TOWN OF LONGBOAT KEY - DIGITIZING TRANSFER SHEET

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Template (Department)	Planning & Zoning
Document Type:	Plans
Address	Sabal Cove Subdivision
Additional Information:	

TOWN OF LONGBOAT KEY
P. O. Box 107
Longboat Key, FL 33548

No. S.D. _____

Date: November 7, 1989

Receipt # 985713 11-8-89

APPLICATION

FOR

SUBDIVISION APPROVAL

The undersigned hereby applies for Subdivision Approval and submits the following information in connection therewith:

Location: HR "C" Bay Isles, P.U.D.

S. D. Name: Sabal Cove

Section No. 5, T36S, R17E

Acreage: 19.05 Ac. No. Lots: 38

Average Lot Area: 0.40 Ac.±

Average Road Frontage Per Lot: 75'±

Owner-Applicant Arvida/JMB Partners

Address: 595 Bay Isles Road
Longboat Key, Florida 34228

Phone: (813) 383-9551

Regis. Engineer: Bishop & Associates

Address: 78 Sarasota Center Boulevard
Sarasota, Florida 34240

Engineer's Phone: (813) 371-6362

PLEASE ANSWER FOLLOWING QUESTIONS COMPLETELY:

1. Is construction and development contemplated in near future? Yes
2. Approximate price range of houses contemplated $600,000 - $800,000
3. Improvements to be installed by subdivider (list) See construction plans previously submitted.
4. What lands will be offered for dedication? None. Roads are private.
5. What lots are to be used for what uses other than single-family residential? None.
6. State type and location of water supply Town of Longboat Key (Manatee County Utilities) in Harbourside Drive at site
7. State type and location of sanitary waste disposal system Manatee County Southwest Regional Treatment Plant at Harbourside Drive
8. Zoning district in which property is located: Current Zone PD
9. State zoning minimums for lot area P.D. Frontage P.D. and set back P.D.

Fees and plans showing all public improvements are submitted with this application. Any additional plans or information required by the Public Works Department will be submitted promptly. The undersigned agrees to comply with all requirements of the Town of Longboat Key Subdivision Ordinance No. 74-27, as amended, and further agrees to execute contract, submit required bonds within stipulated time limit, and obtain all necessary permits in connection with the subject subdivision.

SIGNED: Robert Willadsen
Owner - Applicant

Form: S.D. #1 Ed. 2/75

TOWN OF
LONGBOAT KEY
Incorporated November 14, 1955

501 Bay Isles Road
Longboat Key, Florida 34228
(813) 383-3721
FAX 383-7231

April 29, 1993

Mr. Peter Spencer
Weston Pointe, Inc.
3441 Highlands Bridge Road
Sarasota, FL 34236

Re: Sabal Cove Lot 7

Dear Mr. ~~Spencer~~ Peter:

As per our previous discussions, you have requested information on the yard setback required for Lot 7 in Sabal Cove.

As you are aware, this particular property has been platted and approved as a "through-lot," which would require two (2) street-yard setbacks and two (2) side-yard setbacks. As per the Town's lot, yard and bulk regulations, and as further specified in Resolution 89-33 which approved the Sabal Cove development, the minimum street-yard setback is 20 ft., and the minimum side-yard setback is 10 ft.

Enclosed, please find a graphic illustration which is contained in our zoning code that you may find helpful in determining the Town's minimum setback requirements for a through-lot.

If you should have any questions, or desire any additional information, please do not hesitate to contact me.

Sincerely,

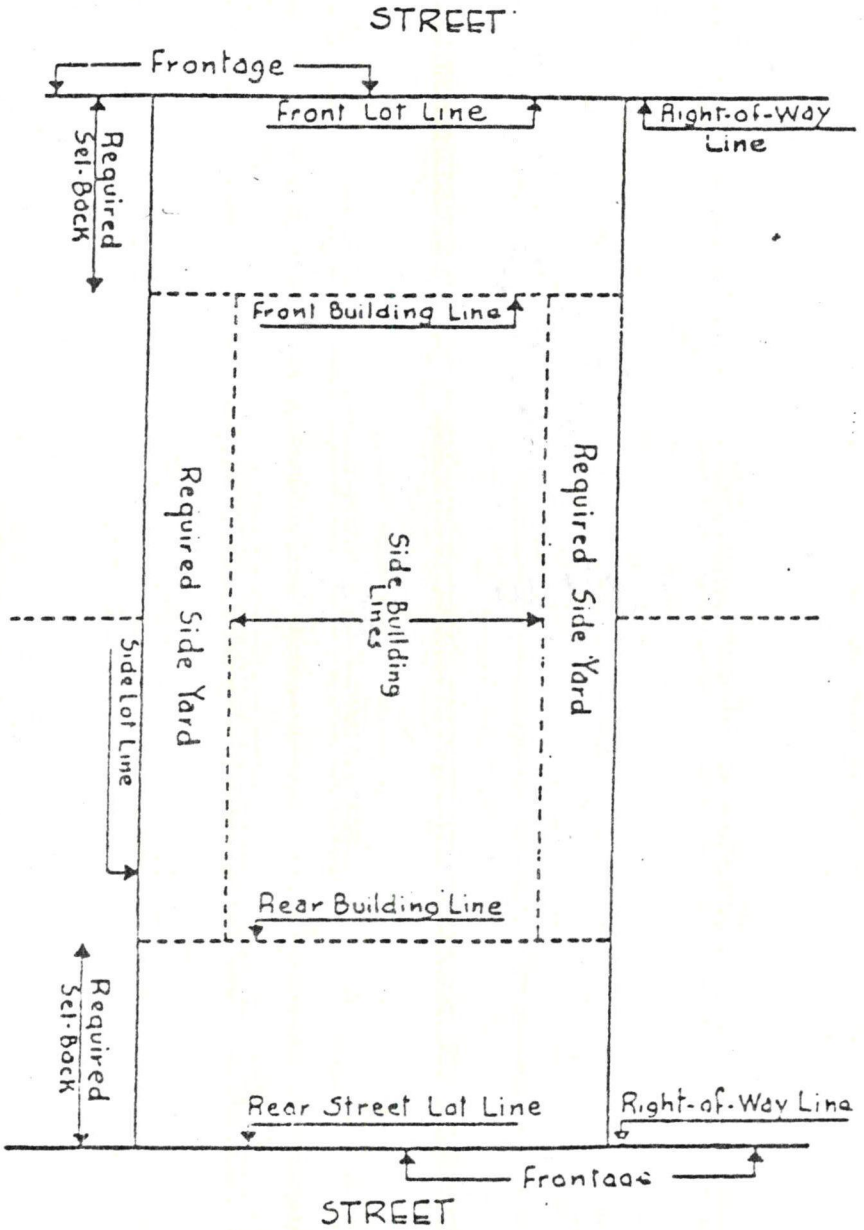
Dan Gaffney

Daniel Gaffney
Town Planner

/dmh

cc: Russ Nowlen, Building Department

(D) Yard Definitions, Through Lot.



(Ord. 90-06, passed 3-19-90)

MEMORANDUM

FILE

DATE: 04/02/93

TO: Daniel Gaffney, Town Planner

FROM: Len Smally, Director of Public Works

SUBJECT: Sabal Cove

Attached is a copy of a portion of Sheet 6 of the approved ODP/Subdivision of Sabal Cove. Also attached is the "setback table", which is consistent with Resolution 89-33.

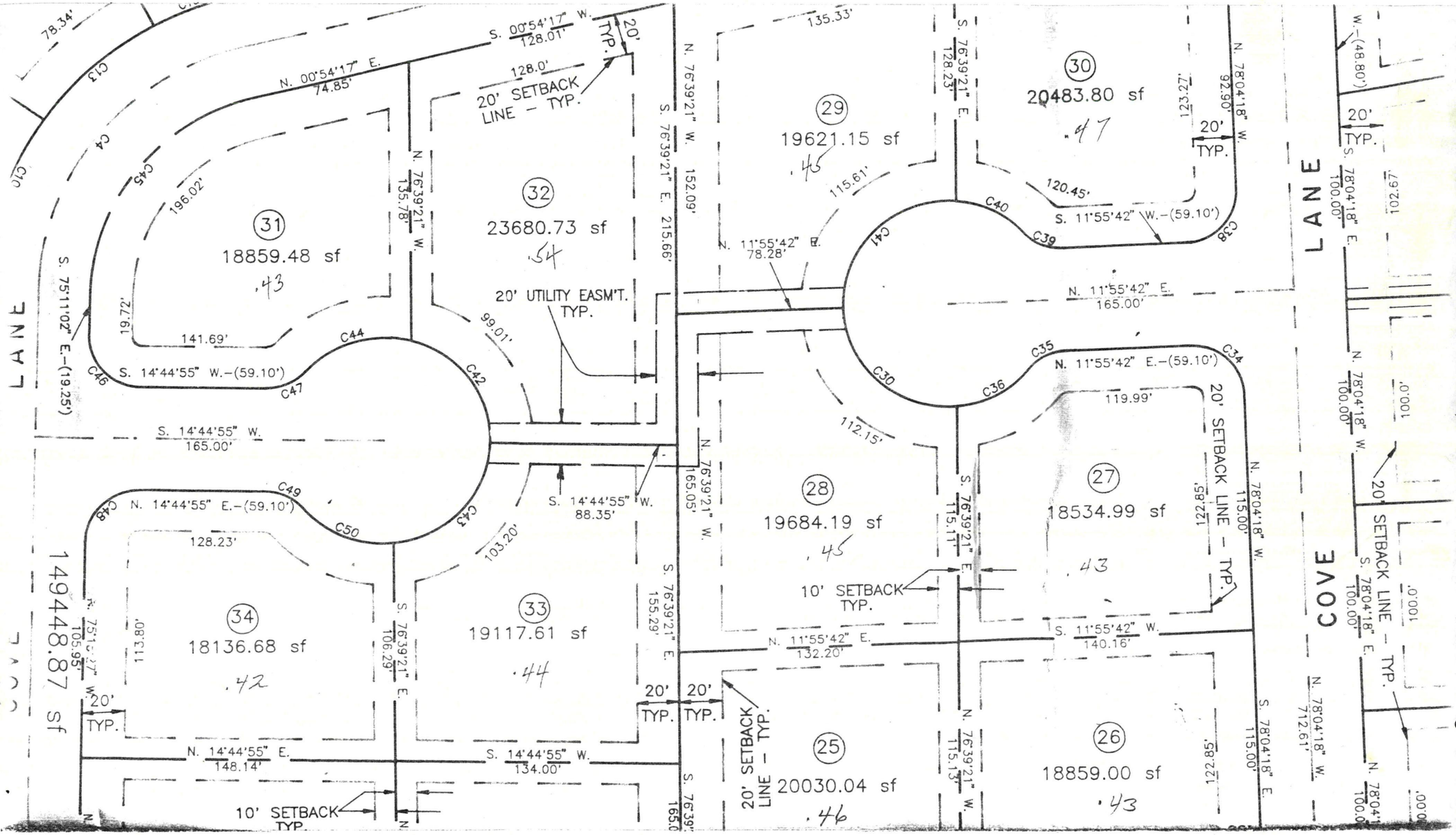
I understand there may be some inconsistency between the drawing and the table. The drawing clearly shows dashed setback lines. Please verify whether or not those dashed lines are to be used. If not, we would like to meet with you and mark up a Sheet 6 for permanent reference.

/cmg

Len - As I advised Russ previously, the Resolution takes precedence and the Resolution, Condition 4 clearly specifies a 10' side yard setback.

Once again, Russ is creating a problem that doesn't exist. I will not waste my time again meeting with Russ - I've wasted enough time already giving him [redacted] a simple answer that he should clearly understand. I've also advised P. Spencer that only a 10' setback is required. Plans should be permitted accordingly.

Dan.



LANE
COVE
LANE
31
18859.48 sf
.43
32
23680.73 sf
.54
29
19621.15 sf
.45
30
20483.80 sf
.47
28
19684.19 sf
.45
27
18534.99 sf
.43
34
18136.68 sf
.42
33
19117.61 sf
.44
25
20030.04 sf
.46
26
18859.00 sf
.43
149448.87 sf
20' SETBACK LINE - TYP.
20' UTILITY EASM'T. TYP.
10' SETBACK TYP.
20' TYP.
S. 00°54'17" W. 128.01'
N. 00°54'17" E. 74.85'
S. 14°44'55" W.-(59.10')
N. 14°44'55" E.-(59.10')
S. 14°44'55" W. 165.00'
N. 14°44'55" E. 148.14'
S. 14°44'55" W. 134.00'
S. 14°44'55" W. 88.35'
N. 11°55'42" E. 78.28'
N. 11°55'42" E. 165.00'
N. 11°55'42" E.-(59.10')
S. 11°55'42" W.-(59.10')
N. 11°55'42" E. 132.20'
S. 11°55'42" W. 140.16'
S. 76°39'21" E. 215.66'
S. 76°39'21" W. 152.09'
N. 76°39'21" W. 165.05'
S. 76°39'21" E. 155.29'
S. 76°39'21" E. 106.29'
N. 76°39'21" W. 135.78'
S. 76°39'21" E. 128.23'
S. 76°39'21" E. 115.11'
N. 76°39'21" W. 115.13'
S. 78°04'18" E. 115.00'
N. 78°04'18" W. 712.61'
S. 78°04'18" E. 100.00'
N. 78°04'18" W. 100.00'
S. 75°11'02" E.-(19.25')
N. 75°16'27" W. 105.95'

SETBACK TABLE

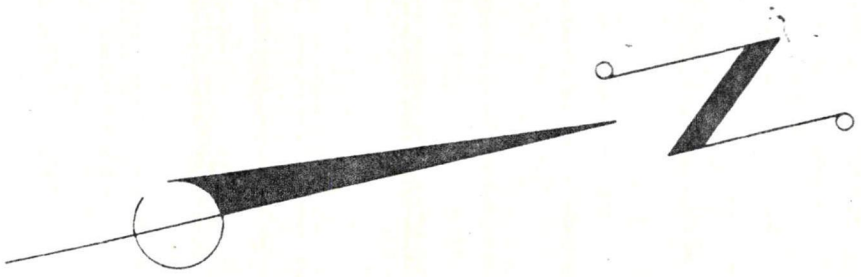
Front: 20' from Right-of-Way

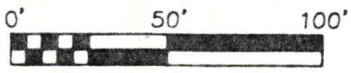
Rear: 20' from Property Line

Side: 20' minimum between buildings
10' minimum on one side of lot line

S A B A L C O V E

PARCEL HR-"C" BAY ISLES, LONGBOAT KEY





SCALE: 1" = 50'

CURVE NUMBER	CURVE DELTA	CURVE RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	20°03'48"	880.00'	308.15'	306.58'	N. 09°44'08" E.
C2					

STATE OF FLORIDA
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

SARASOTA COUNTY
PUBLIC HEALTH UNIT

MARK J. MAGENHEIM, M.D., M.P.H.
DIRECTOR AND HEALTH OFFICER

(813) 954-2900
SUNCOM 552-7950

RECEIVED
JUL 1992

July 9, 1992

Mr. Gary K. Landry, P.E.
Bishop & Associates
78 Sarasota Center Boulevard
Sarasota, Florida 34240

RE: Sabal Cove
WD# 1098-89-004
Longboat Key Utilities

Dear Mr. Landry:

This acknowledges receipt of your letter of certification on July 9, 1992. The subject water distribution system extension has been completed in accordance with your plans and related materials.

Based on this certification, we are approving these facilities for service. Your continued cooperation in our water supply program is appreciated.

Sincerely,

OFFICE OF ENVIRONMENTAL ENGINEERING

Robert F. Bolesta

Robert F. Bolesta, Engineer II
Public Water Systems Section

RFB/er

xc: Len Smalley

THE TOWN OF
LONGBOAT KEY

501 Bay Isles Road
Longboat Key, Florida 33548
(813) 383-3721

July 9, 1991

Fay Sewell
Arvida Contractors
27 Avenue of the Flowers
Longboat Key, Fl. 34228

Re: Letter of Credit #G-264202 - SABAL COVE

Dear Fay:

Enclosed please find original Letter of Credit G-264202 and amendments, posted as surety for the Performance Bond for the SABAL COVE project. Since the criteria of the bond has been fulfilled we are returning the Letter of Credit.

Very truly yours,

Leonard A. Smally, P. E.
Director of Public Works

/cmm

enc.

CHEMICAL BANK
Trade Services Group
P.O. Box 44, Church Street Station
New York, N.Y. 10008
Cable Address: Chemsam New York

JUNE 7, 1990
L/C NO.: G-264202
AMENDMENT NO: 3

Advising Bank

********** DIRECT **********

APPLICANT:
ARVIDA/JMB PARTNERS
7900 GLADES ROAD
BOCA RATON, FLORIDA 33434

Beneficiary

TOWN OF LONGBOAT KEY
501 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 33548

IN ACCORDANCE WITH INSTRUCTIONS RECEIVED, THE ABOVE-REFERENCED LETTER OF CREDIT HAS BEEN AMENDED AS FOLLOWS:

1 - LETTER OF CREDIT AMOUNT IS DECREASED BY USD 340,910.63 (THREE HUNDRED FORTY THOUSAND NINE HUNDRED TEN AND 63/100 UNITED STATES DOLLARS).

2 - THE EXPIRATION DATE IS EXTENDED TO JUNE 06, 1991.

3 - LETTER OF CREDIT AMOUNT NOW TO READ USD 113,636.87 (ONE HUNDRED THIRTEEN THOUSAND SIX HUNDRED THIRTY SIX AND 87/100 UNITED STATES DOLLARS).

4 - PORTION OF THE CREDIT STARING WITH "IT IS A CONDITION OF THIS LETTER OF CREDIT THAT IT SHALL BE EXTENDED FOR AN ADDITIONAL" AND ENDING WITH "ACCOMPANIED BY THE STATEMENT CALLED FOR IN THE CREDIT" IS DELETED IN ITS ENTIRETY.

THE ABOVE REFERS TO YOUR LETTER DATED MAY 24, 1990.

ALL OTHER TERMS AND CONDITIONS OF THE CREDIT REMAIN UNCHANGED.

Doris L. Thomas 2/6
Authorized Signature

G-264202- -009-A1-01-02-01

Provisions applicable to this credit

This credit is subject to the Uniform Customs and Practice for Documentary Credits (1983 Revision.) International Chamber of Commerce Publication No. 400

CHEMICALBANK

Trade Services Group
P.O. Box 44, Church Street Station
New York, N.Y. 10008

NOVEMBER 06, 1989
L/C NO.: G-264202
AMENDMENT NO: 2

Cable Address: Chemsam New York

Advising Bank

********** DIRECT **********

APPLICANT:
ARVIDA/JMB PARTNERS
7900 GLADES ROAD
BOCA RATON, FLORIDA 33434

Beneficiary

TOWN OF LONGBOAT KEY
501 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 33548

IN ACCORDANCE WITH INSTRUCTIONS RECEIVED, THE ABOVE-REFERENCED LETTER OF CREDIT HAS BEEN AMENDED AS FOLLOWS:

1 - PARAGRAPH BEGINNING "ARVIDA/JMB PARTNERS HAS ABANDONED ....." DELETED AND REPLACE WITH

"ARVIDA/JMB PARNTERS IS IN DEFAULT UNDER THE TERMS OF THE DEVELOPER'S COMPLETION, PAYMENT AND GUARANTEE AGREEMENT FOR THE SABAL COVE PROJECT BETWEEN ARVIDA/JMB PARTNERS AND THE TOWN OF LONGBOAT KEY."

