: 954.888.2666
Direct Fax: 954.333.4066
Email: glenn.smith@gmlaw.com

October 27, 2015

Via Email and U.S. Mail

Melissa M. Roberts, P.E.
Administrator
Environmental Resources Compliance Bureau
Lower West Coast Service Center
South Florida Water Management District
2301 McGregor Boulevard
Fort Myers, FL 33901

Subject: Notice of Inspection – Non Compliance
Miromar Lakes
Permit No. 36-03568-P, Application No. 991101-14, 020617-12, 021203-5,
030128-2, 040326-26, 040826-18, 070209-10, 080625-6, 080912-9, and
090903-26
Lee County, S10-15 & 23/T46S/R25E

Dear Ms. Roberts:

This firm is co-counsel for the Miromar Lakes Community Development District (“MLCDD”) for permitting/regulatory matters. This letter is submitted in response to your Notice of Inspection letter dated September 18, 2015 addressed to Mr. James Ward, Manager of the MLCDD, a copy of said letter being attached hereto.

MLCDD has reviewed your letter and provides the following responses to the issues you cite as in need of resolution:

Application 951122-7 – Miromar Lakes:

- *This authorization is conceptual approval, therefore no issues were noted*

No Response Required.

Application 991101-14 – Miromar Lakes - Phase 1:

- *The lake shoreline appears to be steeper than permitted. Please restore the lake shoreline to substantial compliance with Special Condition 8 of the Permit. Please see Picture 1 for reference.*

Response: It appears from Picture 1 that there is a “step” in the lake bank that changes the side slope, making it greater than 4:1 in some locations. MLCDD staff and consultants are conducting an investigation to determine all locations where this condition exists. However, the staff and consultants have been hindered in their investigation because the water level remains too high at the present time to allow completion of the investigation. MLCDD will not be able to complete its investigation and response until the dry season. The MLCDD anticipates completing its investigation no later than January, 2016. You will be furnished a supplemental response by January 31, 2016, detailing the extent and locations of the “step” and the proposed fix and deadline for the completion of the fix.

- *Unpermitted rip-rap was installed along the recreational lake shoreline. Please apply for a permit modification to include the subject rip rap in the permit to comply with Special Condition 9 of the Permit. Please see Picture 1 for reference.*

Response: At the referenced location on the recreational lake, the homeowners have installed rip-rap without input or permission from the MLCDD. MLCDD’s staff and consultants are preparing a survey to pinpoint all such locations on the recreational lake and will submit an application for a letter of modification to permit 36-03568-P to obtain approval for all unpermitted rip-rap locations, including the referenced location.

- *Filter fabric, placed on top of the catch basins/bubble ups, is covered by debris and sod clippings. Please remove the filter fabric from the catch basins/bubble ups to comply with Special Condition 5 of the Permit. Please see Picture 2 for reference.*

Response: Two locations have been identified where this situation exists. One location has been corrected. At the second location, the water level is too high to allow correction. Once the water recedes, the correction will be made. The filter fabric was originally installed to help protect the inlets from floating debris that clog the inlets and restricts their operation. MLCDD recommends that the use of filter fabric be continued to avoid continuing occurrence of clogging inlets. The MLCDD will replace the presently-used filter fabric with a material with a more open weave to provide greater flow. The landscape maintenance crews regularly clean the fabric of material and debris: the maintenance crews have now been instructed to inspect and clear the inlets of any clippings, trash, debris as

part of their regular monthly maintenance activities of the dry detention areas.

- *An unpermitted boat ramp was constructed within the vacant lot for the future Peninsula Phase IV. Upon resolution of the petition for Application No. 140620-1, Please remove the subject boat ramp to comply with Special Condition 9 of the Permit. Please see Picture 3 for reference.*

Response: The MLCDD has no jurisdiction over the unpermitted boat ramp, which was not installed by the MLCDD or with its permission. The MLCDD does not own any property in this area and has no operational control over the area in Peninsula Phase 4. The MLCDD understands that the developer will remove this boat ramp after the conclusion of the proceedings on the Petition for Application No. 140620-1.

Application 020617-12 – Miromar Lakes Mediterranean Village Phases 1 & 2:

- *The south detention areas are heavily vegetated, preventing maintenance and access to the stormwater structures. Please clear and maintain a pathway to these structures to comply with Special Condition 4 of the Permit.*

Response: MLCDD's landscape maintenance contractor has been instructed to clear a path through the vegetation around the water control structures to improve the access for inspections and maintenance. This maintenance will be done on a twice a year basis, or more often if necessary. The first maintenance in the south detention areas under this section is currently underway.

- *Erosion to the lake shoreline has occurred in some areas on Lakes 6H, 6I, and 6J. Lake 6I has a drop of approximately four (4) feet between lots. In addition, erosion has occurred near control structure CS#1. Please restore the lake shorelines to substantial compliance with Special Condition 7 of the Permit. Please see Picture 4 for reference.*

Response: MLCDD is currently reviewing the shoreline for Lakes 6H, 6I, and 6J to determine the extent of the shoreline requiring restoration and then have all eroded areas corrected. MLCDD intends to request proposals from qualified contractors to make applicable corrections to lake shorelines. As a governmental entity, MLCDD will be required to undertake the applicable competitive bidding process to award necessary contracts for the work, as required by Florida law. The MLCDD anticipates that the work will be performed in the spring of 2016 to take advantage of the low lake levels and minimize the impacts to adjacent property. The MLCDD anticipates this work will be completed by June 1, 2016.

As to the location in Picture 4, this erosion is caused by an unpermitted drain, which the MLCDD has no jurisdiction to remove. The MLCDD will confer with the applicable homeowners' association and request that this problem be corrected.

- *It appears that a retaining wall was constructed on Lake 6I within the lake easement. Please restore the lake slope to within substantial compliance with Special Condition 8 of the Permit or apply for a permit modification to include the subject retaining wall.*

Response: The referenced decorative wall was constructed by the subject homeowner without the involvement or permission from the MLCDD. The MLCDD proposes to submit a letter modification to Permit No. 36-03568-P to permit this one location. MLCDD will contact all homeowners through their applicable homeowners' associations and inform the homeowners that such construction is not allowed.

Application 021203-5 – Miromar Lakes - Mediterranean Village Phase 3:

- *The culvert located on the southwest corner of the detention area is covered by overgrown vegetation and rip-rap. Please clear and maintain a pathway to comply with Special Condition 4 of the Permit.*

Response: MLCDD's landscape maintenance contractor has been instructed to clear a path through the vegetation around the water control structure to thin the vegetation around the inlet/outfall pipe. Following such action, MLCDD's stormwater contractor will televise the piping from the basin to the outfall location to certify that the line is clear. This corrective work is expected to be completed by January 31, 2016.

Application 030128-2 – Mediterranean Village Phase 4 Vivaldi:

- *Erosion to the lake shoreline has occurred in some areas on Lakes 6H. Please restore the lake shoreline to substantial compliance with Special Condition 4 of the Permit.*

Response: As previously stated, MLCDD staff and consultants will conduct a survey of the lake shoreline of Lake 6H to identify areas of erosion needing correction. Currently, the water level of the lake is too high to conduct such survey, and the survey cannot be completed until the dry season. The MLCDD anticipates that the survey will be completed in January, 2016 and that a supplemental report based on such survey will be furnished to you by January 31, 2016. This supplemental report will identify areas to be corrected and a timetable for completion of same.

- *A number of yard drains appear to be mostly covered by grass. Please perform maintenance to the yard drains to comply with Special Condition 9 of the Permit.*

Response: MLCDD has no access to these yard drains and no jurisdiction to correct same. MLCDD will notify the appropriate homeowners' associations of this problem and request correction.

Application 040326-26 – Mirasol Beach Residences:

- *No non-compliance issues were noted.*

No Response Required.

Application 040826-18 – Miromar Lakes Castelli and Anacapri:

- Washout to the lake shoreline has occurred on Lot one (1). Please restore the lake shoreline to substantial compliance with Special Condition 6 of the Permit.

Response: MLCDD staff inspected Lot #1 on 10/01/15 in response to your letter. The home planned for Lot #1 is currently under construction. The washout to the lake shoreline at that location has now been corrected by the property owner's contractor. No further action is required.

Application 070209-10 – East 100 Acres at Miromar Lakes:

- No non-compliance issues were noted.

No Response Required.

Application 080625-6 – East 100 Acres at Miromar Lakes:

- No non-compliance issues were noted.

No Response Required.

Application 080912-9 – Miromar Lakes Tract at Beach Cottages:

- Superseded by Application 090903-26, therefore no non-compliance issues were noted.

No Response Required.

Application 090903-26 – Miromar Lakes Tract F-F Beach Cottages:

- Washout to the lake shoreline (beach easement) has occurred, due to the concentration of roof runoff. Upon construction completion and restoration of the lake slope, please restore the lake shoreline to substantial compliance with Special Condition 8 of the Permit. Please see Picture 5 for reference.

Response: This condition, which occurred during a period of very heavy rains, has been corrected.

If you have any questions concerning the above, please contact the undersigned.

Sincerely,

GREENSPOON MARDER, P.A.



Glenn N. Smith, Esq.
For the Firm

GNS:lad

CC: Mr. James Ward (via email)
Greg Urbancic, Esq. (via email)
Mr. Charles Krebs (via email)
Mr. Paul Cusmano (via email)
Mr. Bruce Bernard (via email)
Keith Williams, Esq. (via email)
Howard Nelson, Esq. (via email)
Carly Grimm, Esq. (via email)
Mr. Michael Elgin (via email)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

September 18, 2015

Mr. James Ward
Miromar Lakes Community Development District
513 NE 13th Avenue
Fort Lauderdale, FL 33301

**Subject: Notice of Inspection – Non Compliance
Miromar Lakes
Permit No. 36-03568-P, Application No. 991101-14, 020617-12, 021203-5,
030128-2, 040326-26, 040826-18, 070209-10, 080625-6, 080912-9, and
090903-26
Lee County, S10-15 & 23/T46S/R25E**

Dear Mr. Ward:

This letter is to provide notification that a site inspection for the above-referenced project was conducted on June 17, 2015. This site inspection revealed that the subject permit is not in compliance with the special conditions of the permit. Specifically, those issues in need of resolution are as follows:

Application 951122-7 – Miromar Lakes:

- This authorization is conceptual approval, therefore no issues were noted

Application 991101-14 – Miromar Lakes Phase 1:

- The lake shoreline appears to be steeper than permitted. Please restore the lake shoreline to substantial compliance with Special Condition 8 of the Permit. Please see Picture 1 for reference.
- Unpermitted rip-rap was installed along the recreational lake shoreline. Please apply for a permit modification to include the subject rip rap in the permit to comply with Special Condition 9 of the Permit. Please see Picture 1 for reference.
- Filter fabric, placed on top of the catch basins/bubble ups, is covered by debris and sod clippings. Please remove the filter fabric from the catch basins/bubble ups to comply with Special Condition 5 of the Permit. Please see Picture 2 for reference.

DISTRICT HEADQUARTERS: 3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • (800) 432-2045
Mailing Address: PO BOX 24680 West Palm Beach FL, 33416-4680

LOWER WEST COAST SERVICE CENTER: 2301 McGregor Boulevard, Fort Myers, FL 33901 • (239) 338-2929 • (800) 248-1201
OKEECHOBEE SERVICE CENTER: 3900 N.W. 16th Blvd, Suite A, Okeechobee, FL 34972 • (863) 462-5260 • (800) 250-4200
ORLANDO SERVICE CENTER: 1707 Orlando Central Parkway, Suite 200, Orlando FL 32809 • (407) 858-6100 • (800) 250-4250


9/18/15

sfwmd.gov

2-7

Miromar Lakes Phase 1
Permit Number 36-03568-P

- An unpermitted boat ramp was constructed within the vacant lot for the future Peninsula Phase IV. Upon resolution of the petition for Application No. 140620-1, Please remove the subject boat ramp to comply with Special Condition 9 of the Permit. Please see Picture 3 for reference.

Application 020617-12 – Miromar Lakes Mediterranean Village Phases 1 & 2:

- The south detention areas are heavily vegetated, preventing maintenance and access to the stormwater structures. Please clear and maintain a pathway to these structures to comply with Special Condition 4 of the Permit.
- Erosion to the lake shoreline has occurred in some areas on Lakes 6H, 6I, and 6J. Lake 6I has a drop of approximately four (4) feet between lots. In addition, erosion has occurred near control structure CS#1. Please restore the lake shorelines to substantial compliance with Special Condition 7 of the Permit. Please see Picture 4 for reference.
- It appears that a retaining wall was constructed on Lake 6I within the lake easement. Please restore the lake slope to within substantial compliance with Special Condition 8 of the Permit or apply for a permit modification to include the subject retaining wall.

Application 021203-5 – Miromar Lakes - Mediterranean Village Phase 3:

- The culvert located on the southwest corner of the detention area is covered by overgrown vegetation and rip-rap. Please clear and maintain a pathway to comply with Special Condition 4 of the Permit.

Application 030128-2 – Mediterranean Village Phase 4 Vivaldi:

- Erosion to the lake shoreline has occurred in some areas on Lakes 6H. Please restore the lake shoreline to substantial compliance with Special Condition 4 of the Permit.
- A number of yard drains appear to be mostly covered by grass. Please perform maintenance to the yard drains to comply with Special Condition 9 of the Permit.

Application 040326-26 – Mirasol Beach Residences:

- No non-compliance issues were noted.

Application 040826-18 – Miromar Lakes Castelli and Anacapri:

- Washout to the lake shoreline has occurred on Lot one (1). Please restore the lake shoreline to substantial compliance with Special Condition 6 of the Permit.

Application 070209-10 – East 100 Acres at Miromar Lakes:

- No non-compliance issues were noted.

Miromar Lakes Phase 1
Permit Number 36-03568-P

Application 080625-6 – East 100 Acres at Miromar Lakes:

- No non-compliance issues were noted.

Application 080912-9 – Miromar Lakes Tract at Beach Cottages:

- Superseded by Application 090903-26, therefore no non-compliance issues were noted.

Application 090903-26 – Miromar Lakes Tract F-F Beach Cottages:

- Washout to the lake shoreline (beach easement) has occurred, due to the concentration of roof runoff. Upon construction completion and restoration of the lake slope, please restore the lake shoreline to substantial compliance with Special Condition 8 of the Permit. Please see Picture 5 for reference.

Please submit all information necessary to address the items indicated above or notify District staff of your intentions within thirty (30) days of the date of this letter.

The District now has the capability of receiving certifications, as-built plans and AGI inspection reports, conversion/transfer forms and other documents electronically via the District's ePermitting website at www.sfwmd.gov/ePermitting. For first-time users, an account will need to be created. Reports can be submitted through eCompliance/Environmental Resource.

Should you have any questions or require additional assistance, please contact Angelica S. Hoffert at (239) 338-2929 ext. 7731, or via e-mail at ahoffert@sfwmd.gov, in the Lower West Coast Service Center.

Sincerely,



Melissa M. Roberts, PE, Administrator
Environmental Resource Compliance Bureau
Lower West Coast Service Center
South Florida Water Management District

Enclosure(s): Location Map
Exhibit - Pictures

c: Charles L. Krebs, Hole Montes, Inc. (via Email)
Howard Nelson, Bilzin Sumberg Baena Price & Axelrod LLP (via Email)
Carly Grimm, Bilzin Sumberg Baena Price & Axelrod LLP (via Email)
Michael B. Elgin, Miromar Development Corporation (via Email)

This document is filed in the ePermitting system under Application Number 991101-14 via the Application/Permit Section on the Records Search home page

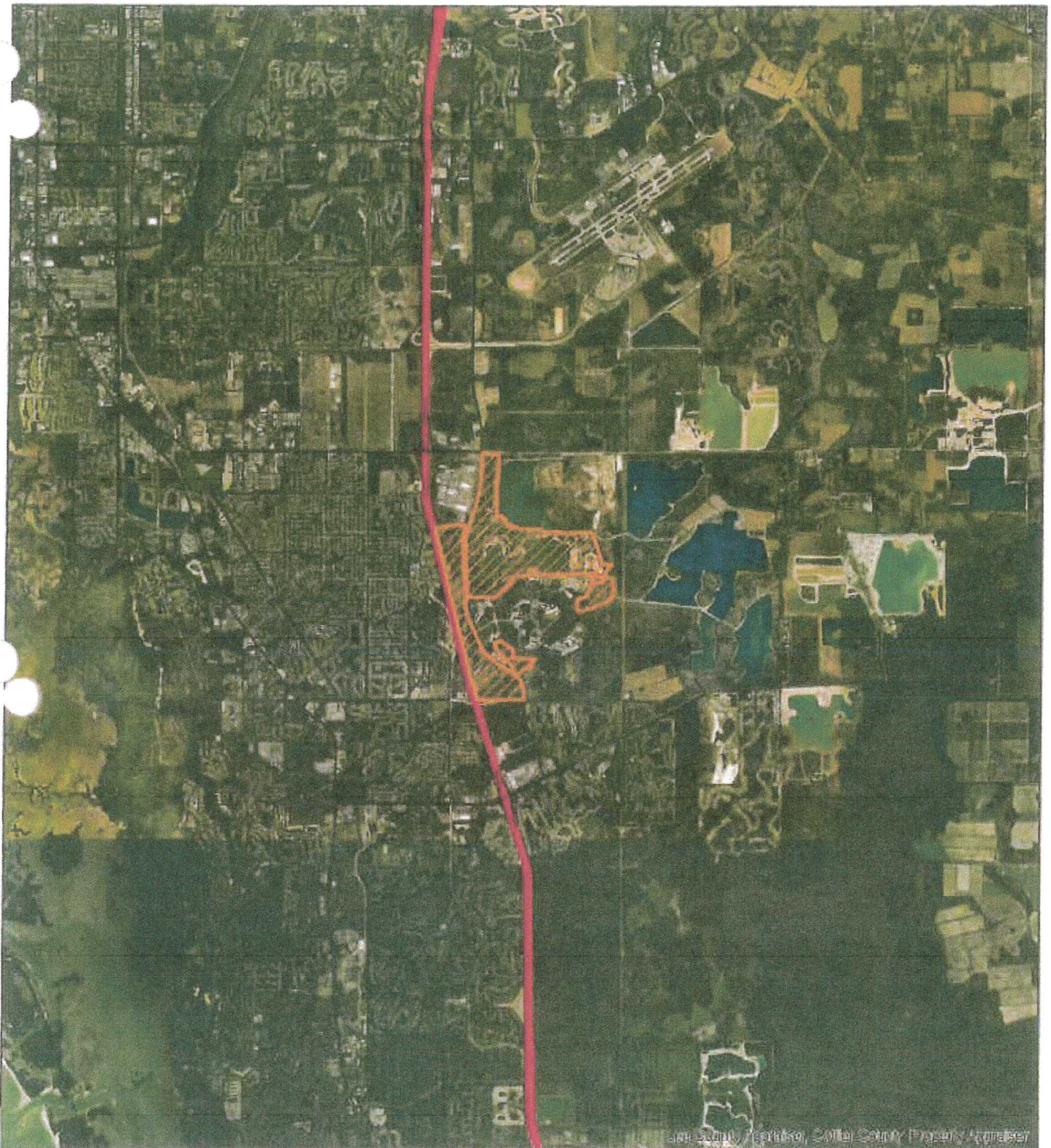


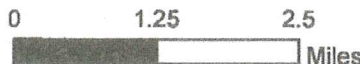




Exhibit No: 1	Exhibit Created On: 2015-09-16	LEE COUNTY, FL	 Application Permit No: 36-03568-P Application Number: 991101-14
<p align="center">REGULATION DIVISION</p> Project Name: MIROMAR LAKES PHASE 1			
		  South Florida Water Management District	

South Florida Water Management District

Environmental Resource Compliance Bureau
Supporting Photo Exhibit - Picture 1



Prepared by: Angelica Hoffert Date of this Exhibit: Jul 29, 2015

Project Name: Miromar Lakes Phase 1

Permit Number: 36-03568-P Application Number: 991101-14 Cost Code Number: _____

County: Lee Service Center: FTM Photo taken on: Jun 17, 2015

Photographer: Angelica Hoffert Purpose: Addressing a Complaint

Direction of View: North Northeast East Southeast South Southwest West Northwest



Notes & Comments:

The lake shoreline appears to be steeper than permitted. Rip-rap was installed along the recreational lake shoreline.

South Florida Water Management District

Environmental Resource Compliance Bureau
Supporting Photo Exhibit - Picture 2



Prepared by: Angelica Hoffert Date of this Exhibit: Jul 29, 2015

Project Name: Miromar Lakes Phase 1

Permit Number: 36-03568-P Application Number: 991101-14 Cost Code Number: _____

County: Lee Service Center: FTM Photo taken on: Jun 17, 2015

Photographer: Angelica Hoffert Purpose: Addressing a Complaint

Direction of View: North Northeast East Southeast South Southwest West Northwest



Notes & Comments:

Filter fabric, placed on top of the catch basins/bubble ups, is covered by debris and sod clippings.

South Florida Water Management District

Environmental Resource Compliance Bureau
Supporting Photo Exhibit - Picture 3



Prepared by: Angelica Hoffert Date of this Exhibit: Jul 29, 2015

Project Name: Miromar Lakes Phase 1

Permit Number: 36-03568-P Application Number: 991101-14 Cost Code Number: _____

County: Lee Service Center: FTM Photo taken on: Jun 17, 2015

Photographer: Angelica Hoffert Purpose: Addressing a Complaint

Direction of View: North Northeast East Southeast South Southwest West Northwest



06/17/2015 13:01

Notes & Comments:

Unpermitted boat ramp - constructed within the vacant lot for the future Peninsula Phase IV

South Florida Water Management District
Environmental Resource Compliance Bureau
Supporting Photo Exhibit - Picture 4



Prepared by: Angelica Hoffert Date of this Exhibit: Jul 29, 2015
Project Name: Miromar Lakes Mediterranean Village Phases 1 & 2
Permit Number: 36-03568-P Application Number: 020617-12 Cost Code Number: _____
County: Lee Service Center: FTM Photo taken on: Jun 17, 2015
Photographer: Angelica Hoffert Purpose: Addressing a Complaint
Direction of View: North Northeast East Southeast South Southwest West Northwest



Notes & Comments:
Lake 6I - Erosion to the lake shoreline. Drop of approximately four (4) feet between lots.

South Florida Water Management District

Environmental Resource Compliance Bureau
Supporting Photo Exhibit - Picture 5



Prepared by: Angelica Hoffert Date of this Exhibit: Jul 29, 2015

Project Name: Miromar Lakes Tract F-F Beach Cottages

Permit Number: 36-03568-P Application Number: 090903-26 Cost Code Number: _____

County: Lee Service Center: FTM Photo taken on: Jun 17, 2015

Photographer: Angelica Hoffert Purpose: Addressing a Complaint

Direction of View: North Northeast East Southeast South Southwest West Northwest



Notes & Comments:
Washout to the lake shoreline (beach easement) - due to the concentration of roof runoff.

Miromar Lakes Phase 1
Application Number 991101-14
Permit Number 36-03568-P

bc: SFWMD – Keith Williams
SFWMD – Angelica Hoffert
SFWMD – Melissa Roberts
[click here to enter additional blind copy names](#)

ADDRESSES:

Charles L. Krebs, Hole Montes, Inc. (via Email): CharlieKrebs@hmeng.com
Howard Nelson, Bilzin Sumberg Baena Price & Axelrod LLP (via Email): hnelson@bilzin.com
Carly Grimm, Bilzin Sumberg Baena Price & Axelrod LLP (via Email): cgrimm@bilzin.com
Michael B. Elgin, Miromar Development Corporation (via Email): MElgin@miromar.com

[click here to enter additional copy addresses](#)

SECTION 3

Miromar Lakes Subdivision Bank Erosion, HOA Drainage Installations and Corrective Modifications and Financial Impacts Spreadsheet

Lake Bank Erosion and Homeowners Association Drainage Reconstruction

Lake bank shoreline erosion in numerous subdivisions within the Miromar Lakes community can be addressed by three different alternatives. These options include importing fill and regrading, excavating fill from lake with heavy equipment and regrading, and dredging fill from lake and regrading. All alternatives, once completed, will then require re-sodding of all disturbed areas and irrigation adjustments and/or repair.

The erosion of lake banks with rip-rap that needs the drop-off between this material and the existing bank will be addressed by transporting material on a barge through the Lake 6 to the properties being reconstructed. Those properties that will obtain new rip-rap banks will be serviced the same way. The majority of the re-construction operations will transpire from the barge with only Valencia and Verona Lago subdivisions having this type of lake bank process.