ALL OTHER TERMS AND CONDITIONS OF THE CREDIT REMAIN UNCHANGED.

Authorized Signature

G-264202- -004-A1-01-02-01

2/6

Provisions applicable to this credit

This credit is subject to the Uniform Customs and Practice for Documentary Credits (1983 Revision.) International Chamber of Commerce Publication No. 400.

CHEMICAL BANK

Trade Services Group
P.O. Box 44, Church Street Station
New York, N.Y. 10008

Cable Address: Chemsam New York

SEPTEMBER 21, 1989
L/C NO.: G-264202
AMENDMENT NO: 1

Advising Bank

********** DIRECT **********

APPLICANT:
ARVIDA/JMB PARTNERS
7900 GLADES ROAD
BOCA RATON, FLORIDA 33434

Beneficiary

TOWN OF LONGBOAT KEY
501 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 33548

IN ACCORDANCE WITH INSTRUCTIONS RECEIVED, THE ABOVE-REFERENCED LETTER OF CREDIT HAS BEEN AMENDED AS FOLLOWS:

1 - IN BENEFICIARY'S STATEMENT:
WORD "JABAL" IS CORRECTED TO READ "SABAL".

ALL OTHER TERMS AND CONDITIONS OF THE CREDIT REMAIN UNCHANGED.

Authorized Signature

G-264202- -003-A1-01-02-01

Provisions applicable to this credit
This credit is subject to the Uniform Customs and Practice for Documentary Credits (1983 Revision.) International Chamber of Commerce Publication No. 400

CHEMICAL BANK

Trade Services Group
P.O. Box 44, Church Street Station
New York, N.Y. 10008
Cable Address: Chemsam New York

ISSUE DATE: SEPTEMBER 12, 1989
L/C NO.: G-264202

Advising Bank

********** DIRECT **********

APPLICANT:
ARVIDA/JMB PARTNERS
7900 GLADES ROAD
BOCA RATON, FLORIDA 33434

Beneficiary

TOWN OF LONGBOAT KEY
501 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 33548

AMOUNT: USD 454,547.50
(FOUR HUNDRED FIFTY FOUR
THOUSAND FIVE HUNDRED FORTY
SEVEN AND 50/100 UNITED
STATES DOLLARS)

WE HEREBY ESTABLISH OUR IRREVOCABLE LETTER OF CREDIT IN YOUR FAVOR, DRAFT(S) TO BE MARKED "DRAWN UNDER CHEMICAL BANK, LETTER OF CREDIT NUMBER G-264202."

DATE AND PLACE OF EXPIRY: SEPTEMBER 11, 1990 IN NEW YORK, N.Y. .

CREDIT AVAILABLE WITH: CHEMICAL BANK, NEW YORK
BY: PAYMENT OF YOUR DRAFT(S) AT SIGHT DRAWN ON CHEMICAL BANK, NEW YORK, ACCOMPANIED BY THE DOCUMENTS INDICATED HEREIN.

DOCUMENTS REQUIRED:

1 - SIGNED STATEMENT FROM THE TOWN OF LONGBOAT KEY READING:

"ARVIDA/JMB PARTNERS HAS ABANDONED JABAL COVE PROJECT PRIOR TO COMPLETION AND IS IN DEFAULT UNDER THE TERMS OF THE AGREEMENT BETWEEN ARVIDA/JMB PARTNERS AND THE TOWN OF LONGBOAT KEY."

IT IS A CONDITION OF THIS LETTER OF CREDIT THAT IT SHALL BE EXTENDED FOR AN ADDITIONAL PERIOD OF ONE YEAR FROM THE PRESENT OR FUTURE EXPIRATION DATE HEREOF, UNLESS THIRTY DAYS PRIOR TO SUCH DATE WE SHALL NOTIFY YOU IN WRITING, THAT WE ELECT NOT TO RENEW THIS LETTER OF CREDIT FOR SUCH ADDITIONAL PERIOD. UPON RECEIPT BY YOU OF SUCH NOTICE, YOU MAY DRAW HEREUNDER BY MEANS OF YOUR DRAFT ON US AT SIGHT ACCOMPANIED BY THE STATEMENT CALLED FOR IN THE CREDIT.

WE HEREBY AGREE WITH YOU THAT DRAFTS DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS CREDIT WILL BE DULY HONORED UPON PRESENTATION AND DELIVERY OF THE DOCUMENTS AS SPECIFIED IF PRESENTED TO THIS OFFICE (LETTER OF CREDIT DEPARTMENT, 55 WATER STREET, NEW YORK, NEW YORK 10041) ON OR BEFORE THE EXPIRY DATE INDICATED ABOVE.

Authorized Signature

G-264202- -001-L1-01-02-01

Provisions applicable to this credit
This credit is subject to the Uniform Customs and Practice for Documentary Credits (1983 Revision.) International Chamber of Commerce Publication No. 400

Arvida Contractors Limited Partnership
GULF COAST DIVISION
595 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 34228
TELEPHONE (813) 383-9551

RECEIVED
JUN 15 1990
Town of
Longboat Key

June 15, 1990

Ms. Carmen Gustin
Town of Longboat Key
501 Bay Isles Road
Longboat Key, Florida 34228

Re: L/C G 264202 - 113,636.87

Dear Carmen:

Attached please find the above referenced Letter of Credit on our Sabal Cove Project. This L/C has been reduced to maintenance and will remain in effect until June 6, 1991.

Thank you taking care of this matter.

Sincerely,

Fay L. Sewell

/fls

Enc.(1)

copy: Russ Luce
John Huffer
Steve Parker

TOWN OF LONGBOAT KEY FLORIDA

INCORPORATED NOVEMBER 14, 1955

501 Bay Isles Road
Longboat Key, Florida 33548
(813) 383-3721

May 24, 1990

Fay L. Sewell
Arvida Contractors Ltd. Partnership
595 Bay Isles Road
Longboat Key, Fl. 34228

Re: Sabal Cove
Letter of Credit G-264202 - $454,547.50

Dear Fay:

Per your request of April 13, 1990, this is your authorization to reduce the above referenced Letter of Credit to maintenance status in the amount of $113,636.87, and to allow automatic cancellation one year from the date the amendment to reduce is issued.

Very truly yours,

Leonard A. Smally, P. E.
Director of Public Works

/cmm

Arvida Contractors Limited Partnership
GULF COAST DIVISION
595 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 34228
TELEPHONE (813) 383-9551

RECEIVED
APR 16 1990
Town of
Longboat Key

April 13, 1990

Mr. Leonard A. Smally
Director of Public Works
Town of Longboat Key
501 Bay Isles Road
Longboat Key, Florida 34228

Re: Sabal Cove
Letter of Credit G-264202 - $454,547.50

Dear Mr. Smally:

We hereby request authorization to reduce the above referenced Letter of Credit to maintenance status in the amount of $113,636, which represents 25% of the original bond.

Further, we would like permission to amend the Letter of Credit to allow automatic cancellation one year from the date the amendment to reduce is issued.

Thank you for your consideration.

Sincerely,

Fay L. Sewell

/fls

copy: Bob Wilhelm
Russ Luce
John Huffer
Betti Coleman

Letter of Credit

DEVELOPER'S COMPLETION, PAYMENT AND GUARANTEE AGREEMENT

Know All Men by These Presents, that ROBERT WILHELM _____ of ARVIDA/JMB PARTNERS, as Principal, hereinafter called Developer, does hereby expressly acknowledge itself to be held and bound to pay unto the TOWN OF LONGBOAT KEY, as Obligee, hereinafter called the Town, the sum of $454,547.50 Dollars for the payment of which sum well and truly to be made unto the Town, and its successors, the Developer does hereby bind itself, its assigns, successors, heirs and personal representatives, jointly and severally.

NOW, THEREFORE, the condition of this obligation is such that if the above bounden Principal shall in all respects fully comply with, carry out, construct, erect and build the improvements listed in Exhibit "A" hereto, in accordance with, the plans, specifications and schedules included in and made a part of said Exhibit "A", and such alterations as may be made in the plans and specifications for said work, and shall complete all of said work on or before Sept.1, 1990, and shall promptly make payment to all persons supplying the Principal or his sub-contractors any labor, materials and supplies used directly or indirectly by said Principal or his sub-contractors in the prosecution of the work referred to in Exhibit "A", and said Principal shall promptly repair or replace any of said improvements referred to in Exhibit "A" to the original condition required by said Code of the Town of Longboat Key, Florida, Subdivision Regulations, as amended, and other approved regulations, should the same because of defective materials, engineering, or faulty workmanship require such repair or replacement within one (1) year after final inspection and acceptance of said improvements by the Town, then this obligation to be void, otherwise to remain in full force and effect.

A Letter of Credit from Chemical Bank #G-264202 dated September 12, 1989 in the above stated amount is deposited with the Town to cover the obligation by the Developer to the Town under this Completion, Payment and Guarantee.

This agreement shall be for the use and benefit of the Town of Longboat Key and also for the use and benefit of all persons, firms, corporations, or associations supplying labor, services, materials and supplies used, either directly or indirectly by the principal or his sub-contractors in the prosecution of the work specified herein and may be enforced by any of such persons, firms, corporations, or associations in any manner authorized by law. This agreement shall be for the use and benefit of the Town, in the event the Principal shall fail to fully comply with any of the obligations imposed herein. The manner of enforcing this agreement for the use and benefit of the Town shall be substantially as follows:

In the event the Principal shall fail to fully comply with any or all of the obligations imposed herein, the Town shall notify said Principal of such default, by registered or certified mail addressed to the last address furnished by such Principal to the office of the Town Clerk of the Town of Longboat Key; and not later than ten (10) days after notification thereof, the Town shall issue a sight draft on Chemical Bank L/C G-264202 per Letter of Credit dated Sept.12,1989, for a sum of money sufficient to cover the Town of Longboat Key's Public Works Department's estimated cost of curing any such default or defaults, plus a sum equal to twenty (20) percent of such sum, all of which shall be used by the Town to complete or cause to be completed the improvements or cure such defaults. In the event there is any surplus of the deposit made by Principal after completion or such improvements or curing such defaults by the Town, such surplus shall be refunded by the Town to the Principal. In the event the deposit is insufficient, Principal must pay in cash the

difference to the Town within ten (10) days after notification of such deficiency. In case of default in the deposit of such sum with the said Town Clerk, the Town may proceed to collect such sum by appropriate court action, without the necessity of doing any further act or deed toward correcting such omissions or defaults on the part of the Principal. Principal agrees to pay all costs of collecting any sums due thereunder, including a reasonable attorney's fee and court costs.

IN WITNESS WHEREOF, the Principal has caused these presents to be duly executed on this 12 day of September, 1989.

ARVIDA/JMB PARTNERS
BY: ARVIDA/JMB MANAGERS, INC., GEN.PARTNER

By: Robert Wilhelm
ROBERT WILHELM
As Vice-President Principal

Principal

TOWN OF LONGBOAT KEY

By: _____

Approved as to form:

Town Attorney 10/25/89

Revised 7/23/85

BONDING ESTIMATE

ARVIDA/JMB PARTNERS **SABAL COVE**
PROJECT ARVD-0430
PAGE 1 **JUNE 5, 1989**

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
1.	Offsite Fill	3,400 CY	$ 7.00	$ 23,800.00
2.	1" Asphalt Surface, Type II	7,210 SY	$ 3.50	$ 25,235.00
3.	6" Soil Cement Base	6,950 SY	$ 6.50	$ 45,175.00
4.	Type "H" Curb	5,990 LF	$ 7.00	$ 41,930.00
5.	Type "A" Curb	360 LF	$ 7.00	$ 2,520.00
6.	Valley Gutter	210 LF	$ 7.00	$ 1,470.00
7.	Sodding Parkways	10,355 SY	$ 2.00	$ 20,710.00
8.	Special Pavers	2,800 SF	$ 3.50	$ 9,800.00
		SUB-TOTAL		**$ 170,640.00**

NOTE: Rock Rip-Rap is not considered at this time in this estimate.

STORM DRAINAGE SYSTEM

1.	Curb Inlets	14 EA	$1,200.00	$ 16,800.00
2.	Junction Box	1 EA	$1,000.00	$ 1,000.00
3.	15" RCP	350 LF	$ 18.00	$ 6,300.00
4.	18" RCP	788 LF	$ 20.00	$ 15,760.00
5.	Flared End Sections	5 EA	$ 300.00	$ 1,500.00
		SUB-TOTAL		**$ 41,360.00**

ARVD0430.J03(ESTIMATES DISK #2)

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
WATER DISTRIBUTION SYSTEM				
1.	10" X 6" Tapping sleeve and valve	2 EA	$1,500.00	$ 3,000.00
2.	Jack & Bore 6" W. M. including casing pipe	180 LF	$ 50.00	$ 9,000.00
3.	6" PVC Water Main	2,360 LF	$ 10.00	$ 23,600.00
4.	6" Gate Valves	7 EA	$ 500.00	$ 3,500.00
5.	2" Gate Valves	6 EA	$ 300.00	$ 1,800.00
6.	Fire Hydrant Assembly	5 EA	$1,500.00	$ 7,500.00
7.	1" & 2" Service Leads (Domestic & Fire)	38 EA	$ 500.00	$ 19,000.00
		SUB-TOTAL		**$ 67,400.00**
SANITARY SEWER SYSTEM				
1.	Connect to Existing System	2 EA	$ 800.00	$ 1,600.00
2.	8" PVC Sanitary Sewer	2,591 LF	$ 18.00	$ 46,638.00
3.	Standard Sanitary Manhole	17 EA	$1,500.00	$ 25,500.00
4.	6" Service Lead Connection (Double)	19 EA	$ 500.00	$ 9,500.00
		SUB-TOTAL		**$ 83,238.00**
		TOTAL ESTIMATED COST		**$ 363,638.00**
		ADD 25% CONTINGENCIES		**$ 90,909.50**
		GRAND TOTAL		**$ 454,547.50**

WILLIAM F. BISHOP, P.E. #8189

ARVD0430.J03(ESTIMATES DISK #2)Revised August 22, 1989

DAN — See Me — Lenny

Need Drawing & Research Info

Will W.S. May

OAKS 966 - 3661

RECEIVED APR 30 1991

Arvida Company
201 GULF OF MEXICO DRIVE
SUITE 1
LONGBOAT KEY, FLORIDA 34228-3102
TELEPHONE: (813) 383-6411

STEVEN A. PARKER
PROJECT MANAGER - SARASOTA

April 25, 1991

RECEIVED APR 29 1991 TOWN MANAGERS OFFICE

Mr. Al Cox
501 Bay Isles Road
Longboat Key, Florida 33548

RE: Sidewalks - Sabal Cove

Dear Al:

Per our previous discussion in regards to the above issue, please find a copy of the recorded amendment to the Sabal Cove homeowner's documents eliminating any requirement of a sidewalk by the homeowner. This amendment was approved by one hundred percent of all property owners within Sabal Cove (copies of proxies attached to amendment).

During our last meeting you stated that you would get back with me in regards to making sure that the elimination of the sidewalks within Sabal Cove is resolved.

If you have any further questions, please feel free to give me a call.

Sincerely,
ARVIDA COMPANY

Steven A. Parker
Project Manager - Sarasota

SAP/cc

FIRST AMENDMENT
TO
DECLARATION OF RESTRICTIONS

THIS FIRST AMENDMENT to the Declaration of Restrictions, Limitations, Conditions and Agreements for Sabal Cove is made and executed this 3RD day of April 1991 by ARVIDA/JMB PARTNERS, a Florida general partnership, hereinafter referred to as "Developer."

R E C I T A L S :

A. Developer caused to be recorded that certain Declaration of Restrictions, Limitations, Conditions and Agreements for Sabal Cove ("Declaration") in the Public Records of Sarasota County, Florida at Official Records Book 2194, page 731.

B. The Declaration provides in Article XIII, Section 5, that the Declaration may be amended upon the vote of two-thirds of the voting interest of the Sabal Cove Homeowners Association ("Association") membership.

C. Both Developer and two-thirds of the lot owners in Sabal Cove wish to amend the Declaration.

NOW THEREFORE, be it known that the amendment contained herein has been approved by not less than two-thirds of the voting interest of the Association membership, as evidenced by the signature lines attached hereto, and thus the Declaration is hereby amended as follows:

1. Wherever referred to in the Declaration, any requirement for a sidewalk to be constructed by the homeowner or by the Developer within the Sabal Cove subdivision shall be deemed deleted. The enactment of this amendment shall be contingent upon the approval by the Town of Longboat Key of a change to the site plan reflecting the deletion of the sidewalk. The Developer shall make a corresponding change to the Architectural Planning Criteria for Sabal Cove.

IN WITNESS WHEREOF, this amendment has been approved by the lot owners of Sabal Cove and by the members of Sabal Cove Homeowners Association, as reflected in the signatures hereinafter.

ARVIDA/JMB Partners, a Florida general partnership
BY: Arvida/JMB Managers, Inc., a Delaware corporation, General Partner

By: Donald S. DeCastro
Vice President

Lot Numbers: 1-16B AND 1-22A

STATE OF FLORIDA)
COUNTY OF SARASOTA)

The foregoing instrument was acknowledged before me this 3rd day of April, 1991, by DONALD S. DECASTRO as Vice President of ARVIDA/JMB MANAGERS, INC., a Delaware corporation, on behalf of the corporation as General Partner of ARVIDA/JMB PARTNERS, a Florida general partnership.

Joan A. Dickinson
Notary Public
My Commission Expires:

Notary Public State of Florida at Large
My Commission Expires Oct. 1, 1992

Name of Lot Owner: ARVIDA / JMB PARTNERS

Lot Number: 1A, 1B, 2A, 3A, 10A, 11A, 12A, 14A, 15A, 16A, 17A, 19A, 20A, 21A, 22A, 2B, 3B, 6B, 7B, 12B, 13B, 16B

Date: April 3, 1991

Donald A. DeCastro
(Signature) VICE PRESIDENT ARVIDA / JMB PARTNERS

(Signature)

STATE OF FLORIDA
COUNTY OF SARASOTA

The foregoing instrument was acknowledged before me this 3rd day of 3rd April 1991 by DONALD J. DECASTRO.

Joan A. Dickinson
Notary Public
My Commission Expires:

Notary Public State of Florida at Large
My Commission Expires Oct. 1, 1992

Name of Lot Owner: _____

Lot Number: _____

Date: _____

(Signature)

(Signature)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____ 1991 by _____.

Notary Public
My Commission Expires:

Name of Lot Owner: Thomas Livingston

Lot Number: 8B

Date: 3/23/91

(Signature)

(Signature)

STATE OF Pennsylvania
COUNTY OF Allegheny

The foregoing instrument was acknowledged before me this 22nd day of March 1991 by Thomas A. Livingston.

Evelyn Kieteska
Notary Public
My Commission Expires:

Notarial Seal
Evelyn [illegible] Notary Public
Pittsburgh, Allegheny County
My Commission Expires Feb. 20, 1994
Member, Pennsylvania Association of Notaries

Name of Lot Owner: _____

Lot Number: _____

Date: _____

(Signature)

(Signature)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____ 1991 by _____.

Notary Public
My Commission Expires:

Name of Lot Owner: Thomas Livingston

Lot Number: 4B

Date: 3/23/91

(Signature)

(Signature)

STATE OF Pennsylvania
COUNTY OF Allegheny

The foregoing instrument was acknowledged before me this 22nd day of March 1991 by THOMAS A. Livingston.

Evelyn Wieteska
Notary Public
My Commission Expires:

Notarial Seal
Evelyn Wieteska, Notary Public
Pittsburgh, Allegheny County
My Commission Expires Feb. 20, 1994
Member, Pennsylvania Association of Notaries

Name of Lot Owner: _____

Lot Number: _____

Date: _____

(Signature)

(Signature)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____ 1991 by _____.