The first two options will require equipment to be operated on homeowner's property, stockpiling of fill material, placement of fill material, final grading of material and repair of irrigation system as required. These operations would be disruptive to residents as far as noise and inconvenience while reconstruction of the lake banks ensue.

The third option is dredging of the lakes to reconstruct the banks. This procedure will be the least intrusive on the residents with minor inconvenience during the final grading and sodding portion of the reconstruction. The dredging progression will also serve an additional objective which would be to re-distribute the lake bottom residue after fifteen to twenty years of sedimentation. The dredging operation would be situated within the lakes and material pumped to the shoreline to reinstitute the lake banks to proper slopes both above and below the mean water level elevation. Once the dredging activity is complete, the contractor will then complete finish grading above and below the 18 foot water level and sod all areas disturbed above the water level.

Homeowners Association Drainage Modifications

Numerous subdivisions have previously installed drainage modification to some or all properties to eliminate drainage concerns. The installations include yard drains in front and rear yards, ADS drain lines from rainwater gutters piped into and adjacent to the lake water edge, yard drains installed with ADS piping into existing lakes and some PVC piping installed into the lakes. The majority of the PVC and ADS piping has been installed improper elevations and are adding to the erosion difficulties that presently exist. Also many of the yard drains were installed at the peak of the lake maintenance easement or within the lake easement and have eroded the sodded bank slope to the lake.

There are three options that can be entertained to lessen the erosion of the banks both above and below the mean water level. These options include installation of PVC Nyloplast drainage structures in areas that overland water flow has eroded the banks, install PVC drainage structures and draining existing ADS piping into these drainage structures, and relocating yard drains from in or around lake maintenance easement and redirecting the drains to front yards of these properties which will enable flow into the existing stormwater drainage systems. All PVC drainage structures will need to have lake outfalls installed a proper depth and distance into the lakes to minimize erosion concerns.

The vendors that currently have provided cost estimates for the lake bank restoration and HOA drainage modifications are listed below:

Advantage Marine Environmental Services, Inc. Edgewater, FL

M.R.I. Under Water Specialists, Inc. – North Fort Myers, FL

<u>Cost Estimate Only (Labor and Material)</u>	<u>Advantage</u>	<u>M.R.I.</u>	
1. Dredging of lake for bank re-sloping	\$ 26.00	\$ 43.00	Per LF
2. Rip- Rap bank step repair	\$ 13.53	\$ 22.00	Per LF
3. New Rip-Rap bank installation	\$ 21.58	\$ 33.00	Per LF
4. Drainage structures installation	\$1,347.22	\$1,485.00	Per Structure
5. Drainage structure outfall piping	\$ 53.00	\$ 55.50	Per LF
6. HOA drainage ADS piping modifications	\$ 34.00	\$ 38.00	Per LF
7. Sand sloping regarding	\$2,800.00	\$5,000.00	Lump Sum
8. Restoration(grading and re-sodding)	\$ 2.75	\$ 3.00	Per LF

Cost Estimate for CEI Services for Project

Drainage Plans - 4.5% for drainage structure and modifications cost and as-built drawings

Inspection Services - 4.5% of construction costs for each individual project

Survey Functions - 2% of individual project costs for property corners and as-built information

Total Estimate for All Elements of Report

	Items	CDD	HOA'S
1	Dredging existing lakes for bank re-sloping	\$188,513	\$357,370
2	Rip-Rap bank step repair		\$39,086
3	New Rip-Rap bank installation	\$22,828	\$29,172
4	Beach sand re-grading and sloping		\$2,800
5	Existing HOA drainage modifications and improvements		\$424,216
6	Littoral shelf re-planting and barriers	\$99,332	
7	Turbidity Curtains	\$13,100	
8	CEI Services (plans, inspections, survey)	\$24,000	\$94,000
9	Contingency	\$10,500	\$42,000
	Totals	\$358,273	\$988,644

Prioritizing of Subdivisions for Erosion Restoration

	Subdivision	Total Cost	Cost Per Unit
1	Siena	\$126,630	\$4,925
2	San Marino	\$156,552	\$1,027
3	Tivoli	\$178,820	\$2,465
4	Porta Romano	\$105,226	\$2,009
5	Portofino	\$41,741	\$2,182
6	Montelago	\$80,228	\$2,714
7	Bellamare	\$59,552	\$2,925
8	St. Moritz	\$75,370	\$2,138
9	Montebello	\$100,415	\$2,636
10	Sorrento	\$23,920	\$2,286
11	Valencia	\$15,164	\$198
12	Verna Lago	\$66,480	\$1,127
13	Costa Amalfi	\$2,800	\$183
14	Golf Course	\$35,360	



Nyloplast® Drain Basins are used as a collection point typically where two or more drain lines converge. Basins can provide a transition between different sizes and types of pipe, and can also change the elevation or direction of the pipe. Drain Basins are also beneficial when faced with shallow pipe burial applications.

Watertight connection

Structures are shipped with rubber gaskets to insure a watertight connection. This prevents the soil infiltration that plagues precast structures and prevents long-term settlement around the basin.

Flexible resilient connection

The real world can be tough on underground structures. Soils consolidate unevenly and external loads can further complicate matters. Flexible connections allow minor movement to take place without compromising the structural or watertight integrity of the basin. Additionally, the need to wait for grout to set-up is totally eliminated. With Nyloplast, you can connect and backfill immediately.

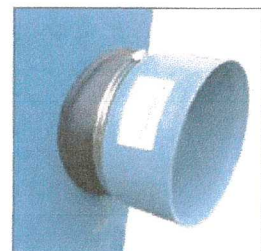
Quick, easy and inexpensive installation

The product is lightweight and easily handled which translates into faster installation with less equipment and personnel, which results in a lower total cost.

Field Adjustments

Basins are easily adjustable in the field to meet final grade. Last minute trimming or extensions are easily made to insure proper positive drainage is achieved.

Not sure about final elevations or wondering how to connect unexpected laterals? Our **Inserta Tee®** (<http://www.insertatee.com/>) option (pictured right) allows field



**Nyloplast offers the smartest, toughest, most cost-effective drainage structures available.
Nyloplast Drain Basins**

Nyloplast drain basins are custom built for each application. Our PVC products are more durable and corrosion resistant than precast basins. With a faster installation, lower installed cost, and great field and project support teams, Nyloplast is the clear choice for your drainage needs.



[Learn More about the Nyloplast advantage](#)

Online Drain Basin Configurator



[\(http://www.basinconfigurator.com\)](http://www.basinconfigurator.com)

Create a custom drain basin in minutes and get documentation you need to specify the part or get pricing.

[TRY THE DRAIN BASIN CONFIGURATOR NOW](#)

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View Project Profiles



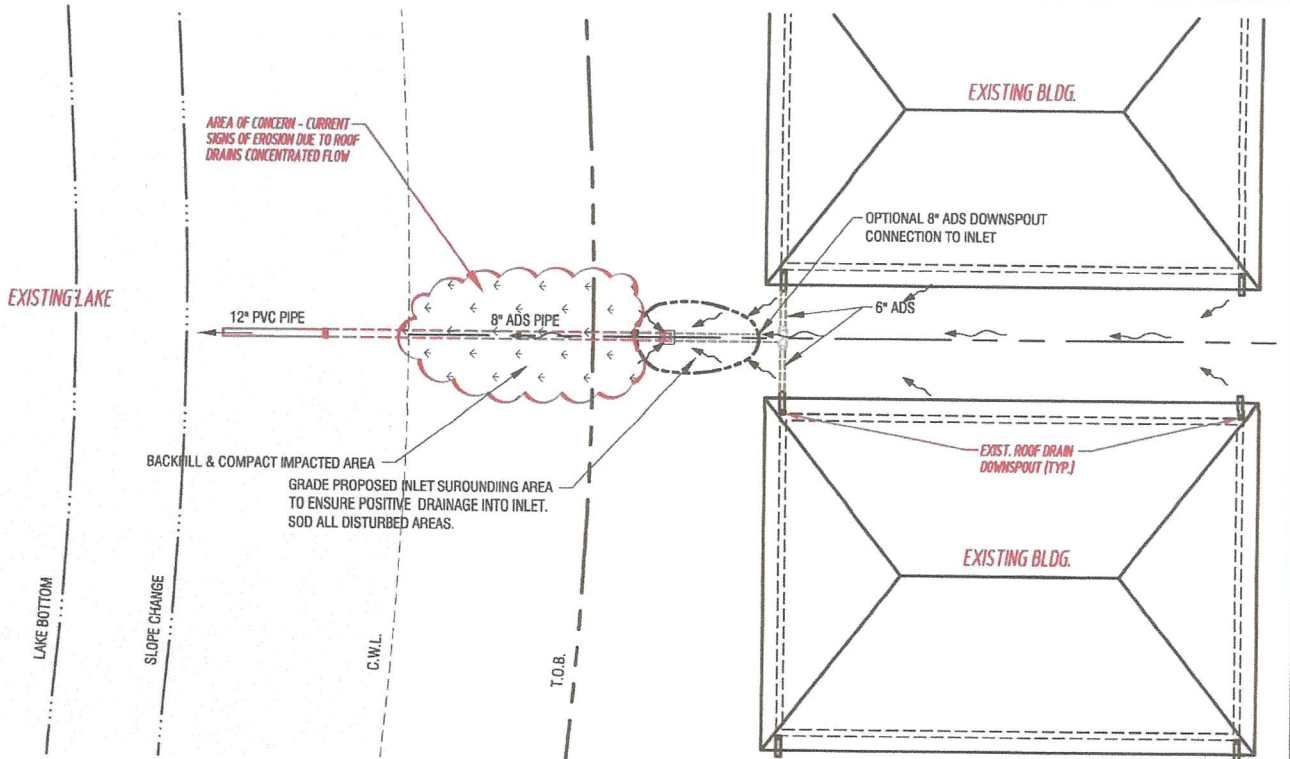
Browse our online library of project profiles. See how engineers have specified Nyloplast in a wide range of project applications.

[COMING SOON](#)

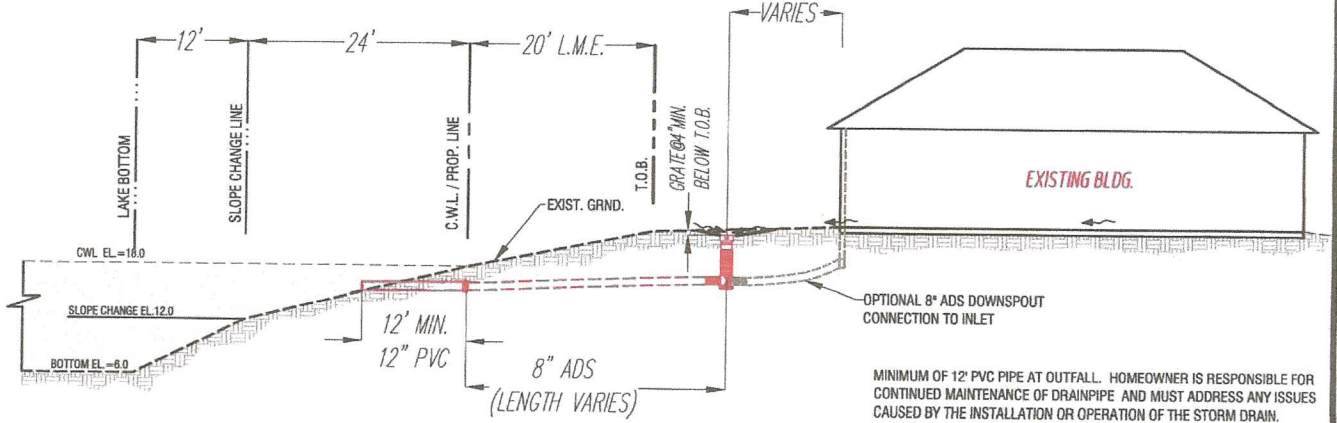
Need Project Support? (866) 888-8479

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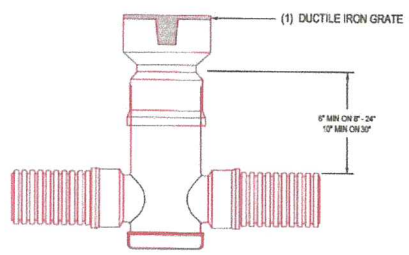
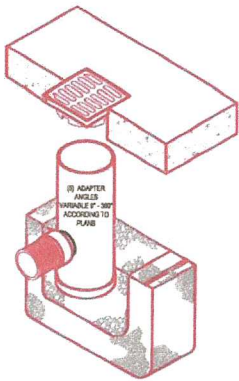
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PLAN



SECTION



Nyloplast
 3130 VERONA AVE
 BUFORD, GA 30518
 PHN (770) 932-2443
 FAX (770) 932-2490
www.nyloplast-us.com

INLET

- 1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
- 2 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
- 5 - DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY

NOTES

1. TYPE OF INLET CONNECTION, GRATE & DIMENSION VARY. REFER TO MANUFACTURER'S SPECS FOR OPTIONAL PRODUCTS AND INSTALLATION DETAILS.
2. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ENGINEER'S REVIEW AND APPROVAL.

DRAWING CURRENT AS OF 10/16/14

MIROMAR LAKES
 LEE COUNTY, FLORIDA

EXISTING DRAINAGE IMPROVEMENTS
ROOF DRAIN EROSION REPAIR DETAIL
 ROOF DRAIN INLET / LAKE OUTFALL DRAINAGE CONNECTION

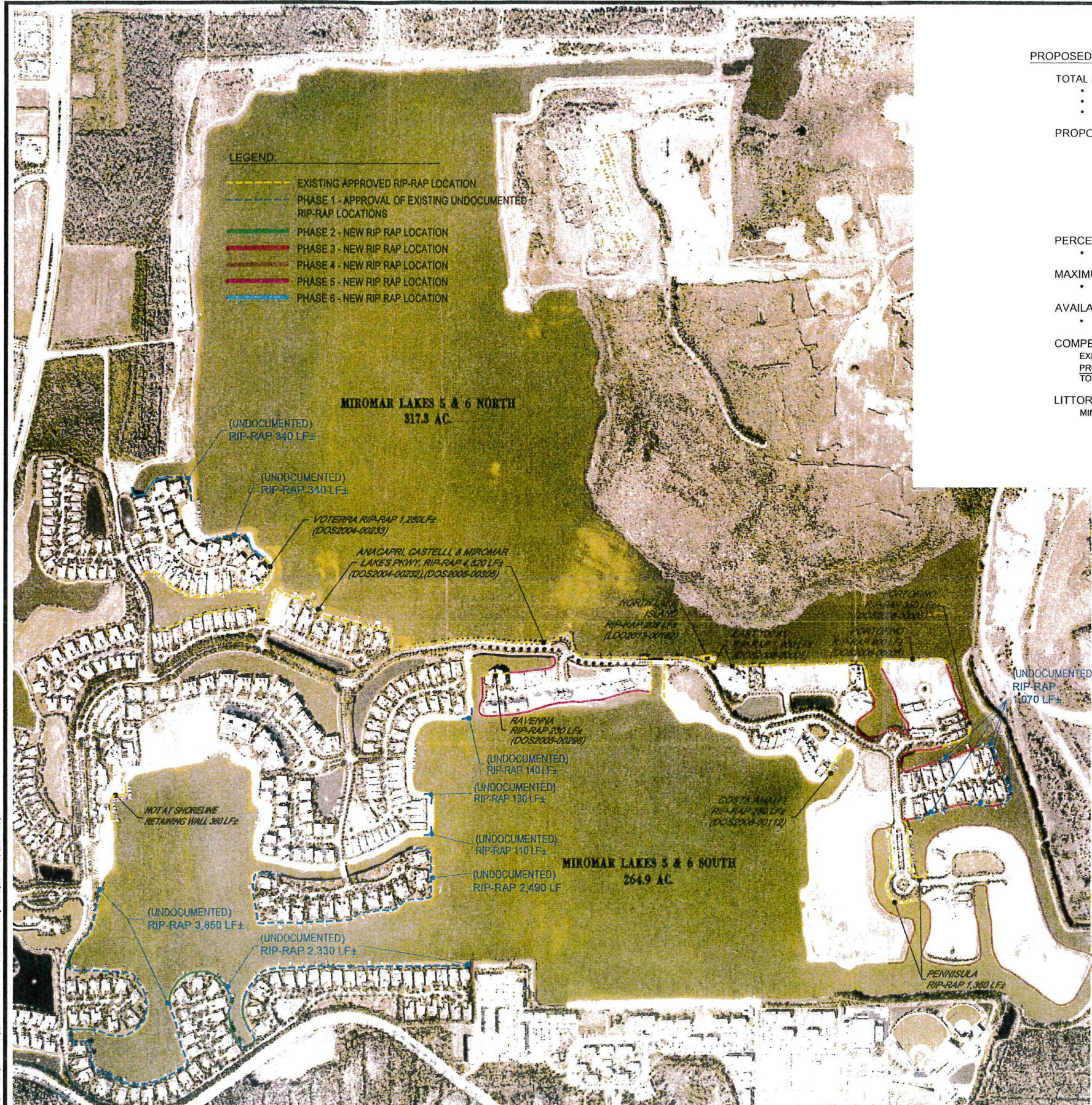


6200 Whiskey Creek Drive
 Fort Myers, FL 33919
 Phone: (239) 985-1200
 Florida Certificate of
 Authorization No. 1772

DRAWING:
 LAKE BANK EROSION
 PREVENTION DETAIL
SHEET NO.:

October 16, 2014

1



L:\Projects\2014\03\MIROMAR Lakes 5 & 6\0314031 MSP - Master Stabilization Plan.dwg 10: 1/21/14 4:54pm
 L:\Projects\2014\03\MIROMAR Lakes 5 & 6\0314031 MSP - Master Stabilization Plan.dwg 10: 1/21/14 4:54pm

LETTER	REVISIONS	DATE
1	ADDED UNDOCUMENTED VS. APPROVED RIP-RAP AREAS	9/17/14
2		
3		
4		
5		

MIROMAR DEVELOPMENT CORP.
**EAST 100 ACRES
 AT MIROMAR LAKES**
 LEE COUNTY, FLORIDA

DESIGNED BY: CLK DATE: 06/12/06
 DRAWN BY: JJH DATE: 06/12/06
 CHECKED BY: CLK DATE: 06/12/06
 VERTICAL SCALE: N/A HORIZONTAL SCALE: 1" = 400'



6200 Whiskey Creek Drive
 Fort Myers, FL 33919
 Phone : (239) 985-1200
 Florida Certificate of
 Authorization No.1772

MASTER STABILIZATION PLAN

THESE DRAWINGS ARE NOT
 APPROVED UNLESS SIGNED
 AND SEALED BELOW :
 CHARLES L. KREBS
 FLORIDA PROFESSIONAL ENGINEER
 REGISTRATION #56835
 DATE:

REFERENCE NO.	DRAWING NO.
14031MSP	1111
PROJECT NO.	SHEET NO.
2014.031	3-8

PROPOSED LAKE 5 & 6 SHORELINE:

TOTAL SHORELINE	74,574 L.F.
• MIROMAR	57,442 L.F.
• CENTER PLACE	14,600 L.F.
• F.G.C.U.	2,532 L.F.

PROPOSED RIP RAP	
APPROVED	11,130 L.F.
PHASE 1	10,750 L.F.
PHASE 2	1,140 L.F.
PHASE 3	1,520 L.F.
PHASE 4	6,890 L.F.
PHASE 5	1,650 L.F.
PHASE 6	600 L.F.
TOTAL	33,680 L.F.

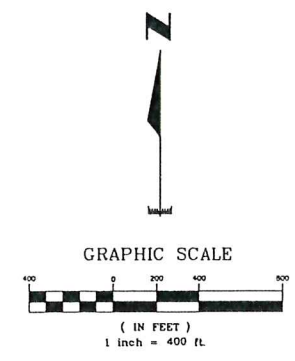
PERCENTAGE TO COVER PROPOSED SHORELINE TREATMENT
 • 33,630 L.F. / 57,442 L.F. * 100 = 58.63%

MAXIMUM HARDENED SHORELINE TREATMENT (65%)
 • 57,442 L.F. * 65.0% = 37,337 L.F.

AVAILABLE SHORELINE TREATMENT FOR STABILIZATION
 • 37,337 L.F. - 33,680 L.F. = 3,657 L.F.

COMPENSATORY LITTORAL PLANTINGS
 EXISTING LITTORAL WADING POOL AREA = 30,100± S.F.
 PROPOSED LITTORAL WADING POOL AREA = 34,890 S.F.
 TOTAL LITTORAL WADING POOL AREA = 64,990 S.F.

LITTORAL PLANTS TO BE PLANTED 1 PLANT PER LF. OF TREATED SHORELINE
 MINIMUM # OF PLANTS = 37,337 TO BE PLANTED WITHIN 64,990 S.F. OF WADING POOLS



**MIROMAR LAKES
RES #Z-12-004**

(DRI #11-9798-142)

REQUESTED DEVIATIONS

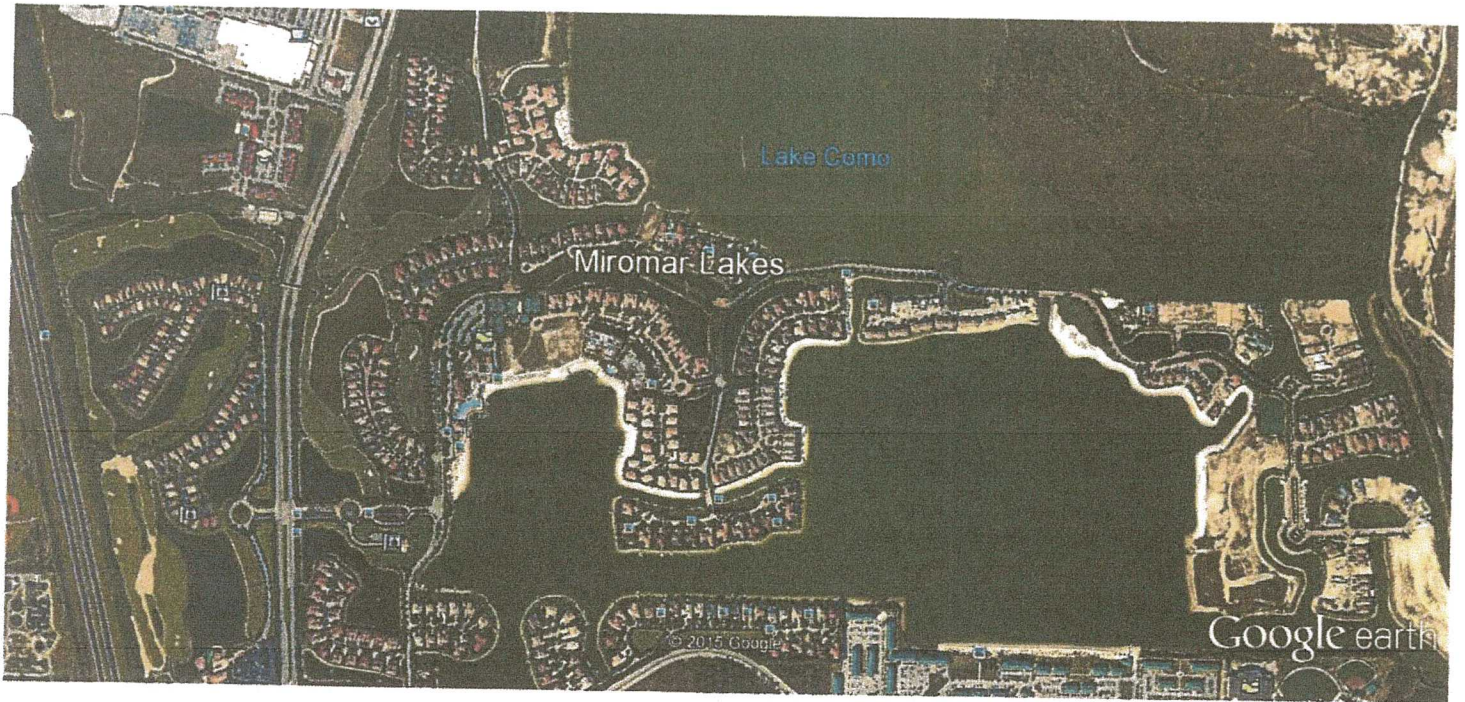
- 1) REQUESTED DEVIATION: from Section 10-418(3) which limits the use of rip-rap and other hardened shoreline treatment to 20% of an individual lake shoreline; to allow up to 65% of the shoreline on the developed portions of north and south recreational lakes within the Miromar Lakes community at the time of this application.
- 2) REQUESTED DEVIATION: from Section 10-481(3), which prohibits the use of rip rap adjacent to single family residential uses; to allow the use of rip rap adjacent to single family uses.
- 3) REQUESTED DEVIATION: from Section 10-329(d)(4) which requires lake banks to be sloped at a 6:1 ratio from the top of bank to a water depth of two feet below the dry season water table; to allow for a minimum ratio of 4:1 where turf reinforcement mat is proposed, and a minimum ratio of 2:1 where rip rap shoreline is proposed.
- 4) REQUESTED DEVIATION: from Section 29-75(d).2, which requires the use of filter fabric when rip rap shoreline stabilization is used; to allow the existing rip rap designated in Phase 1 to remain without use filter fabric until such time as the existing rip rap needs to be repaired or replaced.