Notary Public
My Commission Expires:

Name of Lot Owner: Michael Hussey

Lot Number: 6A

Date: April 1, 1991

Michael D. Hussey DO.
(Signature)

(Signature)

STATE OF Illinois
COUNTY OF DuPage

The foregoing instrument was acknowledged before me this 1st day of April 1991 by Michael Hussey.

"OFFICIAL SEAL"
CAROL W. BAHLMANN
Notary Public, State of Illinois
DuPage County
My Commission Expires 3/26/93

Carol W Bahlmann
Notary Public
My Commission Expires:

Name of Lot Owner: Patricia Hussey

Lot Number: 6A

Date: April 1, 1991

Patricia Hussey
(Signature)

(Signature)

STATE OF Illinois
COUNTY OF DuPage

The foregoing instrument was acknowledged before me this 1st day of April 1991 by Patricia Hussey.

"OFFICIAL SEAL"
CAROL W. BAHLMANN
Notary Public, State of Illinois
DuPage County
My Commission Expires 3/26/93

Carol W Bahlmann
Notary Public
My Commission Expires:

Name of Lot Owner: LORIAN INVESTMENTS LTD

Lot Number: 5B

Date: April 1/1991

Loretta Tanovich
(Signature)

J. Tanovich
(Signature)

Province
~~STATE~~ OF ONTARIO.
~~COUNTY~~ OF CANADA
Country

The foregoing instrument was acknowledged before me this 3rd day of April 1991 by Loretta TANOVICH and J. Tanovich.

Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: NOV. 6, 1992.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

Name of Lot Owner: LORTAN INVESTMENTS LTD.

Lot Number: 5B

Date: April 1/1991

Loretta Tanovich
(Signature)

J. Tanovich
(Signature)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____ 1991 by _____.

Notary Public
My Commission Expires:

91-04-02 14:59 416 461 0787 DANFORTH MEDICAL CENTRE 003 P01

Name of Lot Owner: Robert McCarthy

Lot Number: 93

Date: 27 March 1991

Robert McCarthy
(Signature)

(Signature)

STATE OF Florida
COUNTY OF Sarasota

The foregoing instrument was acknowledged before me this 27th day of March 1991 by Robert McCarthy

Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA
NOV. 3, 1992
BONDED THRU NOTARY PUBLIC UNDERWRITERS

Name of Lot Owner: Lillian McCarthy

Lot Number: 96

Date:

Lillian McCarthy
(Signature)

(Signature)

STATE OF Florda
COUNTY OF Sarasota

The foregoing instrument was acknowledged before me this 27th day of March 1991 by Lillian McCarthy

Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: NOV. 8, 1992.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

Name of Lot Owner: Kamal Greiss

Lot Number: 9A

Date: 3/28/91

Kamal Greiss, MD
(Signature)

(Signature)

STATE OF New Jersey
COUNTY OF Bergen

The foregoing instrument was acknowledged before me this 28th day of March 1991 by Kamal Greiss, MD.

Janet J. Carafa
Notary Public
My Commission Expires:

JANET J. CARAFA
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES MAY 25, 1994

Name of Lot Owner: Jane Greiss

Lot Number: 9A

Date: 3/28/91

Jane R. Greiss
(Signature)

(Signature)

STATE OF New Jersey
COUNTY OF Bergen

The foregoing instrument was acknowledged before me this 28th day of March 1991 by Jane R. Greiss.

Janet J. Carafa
Notary Public
My Commission Expires:

JANET J. CARAFA
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES MAY 25, 1994

Name of Lot Owner: PATRICIA H. SHANNON OR Michael Shannon, TTEE

Lot Number: 10B

Date: 3-21-91

Patricia H. Shannon
(Signature)

_____
(Signature)

STATE OF California
COUNTY OF Los Angeles

The foregoing instrument was acknowledged before me this 21st day of March 1991 by Patricia Shannon.

William Homer
Notary Public
My Commission Expires:

OFFICIAL SEAL
WILLIAM HOMER
NOTARY PUBLIC - CALIFORNIA
LOS ANGELES COUNTY
My comm. expires JAN 2, 1993

Name of Lot Owner: _____

Lot Number: _____

Date: _____

_____
(Signature)

_____
(Signature)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____ 1991 by _____.

_____
Notary Public
My Commission Expires:

Name of Lot Owner: Allan Cannon

Lot Number: 8A

Date: 3/26/91

Allan T. Cannon
(Signature)

(Signature)

STATE OF FLORIDA
COUNTY OF SARASOTA

The foregoing instrument was acknowledged before me this 26th day of March 1991 by Allan T. Cannon.

Betty Martin
Notary Public
My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV. 2,1991
BONDED THRU GENERAL INS. UND.

Name of Lot Owner: BARBARA CANNON

Lot Number: 8A

Date: 3/26/91

Barbara A. Cannon
(Signature)

(Signature)

STATE OF FLORIDA
COUNTY OF SARASOTA

The foregoing instrument was acknowledged before me this 26th day of March 1991 by Barbara A. Cannon.

Betty Martin
Notary Public
My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV. 2,1991
BONDED THRU GENERAL INS. UND.

Name of Lot Owner: WILLIAM LEVINE

Lot Number: 13A

Date: _____

William Levine
(Signature)

Carol Levine
(Signature)

STATE OF NEW JERSEY
COUNTY OF MORRIS

The foregoing instrument was acknowledged before me this 26TH day of MARCH 1991 by WILLIAM LEVINE AND CAROL LEVINE.

Patricia F. Fisher
Notary Public
My Commission Expires:

PATRICIA F. FISHER
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires October 12, 1994

Name of Lot Owner: CAROL LEVINE

Lot Number: 13A

Date: _____

William Levine
(Signature)

Carol Levine
(Signature)

STATE OF NEW JERSEY
COUNTY OF MORRIS

The foregoing instrument was acknowledged before me this 26TH day of MARCH 1991 by WILLIAM LEVINE AND CAROL LEVINE.

Patricia F. Fisher
Notary Public
My Commission Expires:

PATRICIA F. FISHER
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires October 12, 1994

Name of Lot Owner: Norman Creech

Lot Number: 14B

Date: 4/3/91

Norman O. Creech
(Signature)

(Signature)

STATE OF Florida
COUNTY OF Sarasota

The foregoing instrument was acknowledged before me this 3rd day of April 1991 by NORMAN O. CREECH.

Nora P. Mixon Biesele
Notary Public
My Commission Expires:

Notary Public, State of Florida
My Commission Expires Oct. 25, 1992
Bonded Thru Troy Fain - Insurance Inc.

Name of Lot Owner: _____

Lot Number: _____

Date: _____

(Signature)

(Signature)

STATE OF _____
COUNTY OF _____

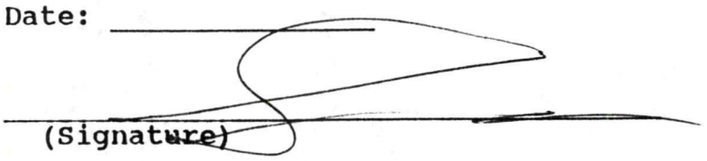
The foregoing instrument was acknowledged before me this ____ day of _____ 1991 by _____.

Notary Public
My Commission Expires:

Name of Lot Owner: Geoscott Group Inc.

Lot Number: 7A

Date: _____



(Signature)

_____

(Signature)

STATE OF FLORIDA
COUNTY OF SARASOTA

The foregoing instrument was acknowledged before me this 22nd day of APRIL 1991 by Michael Edgecombe _____.

Kathleen L. Cryer
Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA
MY COMMISSION EXPIRES: AUG. 25, 1991.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

Name of Lot Owner: _____

Lot Number: _____

Date: _____

_____

(Signature)

_____

(Signature)

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____ 1991 by _____ _____.

_____
Notary Public
My Commission Expires:

Name of Lot Owner: JackLyn MacInnes

Lot Number: 4A

Date: _____

MacInnes
(Signature)

_____
(Signature)

STATE OF FLORIDA
COUNTY OF SARASOTA

The foregoing instrument was acknowledged before me this 2nd day of APRIL 1991 by Wayne R MacInnes.

Kathleen L. Casper
Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: AUG. 25, 1991.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

Name of Lot Owner: SABAL COVE JOINT VENT.

Lot Number: 18A

Date: 4/2/91

MacInnes
(Signature)

_____
(Signature)

STATE OF FLORIDA
COUNTY OF SARAS

The foregoing instrument was acknowledged before me this 2nd day of APRIL 1991 by Wayne R. MacInnes.

Kathleen L. Casper
Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: AUG. 25, 1991.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

Name of Lot Owner: Robert Diamant

Lot Number: B/15

Date: 4/1/91

Robert Diamant
(Signature)

(Signature)

STATE OF Florida
COUNTY OF Sarasota

The foregoing instrument was acknowledged before me this 1st day of April 1991 by Robt. Diamant.

Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: NOV. 8. 1992.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

Name of Lot Owner: Rochelle Diamant

Lot Number: B/15

Date: 4/1/91

Robert Diamant
(Signature)

Rochelle Diamant
(Signature)

STATE OF Florida
COUNTY OF Sarasota

The foregoing instrument was acknowledged before me this 1st day of April 1991 by Rochelle Diamant.

Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: NOV. 8. 1992.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ day of _____ 1991 by _____ _____ _____.

_____
Notary Public
My Commission Expires:

Name of Lot Owner: LINDA PACCHIANO

Lot Number: 5A

Date: _____

Linda Pacchiano
(Signature)

_____
(Signature)

STATE OF Florida
COUNTY OF Sarasota

The foregoing instrument was acknowledged before me this 16th day of April 1991 by Linda Pacchiano _____ _____.

Betty Callaway
Notary Public
My Commission Expires:

NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: NOV. 8, 1992.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

Name of Lot Owner: Ronald Cogswell

Lot Number: 11B

Date: _____

Ronald E Cogswell
(Signature)

_____
(Signature)

STATE OF Florida
COUNTY OF Sarasota

The foregoing instrument was acknowledged before me this 15th day of April 1991 by _____.

Notary Public
State of Florida at Large
My Commission Expires May 19, 1992

_____
Notary Public
My Commission Expires:
[illegible]

Name of Lot Owner: Patricia Cogswell

Lot Number: 11B

Date: _____

Patricia M Cogswell
(Signature)

_____
(Signature)

STATE OF Florida
COUNTY OF Sarasota

The foregoing instrument was acknowledged before me this 15 day of April 1991 by _____.

Notary Public
State of Florida at Large
My Commission Expires May 19 1992

_____
Notary Public
My Commission Expires:
[illegible]

SARASOTA

H.R.S.

SARASOTA COUNTY PUBLIC HEALTH UNIT
DRINKING WATER BACTERIOLOGICAL ANALYSIS

ID # 24025

REC'D 90 APR -9 AM 11:07

RECEIVED APR 13 1990 Town of Longboat Key

REPORTED BY
JUDY P. DRAKE

SYSTEM NAME: Manatee Co (Longboat Key) SYSTEM I.D.#: 6581098 DER DISTRICT: VI

ADDRESS: 4501 66th AVE W. Bradenton COUNTY: Sarasota COLLECTOR: B King

SAMPLE SITE (Locality or Subdivision): Sable Cove

RAW OR TREATED: DATE AND TIME COLLECTED: 4-9-90 10:40

TYPE OF SUPPLY (Circle One): Community Public Water Non-Community Public Water Other Public Private Well Swimming Pool Bottled Water

TYPE OF SAMPLE (Circle One): Compliance Recheck Main Clearance Well Survey Other

REMARKS: 1 of 2 Complete

The consulting engineer must certify to completion of construction in accordance with the approved plans together with copies of satisfactory bacteriological analyses and a letter of clearance must be obtained from the Department of Environmental Regulations before placing these facilities in service. RK

WD 1098-89-004

TO BE COMPLETED BY COLLECTOR OF SAMPLE				TO BE COMPLETED BY LAB				
Coll. No.	Sample Point	Cl Res'd	pH	Sample Number	Non Coliform (303)	Coliform MF/100 ML(303) Total	Coliform MF/100 ML(303) Fecal	MFN 100ML (305)
1	Cul de Sac	3.5		2125		-1		
2	Cul de Sac	3.5		2126		-1		
3	Lot #10	3.5		2127		-1		
4	Lot #29	3.5		2128		-1		
5	Lot #25	3.5		2129		-1		

INTERPRETATIONS/RECOMMENDATIONS BY DER OR HRS REVIEWER

( ) SATISFACTORY
( ) UNSATISFACTORY
(X) RE-SUBMIT

NAME AND MAILING ADDRESS OF PERSON/FIRM TO RECEIVE REPORT

Wm. F. Bishop, P.E.
c/o Bishop and assoc.
78 Sarasota Center Blvd.
Sarasota, Fla. 34240

REVIEWING OFFICIAL:

TITLE:

1/89 EE

SARASOTA

H.R.S.

SARASOTA COUNTY PUBLIC HEALTH UNIT
DRINKING WATER BACTERIOLOGICAL ANALYSIS

ID # 24025

REC'D

90 APR 10 PM 1:22

REPORTED BY
JUDY P. DRAKE

SYSTEM NAME: Manatee Co. (Longboat Key) SYSTEM I.D.#: 6581098 DER DISTRICT: VI

ADDRESS: 4501 66th AVE W. Bradenton COUNTY: Sarasota COLLECTOR: B. King

SAMPLE SITE (Locality or Subdivision): Sable Cove

RAW OR TREATED: _____ DATE AND TIME COLLECTED: 4-10-90 11:00

TYPE OF SUPPLY (Circle One): Community Public Water Non-Community Public Water Other Public

Private Well Swimming Pool Bottled Water

TYPE OF SAMPLE (Circle One): Compliance Recheck Main Clearance Well Survey Other _____

REMARKS: 2 of 2 Complete

The consulting engineer must certify to completion of construction in accordance with the approved plans together with copies of satisfactory bacteriological analyses and a letter of clearance must be obtained from the Department of Environmental Regulations before placing these facilities in service. BK

WD 1098-89-004

TO BE COMPLETED BY COLLECTOR OF SAMPLE				TO BE COMPLETED BY LAB				
Coll. No.	Sample Point	Cl Res'd	pH	Sample Number	Non Coliform (303)	Coliform MF/100 ML(303) Total	Coliform MF/100 ML(303) Fecal	MFN 100ML (305)
1	Lot #3	3.5		2149		-1		
2	Lot #32	3.5		2150	m	-1		
3	Lot #10	3.5		2151		-1		
4	Lot #29	3.5		2152		-1		
5	Lot #25	3.5		2153		-1		

INTERPRETATIONS/RECOMMENDATIONS BY DER OR HRS REVIEWER

( ) SATISFACTORY
( ) UNSATISFACTORY
(Y) RE-SUBMIT

BACTERIOLOGICALLY SATISFACTORY AT THE TIME OF SAMPLING.

NAME AND MAILING ADDRESS OF PERSON/FIRM TO RECEIVE REPORT

Wm. F. Bishop, P.E.
c/o Bishop & Assoc.
78 Sarasota Center Blvd.
Sarasota, Fla. 34240

REVIEWING OFFICIAL: _____

TITLE: _____

1/89 EE

BISHOP & ASSOCIATES

MEMORANDUM

TO: JOHN HUFFER - ARVIDA
DENNIS CHAPMAN -
CHAPMAN CONSTRUCTION
TONY MIONE- TOWN OF LBK

FROM: FRANK I. COUGHENOUR

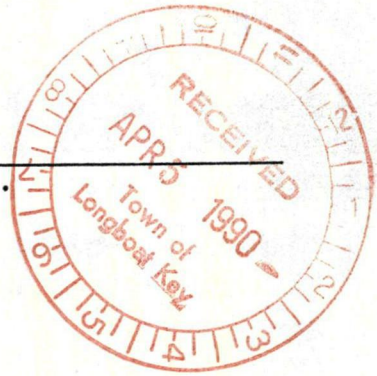
RE: ARVD-0481 -
SABAL COVE SUBDIVISION

DATE: APRIL 4, 1990

A final walk through was conducted the morning of April 4, 1990 at Sabal Cove Subdivision with the above noted individuals in attendance along with myself, and Chris Dohme of Bishop & Associates. The following items were noted to be deficient and in need of repair prior to acceptance:

1. Paint curb inlet steel faces.
2. Provide a concrete valve pad for the water main valve located due west of inlet box S-12.
3. The underside of the top slab of Sanitary Manhole #13 needs touch up painting.
4. Gaps between the concrete curb and sidewalk ramp at the west side of the northwest cul-de-sac need to be cleaned out and filled with grout.
5. Repair a small pavement flaw in the northeast cul-de-sac.
6. Paint steel adjustable rim on Manhole #1 at the north entrance with bitumastic.
7. Successful bacteriological tests are required.

Frank I. Coughenour, P.E.



cc: Len Smally, Town of Longboat Key

(mt#52)

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors

PRINCIPALS
William F. Bishop, P.E.
Alex S. Esber, P.L.S.
William B. Houghton, P.E.
Clyde L. Johnson, P.E.
Azad R. Shah, P.E.
David M. Wachtel, P.E.
Glen L. Stickler

ASSOCIATE
Dennis R. Hoover, P.L.S.

March 29, 1990

Town of Longboat Key
501 Bay Isles Road
Longboat Key, Florida 34228

Attention: Mr. Len Smally, P.E.

Re: Sabal Cove Subdivision

Dear Mr. Smally:

Please note that our office takes no exception to the use of precast valve box pads in lieu of cast-in-place pads, as long as the dimensions are as shown on our approved plans. If you have any questions, please feel free to call.

Sincerely,

Frank I. Coughenour

Frank I. Coughenour, P.E.

FIC/ml (LT-M29, #12) ARVD-0481

cc: John Huffer, Arvida Contractors



78 SARASOTA CENTER BLVD. • SARASOTA, FLORIDA 34240
813/371-6362 • FAX 813/378-3215

Sabal Cove FA'l - NO. OBJ
Priv. Road

CHAPMAN CONTRACTING COMPANY
1910 ORIENT ROAD / TAMPA, FLORIDA 33619 / (813) 621-2467

RECEIVED
FEB 1 1990
Town of Longboat Key

January 31, 1990

Mr. Frank Coughenour
c/o Bishop & Associates
78 Sarasota Center Blvd.,
Sarasota, Fl 34240

RE: Sabal Cove

Dear Mr. Coughenour:

We are requesting to install a 9" shell base as an alternate to the 6" shell base with 6" stabilized subgrade at the 2 entrance intersections and 2 turnouts on Harbourside Drive.

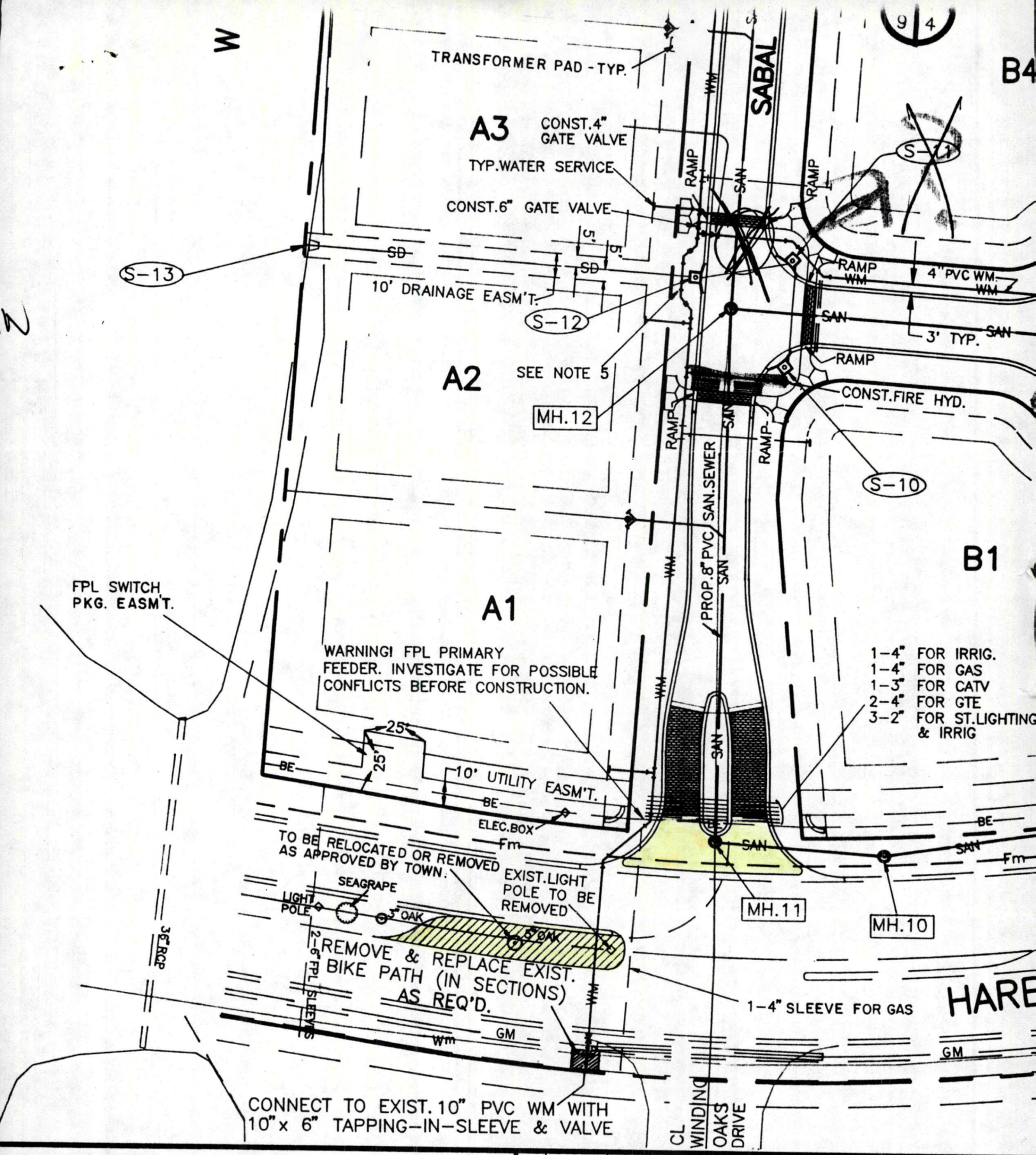
I have enclosed a highlighted area on the attached sheet in the areas in which we would like to go with the deeper base.

Sincerely,

JAMES R. WITHERINGTON
Vice President

JRW:cst

cc: Town of Longboat Key



& ASSOCIATES
Engineers • Surveyors
R BLVD. SARASOTA, FLORIDA 34240
x 813/378-3215

REVISED	BY	DATE	DESCRIPTION

TOWN OF LONGBOAT KEY FLORIDA

INCORPORATED NOVEMBER 14, 1955

501 Bay Isles Road
Longboat Key, Florida 33548
(813) 383-3721

January 5, 1990

CHAPMAN CONTRACTING

Re: SABAL COVE - WELL POINT PUMP

Dear Sirs:

This letter is your authorization from the Town of Longboat Key to run a well point pump at SABAL COVE from 5:00 P. M. on Friday, January 5, 1990 through 8:00 A. M. on Friday, January 12, 1990, contingent upon the following:

1. A dirt berm with haybales and plywood shall be used to keep noise at an absolute minimum. Pump must be baffled.

2. This permit does not take effect until the Town's inspector has accepted the above noise reduction techniques.

Very truly yours,

Leonard A. Smally
Director of Public Works

/cmm
cc: Police Dept.

SABAL - ENF

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors

PRINCIPALS
William F. Bishop, P.E.
Alex S. Esber, P.L.S.
William B. Houghton, P.E.
Clyde L. Johnson, P.E.
Azad R. Shah, P.E.
David M. Wachtel, P.E.
Glen L. Stickler

ASSOCIATE
Dennis R. Hoover, P.L.S.

December 18, 1989

Chapman Contracting
1910 Orient Road
Tampa, Florida 33619

Attention: Mr. James Witherington, Vice President

RE: Sabal Cove

Dear Mr. Witherington:

It has come to our attention, via a site observation, that the curb inlets and junction boxes at Sabal Cove are being constructed of brick, instead of concrete block, on a prepoured concrete slab without the installation of #4 rebar. This type of construction is not specified in the construction plans, and did not receive approval by this office.

We insist that you cease any further construction of these inlets, and formally request a change to this type of construction, complete with shop drawings. This material is necessary for office to analyze this type of construction and make a determination of acceptance or rejection.

Please contact our office as soon as possible regarding the above matter, so future construction will not be excessively delayed.

Sincerely,

David M. Wachtel, P.E.

SHR/mt(#50)

cc: John Huffer
Russ Luce
Herman Tom
Len Smally
William Bishop

ARVD-0478

RECEIVED
DEC 20 1989
Town of
Longboat Key

78 SARASOTA CENTER BLVD. • SARASOTA, FLORIDA 34240
813/371-6362 • FAX 813/378-3215

State of Florida
Department of Environmental Regulation

Request for Letter of Release to Place Water Supply System into Service

I. General Information

Name of Project: Sabal Cove Subdivision

Permit No. WD1098-89-004 Date of Issuance _____

[X] System completed to the full extent of the approved plans

[ ] Partially completed to the extent noted herein

_____

_____

II. Engineer's Certification

This is to certify that the project has been substantially completed in accordance with approved plans and specifications, or that the deviations noted on the attached record drawings will not prevent the system from functioning in compliance with requirements of Chapter 17-555, Florida Administrative Code (F.A.C.), when properly operated and maintained. Further, the system has passed the pressure* and bacteriological tests that were conducted in accordance with AWWA Standards.

This certification is based upon on-site observation of construction, scheduled and conducted by me or by a project representative under my direct supervision.

David M. Wachtel, P.E. #35444

Seal

David M Wachtel 4/12/90
Signature Date

Bishop & Associates, 78 Sarasota Center Blvd.
Name and Address Sarasota, FL 342

(813) 371-6362
Telephone No.

III. Acceptance by Utility*

The subject system has been accepted for operation and maintenance.

_____
Signature Date

Len Smally, P.E. Town Engineer
Name and Title

Town of Longboat Key
Longboat Key, Florida 34228
(813) 383-3721

*In case of water distribution system or water main extention

Instructions

The following supporting material must be submitted with this form:

1. One (1) set of record drawings; in case of water distribution system or water main, the sample points must be indicated.

2. Results of the bacteriological tests -

   Please note that satisfactory bacteriological results for clearance for all parts of a community or non-community water supply facility except wells shall be two (2) consecutive daily samples with results of less than one (1) coliform per 100 milliliters of sample. For a community or non-community water supply system well clearance, a minimum of twenty (20) consecutive samples are required with no more than two (2) samples taken daily. Well sample results shall not exceed four (4) coliform per 100 milliliters of sample in more than ten percent (10%) of the samples analyzed. Sample results from any community or non-community water supply facility shall not be accepted on any analysis with TNTC or heavy non-coliform counts.

3. In case of well construction, a "Well Completion Report" must be submitted by the well driller.

This request must be accompanied by certification of completion of the sewerage system (if applicable).

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT
BRANCH OFFICE

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAH
GOVERN

VICTORIA J. TSCHINK
SECRETA

DOMESTIC WASTEWATER COLLECTION/TRANSMISSION SYSTEMS CERTIFICATION OF COMPLETION OF CONSTRUCTION

Construction Permit No.: CS4 41-166 (89) Dated: December 1, 1989

Name of Project: Sabal Cove Subdivision

Name of Owner: Arvida/JMB Parnters, Inc.

Name of design engineer and Florida registration number (if different from engineer signing certification): William F. Bishop, P.E. #8189

Name of treatment plant to receive wastewater: Manatee County Southwest Regional

Date(s) of connection to existing system or treatment plant:

1/9/1990

Substantial deviations from the approved plans and specifications (attach additional sheets if required):

A. Applicant or Operation and Maintenance Authority (if different from Applicant)

I agree to operate and maintain the facilities in accordance with the provisions of Chapter 403, Florida Statutes, and applicable rules of the department. I attest that appropriate [illegible] and record drawings for the system are available and located at:

Town of Longboat Key Public Works Dept.

Signed: _____ Date: _____

Name and Title (Please Type): Mr. Len Smally, P.E. Town Engineer

Company Name: Town of Longboat Key

Address: 501 Bay Isles Road

Longboat Key, Florida 34228

Telephone No.: (813) 383-3721

B. Professional Engineer Registered In Florida (where required by Chapter 471, F.S. as to Wastewater Facility

I certify that the project has been completed substantially in accordance with the approved plans and specifications, or that deviations will not prevent the system from functioning in compliance with the requirements of F.A.C. Rule 17-6, when properly operated and maintained. These determinations have been based upon on-site observation of construction, scheduled and conducted by me or by a project representative under my direct supervision, for the purpose of determining if the work proceeded in compliance with plans and specifications. I further certify that record drawings for the facilities have been reviewed by me or by individual(s) under my direct supervision, for completeness and adequacy, and have been provided to the permittee. I further certify that the record drawings identify those substantial deviations noted above.

David Wachtel 4/12/90

Signature of Engineer

David M. Wachtel P.E. #35444

Name (Please type) Florida Registration No.

Bishop & Associates

Company Name

78 Sarasota Center Boulevard

Company Address

Sarasota, Florida 34240

Date: _____ Telephone No. (813) 371-6362

(Affix Seal)

Note: Wastewater Collection System under this project is composed entirely of gravity collection lines. No operation and Maintenance Manuals are required.

(See Note Page 2 of 3)

C. Professional Engineer Registered in Florida (where required by Chapter 471, F.S. as to Operation and Maintenance Manual

This is to certify that the operation and maintenance manual for these wastewat facilities has been prepared or examined by me, or by individual(s) under my dire supervision, and that there is reasonable assurance, in my professional judgement that the facilities, when properly maintained and operated in accordance with thi manual, will function as intended.

Signature of Engineer

Name (Please type) Florida Registration No.

Company Name

Company Address

(Affix Seal)

Date: _____ Telephone No. _____

D. Operation and Maintenance Authority Approving Connections

I certify that connection(s) to the wastewater facility which we operate and maintain have been completed to our satisfaction.

Signed: _____ Date: _____

Name and Title (please type): Mr. Len Smally, P.E., Town Engineer

Company Name: Town of Longboat Key

Address: 501 Bay Isles Road

Longboat Key, Florida 34228

TOWN OF LONGBOAT KEY

90055437

Copy Lenny

6.85

EASEMENT (SEWER)

THIS INDENTURE, made this 16th day of April A. D., 1990, by and between ARVIDA/JMB PARTNERS, INC. of the County of SARASOTA and State of FLORIDA herein referred to as Grantor, whether one or more, and TOWN OF LONGBOAT KEY, a municipal corporation of the State of Florida, herein referred to as Grantee,

WITNESSES, that the said Grantor for and inconsideration of the sum of ONE DOLLAR ($1.00) and other good and valuable consideration by Grantee to Grantor duly paid, the receipt whereof is hereby acknowledged has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell and convey to Grantee and its successors and assign forever, a perpetual easement over and across the following described land, situate in SARASOTA County, Florida, to wit:

Tract "A", as shown on Sabal Cove Subdivision Plat, Recorded in Plat Book 33, Pages 48 through 48C, Public Records of Sarasota County, Florida.

** OFFICIAL RECORDS **
BOOK 2213 PAGE 1522

RECORDER'S MEMO: Legibility of writing, typing or printing for reproductive purpose may be unsatisfactory in this document when received.

TRANS NUM:00028291
DOC STAMPS PD: $.55
INTANG. TAX PD: $.00
KAREN E RUSHING SARASOTA CO.
BY: [signature] D.C.

RECORDED IN OFFICIAL RECORDS
RECORDED
MAY 23 [illegible] PM '90
KAREN E. RUSHING
CLERK OF CIRCUIT COURT
SARASOTA COUNTY, FL.

Town of Longboat Key
501 Bay Isles Rd.
Longboat Key 34225

IN WITNESS WHEREOF, each person named as Grantor herein has hereunto set his or her hand and seal the day and year first above written

Executed in our Presence as Witnesses

Joyce A Cabrera

Robert Wilhelm (L.S.)

(L.S.)

(L.S.)

(L.S.)

(GRANTOR(S)

STATE OF FLORIDA
COUNTY OF SARASOTA

I HEREBY CERTIFY, that on this day personally appeared before me, an officer duly authorized to administer oaths and take acknowledgments Mr. Robert Wilhelm to me well known and known to me to be the individuals described in, and who executed the foregoing easement deed, and they acknowledged before me that they executed the same freely and voluntarily for the purposes therein expressed.

WITNESS my hand and official seal at 595 Bay Isles Road County of Sarasota, and State of Florida this 16th day of April, A. D., ~~1978~~ 1990.

My commission Expires:

Notary Public, State of Florida
My Commission Expires April 6, 1994
Bonded Thru Troy Fain - Insurance Inc.

Fay L. Sewell
Notary Public

Prepared By: Arvida/JMB Partners
595 Bay Isles Parkway
Longboat Key, FL 34228

TOWN OF LONGBOAT KEY FLORIDA

INCORPORATED NOVEMBER 14, 1955

501 Bay Isles Road
Longboat Key, Florida 33548
(813) 383-3721

December 5, 1989

Chapman Contractors

Re: SABAL COVE

Dear Sirs:

This letter is your authorization from the Town of Longboat Key to run a well point pump at SABAL COVE, from 5:00 P. M. on Wednesday, December 6, 1989 through Wednesday, December 13, 1989 at 8:00 A. M., contingent upon the following:

1. A dirt berm with haybales and plywood shall be used to keep noise at an absojute minimum. Pump must be baffled.

2. This permit does not take effect until the Town's inspector has accepted the above noise reduction techniques.

Very truly yours,

Leonard A. Smally
Director of Public Works

/cmm
cc: Police Dept.

U.S. FOUNDRY & MANUFACTURING CORP.

8351 N.W. (DEBOGORY DRIVE) 93rd ... MEDLEY, FLORIDA 33166 • PHONE (305) 885-0301

CABLE: "FOUNDRYMAN"
FAX: 305-884-3253

FLORIDA WATS: 1-800-432-9709
NATIONAL WATS: 1-800-327-6742

MUNICIPAL AND STATE ROAD DEPARTMENT CASTING
FERROUS AND NON-FERROUS CASTINGS
METAL FABRICATIONS

DRAINAGE AND INDUSTRIAL GRATINGS
PRECAST PRODUCTS
FIRE HYDRANTS
COMPLETE MACHINE SHOP

ALEX DEBOGORY, JR.
PRESIDENT

JOHN P. DEBOGORY
VICE PRESIDENT

November 21, 1989

352
5173

Chapman Contracting
1910 Orient Road
Tampa, Florida 33619
Attn: James Worthington

Re: USF# 2408 URS Waste water Ring & Cover
USF# 1706 Storm Ring & Cover
USF# 7621FE Ring & Cover (5)
USF# 7610FC Ring & Cover (3)

Job: Sabal Cove

To Whom It May Concern:

This letter is to certify that the U.S. Foundry & Manufacturing Corporation casting named abovee meet the requirements for traffic loading set forth in Federal Specification RR-F-621D in that it can hold 25,000 lbs. distributed over a 9" X 9" area for one minute without failure. The casting material is gray cast iron to Specification ASTM-A48 Class 30B.

In the event you need some information please do not hesitate to call us at 1-800-432-9709.

Respectfully,

Edward C. Stannard

Edward C. Stannard
Product Engineer

I Certify the above to be a true statement.

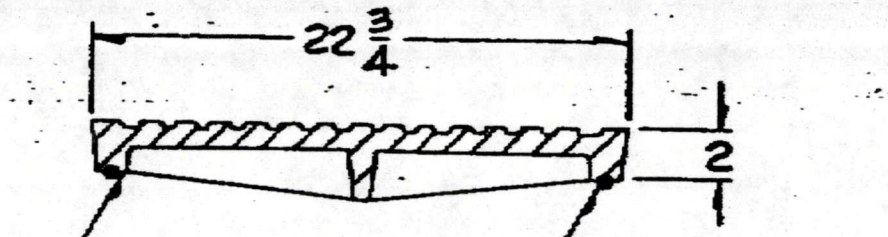
Sworn to and subscribed before me this 22 day of NOV. 19 89.

My Commission Expires:

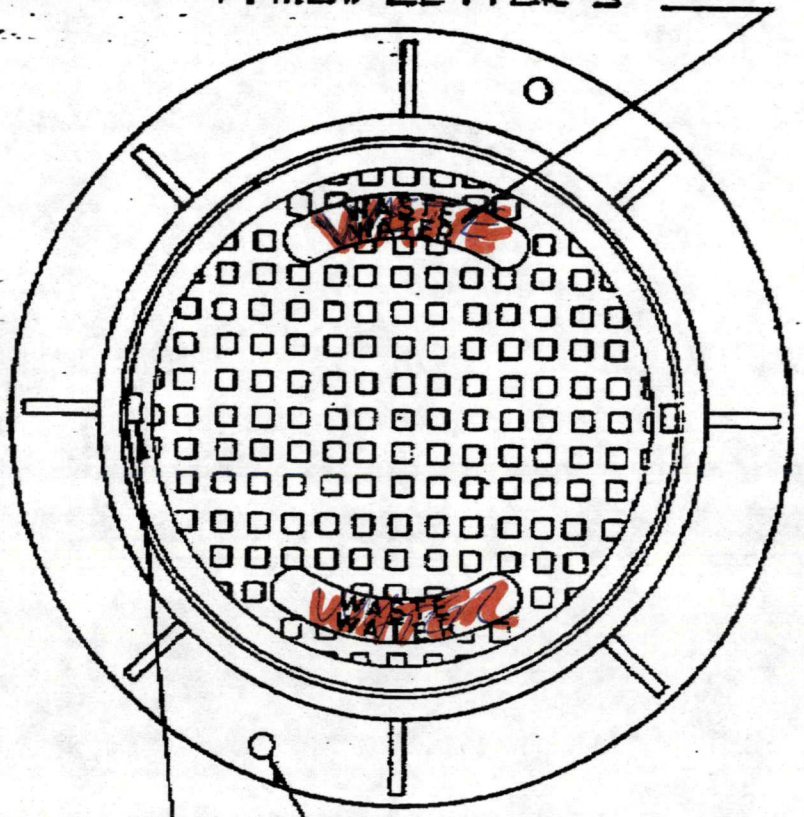
NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. JUNE 26, 1993
BONDED THRU GENERAL INS. UND.