GENERAL NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE AND VERIFY ANY EXISTING UTILITIES.
2. EXTREME CAUTION IS TO BE USED WHEN EXCAVATING, AS THE NUMBER AND LOCATION OF EXISTING UTILITIES HAVE BEEN NOTED BASED ON THE BEST INFORMATION AVAILABLE.
3. THE CONTRACTOR SHALL SAFEGUARD AND AVOID PENETRATION OF SPECIAL WETLAND PRESERVATION AREAS SHOWN ON THE DRAWINGS AND FENCED AT THE SITE.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ANY EXISTING LANDSCAPING (i.e. SOG, BUSHES, TREES, ETC.), SPRINKLER PIPE, SPRINKLER HEADS AND FENCING THAT MAY HAVE TO BE REMOVED DURING CONSTRUCTION.
5. ANY DAMAGE TO EXISTING UTILITIES AND PROPERTY DURING CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE.

GENERAL DEVELOPMENT NOTE:

1) BASED ON THE SPWMD GENERAL PERMIT #36-03568-P AND THE U.S.D.A SOIL CONSERVATION SERVICE SOIL SURVEY OF LEE COUNTY, FLORIDA, IT IS ANTICIPATED THAT THIS SITE MAY BE USED SAFELY FOR BUILDING PURPOSES, WITHOUT UNDUE DANGER FROM FLOOD OR ADVERSE SOIL OR FOUNDATION CONDITIONS, SUBJECT TO PROPERLY ENGINEERED AND CONSTRUCTED CORRECTIVE MEASURES, INCLUDING BUT NOT LIMITED TO SITE FILL, DRAINAGE WATER MANAGEMENT AND SEWAGE DISPOSAL FACILITIES.



Google earth

miles
km



	Siena	Verona Lago
Lake Bank Conditions	Homes on pond have 12" to 18" drop-off. Homes on golf course lake have 12" to 36" drop-offs	Homes along lake 6 where some have rip-rap banks and others do not. There is a step drop-off with the rip-rap banks
Lake Bank Materials Rip-Rap, Fill and Sod)	Fill and Sod	Rip-Rap, Fill and sod
Lake Bank Repair Footage	1920 linear feet	2200 linear feet of rip-rap repair, 1700 linear feet of new rip-rap
Method for Lake Bank Restoration	Dredge, reuse fill and sod	Rip- Rap for all banks
Cost Per/Ft. to Repair Lake Bank	Dredging of lake for resloping- \$26.00 per linear foot	Rip-Rap step repair per linear foot-\$13.53, New Rip-Rap installation per linear foot-\$21.58
Cost of Repair for CDD Property	Dredge resloping- \$ 14,976	Install New Rip -Rap- \$11,004
Cost Per Unit of Subdivision	Per Unit -\$583	Per Unit- \$940
Cost of Repair for Homeowner's Association Property	Dredge resloping- \$34,944	Install New Rip -Rap- \$25,676, Repair Rip-Rap step-\$29,750
Cost Per Unit of Subdivision	Per Unit- \$1,359	Per Unit- \$187
Homeowner's Association Drainage Installations	Yard drains with run-off into lake banks and some piped directly into lake	
Method of Homeowner's Drainage Modification	Combination of installation of drainage structures with homeowners existing piping into structures new outfalls into lake, re-direct of rainwater drains to front yard drains for valley gutter drainage, regrading and berming at top of lake easement slope	
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association	\$36.75 per ft., four drainage structures at \$1,347 per, 160 of outfall piping at \$53.00 per ft./restoration - \$76,710	
Cost Per Unit of Subdivision	Per Unit -\$2,983	
Lake Maintenance Encroachment	N/A	N/A
Total	CDD \$14,976 HOA \$111,654	CDD \$11,004 HOA \$55,476
Total Cost Per Unit in Subdivision (Contingency Included)	27 Units = \$4,925 per unit cost	62 Units = \$1,127 per unit cost

Project CEI Services (easement line survey, drainage plans, inspections, drainage as-builts)

	Vivaldi	Volterra
Lake Bank Conditions	Homes on lake and pond with no sloping issues	No issues with lake bank sloping
Lake Bank Materials(Rip-Rap, Fill and Sod, Sand)	Rip-Rap, Sand	Rip-Rap
Lake Bank Repair Footage		
Method for Lake Bank Restoration		
Cost Per/Ft. to Repair Lake Bank		
Cost of Repair for CDD Property		
Cost Per Unit of Subdivision		
Cost of Repair for Homeowner's Association Property		
Cost Per Unit of Subdivision		
Homeowner's Association Drainage Installations		
Method of Homeowner's Drainage Modification		
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		
Cost Per Unit of Subdivision		
Lake Maintenance Encroachment	N/A	N/A
Total		
Total Cost Per Unit in Subdivision (Contingency Included)	60 Units	12 Units

Project CEI Services (easement line survey, drainage plans, inspections, drainage as-builts)

	Valencia	Tivoli
Lake Bank Conditions	Need repair to step drop-off of 12" and installation of Rip-Rap on remaining lots without Rip-Rap material	Homes on Lake 1B and 1C with drop-off from 12" to 30 "
Lake Bank Materials (Rip-Rap, Fill and Sod, Sand)	Rip-Rap, fill and sod	Fill and sod
Lake Bank Repair Footage	Repair step drop -690 linear feet, Install 270' of new Rip-Rap	4150 Linear feet
Method for Lake Bank Restoration	Additional Rip-Rap installation	Dredge, reuse fill and re-sod
Cost Per/Ft. to Repair Lake Bank	Rip-Rap step repair- \$13.53 per linear foot, New Rip Rap- \$21.58 per linear foot	Dredging of existing lake for material to reslope- \$26.00 per linear foot
Cost of Repair for CDD Property	New Rip -Rap- \$2,330.00	Dredge resloping \$32,370
Cost Per Unit of Subdivision	Per Unit- \$30	Per Unit- \$447
Cost of Repair for Homeowners Association Property	Rip -Rap step repair- \$9,336, New Rip Rap- \$3,496	Dredge Resloping- \$75,530
Cost Per Unit of Subdivision	Per Unit- \$168	Per Unit- \$1,043
Homeowner's Association Drainage Installations		Yard drains in front and back yards
Method of Homeowner's Drainage Modifications		Re-install yard drains from rear lake easement slope area to front yard for valley gutter drainage
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		1920 feet of drainage piping and thirty two yard drains installed at \$36.75 per ft /restoration- \$70,560
Cost Per Unit of Subdivision		Per Unit- \$975
Lake Maintenance Encroachment	N/A	N/A
Total	CDD \$2,330 HOA \$12,832	CDD \$32,370 HOA \$146,090
Total Cost Per Unit in Subdivision (Contingency Included)	80 Units = \$198 cost per unit	76 Units = \$2,465 per unit cost

	Ravenna	Castelli
Lake Bank Conditions	Awaiting turnover to CDD, sloping issues already exist	No issue with bank slopes in subdivision
Lake Bank Materials Rip-Rap, Fill and Sod)	Rip-Rap sections, fill and sod	Rip-Rap
Lake Bank Repair Footage		
Method for Lake Bank Restoration		
Cost Per/Ft. to Repair Lake Bank		
Cost of Repair for CDD Property		
Cost Per Unit of Subdivision		
Cost of Repair for Homeowners Association Property		
Cost Per Unit of Subdivision		
Homeowner's Association Drainage Installations	Yard drains installed to water line of lake	
Method of Homeowner's Drainage Modifications	Re-direct yard drains from back of property to bubble up drains in front yard for valley gutter drainage	
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		
Cost Per Unit of Subdivision		
Lake Maintenance Encroachment	N/A	N/A
Total		
Total Cost Per Unit in Subdivision (Contingency Included)	60 Units	8 Units

	Salerno	Sorrento
Lake Bank Conditions	Under Construction by Builder	Sloping issue with drainage ponds on each side of entrance, drop-offs from 10" to 12" deep. Homes on Lake 5 have Rip-Rap banks.
Lake Bank Materials (Rip-Rap, Fill and Sod, Sand)	Fill and sod	Fill with sod
Lake Bank Repair Footage		920 linear feet
Method for Lake Bank Restoration		Dredge pond, reuse fill and re-sod
Cost Per/Ft. to Repair Lake Bank		Dredging of existing lake for material to reslope-\$26.00 per linear foot
Cost of Repair for CDD Property		Dredge resloping- \$7,176
Cost Per Unit of Subdivision		Per Unit-\$688
Cost of Repair for Homeowners Association Property		Dredge resloping- \$16,744
Cost Per Unit of Subdivision		Per Unit-\$1,598
Homeowner's Association Drainage Installations		
Method of Homeowner's Drainage Modification		
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		
Cost Per Unit of Subdivision		
Lake Maintenance Encroachment	Fencing installed within easement	N/A
Total		CDD \$7,176 HOA \$16,744
Total Cost Per Unit in Subdivision (Contingency Included)	10 Units	11 Units = \$2,286 cost per unit

	Mirasol	Portofino
Lake Bank Conditions	No sloping issues within subdivision, behind homes are sand beach areas	Still under construction, sloping issues already exist
Lake Bank Materials (Rip-Rap, Fill and Sod, Sand)	Sand	Fill and Sod
Lake Bank Repair Footage		590 linear feet rear yards, 440 linear foot on northside of round-a-bout
Method for Lake Bank Restoration		Dredge, reuse fill and re-sod. Rip Rap bank north of round -about at waters edge
Cost Per/Ft. to Repair Lake Bank		New Rip -Rap-\$21.58 per linear foot
Cost of Repair for CDD Property		Dredging resloping-\$4,602, Rip-Rap Installation \$9,494
Cost Per Unit of Subdivision		Per Unit- \$740
Cost of Repair for Homeowners Association Property		Dredging resloping - \$10,738
Cost Per Unit Per Subdivision		Per Unit- \$554
Homeowner's Association Drainage Installations		Yard drains installed with run-off in lake easement
Method of Homeowner's Drainage Modification		Re-install yard drains from rear yard lake easement bank to front yard for valley gutter drainage
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		Drainage Modifications-\$16,905
Cost Per Unit of Subdivision		Per Unit- \$888
Lake Maintenance Encroachment	N/A	Fencing installed within easement
Total		CDD \$14,097 HOA \$27,644
Total Per Unit in Subdivision (Contingency Included)	224 Units	20 Units = \$2,182 per unit cost

	Murano	Isola Bella
Lake Bank Conditions	No sloping issues within this subdivision	All homes have no issue with banks
Lake Bank Materials (Rip-Rap, Fill and Sod, Sand)	Rip-Rap, Fill and Sod	Rip-Rap
Lake Bank Repair Footage		
Method for Lake Bank Restoration		
Cost Per/Ft. to Repair Lake Bank		
Cost of Repair for CDD Property		
Cost Per Unit of Subdivision		
Cost of Repair for Homeowners Association Property		
Cost Per Unit of Subdivision		
Homeowner's Association Drainage Installations		
Method of Homeowner's Drainage Modification		
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		
Cost Per Unit of Subdivision		
Lake Maintenance Encroachment	Fencing installed within easement	N/A
Total		
Total Cost Per Unit in Subdivision (Contingency Included)	19 Units	13 Units

	Bellamare	Montebello
	Homes on northside of roadway have bank erosion issues with 12" to 24" drop-offs	Northside homes on lake needs resloping to repair 10" to 18" drop-off
Lake Bank Conditions	Fill and sod	Fill and sod
Lake Bank Materials(Rip-Rap, Fill and Sod, Sand)	1400 linear feet	1810 linear feet
Lake Bank Repair Footage	Dredge, reuse fill and sod	Dredge, reuse fill and sod
Method for Lake Bank Restoration	Dredging of existing lake for material to reslope- \$26.00 per linear foot	Dredging of existing lake for material to reslope-\$26.00 per linear foot
Cost Per/Ft. to Repair Lake Bank	Dredge resloping-\$10,920	Dredge resloping- \$14,118
Cost of Repair for CDD Property	Per Unit- \$573	Per Unit- \$371
Cost Per Unit of Subdivision	Dredge resloping-\$25,480	Dredge resloping- \$32,942
Cost of Repair for Homeowners Association Property	Per Unit- \$1,337	Per Unit- \$890
Cost Per Unit of Subdivision		Yard drains and rainwater gutters directly into lake
Homeowner's Association Drainage Installations	Need to install new yard drains between properties and drain to bubble up drains in front yard	Install drainage structures between two buildings and pipe existing rainwater leaders into structure with new out fall to lake
Method of Homeowner's Drainage Modification	630 ft of piping and nine yard drains-\$36.75 per ft /restoration - Drainage Modifications-\$23,152	980 feet of yard drain piping and five drainage structures/ 40 ft of outfall piping -Drain Piping \$36.75 per ft, Structures \$1,347 per structure, outfall piping \$53.00 per ft - piping/structure/restoration \$ 52,375
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association	Per Unit- \$1,215	Per Unit-\$1,375
Cost Per Unit of Subdivision	N/A	N/A
Lake Maintenance Encroachment	CDD \$10,920 HOA \$48,632	CDD \$14,118 HOA \$86,297
Total	20 Units = \$2,925 per unit	40 Units = \$2,636 per unit
Total Cost Per Unit in Subdivision 4(Contingency Included)		

	Caprini	Navona
Lake Bank Conditions	No issues with lake banks in this subdivision	Under Construction by Builder
Lake Bank Materials(Rip-Rap, Fill and Sod, Sand)	Rip-Rap	Fill and sod
Lake Bank Repair Footage		
Method for Lake Bank Restoration		
Cost Per/Ft. to Repair Lake Bank		
Cost of Repair for CDD Property		
Cost Per Unit of Subdivision		
Cost of Repair for Homeowners Association Property		
Cost Per Unit of Subdivision		
Homeowner's Association Drainage Installations		
Method of Homeowner's Drainage Modification		
Cost Per Unit of Subdivision		
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		
Lake Maintenance Encroachment	N/A	Fencing installed within easement
Total		
Total Cost Per Unit in Subdivision (Contingency Included)	27 Units	18 Units

	Bellini	Costa Amalfi
Lake Bank Conditions	No Issue with lake bank slopes	No sloping issues, but areas of erosion due to water run-off from property where it meets beach area.
Lake Bank Materials (Rip-Rap, Fill and Sod,Sand)	Rip-Rap	Sand
Lake Bank Repair Footage		330 linear feet
Method for Lake Bank Restoration		Add sand and regrade
Cost Per/Ft. to Repair Lake Bank		
Cost of Repair for CDD Property		
Cost Per Unit of Subdivision		
Cost of Repair for Homeowners Association Property		
Cost Per Unit of Subdivision		
Homeowner's Association Drainage Installations		
Method of Homeowner's Drainage Modification		
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		Lump Sum \$2,800
Cost Per Unit of Subdivision		Per Unit- \$183
Lake Maintenance Encroachment	N/A	N/A
Total		HOA \$2,800
Total Cost Per Unit in Subdivision (Contingency Included)	60 Units	16 Units = \$183 per unit

	Anacapri	San Marino
Lake Bank Conditions	No issues with bank sloping	Homes on Lake 3A have 12" to 24" drop-off. Homes that back-up to Lake 3B drop-off 10" to 36" in depth
Lake Bank Materials(Rip-Rap, Fill and Sod, Sand)	Rip-Rap	Fill and sod
Lake Bank Repair Footage		3950 linear feet
Method for Lake Bank Restoration		Dredge pond, reuse fill and re-sod
Cost Per/Ft. to Repair Lake Bank		Dredging of existing lake for material to reslope- \$26.00 per linear foot
Cost of Repair for CDD Property		Dredging resloping- \$30,810
Cost Per Unit of Subdivision		Per Unit \$203
Cost of Repair for Homeowners Association Property		Dredging resloping-\$71,890
Cost Per Unit of Subdivision		Per Unit- \$471
Homeowner's Association Drainage Installations		
Method of Homeowner's Drainage Modification		Need to install new yard drains between properties and drain water run-off to front yard bubble up structures
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		1460 feet of drainage piping and twenty yard drains installed at \$36.75 per ft/ restoration \$ 53,655
Cost Per Unit of Subdivision		Per Unit-\$353
Lake Maintenance Encroachment	N/A	N/A
Total		CDD \$30,810 HOA \$125,545
Total Cost Per Unit in Subdivision (Contingency Included)	10 Units	160 Units = \$1,027 per unit

	Bellavista	St. Moritz
Lake Bank Conditions	No bank sloping issues in subdivision	Homes that back-up to lake 1A have drop-off of 12" to 18", Homes that back-up to Lake 1C have drop-offs of 10" to 16"
Lake Bank Materials (Rip-Rap, Fill and Sod, Sand)	No water body in rear yards	Fill and Sod
Lake Bank Repair Footage		1655 linear feet
Method for Lake Bank Restoration		Dredge, reuse fill and re-sod
Cost Per/Ft. to Repair Lake Bank		Dredging existing lake for material to reslope- \$26.00 per linear foot
Cost of Repair for CDD Property		Dredge resloping- \$12,909
Cost Per Unit of Subdivision		Per Unit- \$366
Cost of Repair for Homeowners Association Property		Dredge resloping- \$30,121
Cost Per Unit of Subdivision		Per Unit -\$854
Homeowner's Association Drainage Installations		
Method of Homeowner's Drainage Modification		Install new yard drains between properties to divert water to front of properties to drain in existing drainage system
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association		880 feet of piping and twenty four yard drains at \$36.75 per ft /restoration-\$32,340
Cost Per Unit of Subdivision		Per Unit -\$918
Lake Maintenance Encroachment	N/A	N/A
Total		CDD \$12,909 HOA \$62,461
Total Cost Per Unit in Subdivision (Contingency Included)	60 Units	37 Units = \$2,138 per unit

	Montelago	Porto Romano
Lake Bank Conditions	Homes on southside of site have sloping issues with 12" to 36" drop-offs	Homes that back-up to Lake 3D have drop-off of 12" to 30"
Lake Bank Materials(Rip-Rap, Fill and Sod, Sand)	Fill and sod	Fill and sod
Lake Bank Repair Footage	1600 linear feet	1640 linear feet
Method for Lake Bank Restoration	Dredge, reuse fill and re-sod	Dredge, reuse fill and re-sod
Cost Per/Ft. to Repair Lake Bank	Dredging existing lake for material to reslope- \$26.00 per linear foot	Dredging existing lake for material to reslope- \$26.00 per linear foot
Cost of Repair for CDD Property	Dredging resloping- \$12,480	Dredge resloping- \$12,792
Cost Per Unit of Subdivision	Per Unit- \$437	Per Unit- \$245
Cost of Repair for Homeowners Association Property	Dredging resloping- \$29,120	Dredge resloping- \$29,848
Cost Per Unit of Subdivision	Per Unit- \$1019	Per Unit- \$569
Homeowner's Association Drainage Installations	Yard drains into lake	Yards drains
Method of Homeowner's Drainage Modification	Install drainage structures and pipe existing rainwater leaders into structure with new lake outfall from structure	Install drainage structures with lake outfalls and yard drains between properties draining to bubble up drains in front yards
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association	800 feet of drainage piping with two drainage structures and outfall piping- \$36.75 for piping, \$1,347 per structure and \$53.00 per ft outfall piping/restoration- \$35,934	1420 feet of drainage piping at \$36.75 per ft, three drainage structures at \$1,347 per, 120 ft of outfall piping at \$53.00 per ft/ restoration- \$62,586
Cost Per Unit of Subdivision	Per Unit- \$1,258	Per Unit- \$1,195
Lake Maintenance Encroachment	N/A	N/A
Total	CDD \$12,480 HOA \$67,748	CDD \$12,792 HOA \$92,434
Cost Per Unit in Subdivision (Contingency Included)	30 Units = \$2,714 per unit	55 Units = \$2009 per unit

Golf Course	
Lake Bank Conditions	Hole #4 - Lake 3A - 16" drop-off (540'), Hole # 5- Lake 3B - 12" drop-off (280'), Hole # 16 south of tee box - 16" drop-off (240')
Lake Bank Materials(Rip-Rap, Fill and Sod, Sand)	Fill and sod
Lake Bank Repair Footage	1360 linear feet
Method for Lake Bank Restoration	Dredge, reuse fill and sod
Cost Per/Ft. to Repair Lake Bank	Dredging of existing lake for material to reslope- \$26.00 per linear foot
Cost of Repair for CDD Property	Dredge resloping- \$35,360
Cost Per Unit of Subdivision	
Cost of Repair for Homeowners Association Property	
Cost Per Unit of Subdivision	
Homeowner's Association Drainage Installations	
Method of Homeowner's Drainage Modification	
Cost Per/Ft. to Install Drainage Upgrade for Homeowners Association	
Cost Per Unit of Subdivision	
Lake Maintenance Encroachment	N/A
Total	CDD \$35,360
Total Cost Per Unit in Subdivision(Contingency Included)	N/A

SECTION 4

Miromar Lakes Subdivision

Photos and Maps

Siena

Verona Lago

Vivaldi

Volterra

Valencia

Tivoli

Ravenna

Castelli

Salerno

Sorrento

Mirasol

Portofino

Murano

Isola Bella

Bellamare

Montebello

Caprini

Navona

Bellini

Costa Amalfi

Anacapri

San Marino

Bellavista

St. Moritz

Montelago

Porto Romano

Golf Course

Siena





















Verona Lago



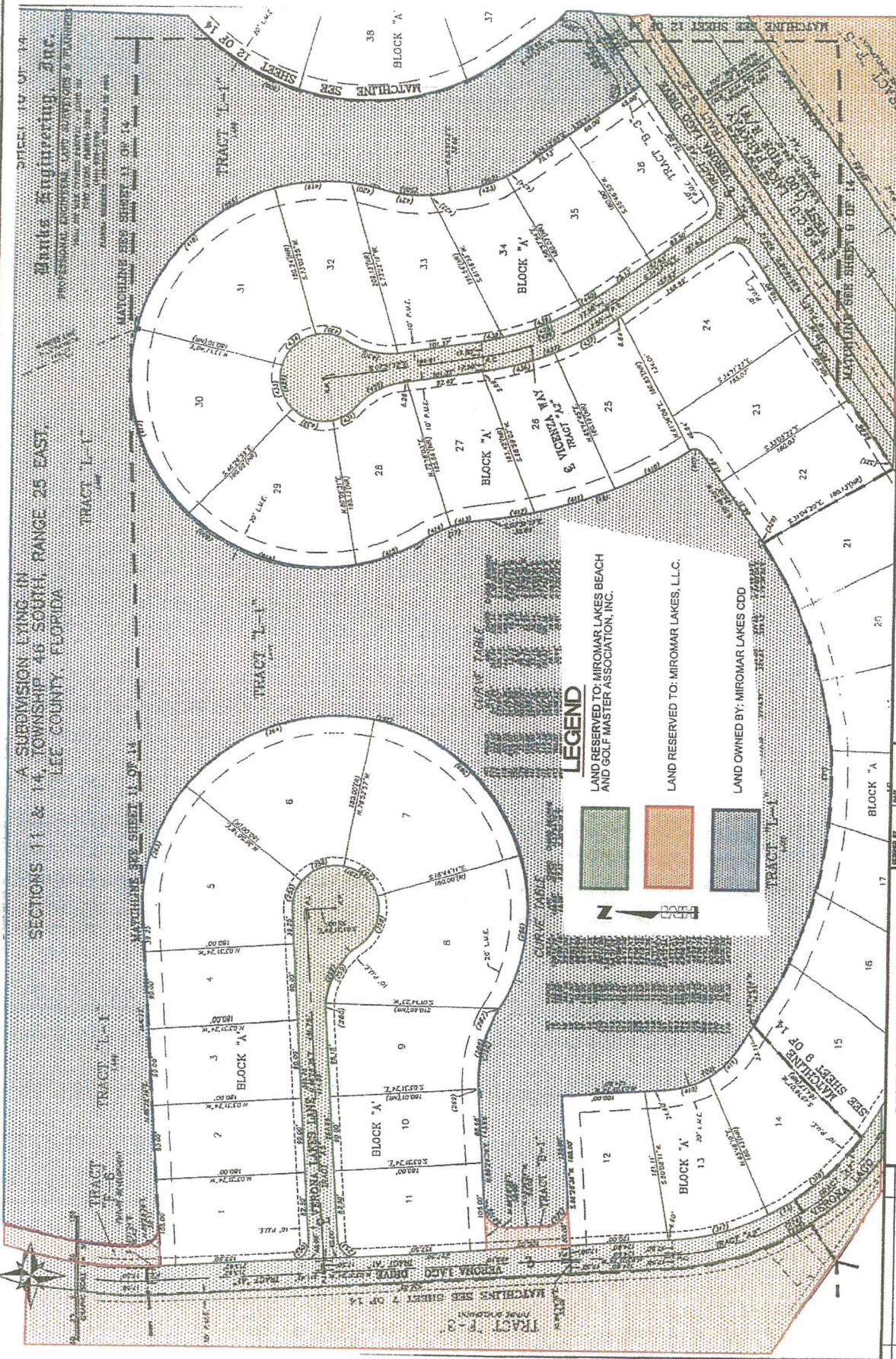






SECTIONS 11 & 14, TOWNSHIP 46 SOUTH, RANGE 25 EAST,
LEE COUNTY, FLORIDA

Units Engineering, Inc.
PROFESSIONAL ENGINEERS, SURVEYORS & PLANNERS
1000 W. GULF BLVD., SUITE 200, TAMPA, FL 33604
PH: (813) 288-1111 FAX: (813) 288-1112