Adria M. Buckner
NOTARY PUBLIC

RECEIVED
NOV 28 1989
Town of Longboat Key

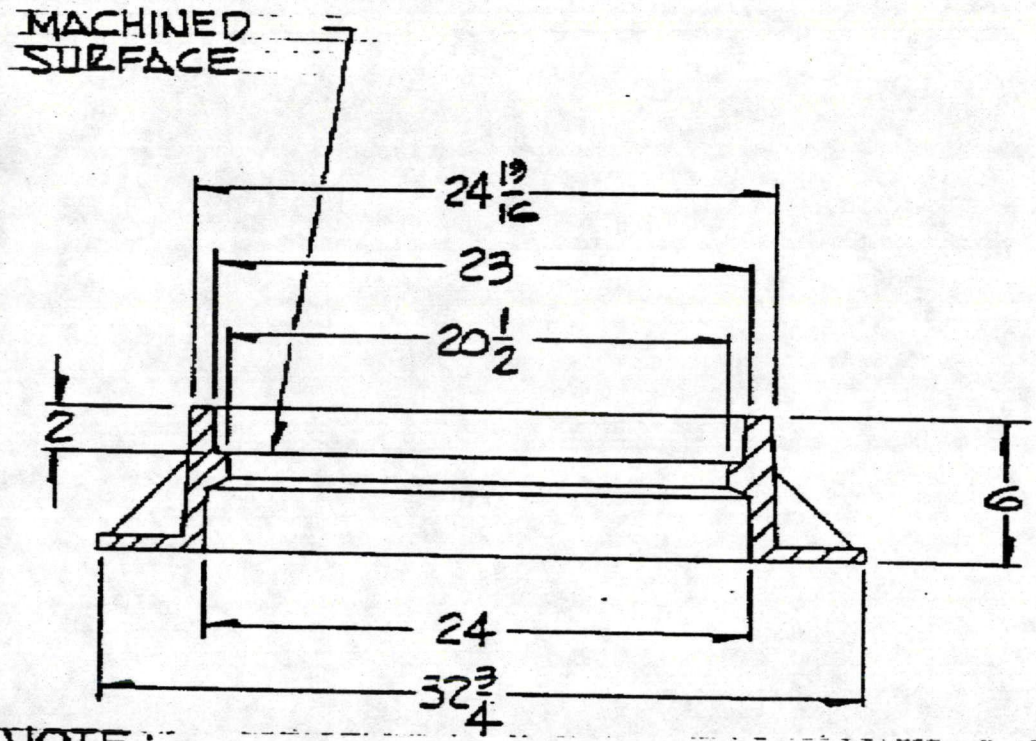


COVER



2 NON PENETRATING PICKHOLES SEE DWG. Nº 1005-1

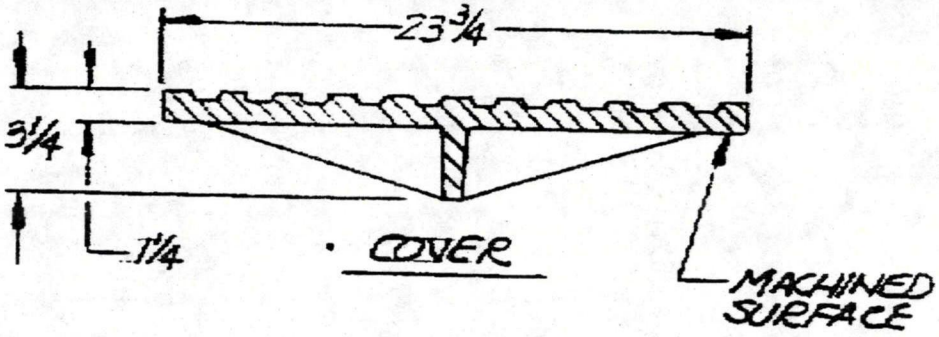
COVER WT: 130 LBS. APP.
FRAME WT: 195 LBS. APP.

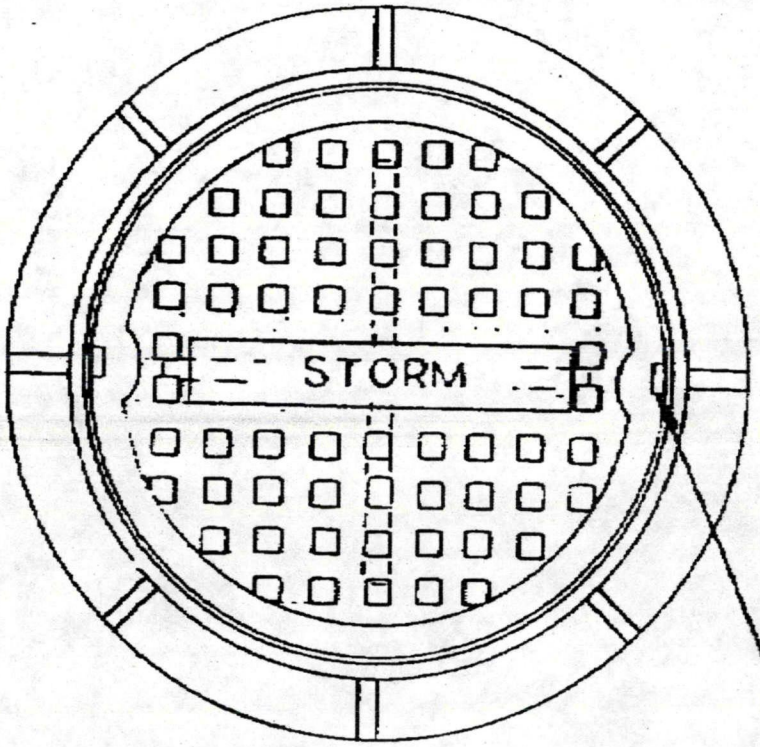


NOTE:

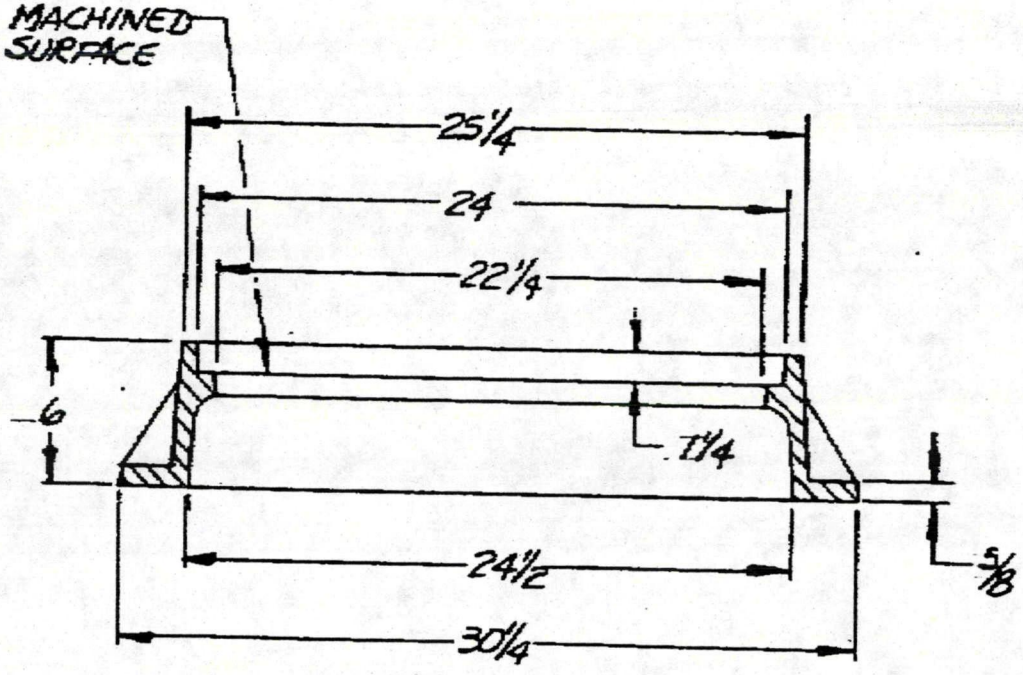
MATERIAL: CAST IRON, ONE COAT OF ASPHALTIC PAINT.

U. S. FOUNDRY & MFG. CORP. MIAMI - FLA.	
USF 240 RING & COVER (B) "ORS"	
DWN. BY: J. M.	DATE: 6-4-87
CHK. BY: MAC	DWG. NO: A-1814





2-NON PENETRATING PICKHOLES. SEE DWG. No: 1005-1

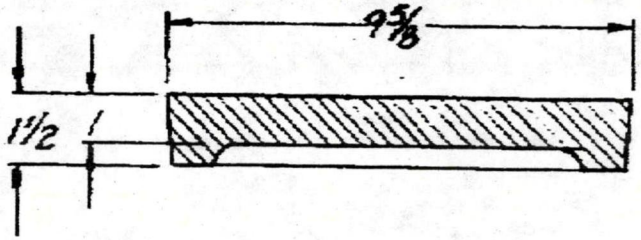


FRAME

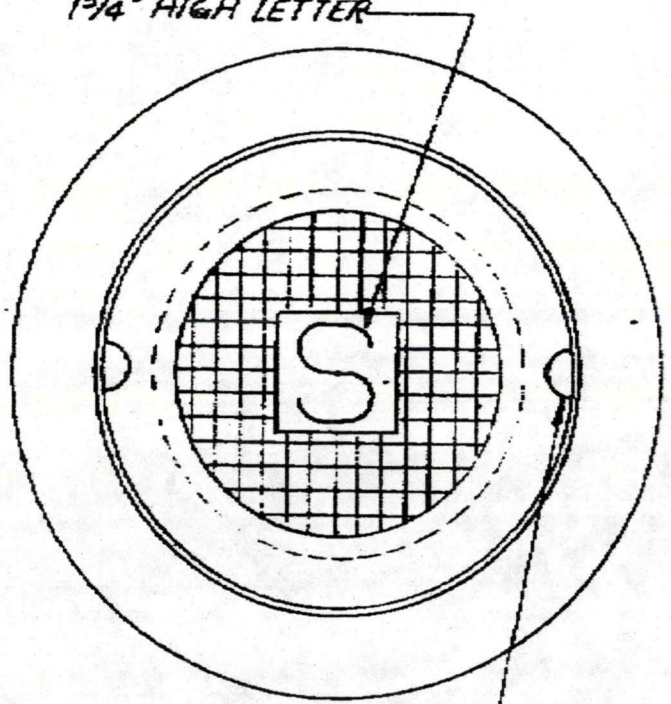
NOTE:
MATERIAL: CAST IRON: ONE COAT OF ASPHALTIC PAINT.

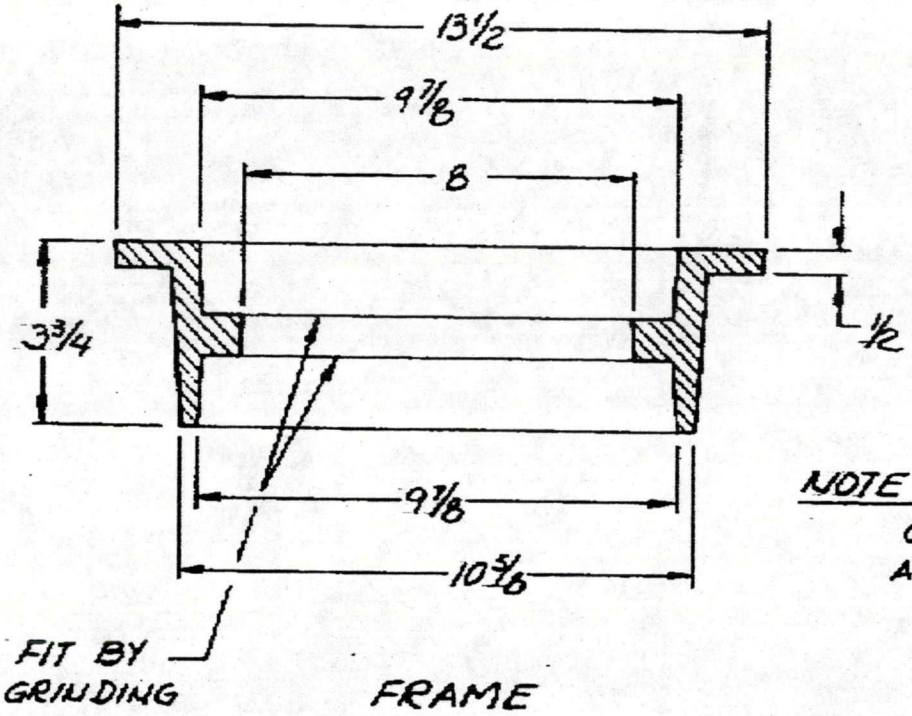
FRAME WT: 155 LBS. APP.
COVER WT: 130 LBS. APP.

U. S. FOUNDRY & MFG. CORP. MIAMI - FLA.	
USF TORING & E COVER	
DWN. BY: E.W.	DATE: 3-2-82
CHK. BY: O.D.	DWG. No: A-353



COVER



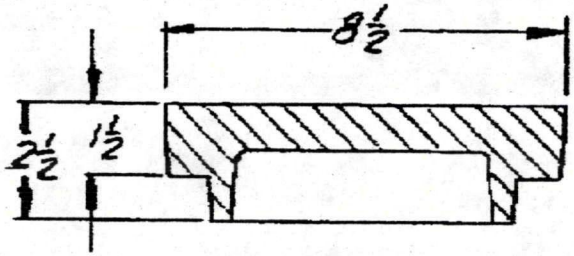


FRAME

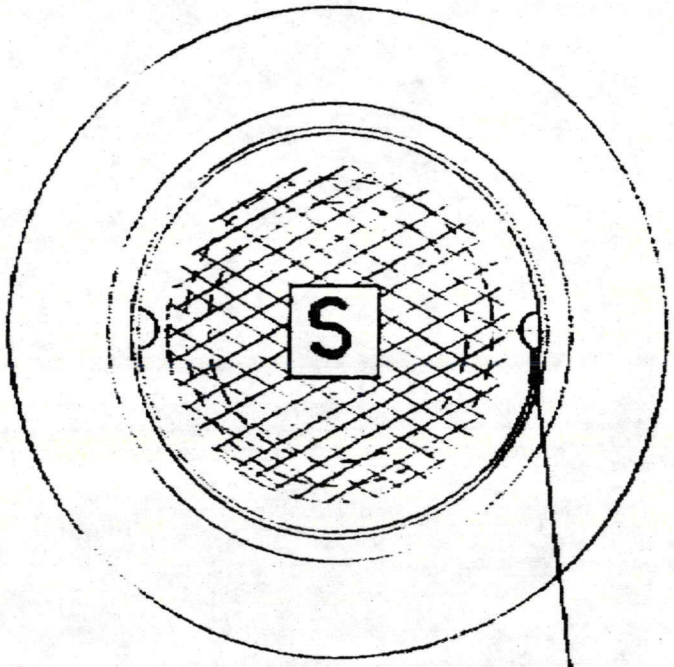
NOTE:
ONE COAT OF ASPHALTIC PAINT.

FRAME WT: 25 LBS. APP
COVER WT: 20 LBS. APP

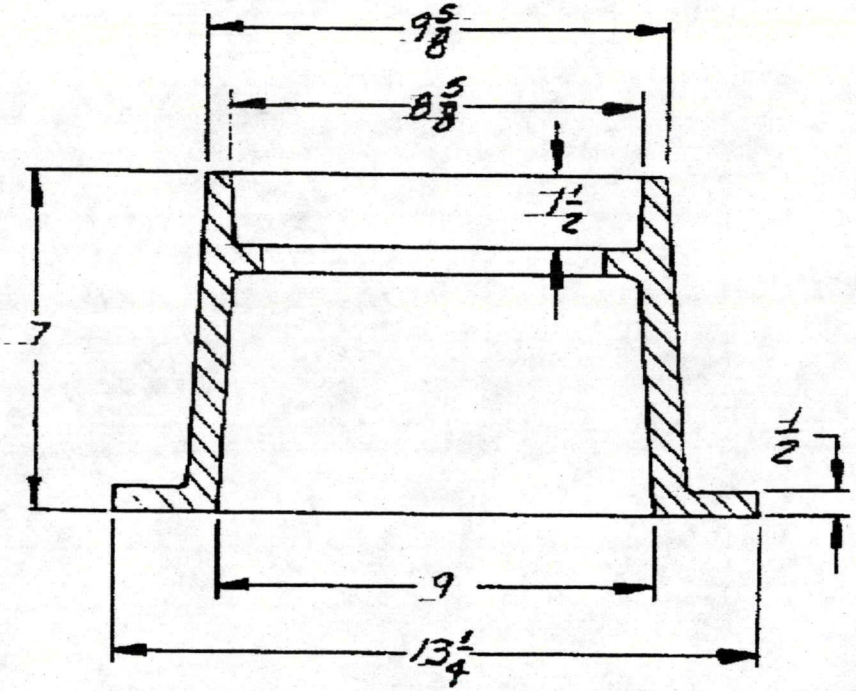
U.S. FOUNDRY & MFG. CORP. MIAMI - FLA	
USF 7621 RING & FE COVER	
DWN. BY: M.R.	DATE. 2-28-80
CHK. BY: ECS	DWG. NO: A240



COVER



2-PENETRATING PICKHOLES. SEE DWG. No. 1005-4



RING

RING WT.: 40 LBS. APP.
COVER WT.: 25 LBS. APP.

NOTE:
MATERIAL: CAST IRON: ONE COAT OF ASPHALTIC PAINT

U. S. FOUNDRY & MFG. CORP. MIAMI - FLA.	
USF 7610 RING AND FC COVER	
DWN. BY: M.R.	DATE: 8-5-82
CHK. BY: E.C.S.	DWG. NO: A882

U.S. FOUNDRY & MANUFACTURING CORP.

8351 N.W. (DEBOGORY DRIVE) 93rd [illegible] MEDLEY, FLORIDA 33166 • PHONE (305) 885-0301

CABLE: "FOUNDRYMAN"
FAX: 305-884-3253

FLORIDA WATS: 1-800-432-9709
NATIONAL WATS: 1-800-327-6742

MUNICIPAL AND STATE ROAD DEPARTMENT CASTING
FERROUS AND NON-FERROUS CASTINGS
METAL FABRICATIONS

DRAINAGE AND INDUSTRIAL GRATINGS
PRECAST PRODUCTS
FIRE HYDRANTS
COMPLETE MACHINE SHOP

ALEX DEBOGORY, JR.
PRESIDENT

JOHN P. DEBOGORY
VICE PRESIDENT

November 21,1989

Corpman Contracting
2910 Orient Road
Tampa, Florida 33619
Attn: James Worthington

RE: USF# 1255AJ Ring & Cover

[illegible]: Sabal Cove

To Whom It May Concern:

This letter is to certify that the U. S. Foundry & Manufacturing Corporation castings named above meets the requirements for non-traffic loading set forth in Federal Specifications RRF-6215 in that it can hold 1,000 lbs. minimum load distributed over a 9" X 9" area for one minute without failure. The castings material is gray cast iron to Specification ASTM-A48 Class 30B.

If we can be of any further assistance please contact our office at 1-800-432-9709.

Respectfully Yours,

U. S. Foundry & Manufacturing Corporation.

Edward C. Stannard

Edward C. Stannard
Engineer

I Certify the above to be a true statement.

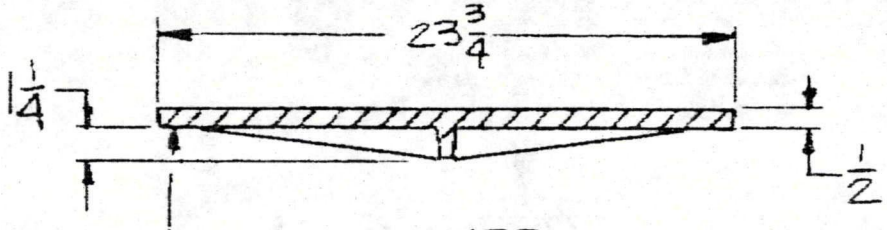
Sworn to and subscribed before me this 22 day of NOV 19 89

My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP.JUNE 26,1993
BONDED THRU GENERAL INS. UND.

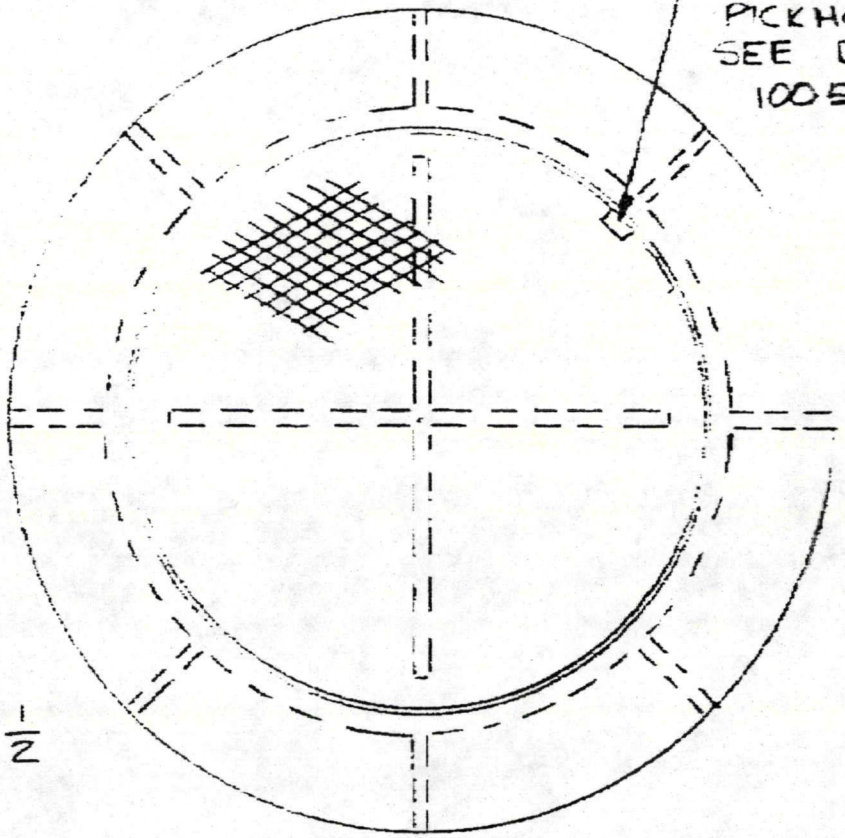
Adria M. Buckner
NOTARY PUBLIC

ESTABLISHED 1916

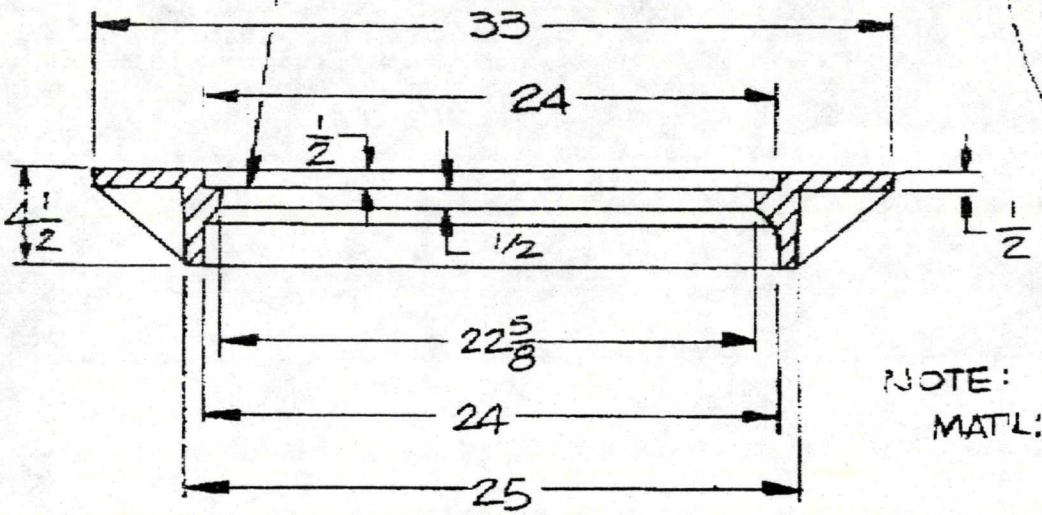


COVER

MACHINED SURFACE



MACHINED SURFACE



FRAME

NOTE:
MAT'L: CAST IRON: ONE COAT OF ASPHALTIC PAINT.

FRAME WT: 120 LBS APP
COVER WT: 55 LBS APP

U. S. FOUNDRY & MFG. CORP. MIAMI - FLA.	
USF 1255 RING / AJ COVER	
DWN. BY: MJH	DATE: 4-28-82
CHK. BY: ECS	DWG. NO: A821

FLORIDA MINING & MATERIALS
P. O. BOX 31965, TAMPA, FLORIDA 33631-3965, PHONE:(813)933-6711

LETTER OF CERTIFICATION

RECEIVED
DEC 5 1989
Town of
Longboat Key

August 28, 1989

Florida Mining & Materials
d/b/a Tampa Bay District
P.O. Box 152137
Tampa, Florida 33684

Florida Mining & Materials hereby certifies that fly ash to be used in ready-mixed concrete as supplied for the above referenced project, meets ASTM specification C-618, Class F.

FLORIDA MINING & MATERIALS

BY: John P. Roebuck

John P. Roebuck, Vice President

Sworn to and subscribed before me
this 28th day of August 1989.

Patricia D. Bass

Notary Public, State of Florida

My Commission Expires:

Notary Public, State of Florida
My Commission Expires Dec. 12, 1992

GRACE

Construction Products Division

W.R. Grace & Co.
1200 N.W. 15th Avenue
Pompano Beach, FL 33069

(305) 974-6700, 949-6889

August 23, 1989

Florida Mining & Materials
5517 W. Waters
Tampa, FL 33614

This is to certify that WRDA-79, supplied by the Construction Products Division, W.R. Grace & Co., is a water-reducing and retarding agent formulated to comply with the requirements for Specifications for Chemical Admixtures for Concrete, ASTM Designation: C-494 and as a Type A and Type D admixture.

WRDA-79 contains no calcium chloride.

The foregoing is in addition to and not in substitution for our standard Condition of Sale printed on the reverse side hereof.

LID:de

L. I. Daniels
Florida District Manager

STATE OF FLORIDA :
COUNTY OF BROWARD :

Sworn to and subscribed, before me, this 23rd day of August 1989.

Notary Public, State of Florida at Large

GRACE

Construction Products Division

W.R. Grace & Co.
1200 N.W. 15th Avenue
Pompano Beach, FL 33069

(305) 974-6700, 949-6889

August 23, 1989

Florida Mining & Materials
5517 W. Waters
Tampa, FL 33614

This is to certify that DAREX AEA, an air-entraining admixture supplied by the Construction Products Division, W.R. Grace & Co., is formulated to comply with Specifications for Air-Entraining Admixtures for Concrete, ASTM Designation: C-260.

DAREX AEA contains no calcium chloride.

The foregoing is in addition to and not in substitution for our standard Condition of Sale printed on the reverse side hereof.

LID:de

L. I. Daniels
Florida District Manager

STATE OF FLORIDA :
COUNTY OF BROWARD :

Sworn to and subscribed, before me, this 23rd day of August 1989.

FLORIDA MINING & MATERIALS
P. O. BOX 31965, TAMPA, FLORIDA 33631-3965, PHONE:(813)933-6711

LETTER OF CERTIFICATION

August 28, 1989

Florida Mining & Materials
d/b/a Tampa Bay District
P.O. Box 152137
Tampa, Florida 33684

Florida Mining & Materials hereby certifies that coarse aggregate for concrete shipped to you for use on the above referenced project meets ASTM Standard Specifications C-33 for coarse aggregate.

FLORIDA MINING & MATERIALS

BY: John P. Roebuck

John P. Roebuck, Jr., Vice President

Sworn to and subscribed before me
this 28th day of August 1989.

Patricia S. Bass
Notary Public, State of Florida

My Commission Expires:

Notary Public, State of Florida
My Commission Expires Dec. 12, 1992

FLORIDA MINING & MATERIALS
CONCRETE PRODUCTS
TAMPA DIVISION
P.O. BOX 152137, TAMPA,FL 33684, PHONE (813) 884-8447

November 21, 1989

Chapman Contracting
1910 Orient Road
Tampa, FL 33619

Re: Mix Design/Submittal Package for
Sabal Cove Subdivisions
Sarasota, Florida

LETTER OF TRANSMITTAL

Enclosed you will find the necessary documents for your review:

Mix Design
Mix 314 (3000 Curb)
Cement Certification
Flyash Certification
Rock Certification
Sand Certification
Admixture Certification

We thank you for allowing us to submit these documents for your clarification and submittal to all necessary parties.

If there should be any further questions, please do not hesitate to call.

Sincerely,

mark Dombkowski/dd

Mark Dombkowski
Sales Representative

MD/dd

Enclosures

RECEIVED
NOV 28 1989
Town of
Longboat Key



FLORIDA MINING & MATERIALS

CONCRETE PRODUCTS
TAMPA DIVISION
P.O.BOX 152137, TAMPA,FL 33684, PHONE (813) 884-8447

CONCRETE MIX DESIGN

CLIENT: Chapman Contracting

PROJECT: Sabal Cove Subdivision - Sarasota

DATE: 11/21/89 **MIX NO.** 314 **CLASS:** 3000 PSI **LOCATION:** CURB

SOURCES OF MATERIALS

CEMENT	Florida Mining & Materials	TYPE I	ASTM C150
FLYASH	Florida Flyash	TYPE F	ASTM C618
COARSE AGGREGATE (1)	Brooksville Rock	#57 @2.42	ASTM C33
COARSE AGGREGATE (2)		#	ASTM C33
FINE AGGREGATE (1)	Devane Silica	FM 2.10	ASTM C33
FINE AGGREGATE (2)		FM	ASTM C33
ADMIXTURE (1)	W.R. Grace WRDA 79	TYPE D	ASTM C494
ADMIXTURE (2)			
AIR ENTR. AGENT			ASTM C260

MATERIALS PER CUBIC YARD SATURATED SURFACE DRY AGGREGATES		ABSOLUTE VOLUMES	
CEMENT, LBS	350	1.78	CU. FT.
FLYASH, LBS	120	0.77	CU. FT.
COARSE AGGREGATE, LBS	1525	10.10	CU. FT.
COARSE AGGREGATE, LBS			CU. FT.
FINE AGGREGATE, LBS	1632	9.95	CU. FT.
FINE AGGREGATE, LBS			CU. FT.
ADMIXTURE, OZS	24		
ADMIXTURE, OZS			
AIR ENTR. AGENT, OZS		0.41	CU. FT.
WATER, GALLONS	31.0	4.14	CU. FT.
WATER, LBS	258		
		27.14	CU. FT.
		1.005	CU. YD.

TEST DATA

Slump Range....1....to...2....INCHES

Air Content.....3 ± 1.5.....%

Unit Weight(wet).....143.2.....PCF

Water/Cement+Flyash Ratio(#/#)..0.55

OUR CONCRETE STRENGTH GUARANTEE PER ASTM C94 WILL NOT BE EFFECTIVE UNLESS FIELD SAMPLING HAS BEEN DONE PER ASTM C172 AND C31 AND UNLESS LABORATORY TESTING FULLY COMPLIES WITH ASTM C39 AND ASTM E329.

Ray

HYDRO CONDUIT CORPORATION

1915 62nd Street
P.O. Box 5077
Tampa, Florida 33675
(813) 248-3253

RECEIVED
DEC 5 1989
Town of Longboat Key

CERTIFICATE OF COMPLIANCE

Date : November 1, 1989

Contractor : Chapman Contracting
Project : Sabal Cove
County : Hillsborough

State of Florida)

County of Hillsborough)

Before me, a Notary Public, personally appeared Gary D. Sawyer, the undersigned, who on oath states he is authorized to execute this affidavit in the name of Hydro Conduit Corporation.

This affiant hereby certifies that all concrete pipe shipped to the above project was manufactured in compliance with ASTM C-76 and ASTM C-507 specifications and will meet or exceed the Florida State Department of Transportation requirements for concrete pipe of the class indicated.

At Tampa, Florida:

This 1st day of November 19 89.

Plant Mgr.
Gary D. Sawyer, Plant Manager

Sworn and subscribed to before me
on this 1 day of Nov 19 89.

LaAnne Brooks
Notary Public

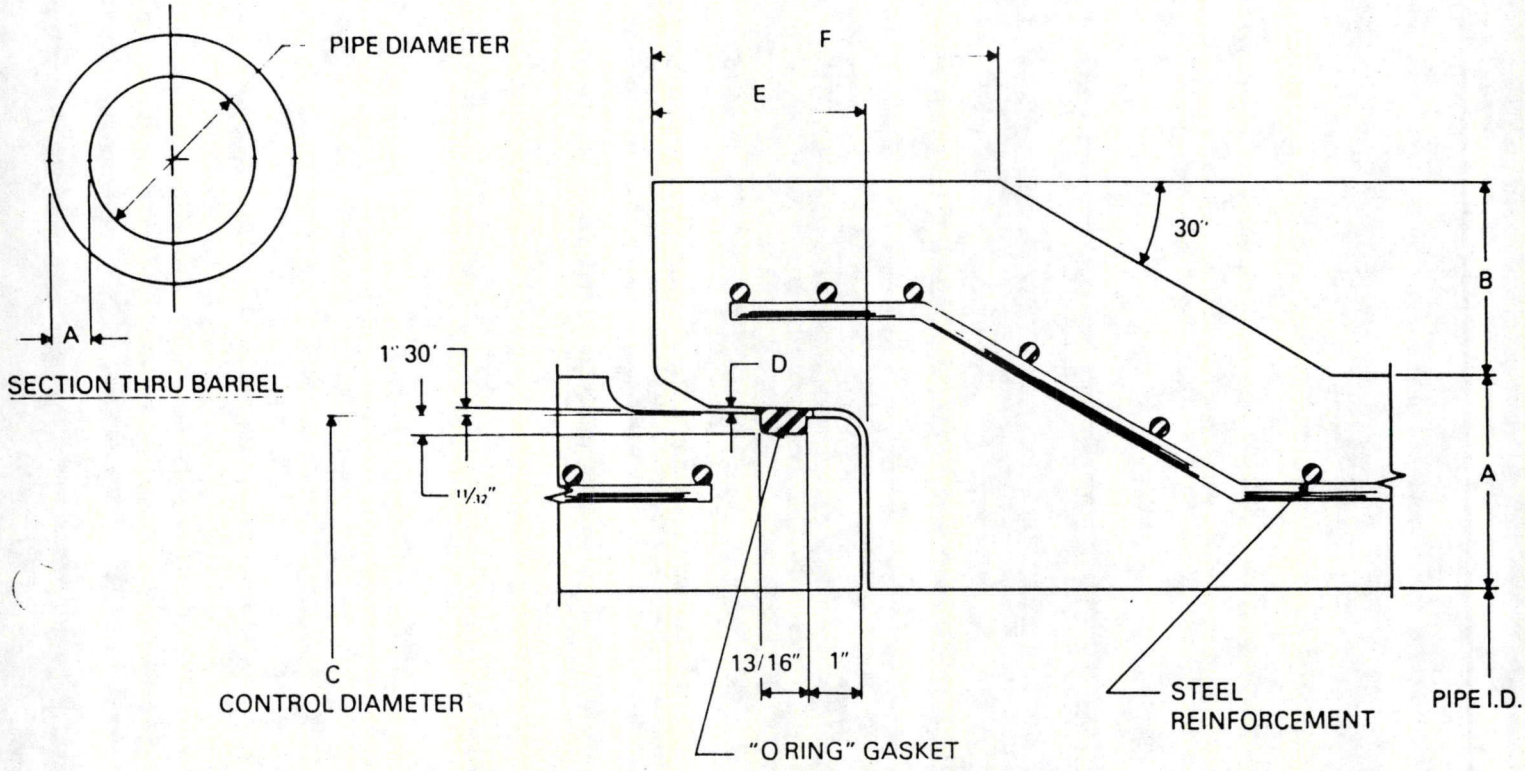
NOTARY PUBLIC, STATE OF FLORIDA
MY COMMISSION EXPIRES: JAN. 5, 1992
BONDED THRU NOTARY PUBLIC UNDERWRITERS

My Commission Expires

Distribution : Original to customer
Copy to S. O. file
Copy to Q. C. file

HYDRO CONDUIT CORPORATION

Packerhead "O" Ring Joint
12"–30" Diameter Pipe
B-Wall Design



SECTION THRU JOINT

Table of Approximate Dimensions and Weights								
Pipe Diameter	A	B	C	D	E	F	Weights (lbs/ft)	Length (ft)
12	2	2	15 13/16	1/16	3 3/8	5	93	8
15	2 1/4	2 1/4	18 11/16	1/16	3 3/8	5	127	8
18	2 1/2	2 1/2	22 1/2	1/16	3 3/8	5	168	8
21	2 3/4	2 5/8	25 21/32	1/16	3 1/8	6	227	8
24	3	2 3/4	29 1/32	1/16	3 1/8	6 1/2	264	8
30	3 1/2	3 1/8	35 7/8	1/16	4	7	384	8

All dimensions are inches unless otherwise noted.

NOTES:

1. Produced to A.S.T.M. Specification C-76 and Florida Department of Transportation.
2. This drawing is not intended to show reinforcement design—either as to placement or steel area. Actual project specification or A.S.T.M. C-76 will govern.
3. Consult Hydro Conduit Corp. for further details not listed on this drawing.

TAMPA
1915 62nd Street
P.O. Box 5077
Tampa, Florida 33675
(813) 248-3253

ER 105
Issued 3 84
41, 42, 44, 47

Jacksonville Engineering & Testing Co.

Post Office Box 20801, Orlando, Florida 32814

TELEPHONE 277-0284
AREA CODE 305

Order No: OL87-839
Report No: 745
Lab No: 2686
Date: 8-02-89

PROJECT: Hydro Conduit - Tampa Plant

REPORTED TO: Hydro Conduit
P.O. Box 5077
Tampa, FL 33675

REPORT OF: Observation of External Load Crushing Strength by the Three-Edge Bearing Method

On August 2 19 89, a representative of this office observed the testing of reinforced concrete pipe, externally loaded by the Three-Edge Bearing Method. Results are as follows:

CONCRETE PIPE

Test Method:	Three-Edge Bearing (ASTM C-497)
Cast Date:	June 21, 1989
Producer:	Hydro Conduit, Inc.
Class Pipe:	3 B
Internal Diameter:	15 Inches
Laying Length:	8 Feet
Wall Thickness:	2.25 Inches

Load to Produce First Crack:

Guage Reading Flbs.	Flbs/lin. ft.	D Load
20,000	2500	2000

Ultimate Strength

Guage Reading Flbs.	Flbs/lin. ft.	D Load

01 equal to minimum ultimate requirement

Machine:	Forney SN58179 Model PT-725
Calibration Date:	July 14, 1989
Calibrated By:	Mobile Calibration
Inspector:	B. Sleeth

Respectfully submitted,
JACKSONVILLE ENGINEERING & TESTING CO.

VICTOR G. COTE,
LAB MANAGER

RECEIVED
AUG - 7 1989

Jacksonville Engineering
& Testing Co.

TELEPHONE 277-0284
AREA CODE 305

Post Office Box 20801, Orlando, Florida 32814

PAUL H. SHEA, P.E.
MARTIN JONES, PRESIDENT
VICTOR G. COTE, LAB MGR.