LEGEND

- LAND RESERVED TO: MIROMAR LAKES BEACH AND GOLF MASTER ASSOCIATION, INC.
- LAND RESERVED TO: MIROMAR LAKES, L.L.C.
- LAND OWNED BY: MIROMAR LAKES CDD

<p>MIROMAR LAKES C.D.D. LEE COUNTY, FLORIDA</p>		<p>6203 Whiskey Creek Drive For Meade Phone: (239) 935-1300 Florida Certificate of Authorization No. 1772</p>		<p>HAM HOLE MONTES ENGINEERING & ARCHITECTURE LANSING, MICHIGAN</p>		<p>DATE: 07/15/09 BY: [Signature] CHECKED BY: [Signature] DATE: 07/15/09 SCALE: N/A N.T.S.</p>		<p>DATE: 07/15/09 BY: [Signature] CHECKED BY: [Signature] DATE: 07/15/09 SCALE: N/A N.T.S.</p>		<p>OWNER: UNIT ONE PROJECT: 2003.022 SHEET: 8 OF 35</p>	
<p>UNIT ONE PLAT LAND OWNERSHIP EXHIBIT</p>											

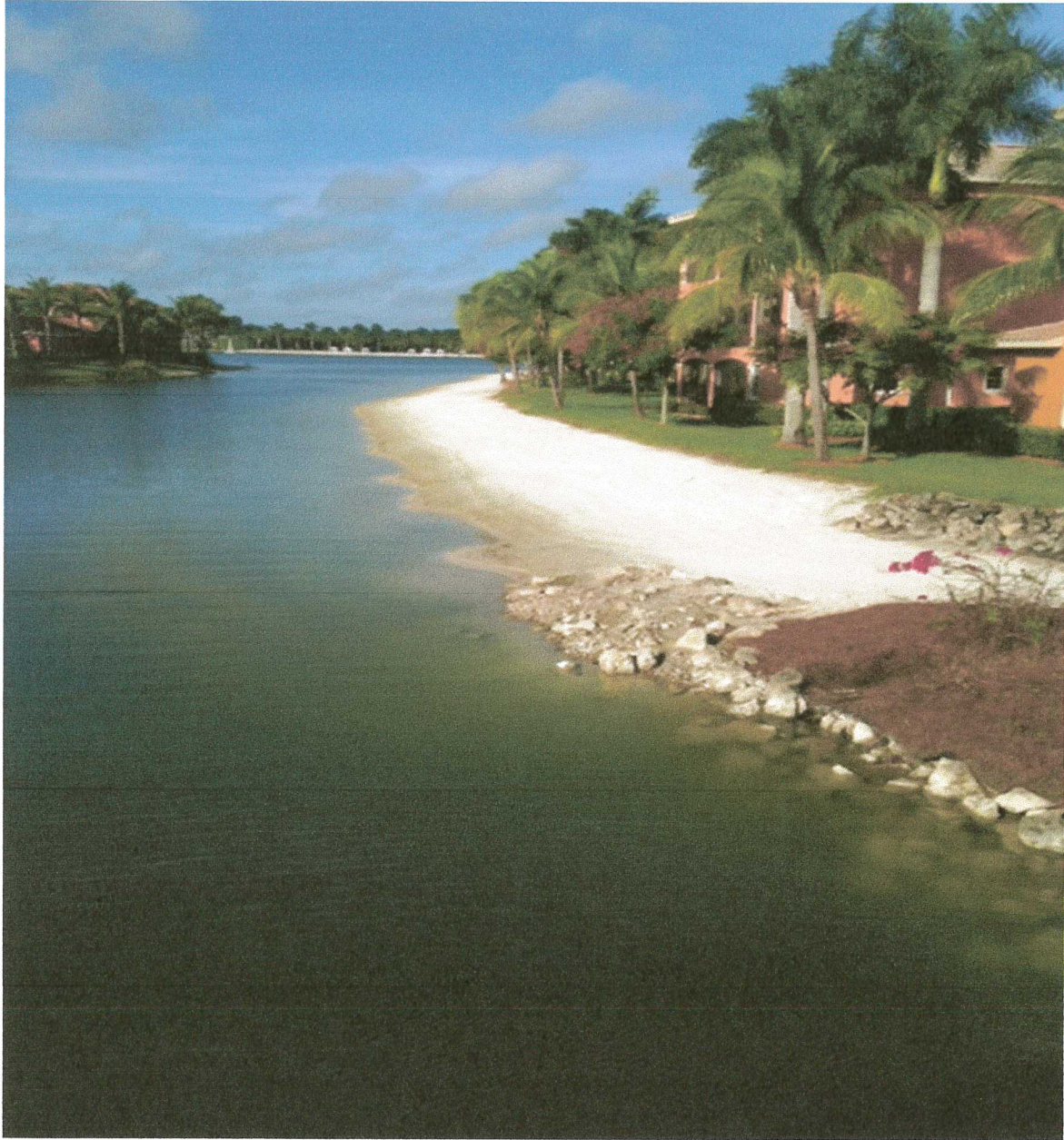


Google earth



Vivaldi





OWNED BY MIKUMAK LAKES LLC

LAKE 6H
1.41 Ac.
CONTROL EL. = 18.0
(BY OTHERS)

EXIST LAKE 6
21.36 Ac.
CONTROL EL. = 18.0

CHANNEL
CONTROL EL. = 18.0
(BY OTHERS)





Google earth



Volterra











Google earth

feet
meters



Valencia









Google earth



Tivoli













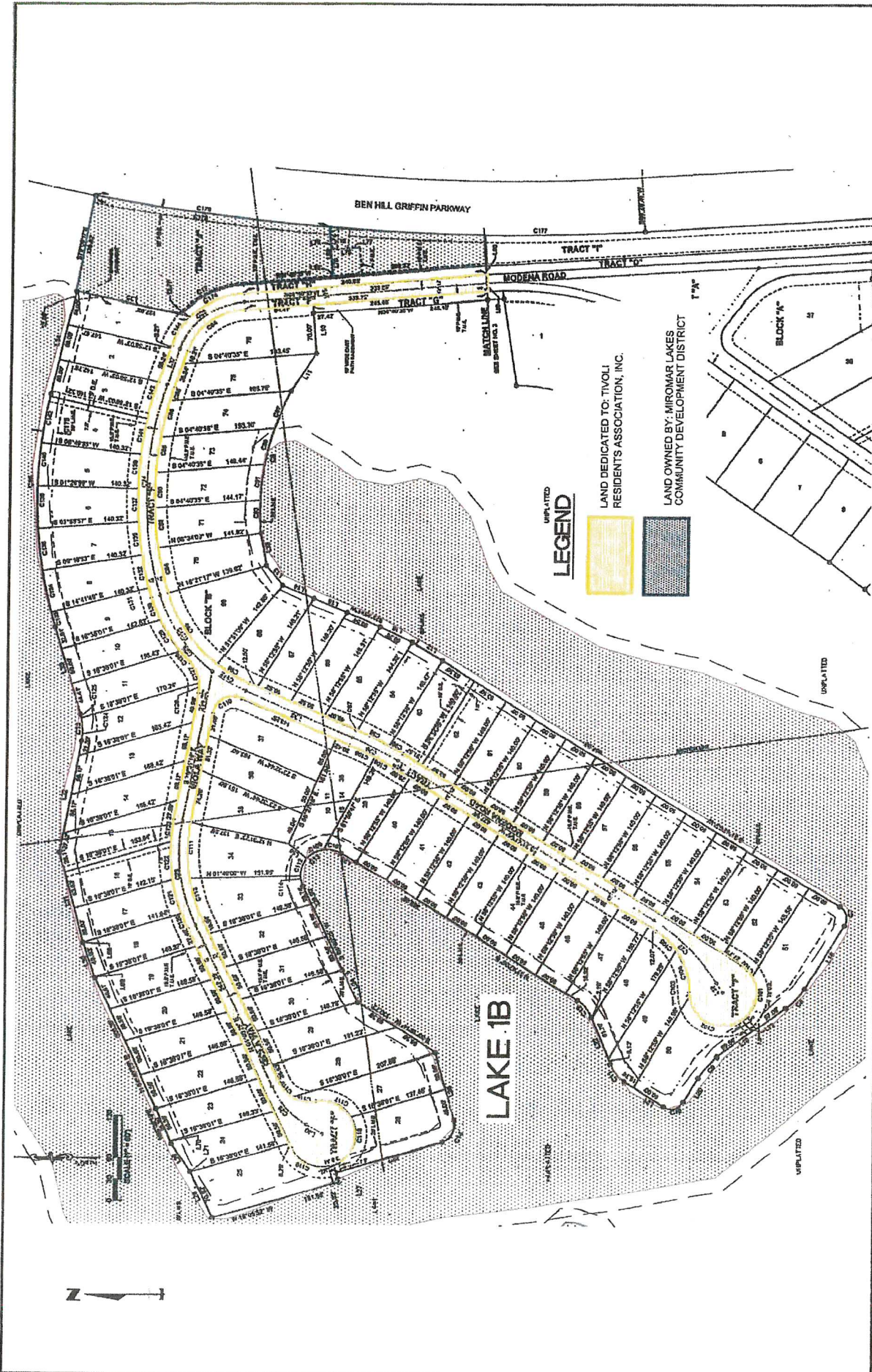












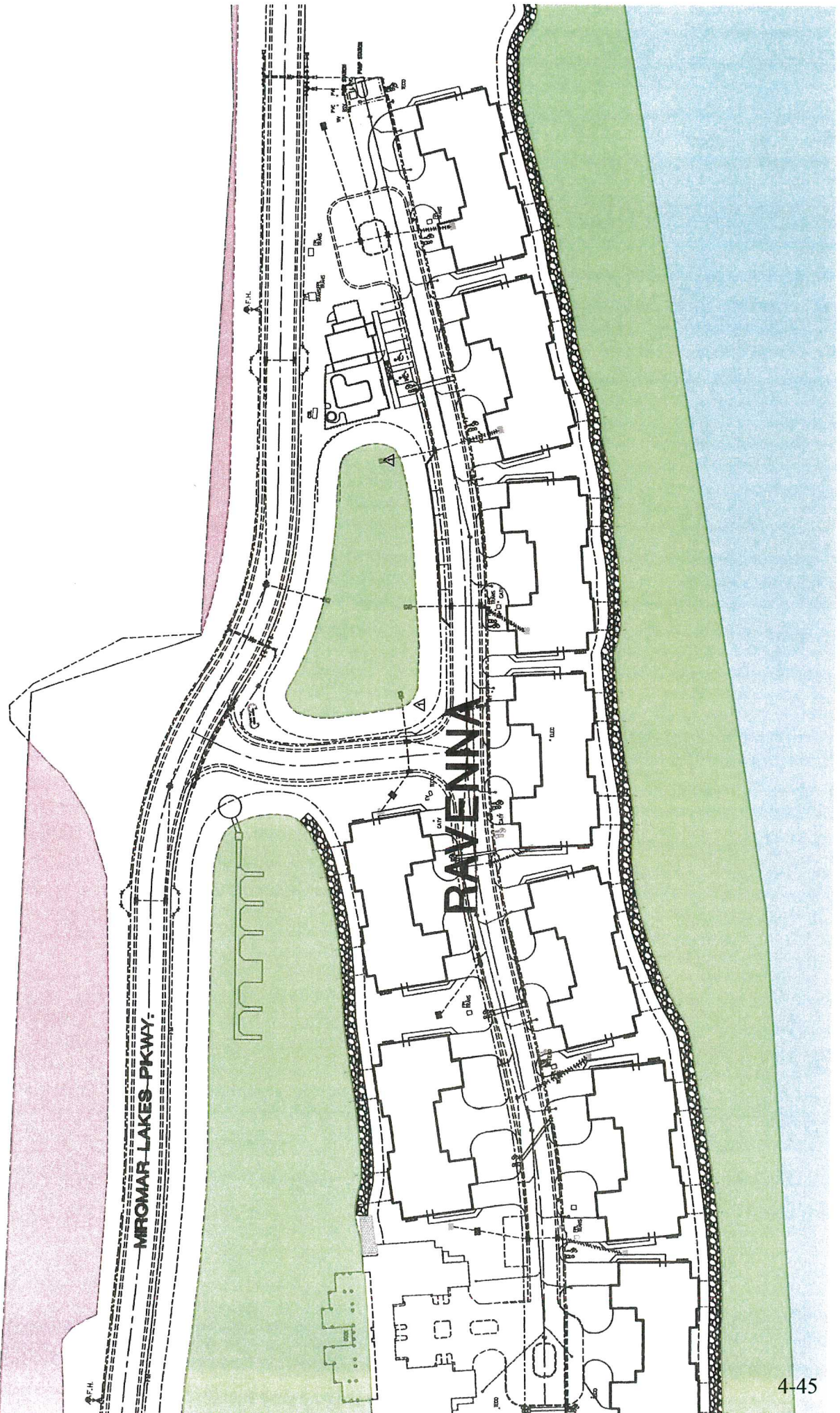
MIROMAR LAKES C.D.D. LEE COUNTY, FLORIDA	DATE: _____ PREPARED BY: _____ CHECKED BY: _____ APPROVED BY: _____	6200 Whiskey Creek Drive Miramar, FL 33181 Phone: (239) 585-3200 Florida Certificate of Authorization No. 1772	UNIT FOUR 1258-17	COUNTY P.L. 2003.022	SHEET NO. 17 OF 35
	DATE: 07/15/08 DRAWN BY: CJK CHECKED BY: RJA APPROVED BY: _____ N.T.S.	H.M. HOLE MONTES DEVELOPMENT DISTRICT LICENSE NO. 02-03-01	5200 Whiskey Creek Drive Miramar, FL 33181 Phone: (239) 585-3200 Florida Certificate of Authorization No. 1772	UNIT FOUR PLAT LAND OWNERSHIP EXHIBIT	COUNTY P.L. 2003.022

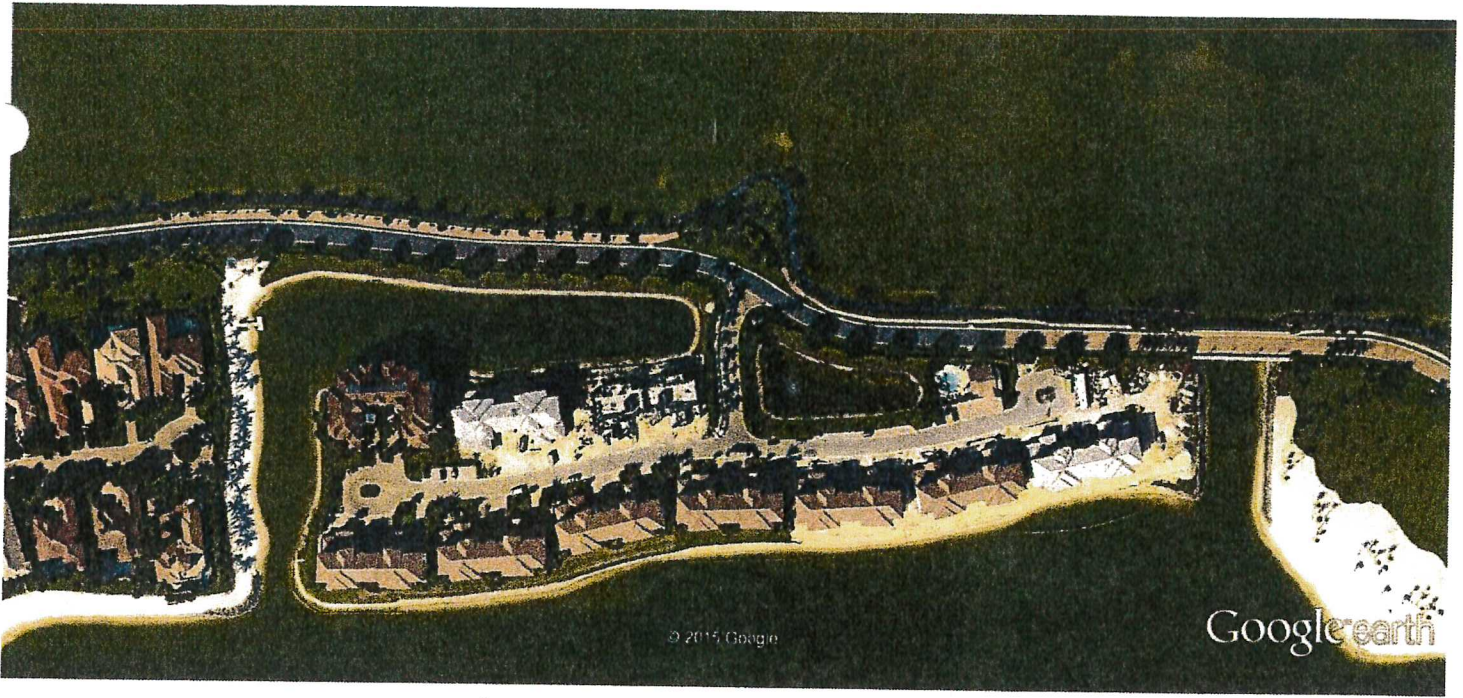
Ravenna





OWNED BY M. J. LUMAR
 OWNED BY MIROMAR
 OWNED BY TMD CON.



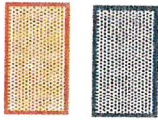


Google earth



Castelli

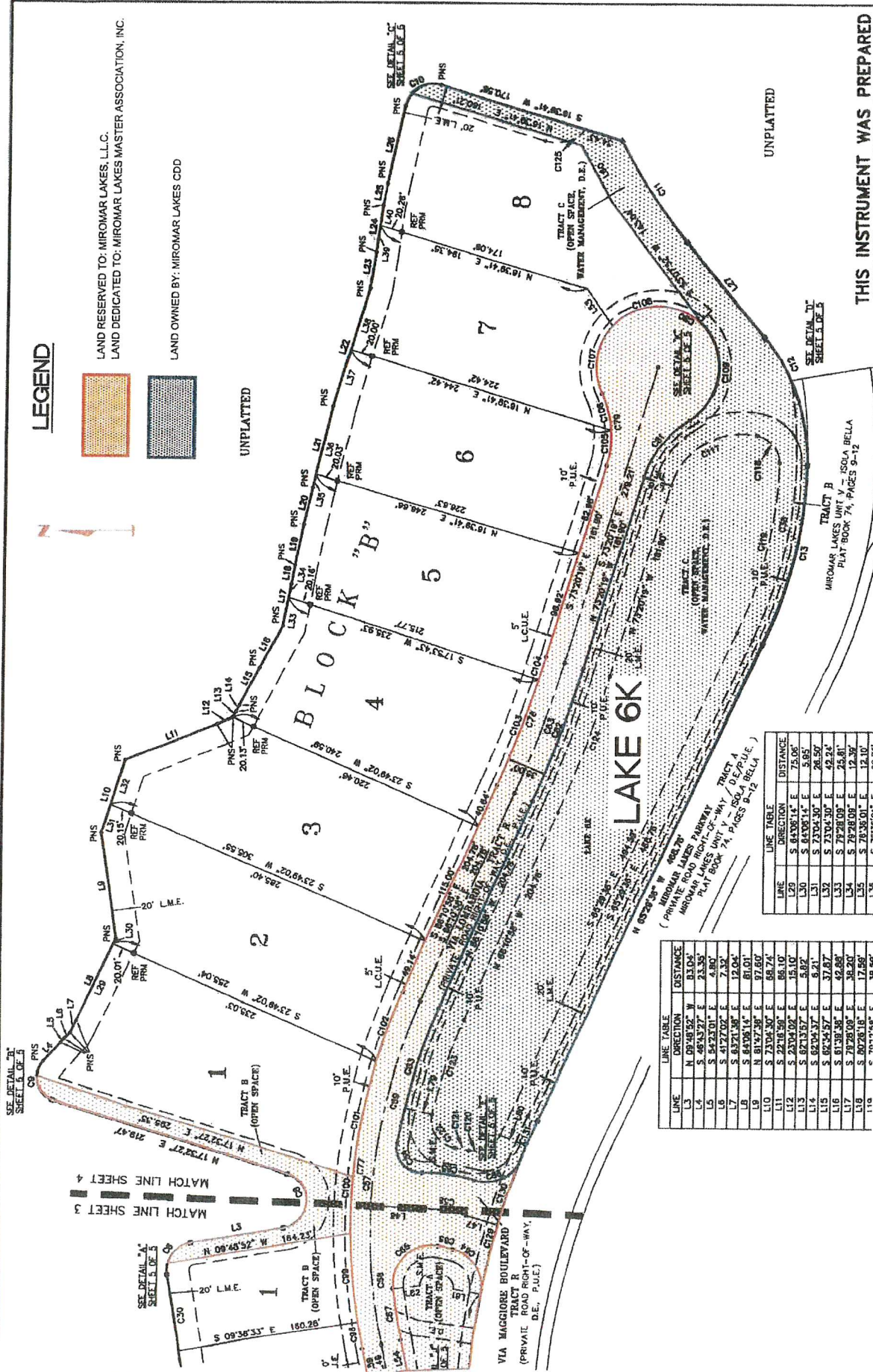
LEGEND



LAND RESERVED TO: MIROMAR LAKES, L.L.C.
LAND DEDICATED TO: MIROMAR LAKES MASTER ASSOCIATION, INC.

LAND OWNED BY: MIROMAR LAKES CDD

UNPLATTED



LINE TABLE

LINE	DIRECTION	DISTANCE
L10	S 84°00'14" E	75.00'
L11	S 84°00'14" E	24.35'
L12	S 23°04'30" E	26.57'
L13	S 23°04'30" E	42.24'
L14	S 20°28'09" E	25.81'
L15	S 20°28'09" E	12.36'
L16	S 20°28'09" E	12.10'
L17	S 20°28'09" E	42.74'
L18	S 20°28'09" E	65.10'
L19	S 20°28'09" E	15.10'
L20	S 20°28'09" E	5.92'
L21	S 82°04'37" E	6.21'
L22	S 82°04'37" E	37.87'
L23	S 81°38'38" E	42.88'
L24	S 78°28'08" E	36.20'
L25	S 78°28'08" E	17.59'
L26	S 78°28'08" E	18.40'

LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N 09°48'52" W	83.04'
L2	S 48°43'27" E	23.35'
L3	S 54°33'01" E	5.86'
L4	S 41°27'02" E	7.32'
L5	S 82°04'37" E	17.04'
L6	N 81°42'34" E	97.00'
L7	S 23°04'30" E	68.74'
L8	S 22°16'50" E	86.10'
L9	S 23°04'30" E	15.10'
L10	S 82°04'37" E	5.92'
L11	S 82°04'37" E	6.21'
L12	S 82°04'37" E	37.87'
L13	S 81°38'38" E	42.88'
L14	S 78°28'08" E	36.20'
L15	S 78°28'08" E	17.59'
L16	S 78°28'08" E	18.40'

UNPLATTED

THIS INSTRUMENT WAS PREPARED
THOMAS M. MIDDY P E M S E F

MIROMAR LAKES C.D.D.
LEE COUNTY, FLORIDA

8200 Whiskey Creek Circle
Fort Myers, FL 33910
Phone: (239) 965-1200
Florida Certificate of
Authorization No. 1772

H.M.
HOLE MONTES
CONSULTING ARCHITECTS
N.T.S.