ORDER NO: OL87-839
REPORT NO: 753
LAB NO: 2707

REPORT OF: Concrete Core Absorption and Compressive Strength

PROJECT: Hydro Conduit - Tampa Plant

REPORTED TO: Hydro Conduit
P.O. Box 5077
Tampa, FL 33675

DATE OF SAMPLED: August 2, 1989

DATE TESTED: August 4, 1989

As requested, Jacksonville Engineering and Testing Company tested Eight (8) concrete cores for the above referenced project. Listed below are the results of our test:

Sample #	Cast Date	Size of Core	% Absorption	Compressive Strength PSI	Average PSI
1	(15") 6-21-89	2.75 X 2.375	4.08	42500	5654
2	(15") 6-21-89	2.75 X 2.375	4.15	24225	
3	(18") 7-31-89	2.75 X 2.5	4.02	23800	3998
4	(18") 7-31-89	2.75 X 2.5	3.96	23375	
5	(24") 7-18-89	2.75 X 3.0	4.58	25200	4309
6	(24") 7-18-89	2.75 X 3.0	4.90	25650	
7	(30") 7-25-89	2.75 X 3.25	4.52	23970	4182
8	(30") 7-25-89	2.75 X 3.25	4.30	25380	

Inspected By:

Respectfully submitted,
JACKSONVILLE ENGINEERING & TESTING CO.

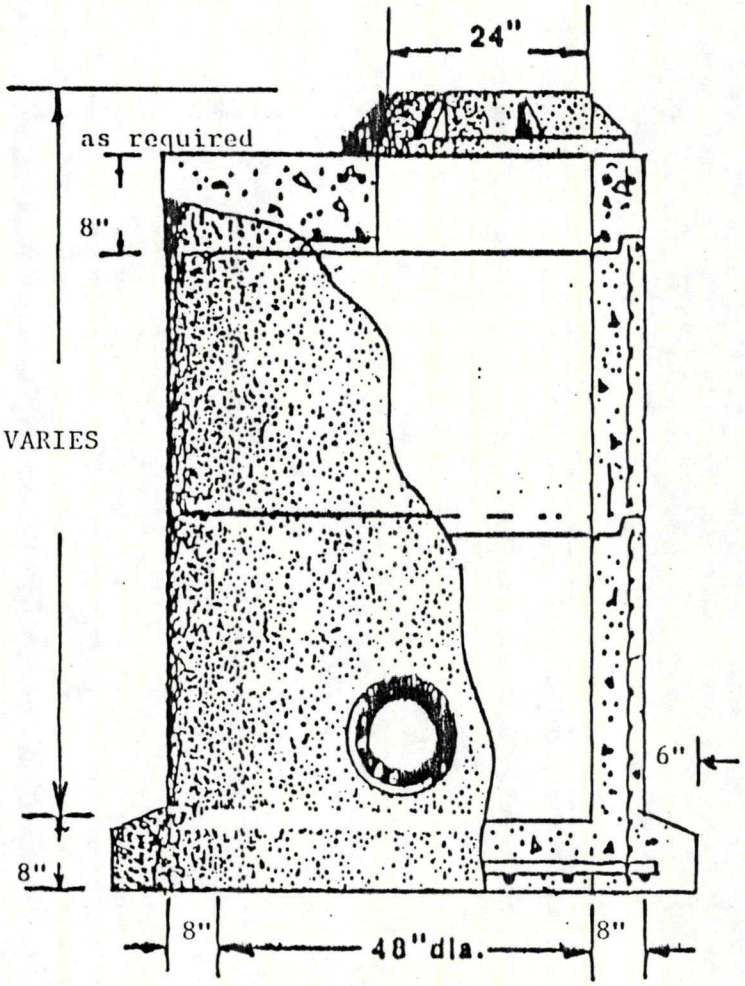
VICTOR G. COTE,
LAB MANAGER

RECEIVED
AUG 16 1989

COATED INTERIOR AND EXTERIOR
WITH COAL TAR EPOXY. EP-214
DFT 15 mls.



CAST IRON FRAME & COVER
BY CONTRACTOR
ADJUST TO GRADE AS REQUIRED.

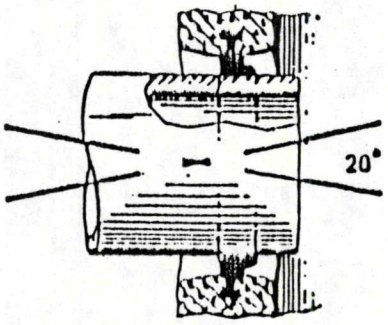


MANHOLE DESIGN
MANHOLE DESIGN SPECIFICATIONS CONFORMS TO: "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS A.S.T.M. DESIGNATION C478, LATEST REVISION."

MANHOLE JOINT
BUTYL RUBBER

REINFORCING A.S.T.M. A 185
AREA 0.12 IN^2/VERTICAL FOOT

CONCRETE COMPRESSIVE
STRENGTH 4000 P.S.I.



PIPE TO MANHOLE SEAL
A-LOK GASKET PER A.S.T.M. RUBBER GASKET SPECS. C923, CAST INTEGRALLY IN MANHOLE WALL AND LOCATED AS REQUIRED.

JOINT ALLOWS10° OMNIDIRECTIONAL DEFLECTION.

ATLANTIC CONCRETE PRODUCTS CO.
1701 Myrtle Street
P.O. Box 1042
Sarasota, Florida 33580
813-355-2988

SHALLOW MANHOLE DETAIL

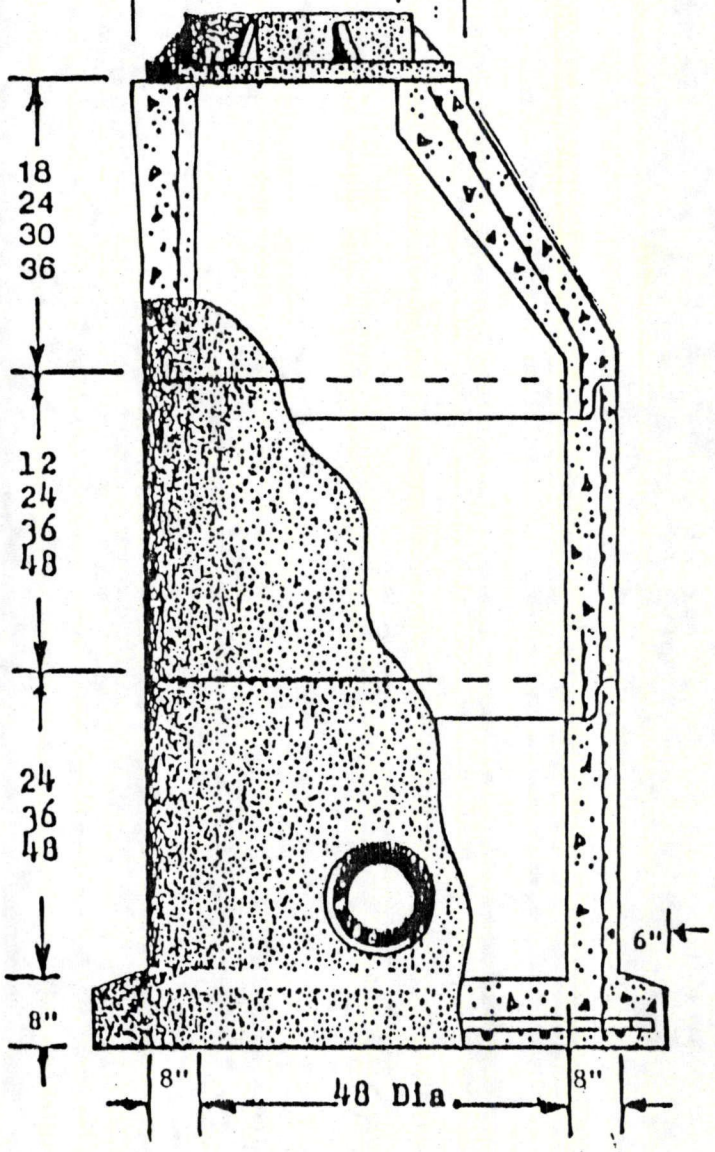
nts

9/83

CAST IRON FRAME & COVER
BY CONTRACTOR
ADJUST TO GRADE AS REQUIRED.

Coated interior and exterior with coal tar epoxy. EP-214 DFT 15 mils.

Cones may be concentric or eccentric.

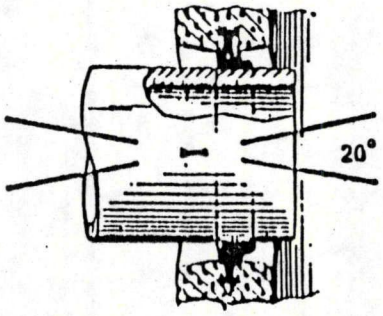




MANHOLE JOINT
BUTYL RUBBER

REINFORCING A.S.T.M. A 185
AREA 0.12 IN./VERTICAL FOOT

CONCRETE COMPRESSIVE
STRENGTH 4000 P.S.I.



MANHOLE DESIGN

MANHOLE DESIGN SPECIFICATIONS CONFORMS TO: "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS A.S.T.M. DESIGNATION C478, LATEST REVISION."

DESIGNED TO MEET

RESILIENT CONNECTORS REQUIREMENTS OF A.S.T.M. C-923.

PIPE TO MANHOLE SEAL

A-LOK GASKET PER A.S.T.M. RUBBER GASKET SPECS. C923, CAST INTEGRALLY IN MANHOLE WALL AND LOCATED AS REQUIRED.

JOINT ALLOWS10° OMNIDIRECTIONAL DEFLECTION.

DESIGNED TO MEET

RESILIENT CONNECTORS REQUIREMENTS OF A.S.T.M. C-923.

ATLANTIC CONCRETE PRODUCTS CO.
1701 Myrtle Street
P.O. Box 1042
Sarasota, Florida 33580
813-355-2988

48" DIA. PRECAST CONCRETE MANHOLE RUBBER JOINT A-LOK SEAL

N.T.S. 1-2-79

C-14007

STATE OF FLC A
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

SARASOTA COUNTY
PUBLIC HEALTH UNIT

MARK J. MAGENHEIM, M.D., M.P.H.
DIRECTOR AND HEALTH OFFICER

(813) 954-2900
SUNCOM 552-7950

November 9, 1989

Mr. Robert Wilhelm, President
595 Bay Isles Road
Longboat Key, Florida 34228

RE: Sabal Cove
Longboat Key Utilities

Dear Mr. Wilhelm:

Our office received the notice of intent to use a general permit for construction of the referenced water distribution system on October 30, 1989. The notice was subsequently reviewed under WD#1098-89-004 on November 7, 1989.

Upon completion of the project, please provide us with copies of satisfactory bacteriological test results and a certification letter from the engineer of record. We may then issue a clearance letter releasing the facilities for public use.

If there are any questions, please contact me at (813) 378-6133.

Sincerely,

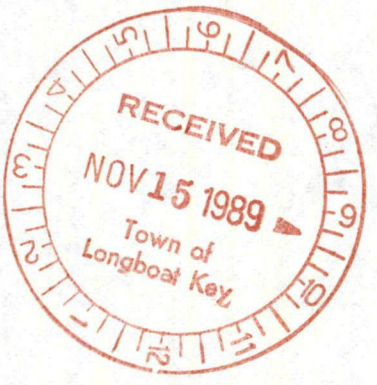
DIVISION OF ENVIRONMENTAL ENGINEERING

Robert F. Bolesta

Robert F. Bolesta
Public Systems Section

RB/ks

xc: William Bishop, P.E.
Mr. Wamsley, Director



TOWN OF LONGBOAT KEY FLORIDA

INCORPORATED NOVEMBER 14, 1955

501 Bay Isles Road
Longboat Key, Florida 33548
(813) 383-3721

November 6, 1989

Scott Christiansen
Sarasota Quay
Sarasota, Fl.

Dear Scott:

Enclosed please find the Attorney's Package submitted for SABAL COVE. Please review and return with your comments and recommendations. The Final Plat has been applied for and we hope to schedule for the Workshop of 11-16-89.

Very truly yours,

Leonard A. Smally
Director of Public Works

/cmm

Arvida / JMB Partners
GULF COAST DIVISION
595 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 34228
TELEPHONE (813) 383-9551

November 3, 1989

Mr. Leonard Smally, Public Works Director
Town of Longboat Key
Longboat Key, Florida 34228

Dear Mr. Smally,

Enclosed find Record Plat submittal for Sabal Cove Subdivision, duly signed and notarized as of this date.

Thank you for your assistance.

Sincerely,

Herman Tom

Herman Tom
Vice President
Planning & Development

Enclosure

H & W Industries, Inc.

C — 900
AWWA C-900 PVC WATER PIPE

DIMENSIONS AND PRESSURE CLASSES FOR DIMENSION RATIO (DR)
PVC 1120 PIPE WITH CAST-IRON-PIPE-EQUIVALENT ODs

Size Class**	DR	Laying Length (Feet)	Outside Diameter (inches)	Tolerance (inches)	Minimum Wall Thickness (inches)	Tolerance (inches)	Weight (Pounds/ Foot)	Pieces Bundle	Bundle Truckload	Truckload Pieces	Truckload Footage
4"-100	25	20	4.800	±0.009	0.192	+0.023	1.92	38	20	760	15,200
6"-100	25	20	6.900	±0.011	0.276	+0.033	3.96	28	12	392	7,840
								14	4		
8"-100	25	20	9.050	±0.015	0.362	+0.043	6.81	20	8	220	4,400
								15	4		
10"-100	25	20	11.100	±0.015	0.444	+0.053	10.25	12	12	144	2,880
12"-100	25	20	13.200	±0.015	0.528	+0.063	14.50	8	6@8	98	1,960
								4	2@4		
								6	6@6		
								3	2@3		
4"-150	18	20	4.800	±0.009	0.267	+0.032	2.61	38	20	760	15,200
6"-150	18	20	6.900	±0.011	0.383	+0.046	5.41	28	12	392	7,840
								14	4		
8"-150	18	20	9.050	±0.015	0.503	+0.060	9.32	20	8	220	4,400
								15	4		
10"-150	18	20	11.100	±0.015	0.617	+0.074	14.00	12	12	144	2,880
12"-150	18	20	13.200	±0.015	0.733	+0.088	19.80	8	6@8	98	1,960
								4	2@4		
								6	6@6		
								3	2@3		
*4"-200	14	20	4.800	±0.009	0.343	+0.041	3.30	38	20	760	15,200
*6"-200	14	20	6.900	±0.011	0.493	+0.059	6.84	28	12	364	7,280
								14	2		
*8"-200	14	20	9.050	±0.015	0.646	+0.078	11.76	20	4	200	4,000
								15	8		
10"-200	14	20	11.100	±0.015	0.793	+0.095	17.71	12	12	144	2,880
12"-200	14	20	13.200	±0.015	0.943	+0.113	25.04	8	6@8	98	1,960
								4	2@4		
								6	6@6		
								3	2@3		

**Pressure classes are working-pressure ratings (AWWA C-900 Sec. 2.8)
*Truckload quantities are lower due to weight limits.

MEETS OR EXCEEDS ALL INDUSTRY STANDARDS AND SPECIFICATIONS*

Materials
H & W pipe is made from a virgin PVC compound with a cell classification of 12454-B; the established hydrostatic-design-basis (HDB) rating is 4,000 psi at 73.4°F. (23°C.) The Standard Thermoplastic Pipe Material Designation Code is PVC 1120. White is the standard with blue optional.

Nontoxic
PVC compounds used in the manufacture of H & W pipe contain no ingredients that will migrate into the water in amounts considered to be toxic.

Compatible Gaskets and Lubricants
H & W Gaskets and Lubricants are compatible with the plastic material in H & W pipe and in combination with them will not adversely affect the potable qualities of the water. One gasket is furnished with each bell-end pipe. Gaskets and joints meet all requirements for performances as specified in ASTM F-477. All gaskets are factory installed and have a steel reinforcing ring (Locked-in).

High-Quality Workmanship
Pipe is homogeneous and free from defects. Color, density and other physical properties are as uniform as commercially possible. Mating surfaces are free from imperfections that might cause leakage at the joints.

Dimensions
The dimensions and tolerances for the pipe barrel conform with the AWWA requirements listed in Table. The bell ends conform with the DR requirements for PVC pipe.

Pressure Requirements
Pipe meets or exceeds all established criteria for either sustained or burst pressure loss.

Standard Length
Pipe is supplied in standard nominal laying lengths of 20 feet.

NSF Certified
PVC compounds are tested and certified usable for potable water by the National Sanitation Foundation Testing Laboratory (NSF-pw).

U.L. Approved
H & W pipe is listed by underwriters laboratories.

F.M. Approved
H & W pipe is Factory Mutual approved for fire protection.

Identification Marking
Pipe is marked at five-foot intervals with the following information:
- A Nominal size and OD base (e.g. 8' C.I.)
- B Material code designation (PVC 1120)
- C Dimension ratio number (DR 25, 18 or 14)
- D AWWA pressure class (100, 150, or 200)
- E AWWA designation number (AWWA C-900)
- F Manufacturer's name or trademark and production code
- G Seal of the testing agency that verified the suitability of the pipe material for potable water service (NSF-pw)

EXTENSIVE TESTING AND INSPECTION ASSURES OUTSTANDING QUALITY

H & W Industries, Inc. pipe is thoroughly tested in strict accordance with the American Water Works Association Standard (C-900).

Sustained Pressure
All sizes of pipe are tested at the beginning of production and semi-annually thereafter for 1,000 hours at the sustained pressures listed in the AWWA C-900 Standard.

Pipe Dimensions
Dimensions for all pipe sizes, including bell, are checked at the beginning of production and once every hour thereafter.

Burst Strength
Each variation of pipe is thoroughly tested for quick-burst strength at the beginning of production and once every 24 hours thereafter. Bells of bell-end pipe are included in the tests as are pipe samples with the required markings located near the end of the sample.

Flattening Resistance
Pipe is tested for flattening resistance at the beginning of each production run and once every eight-hour shift thereafter.

Extrusion Quality
Pipe from each extrusion outlet is tested by the acetone-immersion method at the beginning of production and once every eight-hour shift thereafter.

Test Sample Failure
If any sample fails to meet any requirement, additional tests are performed to determine which products are acceptable since the last favorable test. Products failing to meet any requirement are rejected.

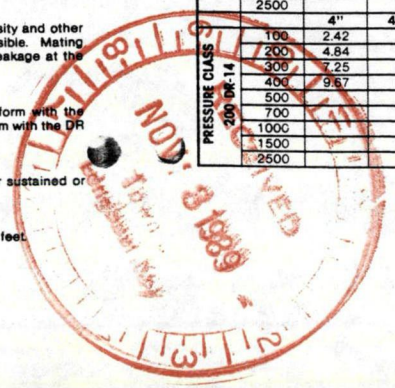
Quality Control Records
H & W INDUSTRIES maintains complete records of all Quality Control tests for at least five years. Customers are provided with pertinent records on request.

Hydrostatic Proof-Test
Pressure tests all pipe at 73.4° F. ±3.6°F. (23°C. ±2°C.). Every length of pipe, including the bell, is proof tested at four times its rated-class pressure as listed in the AWWA Standard for a minimum dwell of five seconds.

VELOCITY AND HEAD LOSS

Values in these tables use the Hazen-Williams Equation with a coefficient, C=150.
The smooth bore of PVC pipe makes high flow characteristics inherent.