REVISION BY DATE
01/13/09
DATE 07/15/09
REVISION BY DATE
07/15/09
DATE 07/15/09

UNIT NINE PLAT - ANACAPRI & CASTELLI
LAND OWNERSHIP EXHIBIT

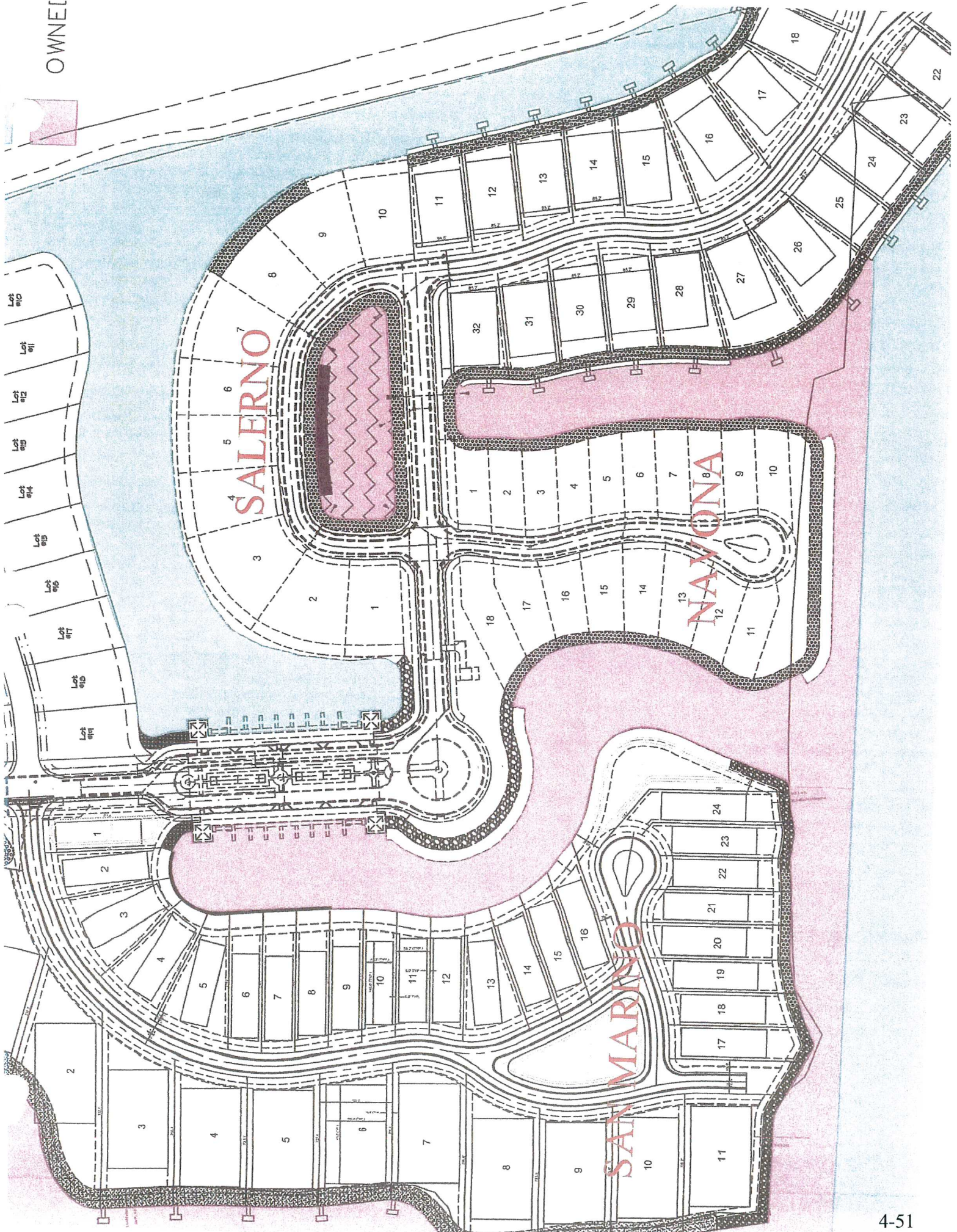
FOR FILE WITH
UNIT NINE 1258-26
PROJECT NO. 2003.022 26 OF 35

Salerno











Google earth



Google earth



Sorrento





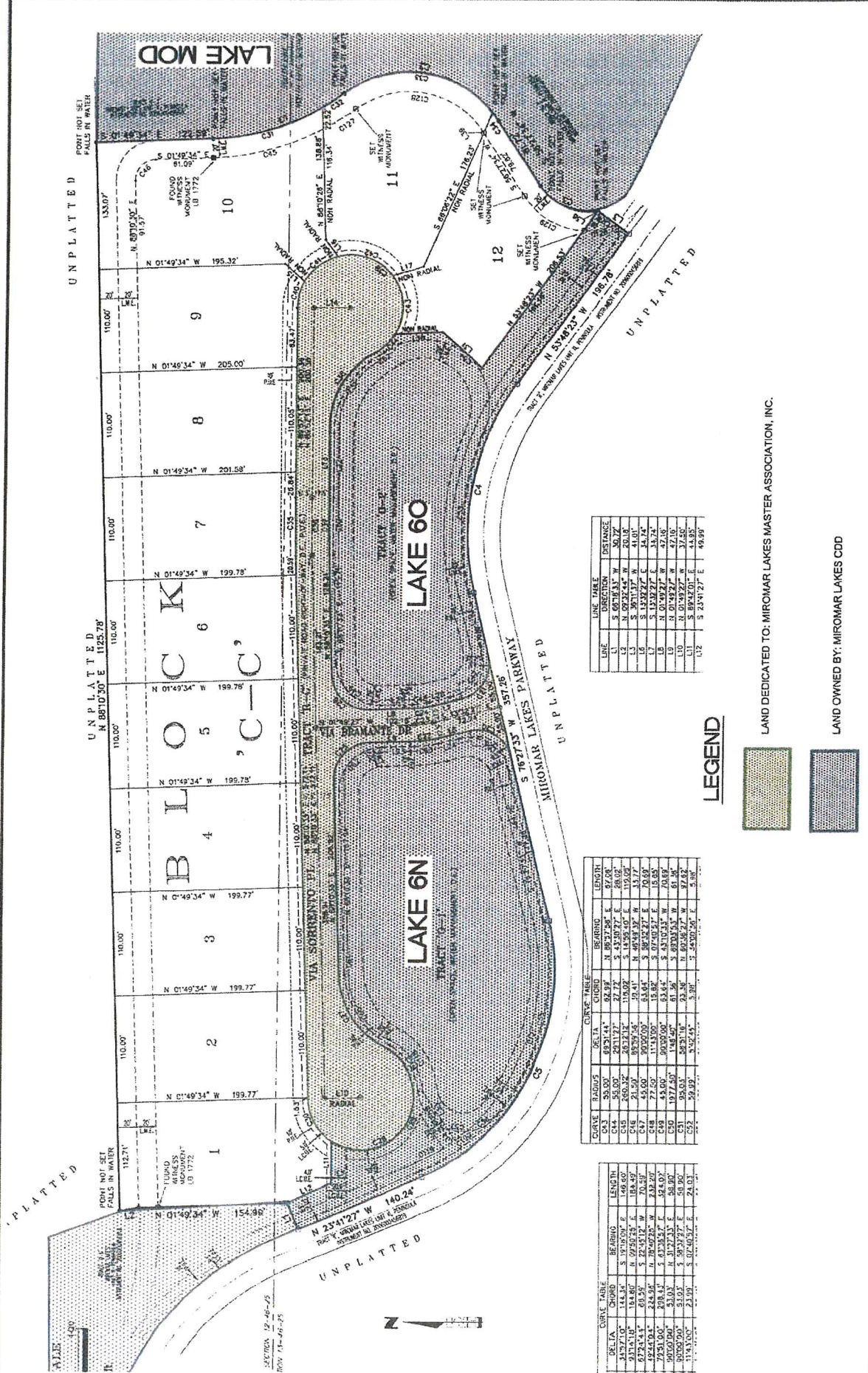












LINE TABLE

LINE	DIRECTION	DISTANCE
L1	S 69°18'31" W	36.72'
L2	S 26°11'37" N	41.00'
L3	S 15°32'27" E	34.74'
L4	N 01°49'34" W	205.00'
L5	N 01°49'34" W	199.78'
L6	N 01°49'34" W	199.77'
L7	N 01°49'34" W	199.77'
L8	N 01°49'34" W	199.77'
L9	N 01°49'34" W	199.77'
L10	N 01°49'34" W	199.77'
L11	N 01°49'34" W	199.77'
L12	N 01°49'34" W	199.77'

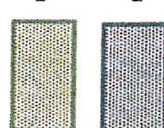
CURVE TABLE

CURVE	RADIUS	DELTA	CHORD	BEARING	LENGTH
C03	59.00'	89°31'44"	92.89'	N 89°27'58" E	97.08'
C04	59.00'	29°11'27"	27.77'	S 43°59'27" E	29.02'
C05	59.00'	11°43'50"	10.41'	S 88°06'09" E	11.17'
C06	21.50'	89°38'54"	19.41'	N 49°49'34" E	20.00'
C07	45.00'	90°00'00"	63.64'	S 89°32'27" E	70.69'
C08	77.50'	11°43'50"	18.88'	S 87°49'51" E	19.85'
C09	45.00'	90°00'00"	63.64'	S 43°10'31" W	70.69'
C10	20.00'	89°38'54"	21.36'	S 89°38'54" E	22.00'
C11	45.00'	90°00'00"	63.64'	S 43°10'31" W	70.69'
C12	45.00'	90°00'00"	63.64'	S 43°10'31" W	70.69'

CURVE TABLE

DELTA	BEARING	LENGTH
15°27'10"	S 15°10'00" E	148.40'
93°11'10"	N 92°55'15" E	184.59'
67°21'41"	S 22°35'12" W	70.49'
19°24'03"	N 78°07'58" W	238.20'
11°43'50"	N 81°22'11" E	18.90'
90°00'00"	S 39°27'37" E	59.90'
11°43'50"	S 87°49'57" E	24.03'
11°43'50"	S 87°49'57" E	24.03'

LEGEND



LAND DEDICATED TO: MIROMAR LAKES MASTER ASSOCIATION, INC.

LAND OWNED BY: MIROMAR LAKES CDD

<p>MIROMAR LAKES C.D.D. LEE COUNTY, FLORIDA</p>	<p>DATE: 07/15/09 DRAWN BY: JACOB ADRIANI CHECKED BY: JACOB ADRIANI SCALE: N.T.S.</p>	<p>6200 Whiskey Creek Drive Fort Myers, FL 33918 Phone: (239) 985-1900 Florida Certificate of Professional Engineer No. 11772 JACOB ADRIANI</p>	<p>UNIT TWELVE - PENINSULA PH-2 PLAT LAND OWNERSHIP EXHIBIT</p>	<p>DATE: 07/15/09 DRAWN BY: JACOB ADRIANI CHECKED BY: JACOB ADRIANI SCALE: N.T.S.</p>
	<p>DATE: 07/15/09 DRAWN BY: JACOB ADRIANI CHECKED BY: JACOB ADRIANI SCALE: N.T.S.</p>	<p>DATE: 07/15/09 DRAWN BY: JACOB ADRIANI CHECKED BY: JACOB ADRIANI SCALE: N.T.S.</p>	<p>DATE: 07/15/09 DRAWN BY: JACOB ADRIANI CHECKED BY: JACOB ADRIANI SCALE: N.T.S.</p>	<p>DATE: 07/15/09 DRAWN BY: JACOB ADRIANI CHECKED BY: JACOB ADRIANI SCALE: N.T.S.</p>

Mirasol





Google earth



Portofino



















Murano









Isola Bella





Bellamare

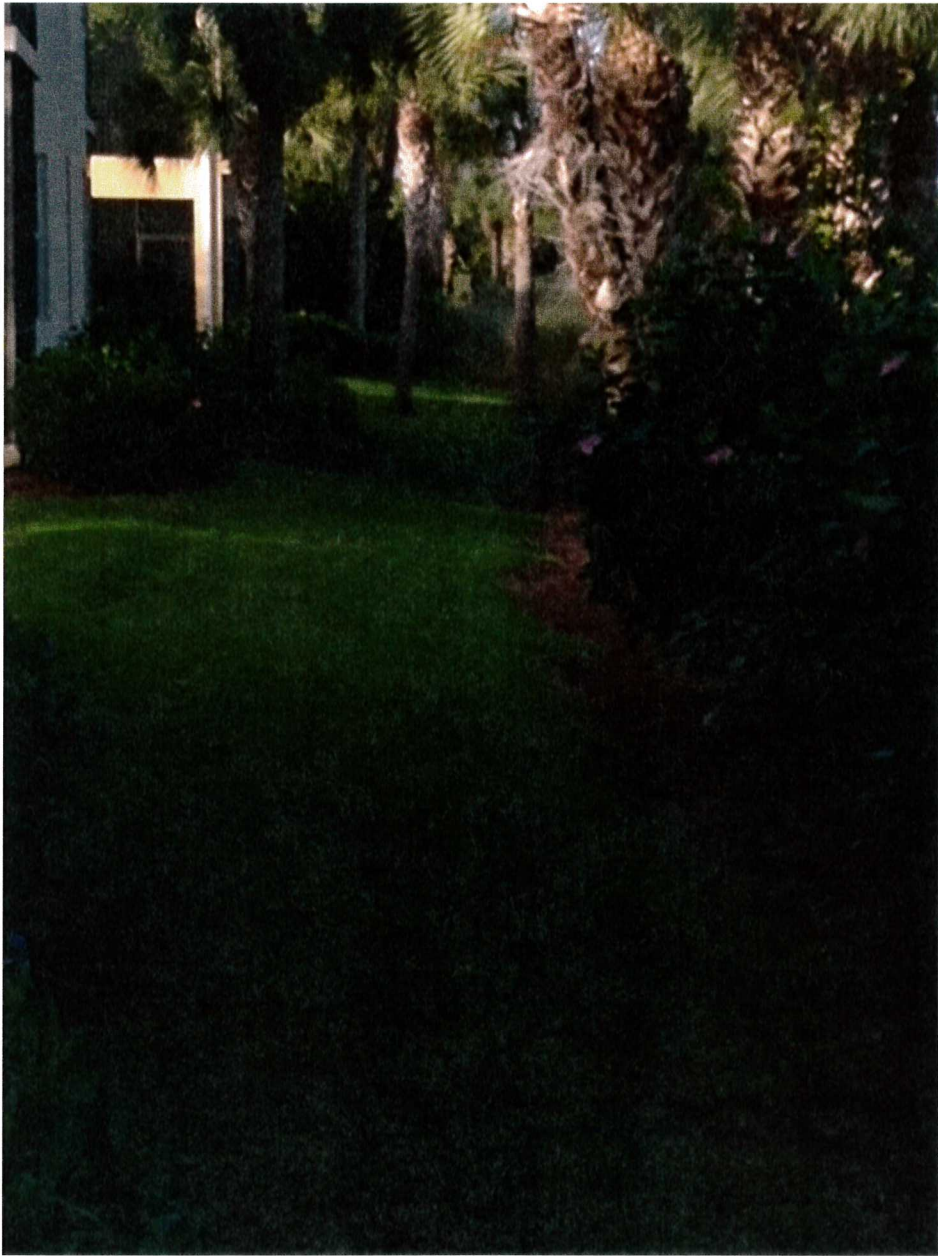








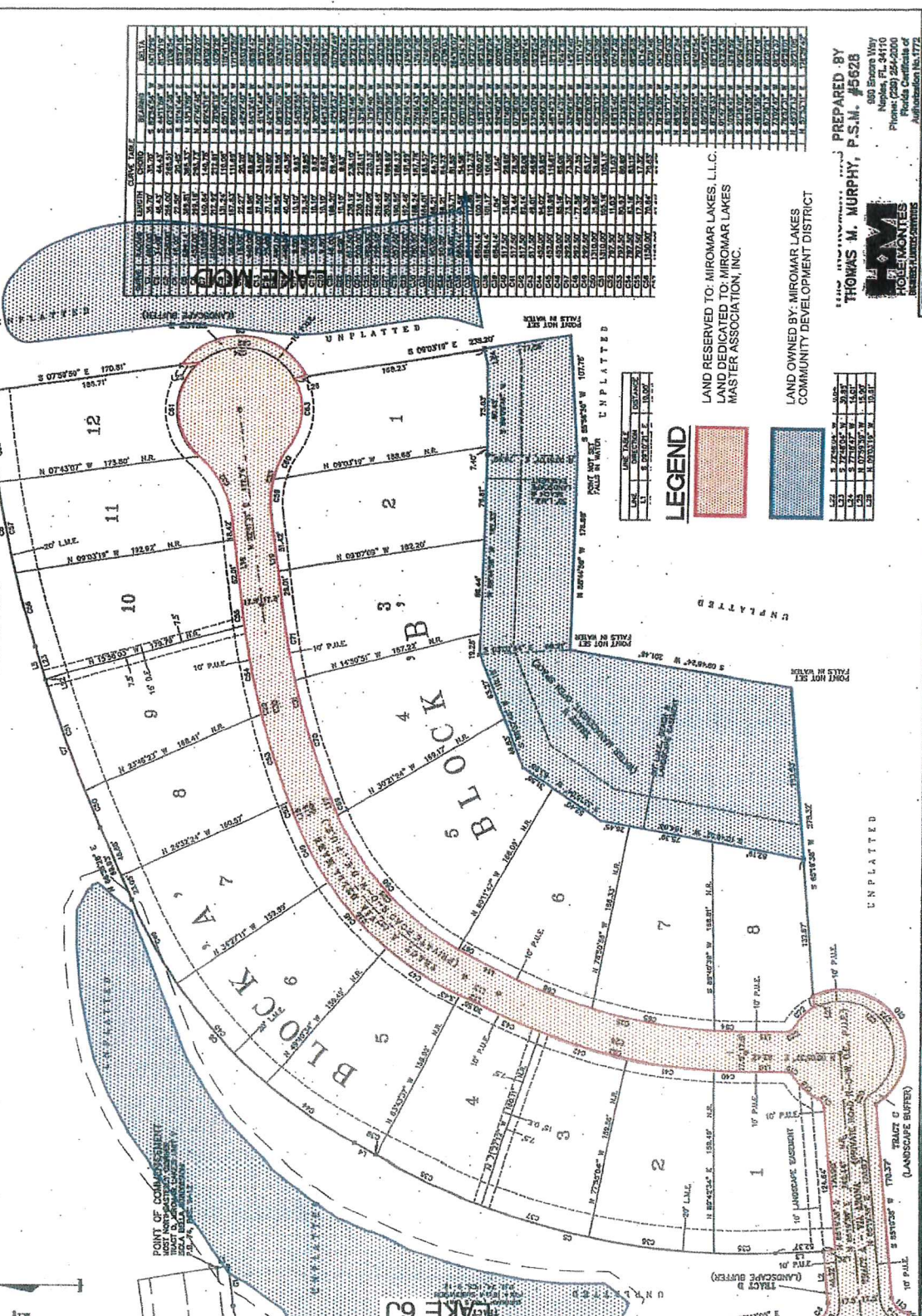
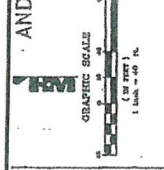








AND A REPLAT OF A PORTION OF TRACT D MIROMAR LAKES - UNIT V - ISULA BELLA SUBDIVISION,
AS RECORDED IN PLAT BOOK 74 AT PAGES 9 THROUGH 12, LEE COUNTY, FLORIDA



LOT	AREA	PERCENTAGE	AREA	PERCENTAGE
1	10,237.50	10.2375	10,237.50	10.2375
2	10,237.50	10.2375	10,237.50	10.2375
3	10,237.50	10.2375	10,237.50	10.2375
4	10,237.50	10.2375	10,237.50	10.2375
5	10,237.50	10.2375	10,237.50	10.2375
6	10,237.50	10.2375	10,237.50	10.2375
7	10,237.50	10.2375	10,237.50	10.2375
8	10,237.50	10.2375	10,237.50	10.2375
9	10,237.50	10.2375	10,237.50	10.2375
10	10,237.50	10.2375	10,237.50	10.2375
11	10,237.50	10.2375	10,237.50	10.2375
12	10,237.50	10.2375	10,237.50	10.2375

LEGEND

- LAND RESERVED TO: MIROMAR LAKES, LLC
LAND DEDICATED TO: MIROMAR LAKES MASTER ASSOCIATION, INC.
- LAND OWNED BY: MIROMAR LAKES COMMUNITY DEVELOPMENT DISTRICT

PREPARED BY
THOMAS M. MURPHY, P.S.M. #5628
900 Europa Way
Naples, FL 34110
Phone: (239) 254-2000
Florida Certificate of
Professional Registration
No. 11772

MIROMAR LAKES C.D.D.
LEE COUNTY, FLORIDA

6200 Whiskey Creek Drive
Fort Myers, FL 33919
Phone: (239) 985-1900
Fax: (239) 985-1901
Certificate of
Professional Registration
No. 11772

UNIT SIX 1258-20
PROJECT NO. 2003.022 20 OF 35

Montebello







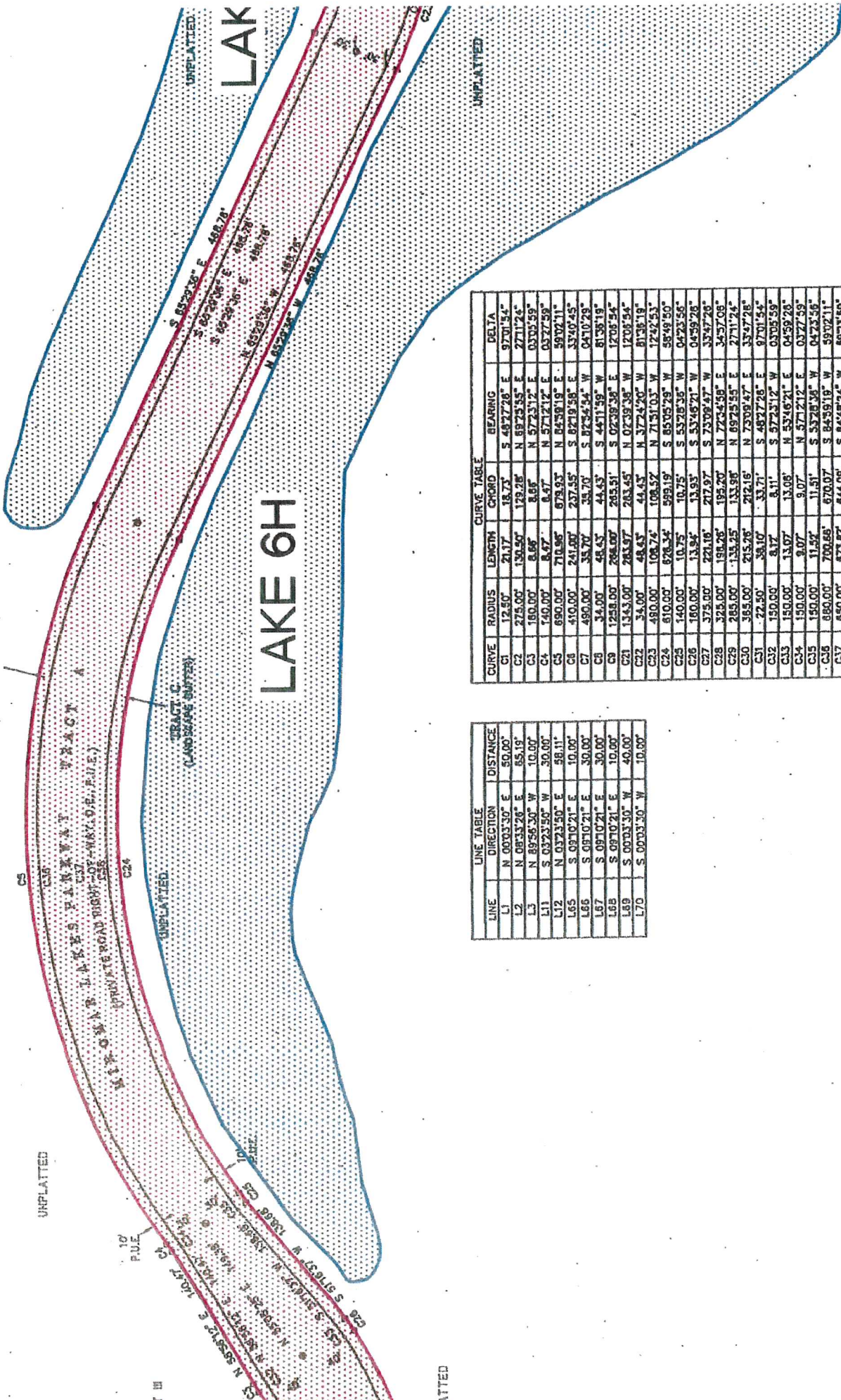






LAND OWNED BY: MIROMAR LAKES
COMMUNITY DEVELOPMENT DISTRICT

TRACT B
(LANDSCAPE BUFFER)



LINE	DIRECTION	DISTANCE
L1	N 00°03'30" E	50.00'
L2	N 08°33'28" E	55.19'
L3	N 89°56'50" W	10.00'
L11	S 03°23'50" W	30.00'
L12	N 03°23'50" E	58.11'
L65	S 09°10'21" E	10.00'
L66	S 09°10'21" E	30.00'
L67	S 09°10'21" E	30.00'
L68	S 09°10'21" E	10.00'
L69	S 00°03'30" W	40.00'
L70	S 00°03'30" W	10.00'

CURVE	RADIUS	LENGTH	CHORD	BEARING	DELTA
C1	12.50'	21.17'	18.73'	S 48°27'28" E	97°01'54"
C2	275.00'	130.50'	173.28'	N 89°23'55" E	27°11'24"
C3	160.00'	8.66'	8.66'	N 97°23'12" E	03°05'59"
C4	740.00'	8.47'	8.47'	N 57°12'12" E	03°27'58"
C5	690.00'	710.95'	678.93'	N 84°38'19" E	59°02'11"
C6	410.00'	241.95'	237.55'	S 87°19'58" E	33°40'45"
C7	490.00'	35.70'	35.70'	S 87°24'54" W	04°10'28"
C8	34.00'	48.43'	44.43'	S 44°11'59" W	81°38'19"
C9	1258.00'	286.00'	285.51'	S 02°38'38" E	12°05'54"
C21	34.00'	48.43'	44.43'	S 44°11'59" W	81°38'19"
C22	1343.00'	263.97'	263.45'	N 02°38'38" W	12°05'54"
C23	480.00'	108.74'	108.52'	N 71°31'03" W	12°32'53"
C24	810.00'	878.34'	599.19'	S 85°05'29" W	58°49'50"
C25	140.00'	10.75'	10.75'	S 53°28'35" W	04°23'56"
C26	160.00'	13.94'	13.93'	S 53°46'21" W	04°59'28"
C27	375.00'	221.19'	217.97'	S 73°09'47" W	33°47'28"
C28	325.00'	198.28'	195.70'	N 72°24'58" E	34°57'08"
C29	285.00'	135.45'	133.96'	N 89°23'55" E	27°11'24"
C30	385.00'	215.78'	212.16'	N 73°09'47" E	33°47'28"
C31	72.50'	39.10'	33.71'	S 48°27'28" E	97°01'54"
C32	150.00'	8.17'	8.11'	S 57°23'12" W	03°05'59"
C33	150.00'	13.07'	13.08'	N 53°46'21" E	04°59'28"
C34	150.00'	9.07'	9.07'	N 57°12'12" E	03°27'58"
C35	150.00'	11.51'	11.51'	S 53°28'35" W	04°23'56"
C36	690.00'	700.66'	670.07'	S 84°38'19" W	59°02'11"
C37	650.00'	638.61'	644.09'	S 84°48'24" W	59°23'59"
C38	620.00'	636.81'	609.01'	S 85°05'29" W	58°49'50"
C39	420.00'	245.88'	243.34'	S 97°19'58" E	33°40'45"
C40	450.00'	284.51'	280.77'	S 87°19'58" E	33°40'45"
C41	450.00'	165.79'	164.85'	S 76°02'53" E	21°08'35"
C42	450.00'	98.77'	98.57'	N 87°06'44" E	12°34'10"
C43	480.00'	282.15'	278.10'	S 67°19'58" E	33°40'45"
C44	480.00'	108.57'	108.30'	S 71°31'03" E	12°32'53"
C45	480.00'	70.33'	70.28'	S 67°24'20" E	08°23'41"
C46	480.00'	34.97'	34.97'	N 87°19'58" E	08°23'41"
C47	480.00'	34.97'	34.97'	N 87°24'54" E	04°10'29"
C48	1333.00'	261.86'	261.33'	S 02°38'38" E	12°05'54"

THIS INSTRUMENT
THOMAS M. N



Google earth

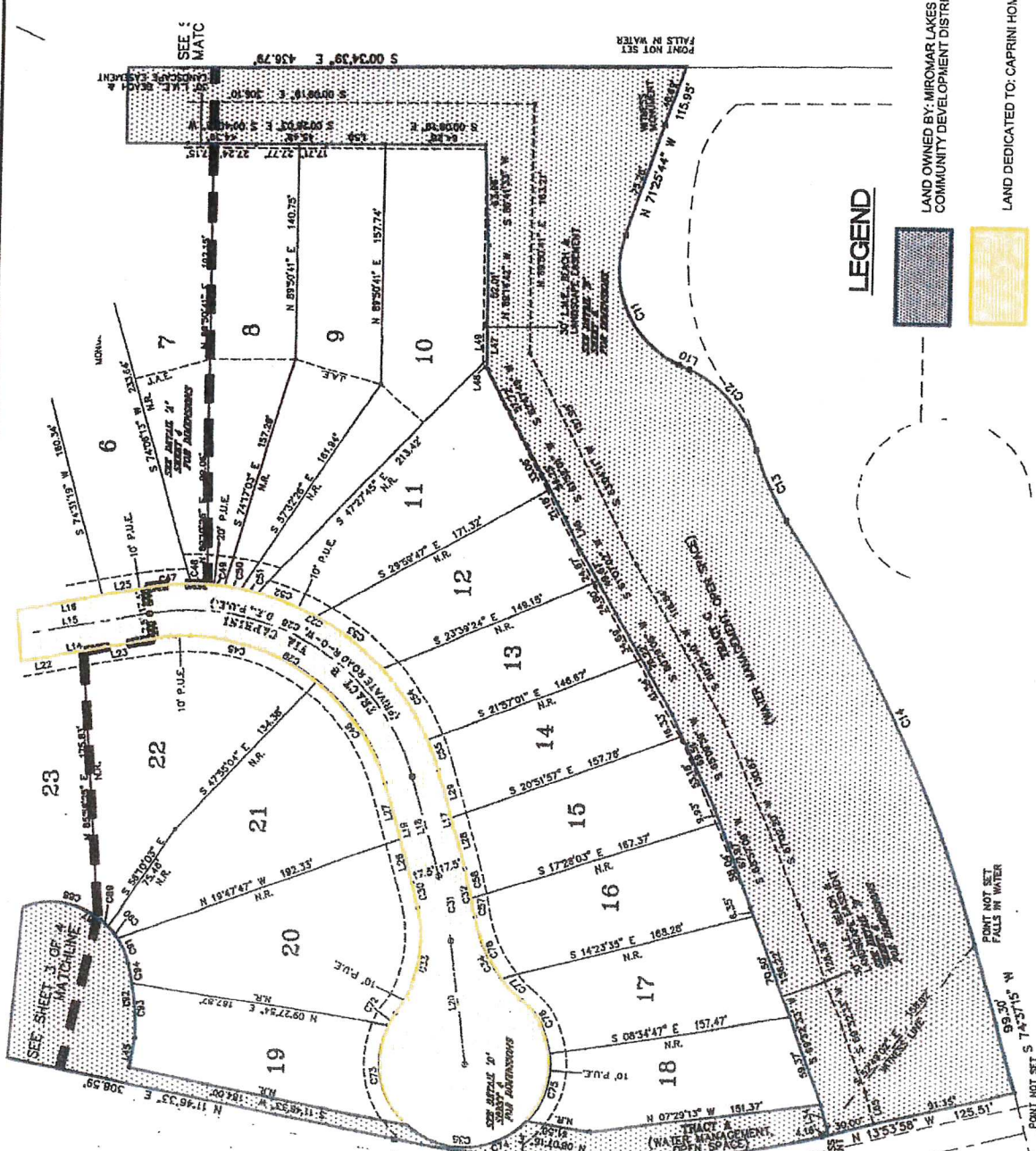


Caprini







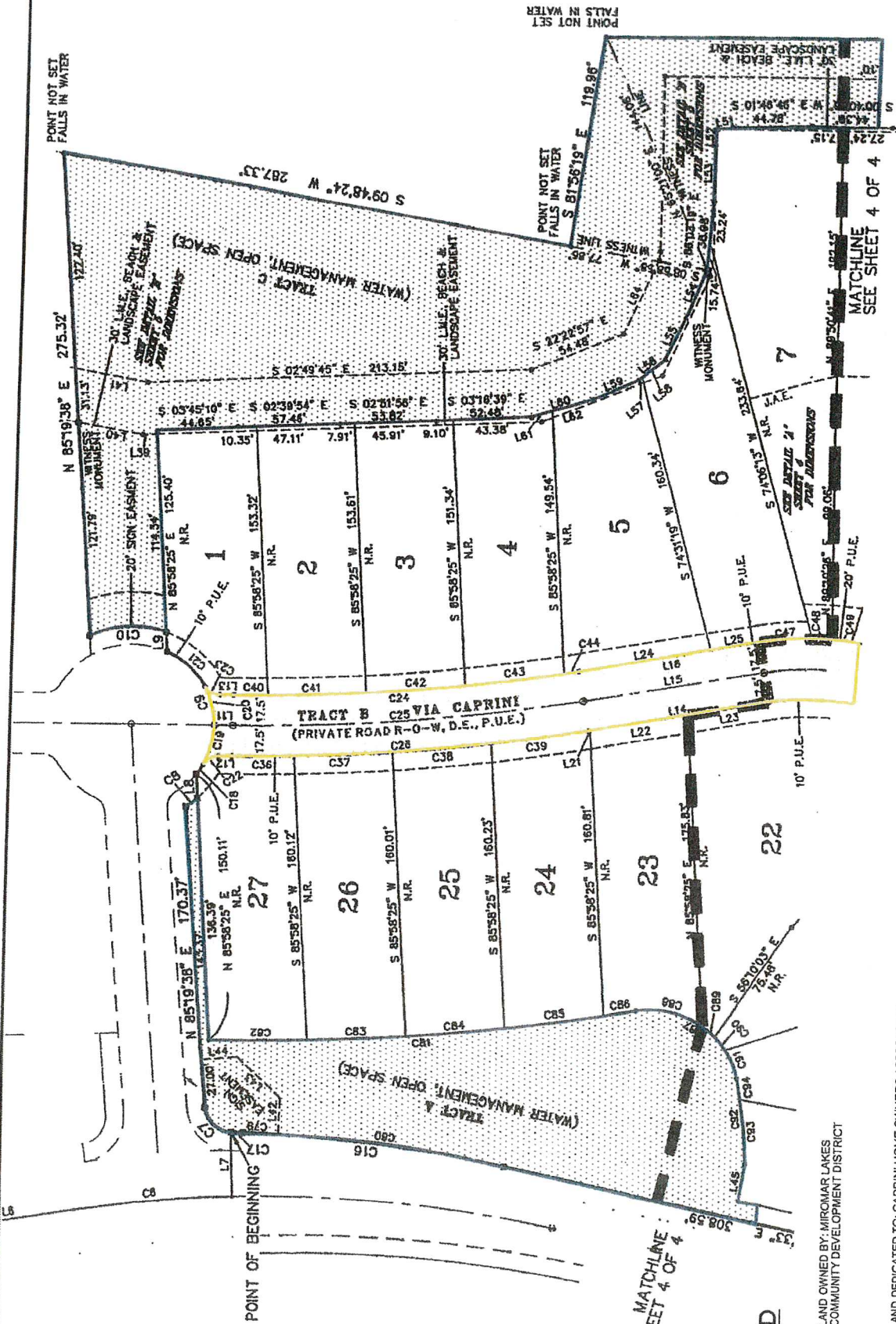




LEGEND

-  LAND OWNED BY: MIROMAR LAKES COMMUNITY DEVELOPMENT DISTRICT
-  LAND DEDICATED TO: CAPRINI HOME OWNERS ASSOCIATION

<p>MIROMAR LAKES C.D.D. LEE COUNTY, FLORIDA</p>		<p>6200 Whiskey Creek Drive Fort Myers, FL 33919 Phone: (239) 595-1200 Florida Certificate of Authorization No. 1772</p>		<p>DATE: 07/15/08 DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 07/15/08 SCALE: N/A N.T.S.</p>	<p>DATE: 07/15/08 DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 07/15/08 SCALE: N/A N.T.S.</p>	<p>UNIT SEVEN 2003.022</p>	<p>1258-22 22 of 35</p>
<p>LETTER</p>	<p>REVISIONS</p>	<p>DATE</p>					



SEE MATCHLINE
4 OF 4

LEGEND

- LAND OWNED BY MIOMAR LAKES COMMUNITY DEVELOPMENT DISTRICT
- LAND DEDICATED TO: CAPRINI HOME OWNERS ASSOCIATION

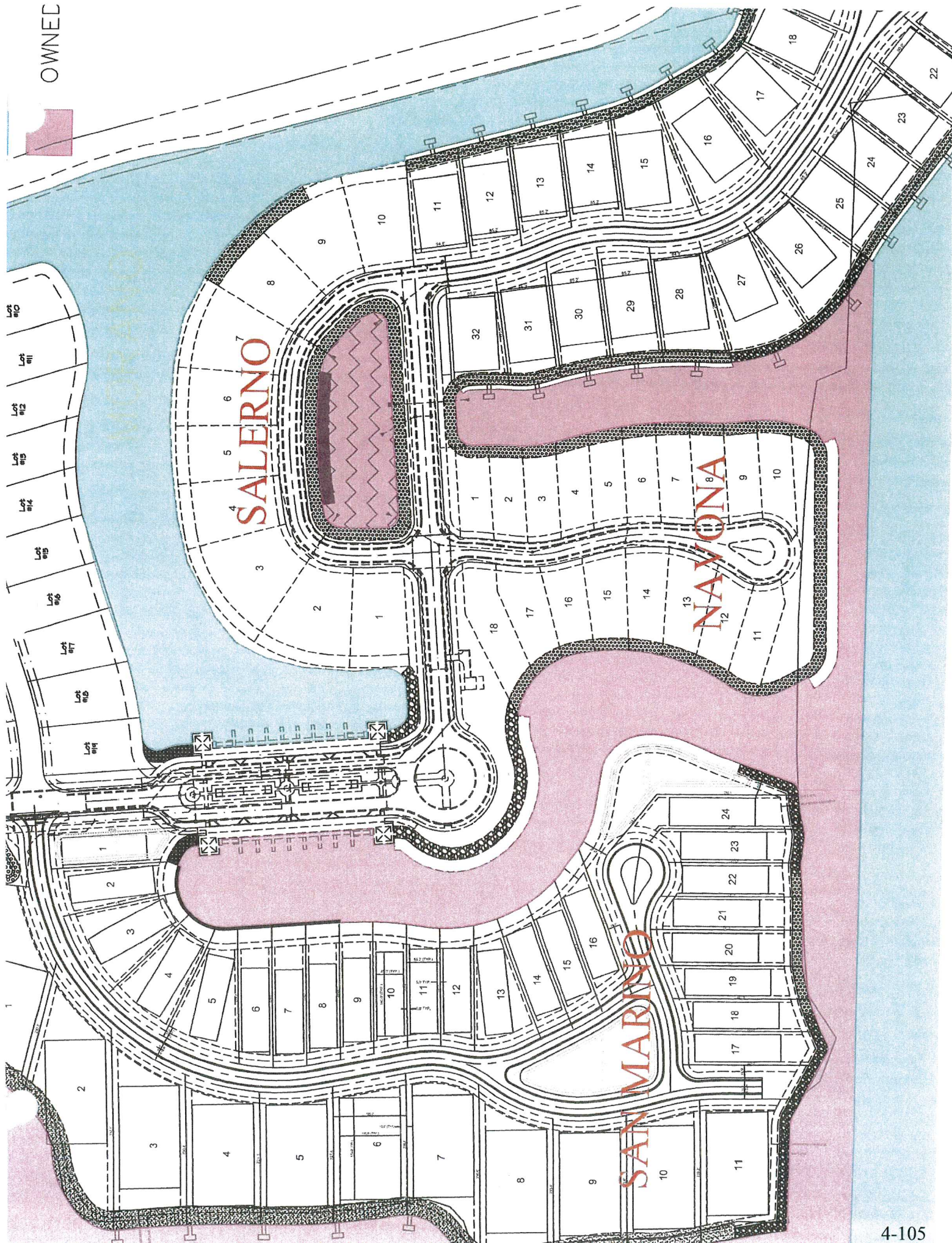
DATE	ISSUED	BY	FOR	PROJECT NO.	UNIT	DATE	NO.
				2003.022	SEVEN	1258-21	21 of 35
MIOMAR LAKES C.D.D.							
LEE COUNTY, FLORIDA							
FHM HOLE MONTES Surveyors 5200 Whiskey Creek Drive Fort Myers, FL 33919 Phone: (239) 995-1200 Fax: (239) 995-1201 License No. 1172							
5200 Whiskey Creek Drive Fort Myers, FL 33919 Phone: (239) 995-1200 Fax: (239) 995-1201 License No. 1172							
UNIT SEVEN PLAT - CAPRINI LAND OWNERSHIP EXHIBIT							

Navona





OWNED





Google earth



Bellini





SECT

LEGEN

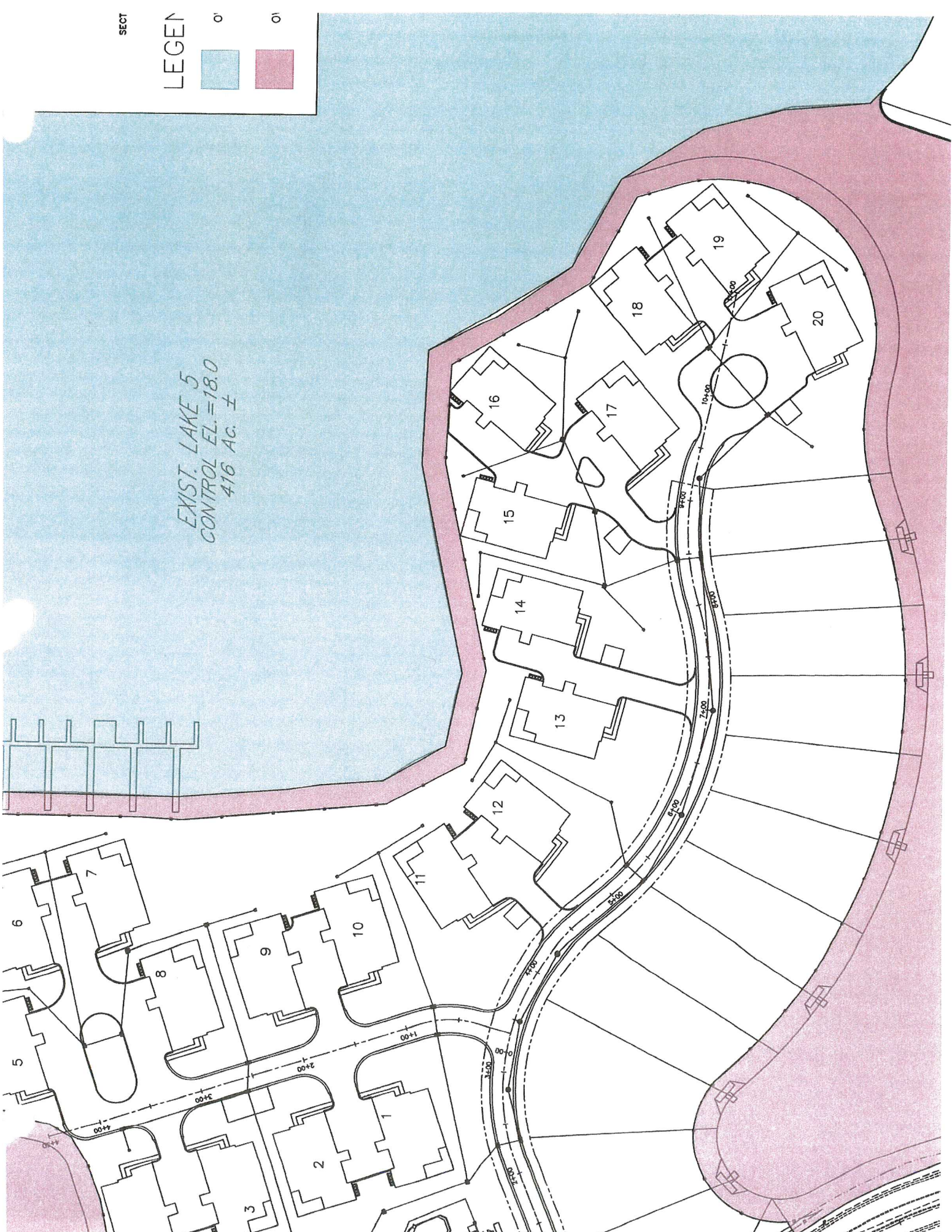


01



01

EXIST. LAKE 5
CONTROL EL. = 18.0
416 Ac. ±





Google earth



Costa Amalfi



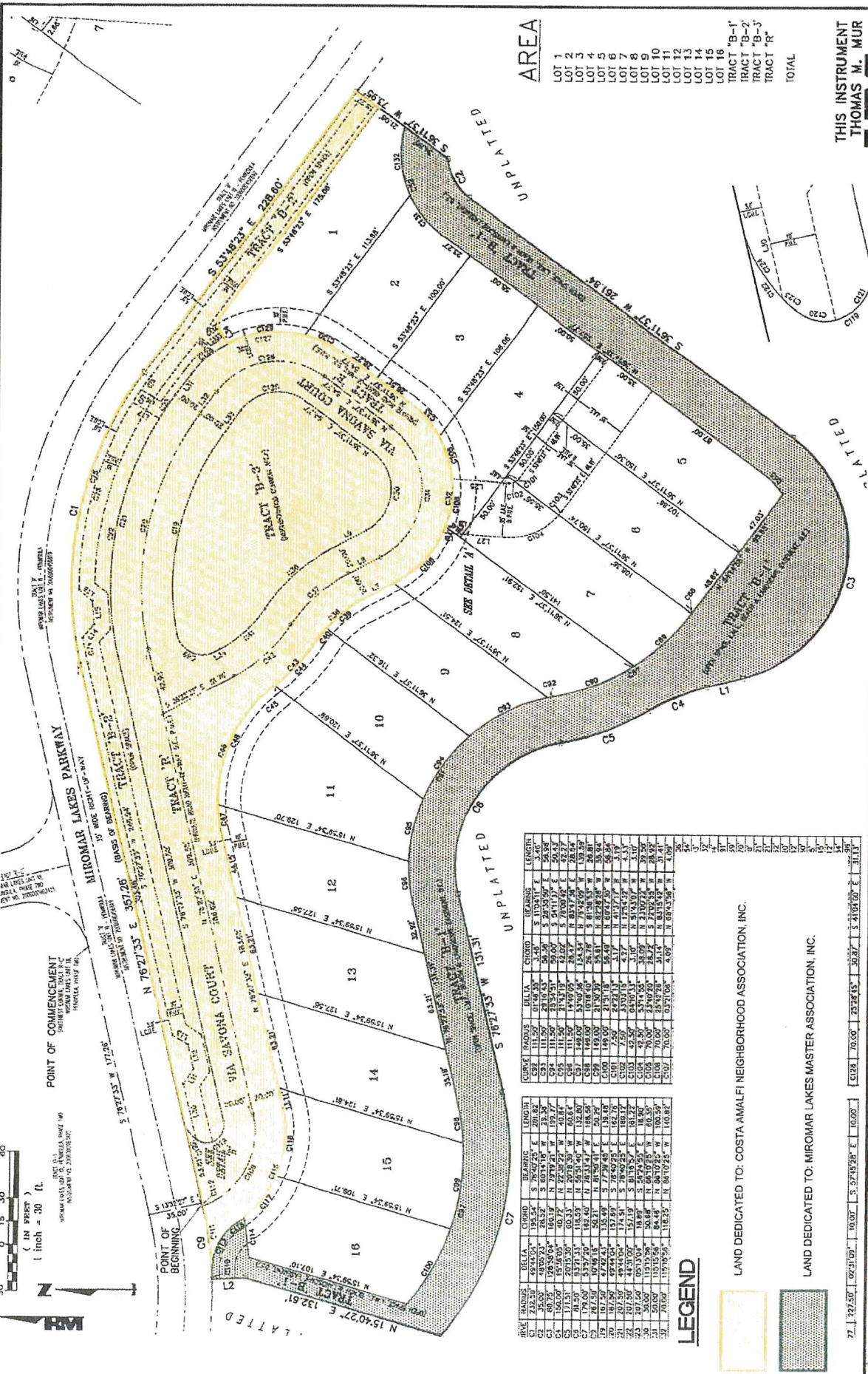












AREA

LOT 1	
LOT 2	
LOT 3	
LOT 4	
LOT 5	
LOT 6	
LOT 7	
LOT 8	
LOT 9	
LOT 10	
LOT 11	
LOT 12	
LOT 13	
LOT 14	
LOT 15	
LOT 16	
TRACT "B-1"	
TRACT "B-2"	
TRACT "B-3"	
TRACT "R"	
TOTAL	

THIS INSTRUMENT
THOMAS M. MUR
 UNIT THIRTEEN
 1258-34
 2003.022
 34 of 35

**UNIT THIRTEEN PLAT - (COSTA AMALFI)
 LAND OWNERSHIP EXHIBIT**

6200 Whiskey Creek Drive
 Fort Myers, FL 33919
 Phone: (239) 985-1200
 Florida Certificate of
 Authorization No. 1172

H&M
HOLE MONTES
 SURVEYING & ENGINEERING
 10000 W. GULF BLVD.
 SUITE 100
 FORT MYERS, FL 33907

DATE: 07/15/08
 DRAWN BY: JLM
 CHECKED BY: JLM
 DATE: 07/15/08
 DATE: 07/15/08
 SCALE: N/A
 SHEET NO.: 34 OF 35

**MIROMAR LAKES
 C.D.D.**
 LEE COUNTY, FLORIDA

LINE	BEARING	LENGTH	CURVE	RADIUS	DELTA	CHORD	CHORD BEARING	LENGTH
C1	N 154°02' E	132.61'						
C2	N 153°34' E	108.71'						
C3	N 152°34' E	124.81'						
C4	N 151°34' E	140.91'						
C5	N 150°34' E	157.01'						
C6	N 149°34' E	173.11'						
C7	N 148°34' E	189.21'						
C8	N 147°34' E	205.31'						
C9	N 146°34' E	221.41'						
C10	N 145°34' E	237.51'						
C11	N 144°34' E	253.61'						
C12	N 143°34' E	269.71'						
C13	N 142°34' E	285.81'						
C14	N 141°34' E	301.91'						
C15	N 140°34' E	318.01'						
C16	N 139°34' E	334.11'						
C17	N 138°34' E	350.21'						
C18	N 137°34' E	366.31'						
C19	N 136°34' E	382.41'						
C20	N 135°34' E	398.51'						
C21	N 134°34' E	414.61'						
C22	N 133°34' E	430.71'						
C23	N 132°34' E	446.81'						
C24	N 131°34' E	462.91'						
C25	N 130°34' E	479.01'						
C26	N 129°34' E	495.11'						
C27	N 128°34' E	511.21'						
C28	N 127°34' E	527.31'						
C29	N 126°34' E	543.41'						
C30	N 125°34' E	559.51'						
C31	N 124°34' E	575.61'						
C32	N 123°34' E	591.71'						
C33	N 122°34' E	607.81'						
C34	N 121°34' E	623.91'						
C35	N 120°34' E	640.01'						
C36	N 119°34' E	656.11'						
C37	N 118°34' E	672.21'						
C38	N 117°34' E	688.31'						
C39	N 116°34' E	704.41'						
C40	N 115°34' E	720.51'						
C41	N 114°34' E	736.61'						
C42	N 113°34' E	752.71'						
C43	N 112°34' E	768.81'						
C44	N 111°34' E	784.91'						
C45	N 110°34' E	801.01'						
C46	N 109°34' E	817.11'						
C47	N 108°34' E	833.21'						
C48	N 107°34' E	849.31'						
C49	N 106°34' E	865.41'						
C50	N 105°34' E	881.51'						
C51	N 104°34' E	897.61'						
C52	N 103°34' E	913.71'						
C53	N 102°34' E	929.81'						
C54	N 101°34' E	945.91'						
C55	N 100°34' E	962.01'						
C56	N 99°34' E	978.11'						
C57	N 98°34' E	994.21'						
C58	N 97°34' E	1010.31'						
C59	N 96°34' E	1026.41'						
C60	N 95°34' E	1042.51'						
C61	N 94°34' E	1058.61'						
C62	N 93°34' E	1074.71'						
C63	N 92°34' E	1090.81'						
C64	N 91°34' E	1106.91'						
C65	N 90°34' E	1123.01'						
C66	N 89°34' E	1139.11'						
C67	N 88°34' E	1155.21'						
C68	N 87°34' E	1171.31'						
C69	N 86°34' E	1187.41'						
C70	N 85°34' E	1203.51'						
C71	N 84°34' E	1219.61'						
C72	N 83°34' E	1235.71'						
C73	N 82°34' E	1251.81'						
C74	N 81°34' E	1267.91'						
C75	N 80°34' E	1284.01'						
C76	N 79°34' E	1300.11'						
C77	N 78°34' E	1316.21'						
C78	N 77°34' E	1332.31'						
C79	N 76°34' E	1348.41'						
C80	N 75°34' E	1364.51'						
C81	N 74°34' E	1380.61'						
C82	N 73°34' E	1396.71'						
C83	N 72°34' E	1412.81'						
C84	N 71°34' E	1428.91'						
C85	N 70°34' E	1445.01'						
C86	N 69°34' E	1461.11'						
C87	N 68°34' E	1477.21'						
C88	N 67°34' E	1493.31'						
C89	N 66°34' E	1509.41'						
C90	N 65°34' E	1525.51'						
C91	N 64°34' E	1541.61'						
C92	N 63°34' E	1557.71'						
C93	N 62°34' E	1573.81'						
C94	N 61°34' E	1589.91'						
C95	N 60°34' E	1606.01'						
C96	N 59°34' E	1622.11'						
C97	N 58°34' E	1638.21'						
C98	N 57°34' E	1654.31'						
C99	N 56°34' E	1670.41'						
C100	N 55°34' E	1686.51'						

LEGEND

LAND DEDICATED TO: COSTA AMALFI NEIGHBORHOOD ASSOCIATION, INC.

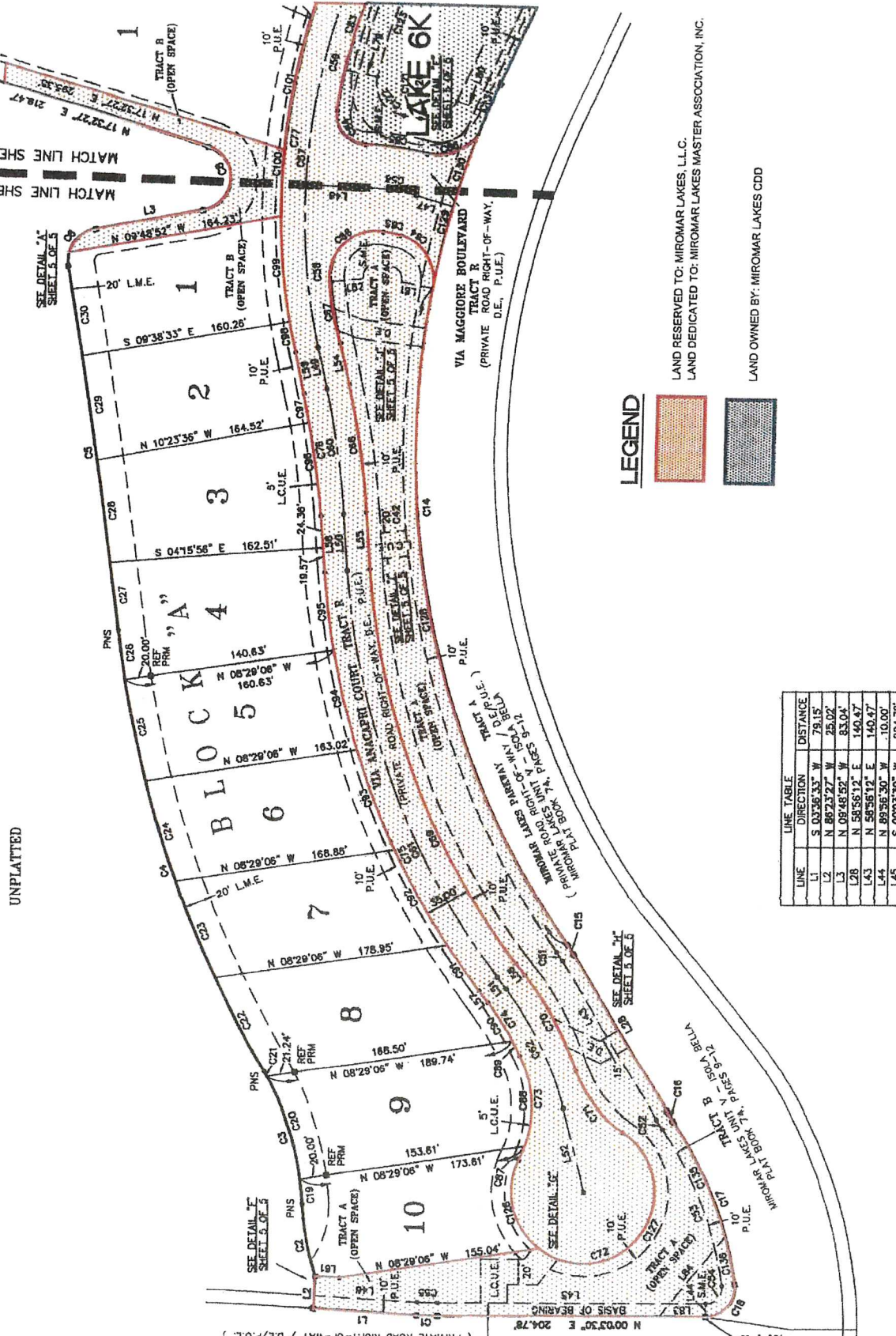
LAND DEDICATED TO: MIROMAR LAKES MASTER ASSOCIATION, INC.

72.1 322.50' 00.31.00" 10.00' S. 97°49'28" E. 10.00' [C128] 10.00' 2528.45' 30.87' S. 41°01'00" E. 311.3'

Anacapri



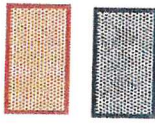




MATCH LINE SHEET 5 OF 5
MATCH LINE SHEET 218.47

UNPLATTED

LEGEND



LAND RESERVED TO: MIROMAR LAKES, L.L.C.
LAND DEDICATED TO: MIROMAR LAKES MASTER ASSOCIATION, INC.
LAND OWNED BY: MIROMAR LAKES CDD

LINE	DIRECTION	DISTANCE
L1	S 03°26'33" W	79.15'
L2	N 85°23'27" W	25.02'
L3	N 09°48'52" W	83.04'
L4	N 59°58'12" E	140.47'
L4.1	N 59°58'12" E	140.47'
L4.2	N 89°36'30" W	10.00'
L4.3	S 00°03'30" W	204.78'
L4.4	N 03°26'33" W	79.15'

H.M.
HOLE MONTE
DESIGN & CONSTRUCTION
LANDSCAPE ARCHITECTS

8200 Whiskey Creek Drive
Phone: (239) 985-1200
Florida Certificate of
Authorization No. 1772

**MIROMAR LAKES
C.D.D.**
LEE COUNTY, FLORIDA

REVISION	DATE

EST CORNER, TRACT B,
LA BELLA SUBDIVISION,
BOOK 74, PAGES 9-12

JOB FILE NAME	DRAWING NO.
UNIT NINE	125B-25
PROJECT NO.	2003.022
SHEET NO.	25 OF 35

**UNIT NINE PLAT - ANACAPRI & CASTELLI
LAND OWNERSHIP EXHIBIT**

San Marino









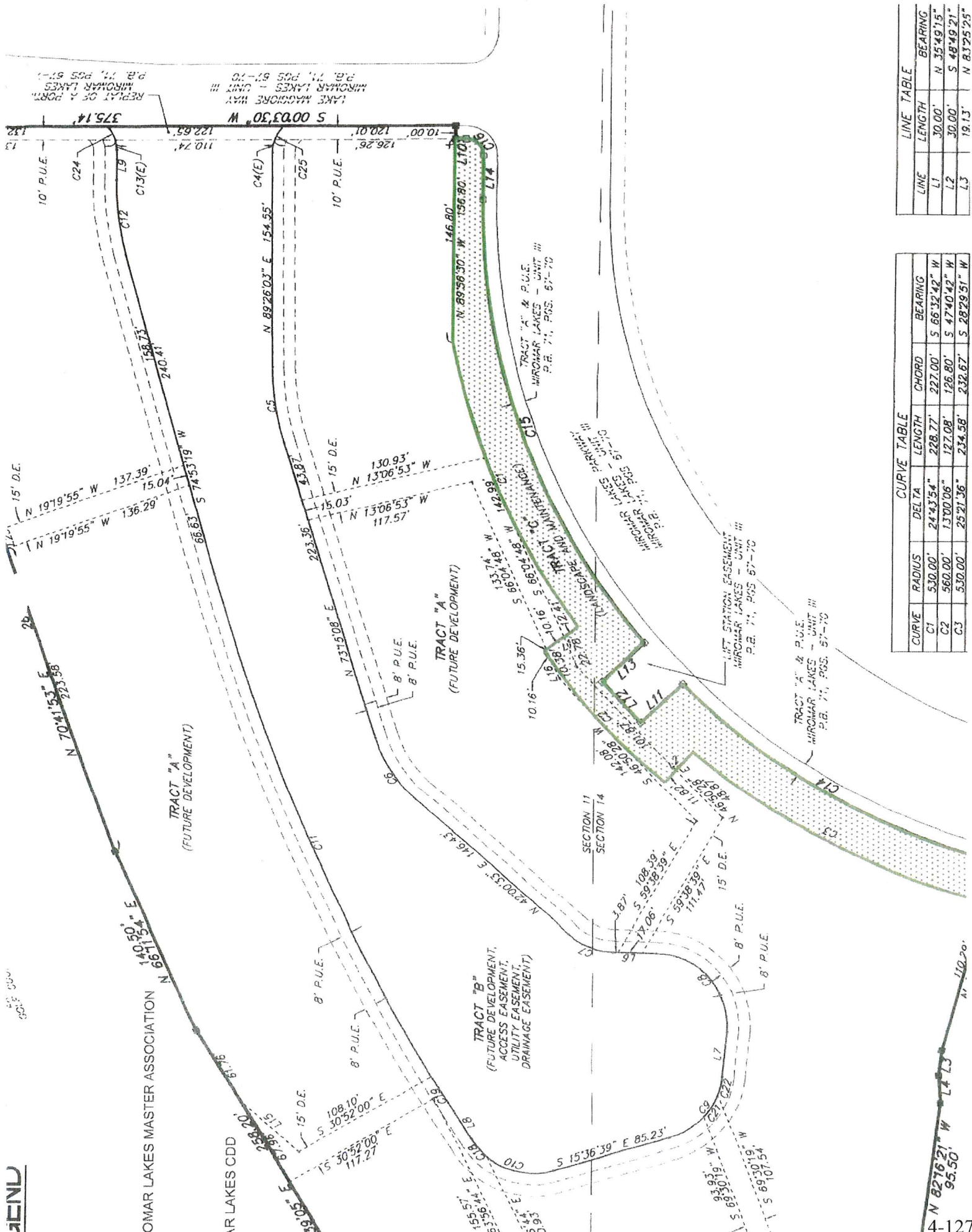




Google earth



Bellvista



CURVE TABLE

CURVE	RADIUS	DELTA	LENGTH	CHORD	BEARING
C1	530.00'	24°43'54"	228.77'	227.00'	S 66°32'42" W
C2	560.00'	13°00'06"	127.08'	126.80'	S 47°40'42" W
C3	530.00'	25°21'36"	234.58'	232.67'	S 28°29'51" W

LINE TABLE

LINE	LENGTH	BEARING
L1	30.00'	N 35°49'15"
L2	30.00'	S 48°49'21"
L3	19.13'	N 83°25'25"



Google earth



St. Moritz





Montelago







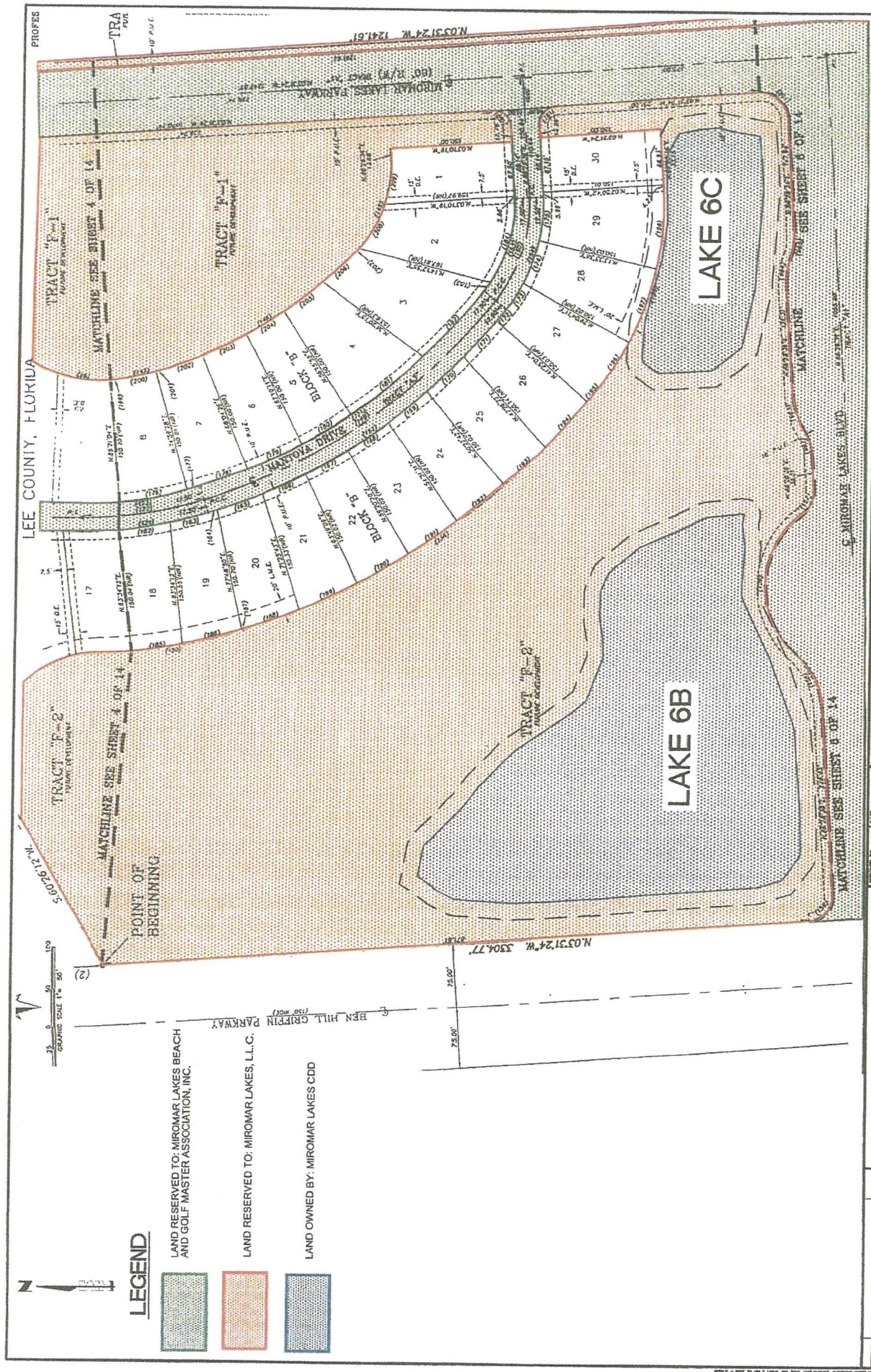








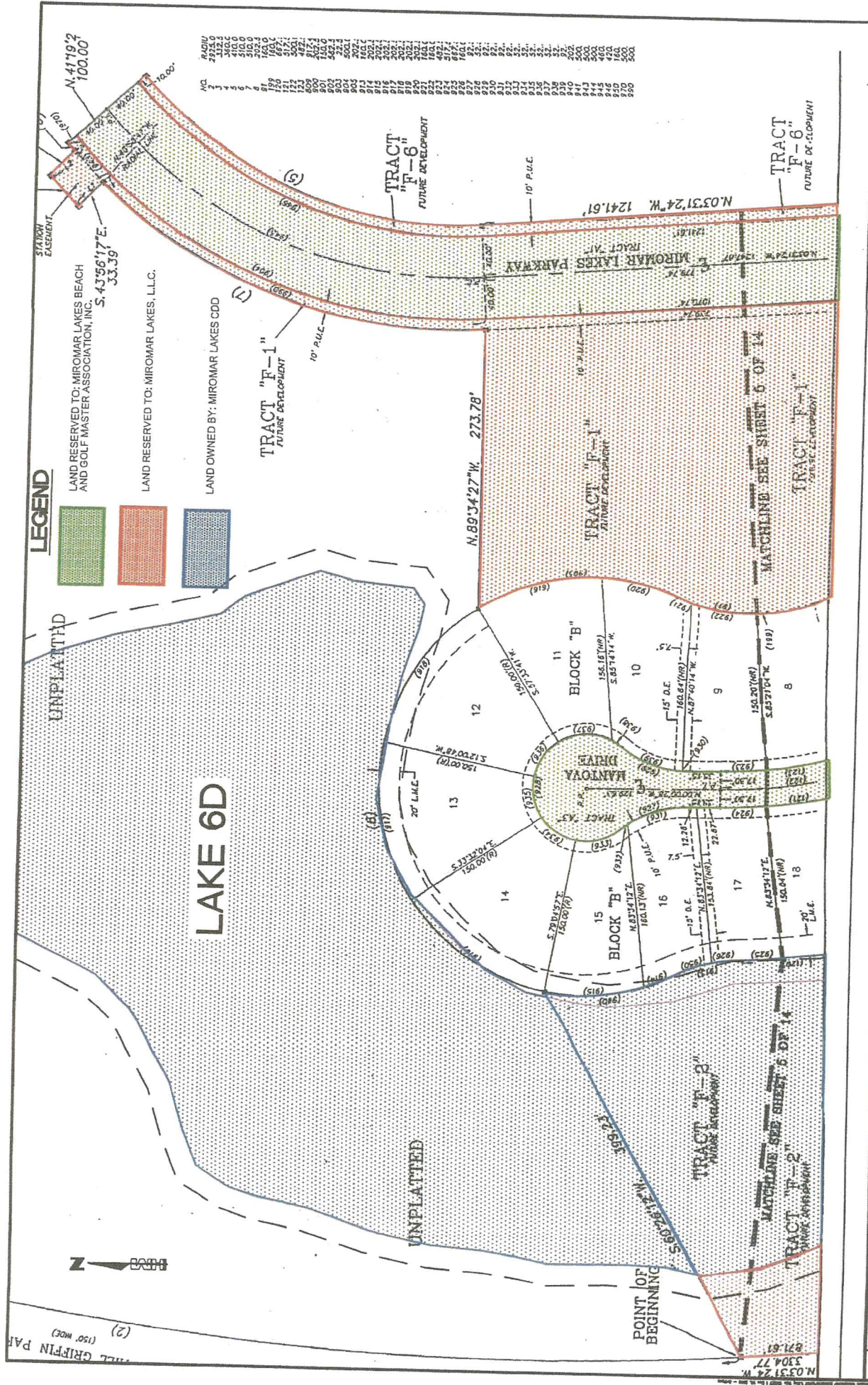




LEGEND

- LAND RESERVED TO: MIROMAR LAKES BEACH AND GOLF MASTER ASSOCIATION, INC.
- LAND RESERVED TO: MIROMAR LAKES, L.L.C.
- LAND OWNED BY: MIROMAR LAKES CDD

MIROMAR LAKES C.D.D.	UNIT ONE PLAT LAND OWNERSHIP EXHIBIT	6000 Whiskey Creek Drive Miramar, Florida 33025 Phone: (305) 865-1200 Florida Certificate of Authorization No. 1772	H.M. HOLE MONTES REGISTERED ARCHITECT	DATE: 07/15/09 SCALE: 1" = 20'	DRAWN BY: ERIC CLARK CHECKED BY: [Signature] DATE: 07/15/09	DATE: 07/15/09 SCALE: N/A	DATE: 07/15/09 SCALE: N/A
LEE COUNTY, FLORIDA	2003.022	3 OF 35	UNIT ONE	2003.022	3 OF 35	2003.022	3 OF 35



MIROMAR LAKES C.D.D.
LEE COUNTY, FLORIDA

H&M HOLE MONTES
REGISTERED PROFESSIONAL SURVEYOR
FLORIDA CERTIFICATE OF ADOPTION NO. 1772

6200 Whiskey Creek Drive
Fort Myers, FL 33919
Phone: (239) 985-1900
Florida Certificate of Adoption No. 1772

UNIT ONE PLAT
LAND OWNERSHIP EXHIBIT

DATE: 07/15/08
BY: [Signature]
SCALE: AS SHOWN
SHEET NO.: 2 OF 35

Porto Romano

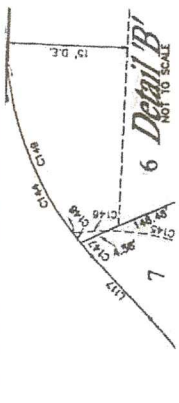
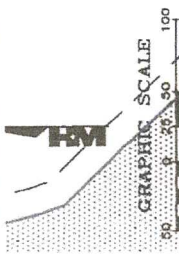
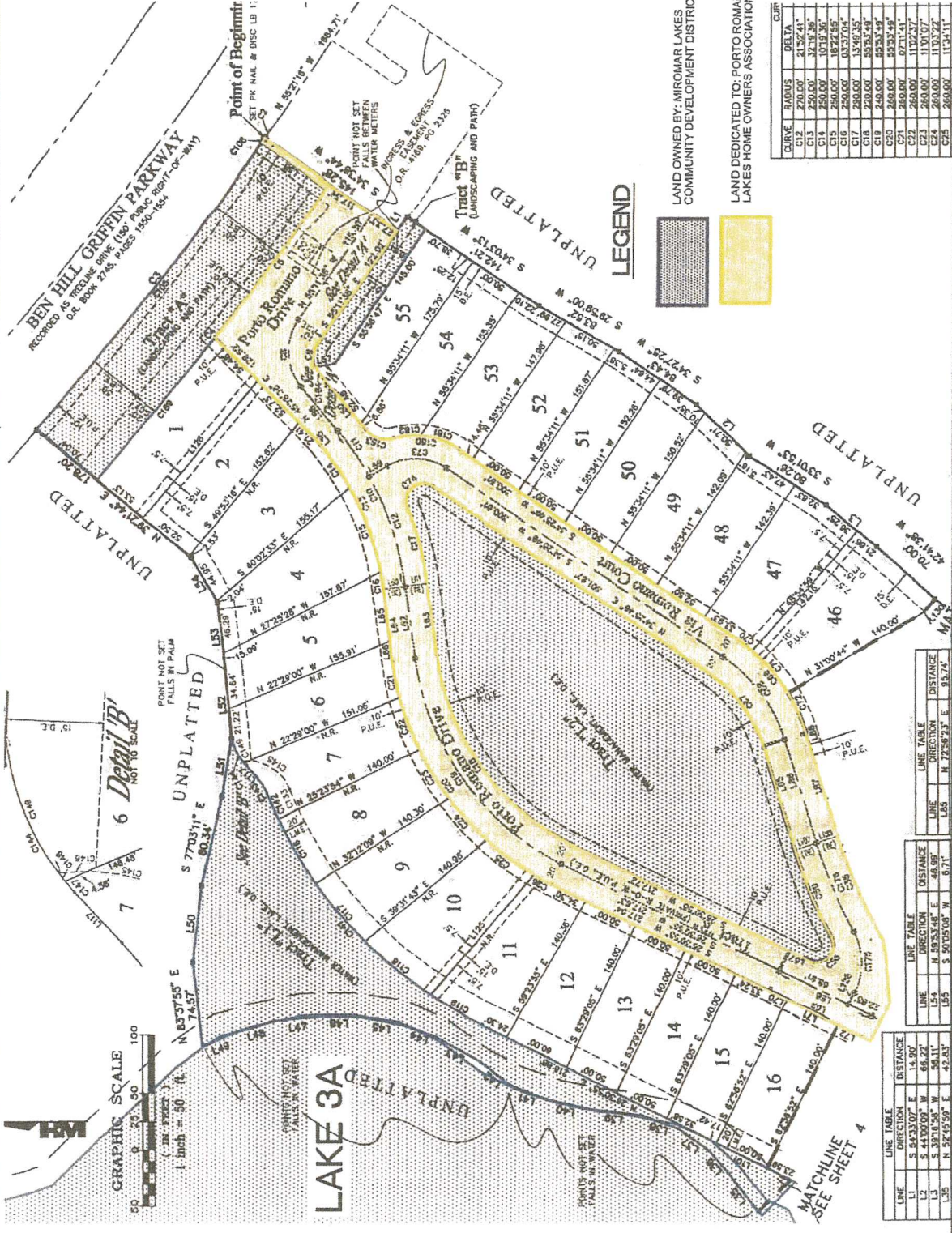






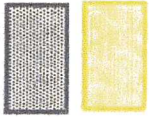






CURVE	RADIUS	DELTA
C12	270.00'	21.52°41'
C13	250.00'	32°18'58"
C14	250.00'	19°13'36"
C15	250.00'	27°10'04"
C16	250.00'	13°27'04"
C17	250.00'	13°49'45"
C18	250.00'	55°31'49"
C19	250.00'	55°31'49"
C20	250.00'	55°31'49"
C21	250.00'	55°31'49"
C22	250.00'	55°31'49"
C23	250.00'	11°32'37"
C24	250.00'	11°32'37"
C25	250.00'	11°32'37"

LEGEND



LAND OWNED BY MIROMAR LAKES COMMUNITY DEVELOPMENT DISTRICT

LAND DEDICATED TO: PORTO ROMANO AT MIROMAR LAKES HOME OWNERS ASSOCIATION, INC.

DATE OF RECORD	2003.022
UNIT	EIGHT
PLAT NO.	1256-23
SHEET NO.	23 OF 35

UNIT EIGHT PLAT - PORTO ROMANO LAKES OWNERSHIP EXHIBIT

6200 Whiskey Creek Drive
Fort Myers, FL 33919
Professional Seal of
Florida Certified
Professional Surveyor
Authorization No. 1172

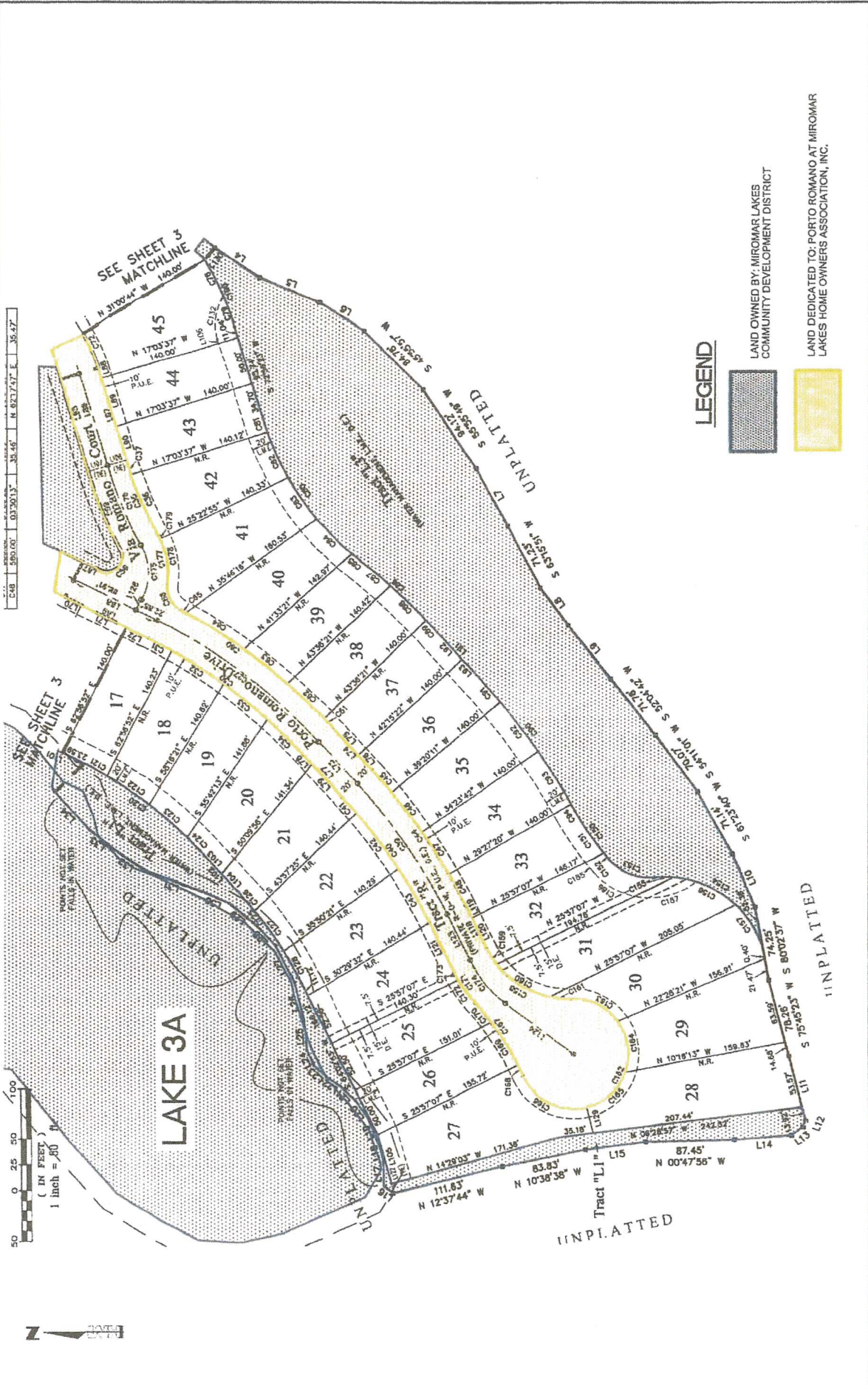


DATE	07/15/08
REVISION	07/15/08
BY	07/15/08
DATE	07/15/08
REVISION	
DATE	
REVISION	

MIROMAR LAKES C.D.D.
LEE COUNTY, FLORIDA

LINE	DIRECTION	DISTANCE
L1	S 25°33'07" E	45.90'
L2	S 39°43'48" E	46.90'
L3	S 39°43'48" W	58.11'
L3.5	N 32°45'39" E	42.43'

LINE	DIRECTION	DISTANCE
L45	N 72°36'33" E	95.74'
L46	N 72°36'33" E	95.74'



<p>MIROMAR LAKES C.D.D. LEE COUNTY, FLORIDA</p>		<p>6200 Whitney Creek Drive Fort Myers, FL 33919 Phone: 941-336-1111 Florida Certificate of Professional Engineer Authorization No. 1772</p>		<p>H.M. HOLE MONTES DIRECTOR OF PLANNING SERVICES LAND SURVEY DISTRICT</p>		<p>DATE: 07/13/09 BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature] SCALE: N/A SHEET NO.: 24 of 35</p>		<p>OWNER: UNIT EIGHT PROJECT NO.: 2003.022</p>		<p>DATE: 07/13/09 BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature] SCALE: N/A SHEET NO.: 24 of 35</p>	
<p>UNIT EIGHT PLAT - PORTO ROMANO LAND OWNERSHIP EXHIBIT</p>						<p>LAND OWNED BY: MIROMAR LAKES COMMUNITY DEVELOPMENT DISTRICT</p>					
<p>LAND DEDICATED TO: PORTO ROMANO AT MIROMAR LAKES HOME OWNERS ASSOCIATION, INC.</p>											

Golf Course





SECTION 5

Littoral Shelf Plantings and Lake Barriers

Littoral Shelf Plantings and Lake Barriers

Miromar Lakes was approved, by permitting governmental agencies, to include plantings of wetland plants and tree species for the 118,325 linear feet of shoreline for the existing lakes. The lakes were approved with the requirement of 1 littoral plant per linear foot of shoreline. Presently, the existing littoral plants currently in place amount to 56,796 (based on 48% of initial plantings still remaining) of the 118,325 plantings required. There are also additional plantings to be installed by ML developers within the undeveloped parcels of land that amount to 17,748 (15% to be installed) plants not yet in place. This will leave Miromar Lakes CDD required to replant any combination of 43,780 plant or tree species to comply with permitting requirements.

Littoral shelf plants best suited for Southwest Florida are the Herbaceous species. The four preferred species, although there are a number of available planting types, are Yellow Cana, Pickerelweed, Arrowhead and Spike Rush. These should be planted in the order listed with Yellow Cana highest on the bank and conversely Spike Rush the deepest. Plants are installed on two (2) foot centers with means each plant will cover approx... four (4) square feet. Each plant will cost \$0.65 (65 cents) per plant installed amounting to a total expenditure of \$28,457.00 dollars for 43,780 plantings.

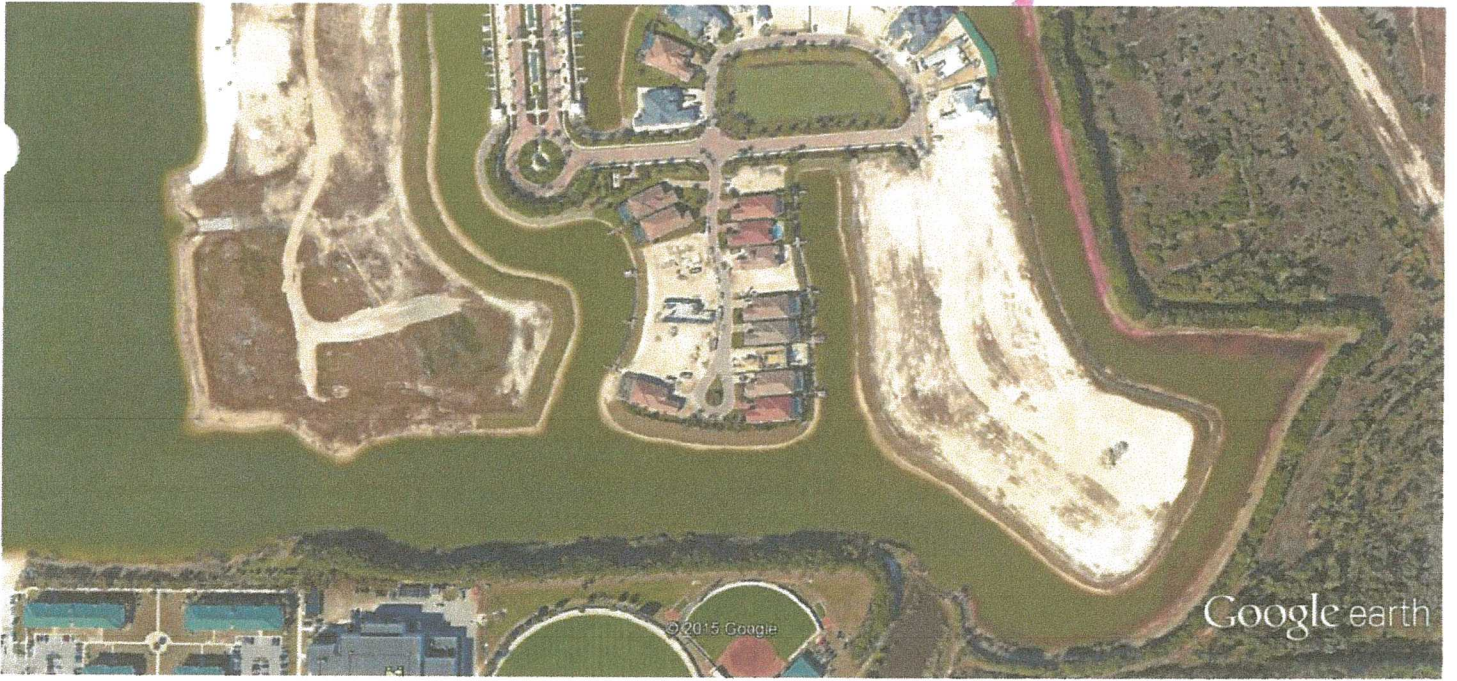
Tree plantings are a viable option for additional credits towards littoral plantings obligations. The tree species able to be planted are Cypress, Dahoon Holly, Red Maple, Live Oak, Pond Apple and Wax Myrtle. Cost of installation of a 15 gallon tree will be \$100.00 dollars and a 30 gallon tree would be \$170.00 dollars. Any tree installation would reduce the plant expenditure by the amount of plant credit given per tree. Native wetland trees may be substituted for up to 25 percent of the total number of herbaceous plants required. One tree with minimum height of ten (10) feet and with a 2" caliper may be substituted for one hundred (100) herbaceous plants.

The best time of year for planting of material is in the spring for survival objectives, and both plant and/or tree installation can take upwards of two weeks.

Lake barriers are proposed for installation at the deepest edge of the littoral shelf plantings for grass carp control. The barrier will be black poly-coated 1 inch wire mesh, used in marine environments such as crab traps, to prevent grass carp migration and penetration into the newly planted shelf's. Cost of installation will be \$20.25 per linear foot with a minimum installation of five hundred foot sections. Each 500 foot segment of barrier installed will cost \$10,125.00 dollars.

A plantings segment would require 1,000 plants installed within each 8 foot wide by 500 linear feet in length area. This amounts to a cost per segment installed of \$10,775.00 dollars in locations barriers are placed within the lake shoreline. Water bodies that are self-contained will only require replanting of plants. It is estimated that we will need 3500 linear feet of shoreline barriers for replanting. The cost for these plantings and barrier installations will amount to \$75,425.00 dollars. With \$23,907.00 dollars required to replant littoral shelf's on the remaining self-contained lakes on-site. The budget amount required to complete the permit compliance of littoral replanting will be- \$99,332.00 dollars

It has been continually conferred that the CDD staff would propose the first segments be replanted with barriers on the border of Lake 5 on the southernmost canal to the overflow weir in that area. This total installation is 3500 linear feet in length with each 500 foot segment installation charge of - \$10,775.00 dollars.



Google earth







SECTION 6
Turbidity Barriers

TURBIDITY BARRIERS

The settlement agreement between Miromar Lakes CDD and Alico Commercial Group has a stipulation that each (developer / CDD) must provide floating turbidity barriers (screening) for installation between Lakes 5 and 6 within the Miromar CDD. The installation of the barriers is to prevent contamination from pollutants (and suspended solids / sediment) for both lake water bodies as well as to aid in minimizing the transfer of turbidity by retarding wave action between the lakes during severe storm events.

The turbidity screening that has been recommended for this purpose is the F.D.O.T. Type II floating turbidity barriers. These screens have a higher resistance to wave action, and with better visibility while installed. The screening panels required are to be typically 12 feet in depth, with lake bottoms depths that vary but in places measure 11 feet deep. Each screening panel is a 50 foot length section. The CDD will be responsible for two (2) locations for installation of the turbidity screening.

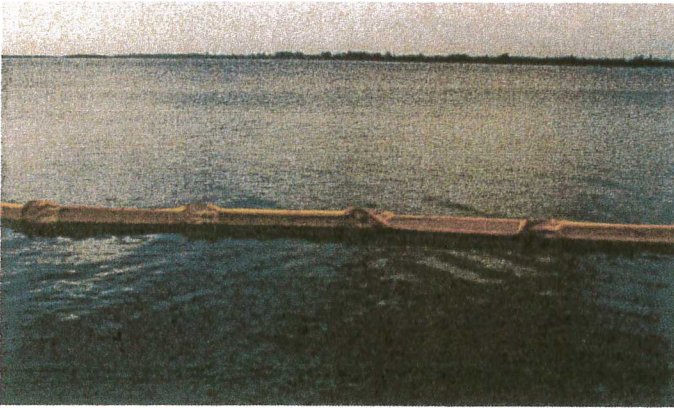
The first location is on the east property line of the Ravenna subdivision stretching across the water channel at the existing bridge. The screening will be anchored to both sides of the bridge foundation supports.

The second location is within the channel between Lake 5 and Lake 6 on the northeast corner of the Portofino subdivision. Here the screening will be anchored to concrete posts installed / mounted within the lake maintenance easement (L.M.E.) at the base of the slope on each side of the channel.

The quote for the first location (bridge) turbidity barrier material and hardware is \$4,600.00 including delivery of 160 linear feet of screening at 12 feet in depth. The quote for the second (channel crossing) turbidity barriers material and hardware is \$7,000.00 including delivery of 250 linear feet of screening at 12 feet in depth. Initial installation will be \$1,500.00 for the anchor mounting and screening deployment at both locations. The total cost for turbidity barriers purchase, delivery and initial installation will be \$13,100.00.

All other deployments and removals of screening and storage at the Miromar Lakes golf course maintenance facility site will cost \$1,000.00 per occurrence as these barriers are heavy and bulky, and thus require equipment and staff for movement.

MOVING WATER SILT & TURBIDITY CURTAINS TRITON Type 2 HD Curtains



TURBIDITY CURTAIN FEATURES

- 18 oz. Impermeable PVC Fabric
- 5/16" Bottom Chain
- 8" or 12" Flotation Device
- 5/16" Single Tension Cable
- Universal Bulk Connectors w/ Grommets
- Section Lengths: 50' and 100'
- Depths: 3' to 100', Standard 5'

SolHuTec's [Type 2 Turbidity Curtain](#) is a great option for silt and turbidity containment in moving water locations. Often used for dredging projects, construction projects in moving waters, and other marine repair jobs, these curtains help to increase settling times and prevent the spread of silt in a various moving water locations. Curtain depths are often sized to meet the requirements of your site.

CURTAIN USES & APPLICATIONS

- Pond & Lake Silt Containment
- Dock and Bridge Repair
- Dredging Projects
- River Turbidity Control
- DOT Projects
- Shoreline Silt Control



TYPE 2 ADVANTAGES

- Meets DOT Requirements
- Helps Contain Silt from Construction Projects
- Increases Silt Settling Times
- Control for Materials During Dock Repair
- Helps Keep Sites in Compliance

Phone: 888-251-8445

Fax: 772-646-0524

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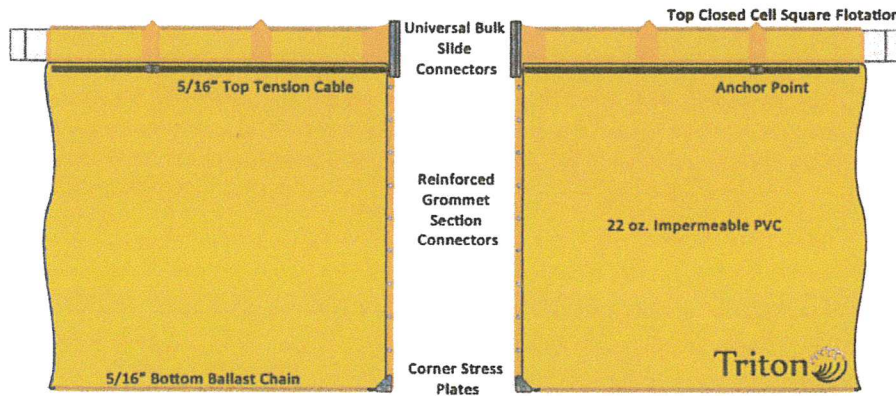
- Home
- Turbidity Curtains
- CALM WATER (TYPE 1)**
- Type 1 Contractor
- Type 1 Economy
- Type 1 DOT
- Type 1 Geo Curtain
- MOVING WATER (TYPE 2)**
- Type 2 Contractor
- Type 2 DOT
- Triton Type 2 HD
- Triton Type 2 HD Permeable
- FAST WATER (TYPE 3)**
- Type 3 DOT
- Triton Type 3 HD
- Triton Type 3 HD Permeable
- Custom Curtains
- ACCESSORIES**
- Anchor Kits
- Marker Lights
- Reefing Lines
- Tow Bridle
- All Products

[Home](#) > [Turbidity Curtains](#) > Type 2 DOT Curtain Turbidity

Triton Type 2 HD Curtain Turbidity

The Triton Type 2 HD Turbidity Curtain is a common option for silt control in areas dealing with moving waters, currents, flows, tides, waves or adjusting water levels. All curtains are manufactured with a top flotation, bottom chain, top tension cable and 22 oz. PVC fabric. This combination of components helps to keep barriers stable against moving or flowing water conditions. Type 2 models have been commonly used around job sites, dredging sites, docks, bridges and intercoastal waterways to keep silt contained and job sites in compliance.

Compare all [Type 2 Moving Water Turbidity Curtains](#).



- Quick Links:** [Drawing](#) [Flyer](#) [Installation](#) [Accessories](#) [Request Pricing](#)

Technical Specifications

Top Square Foam Cell Flotation	6" (skirt depths <10') 8" (skirt depths from 11' to 20') 12" (skirt depths over 20')
Fabric	22 oz. Impermeable PVC
Tension Cable	Top 5/16" Tension Cable
Bottom Ballast Chain	5/16"
Section Connectors	Grommets & Universal Bulk Slide Connectors
Additional Components	Bottom Corner Stress Plates
Section Lengths	50' or 100'
Skirt Depth	5' Standard, 3'-100' Available

Typical Sizing for Triton Type 2 HD Curtains

50' Sections						
Part Number	Material	Length	Depth	Float		Tension Cable



Google earth



Turbidity Screen Locations #1 + #2