	Gals/ Min.	Vel. Ft/Sec.	Head Loss psi/100'	Vel. Ft/Sec.	Head Loss psi/100'	Vel. Ft/Sec.	Head Loss psi/100'	Vel. Ft/Sec.	Head Loss psi/100'	Vel. Ft/Sec.	Head Loss psi/100'
		4"	4.416" ID	6"	6.348" ID	8"	8.326" ID	10"	10.212" ID	12"	12.144" ID
PRESSURE CLASS 100 DR-25	100	2.09	0.15								
	200	4.19	0.56	2.03	0.10						
	300	6.28	1.18	3.04	0.20	1.76	0.05				
	400	8.38	2.01	4.06	0.34	2.35	0.09				
	500			5.07	0.52	2.95	0.14	1.95	0.05		
	700			7.10	0.97	4.13	0.26	2.74	0.10	1.94	0.04
	1000					5.89	0.50	3.92	0.19	2.77	0.06
	1500					8.84	1.06	5.88	0.39	4.16	0.17
	2000							7.83	0.67	5.54	0.29
	2500									6.92	0.43
		4"	4.266" ID	6"	6.134" ID	8"	8.044" ID	10"	9.866" ID	12"	11.734" ID
PRESSURE CLASS 150 DR-18	100	2.25	0.19								
	200	4.49	0.67	2.17	0.11						
	300	6.74	1.42	3.26	0.24	1.90	0.06				
	400	8.99	2.41	4.35	0.41	2.53	0.11				
	500			5.44	0.62	3.16	0.14	2.10	0.06		
	700			7.61	1.16	4.43	0.31	2.94	0.11	2.08	0.05
	1000					6.32	0.59	4.20	0.22	2.97	0.09
	1500					9.48	1.27	6.30	0.47	4.46	0.20
	2000							8.40	0.79	5.94	0.34
	2500									7.43	0.52
		4"	4.114" ID	6"	5.914" ID	8"	7.758" ID	10"	9.514" ID	12"	11.314" ID
PRESSURE CLASS 200 DR-14	100	2.42	0.22								
	200	4.84	0.79	2.34	0.14						
	300	7.25	1.64	3.51	0.29	2.04	0.08				
	400	9.67	2.88	4.68	0.49	2.72	0.13				
	500			5.85	0.74	3.40	0.20	2.26	0.07		
	700			8.13	1.39	4.76	0.37	3.16	0.14	2.23	0.06
	1000					6.80	0.72	4.51	0.26	3.19	0.11
	1500							6.77	0.55	4.78	0.24
	2500									7.98	0.61



Standards Applicable to Ductile Iron Pipe and Fittings

Thickness Design of Ductile Iron Pipe	ANSI/AWWA C150/A21.50
Ductile Iron Pipe for Water and Other Liquids	ANSI/AWWA C151/A21.51 FEDERAL WWP421D, Grade C
Ductile Iron Pipe for Gravity Flow Service	ANSI/ASTM A746
Ductile and Gray Iron Fittings for Water and Other Liquids 3" through 48"	ANSI/AWWA C110/A21.10
Ductile Iron Compact Fittings	ANSI/AWWA C153/A21.53
Flanged Fittings	ANSI/AWWA C110/A21.10 ANSI B16-1
Ductile Iron Pipe with Threaded Flanges	ANSI/AWWA C115/21.15
Coatings and Linings:	
Asphaltic	ANSI/AWWA C151/A21.51 ANSI/AWWA C110/A21.10 ANSI/AWWA C153/A21.53
Cement Lining	ANSI/AWWA C104/A21.4
Various Epoxy Linings	MANUFACTURER'S STANDARD
Polyethylene Lining	MANUFACTURER'S STANDARD
Exterior Polyethylene Encasement	ANSI/AWWA C105/A21.5
Joints — Pipe and Fittings	
Push-On and Mechanical Rubber-Gasket Joints	ANSI/AWWA C111/A21.11 FEDERAL WWP421D
Flanged	ANSI/AWWA C115/A21.15 ANSI B16.1
Grooved and Shouldered	ANSI/AWWA C606
Pipe Threads	ANSI B2.1
Installation	ANSI/AWWA C600

LAYING CONDITIONS

Type 1†† Flat-bottom trench.* Loose backfill.

Type 2 Flat-bottom trench.* Backfill lightly consolidated to centerline of pipe.

Type 3 Pipe bedded in 4-in. minimum loose soil.** Backfill lightly consolidated to top of pipe.

Type 4 Pipe bedded in sand, gravel or crushed stone to depth of ⅛ pipe diameter , 4-in. minimum. Backfill compacted to top of pipe. (Approximately 80% Standard Proctor, AASHO T-99.)

Type 5 Pipe bedded in compacted granular material to centerline of pipe. Compacted granular or select** material to top of pipe. (Approximately 90% Standard Proctor, AASHO T-99.)



† For pipe 30" and larger, consideration should be given to the use of laying conditions other than type 1.
*"Flat-bottom" is defined as undisturbed earth.
**"Loose soil" or "select material" is defined as native soil excavated from the trench, free of rocks, foreign materials and frozen earth.

NOTE: The Type 1 laying condition is entirely satifactory for virtually all trench depths and all thickness classes. The special bedding and backfill requirements shown for laying conditions 2 thru 5 are only required in severe installation or as specified.

Mechanical Joint Pipe

Maximum Allowable Joint Deflection



Size of Pipe	Y-Maximum Joint Deflection in Degrees	X Deflection in Inches 18 ft. Length	Approximate Radius in Feet of Curve Produced by Succession of Joints 18 ft. Length
3	8°-18'	35*	140*
4	8°-18'	35*	140*
6	7°- 7'	27	145
8	5°-21'	20	195
10	5°-21'	20	195
12	5°-21'	20	195
14	3°-35'	13.5	285
16	3°-35'	13.5	285
18	3°- 0'	11	340
20	3°- 0'	11	340
24	2°-23'	9	450

*20-ft length

Push-on Joint Pipe

Maximum Allowable Joint Deflection



Size of Pipe	Y-Maximum Joint Deflection in Degrees	X Deflection in Inches 18 ft. Length	Approximate Radius in Feet of Curve Produced by Succession of Joints 18 ft. Length
3	5°	21*	230*
4	5°	21*	230*
6	5°	19	205
8	5°	19	205
10	5°	19	205
12	5°	19	205
14	4°	15	260
16	4°	15	260
18	3°	11	345
20	3°	11	345
24	3°	11	345
30	3°	11	345
36	3°	11	345

*20-ft length

SELECTION TABLE FOR DUCTILE IRON PIPE

This table shows thickness class of pipe necessary for the rated water working pressures and the maximum depth of cover. The thicknesses in this table are equal to or in excess of those required to withstand the rated working pressures plus a surge allowance of 100 psi. Ductile Iron pipe for working pressures higher than 350 psi are available.

Pipe Size In.	Thick. Class	Nominal Thick. In.	Rated Water Working Pressure, psi	Laying Condition — Maximum Depth of Cover, Feet†† Type 1	Type 2	Type 3	Type 4	Type 5
3	51	.25	350	98	100*	100*	100*	100*
3	52	.28	350	100*	100*	100*	100*	100*
3	53	.31	350	100*	100*	100*	100*	100*
3	54	.34	350	100*	100*	100*	100*	100*
3	55	.37	350	100*	100*	100*	100*	100*
3	56	.40	350	100*	100*	100*	100*	100*
4	51	.26	350	76	86	96	100*	100*
4	52	.29	350	100*	100*	100*	100*	100*
4	53	.32	350	100*	100*	100*	100*	100*
4	54	.35	350	100*	100*	100*	100*	100*
4	55	.38	350	100*	100*	100*	100*	100*
4	56	.41	350	100*	100*	100*	100*	100*
6	50	.25	350	32	38	44	56	75
6	51	.28	350	49	57	64	80	100*
6	52	.31	350	67	77	86	100*	100*
6	53	.34	350	91	100*	100*	100*	100*
6	54	.37	350	100*	100*	100*	100*	100*
6	55	.40	350	100*	100*	100*	100*	100*
6	56	.43	350	100*	100*	100*	100*	100*
8	50	.27	350	25	30	36	46	64
8	51	.30	350	36	42	49	61	81
8	52	.33	350	47	54	62	77	99
8	53	.36	350	64	73	82	100*	100*
8	54	.39	350	80	91	100*	100*	100*
8	55	.42	350	98	100*	100*	100*	100*
8	56	.45	350	100*	100*	100*	100*	100*
10	50	.29	350	19	24	29	38	55
10	51	.32	350	27	32	38	49	66
10	52	.35	350	35	41	47	59	79
10	53	.38	350	45	52	59	74	95
10	54	.41	350	57	65	74	91	100*
10	55	.44	350	67	77	86	100*	100*
10	56	.47	350	81	92	100*	100*	100*
12	50	.31	350	17	22	27	36	52
12	51	.34	350	23	28	33	43	60
12	52	.37	350	30	35	41	53	71
12	53	.40	350	36	42	49	61	81
12	54	.43	350	45	52	59	74	95
12	55	.46	350	54	62	71	87	100*
12	56	.49	350	64	73	83	100*	100*
14	50	.33	350	15	19	24	33	49
14	51	.36	350	19	23	28	38	55
14	52	.39	350	24	29	34	44	62
14	53	.42	350	30	35	41	53	71
14	54	.45	350	36	42	49	61	81
14	55	.48	350	43	50	57	71	92
14	56	.51	350	52	59	67	83	100*
16	50	.34	350	13	17	21	30	47
16	51	.37	350	16	21	25	34	51
16	52	.40	350	20	25	30	40	57
16	53	.43	350	25	30	36	46	64
16	54	.46	350	30	35	41	53	71
16	55	.49	350	35	41	47	59	79
16	56	.52	350	41	48	55	68	89
18	50	.35	350	11	15	20	29	42
18	51	.38	350	14	19	23	32	49
18	52	.41	350	18	22	27	36	53
18	53	.44	350	22	26	31	41	58
18	54	.47	350	25	30	36	46	64
18	55	.50	350	30	35	41	53	71
18	56	.53	350	35	41	47	59	79
20	50	.36	300	10	14	18	27	38
20	51	.39	350	13	17	21	30	44
20	52	.42	350	16	20	25	34	50
20	53	.45	350	19	23	28	38	54
20	54	.48	350	22	27	32	42	59
20	55	.51	350	26	31	37	47	65
20	56	.54	350	30	35	41	53	71
24	50	.38	250	8	12	17	23	31
24	51	.41	300	10	15	19	27	36
24	52	.44	350	13	17	21	30	41
24	53	.47	350	15	19	24	33	47
24	54	.50	350	18	22	27	36	53
24	55	.53	350	20	25	30	40	57
24	56	.56	350	24	29	34	44	61
30	50	.39	200		10	14	18	25
30	51	.43	250		12	16	21	29
30	52	.47	300		14	19	24	33
30	53	.51	350		17	21	29	38
30	54	.55	350		19	24	33	44
30	55	.59	350		22	27	36	51
30	56	.63	350		26	31	41	57
36	50	.43	200		10	13	17	25
36	51	.48	250		12	16	20	28
36	52	.53	300		15	19	24	32
36	53	.58	350		17	21	28	37
36	54	.63	350		20	25	33	43
36	55	.68	350		23	28	37	50
36	56	.73	350		26	31	41	59

††An allowance for single H-20 truck with 1.5 impact factor is included for all depths of cover.
*Calculated maximum depth of cover exceeds 100 ft.
Note: For pipe 30 in. and larger, consideration should be given to the use of laying conditions other than type 1.

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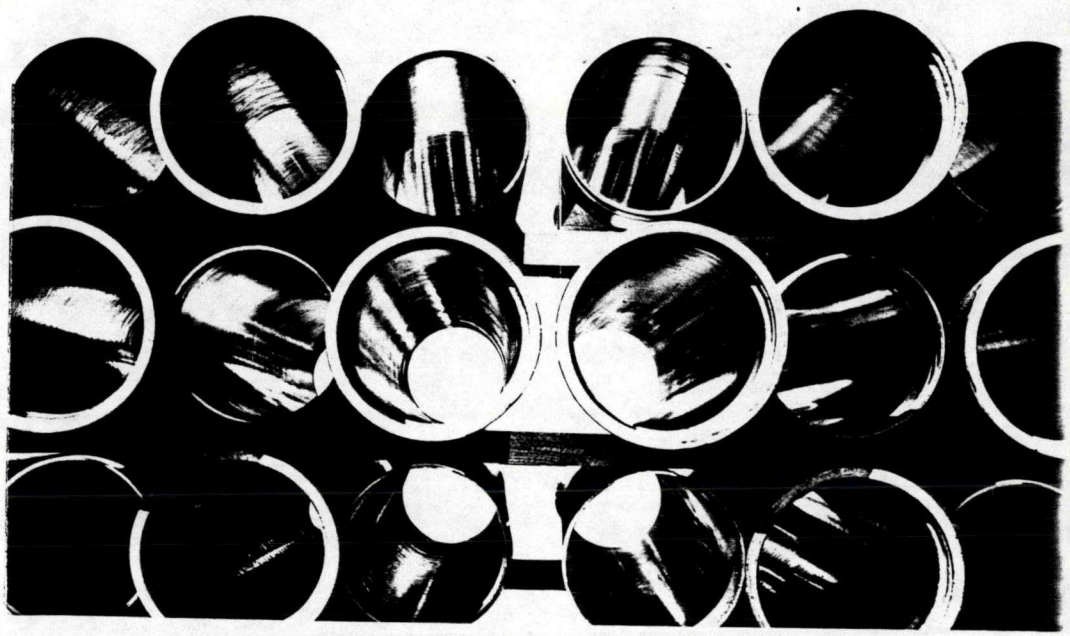
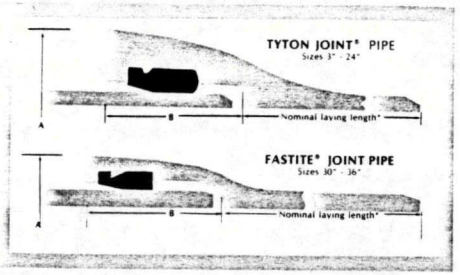


THICKNESS, DIMENSIONS AND WEIGHTS OF TYTON JOINT AND MECHANICAL JOINT DUCTILE IRON PIPE BY SIZE FOR EACH THICKNESS CLASS

Pipe manufactured in accordance with ANSI/AWWA C151/A21.51 under method of design outlined in ANSI/AWWA C150/A21.50.

Size In.	Thickness Class	Thickness In.	OD* In.	Wt. of Barrel Per Ft. Lb.	Tyton Joint Wt. of Bell Lb.	Tyton Joint Wt. Per Lgth.† Lb.	Tyton Joint Avg. Wt. Per Ft. ‡ Lb.	Mechanical Joint Wt. of Bell Lb.	Mechanical Joint Wt. Per Lgth. † Lb.	Mechanical Joint Avg. Wt. Per Ft. ‡ Lb.
3	51	.25	3.96	8.9	9	185	9.4	11	190	9.4
3	52	.28	3.96	9.9	9	205	10.4	11	210	10.4
3	53	.31	3.96	10.9	9	225	11.4	11	230	11.4
3	54	.34	3.96	11.8	9	245	12.2	11	245	12.4
3	55	.37	3.96	12.8	9	265	13.2	11	265	13.4
3	56	.40	3.96	13.7	9	285	14.2	11	285	14.2
4	51	.26	4.80	11.3	11	235	11.8	16	240	12.1
4	52	.29	4.80	12.6	11	265	13.2	16	270	13.4
4	53	.32	4.80	13.8	11	285	14.4	16	290	14.6
4	54	.35	4.80	15.0	11	310	15.6	16	315	15.8
4	55	.38	4.80	16.1	11	335	16.6	16	340	16.9
4	56	.41	4.80	17.3	11	355	17.8	16	360	18.1
6	50	.25	6.90	16.0	15	305	16.8	18	305	17.0
6	51	.28	6.90	17.8	15	335	18.6	18	340	18.8
6	52	.31	6.90	19.6	15	370	20.4	18	370	20.6
6	53	.34	6.90	21.4	15	400	22.2	18	405	22.4
6	54	.37	6.90	23.2	15	435	24.0	18	435	24.2
6	55	.40	6.90	25.0	15	465	25.8	18	470	26.0
6	56	.43	6.90	26.7	15	495	27.5	18	500	27.7
8	50	.27	9.05	22.8	22	430	24.0	24	435	24.1
8	51	.30	9.05	25.2	22	475	26.4	24	480	26.5
8	52	.33	9.05	27.7	22	520	28.9	24	525	29.0
8	53	.36	9.05	30.1	22	565	31.3	24	565	31.4
8	54	.39	9.05	32.5	22	605	33.7	24	610	33.8
8	55	.42	9.05	34.8	22	650	36.0	24	650	36.1
8	56	.45	9.05	37.2	22	690	38.4	24	695	38.5
10	50	.29	11.10	30.1	29	570	31.7	31	575	31.8
10	51	.32	11.10	33.2	29	625	34.8	31	630	34.9
10	52	.35	11.10	36.2	29	680	37.8	31	685	37.9
10	53	.38	11.10	39.2	29	735	40.8	31	735	40.9
10	54	.41	11.10	42.1	29	785	43.7	31	790	43.8
10	55	.44	11.10	45.1	29	840	46.7	31	845	46.8
10	56	.47	11.10	48.0	29	895	49.6	31	895	49.7
12	50	.31	13.20	38.4	35	725	40.3	37	730	40.5
12	51	.34	13.20	42.0	35	790	43.9	37	795	44.1
12	52	.37	13.20	45.6	35	855	47.5	37	860	47.7
12	53	.40	13.20	49.2	35	920	51.1	37	925	51.3
12	54	.43	13.20	52.8	35	985	54.7	37	985	54.9
12	55	.46	13.20	56.3	35	1050	58.2	37	1050	58.4
12	56	.49	13.20	59.9	35	1115	61.8	37	1115	62.0
14	50	.33	15.30	47.5	60	915	50.8	61	915	50.9
14	51	.36	15.30	51.7	60	990	55.0	61	990	55.1
14	52	.39	15.30	55.9	60	1065	59.2	61	1065	59.3
14	53	.42	15.30	60.1	60	1140	63.4	61	1145	63.5
14	54	.45	15.30	64.2	60	1215	67.5	61	1215	67.5
14	55	.48	15.30	68.4	60	1290	71.7	61	1290	71.8
14	56	.51	15.30	72.5	60	1365	75.8	61	1365	75.9
16	50	.34	17.40	55.8	68	1070	59.6	74	1080	59.9
16	51	.37	17.40	60.6	68	1160	64.4	74	1165	64.7
16	52	.40	17.40	65.4	68	1245	69.2	74	1250	69.5
16	53	.43	17.40	70.1	68	1330	73.9	74	1335	74.2
16	54	.46	17.40	74.9	68	1415	78.7	74	1420	79.0
16	55	.49	17.40	79.7	68	1505	83.5	74	1510	83.8
16	56	.52	17.40	84.4	68	1585	88.2	74	1595	88.5
18	50	.35	19.50	64.4	78	1235	68.7	85	1245	69.1
18	51	.35	19.50	69.3	78	1335	74.1	85	1340	74.5
18	52	.41	19.50	75.2	78	1430	79.5	85	1440	79.9
18	53	.44	19.50	80.6	78	1530	84.9	85	1535	85.3
18	54	.47	19.50	86.0	78	1625	90.3	85	1635	90.7
18	55	.50	19.50	91.3	78	1720	95.6	85	1730	96.0
18	56	.53	19.50	96.7	78	1820	101.0	85	1825	101.4
20	50	.36	21.60	73.5	87	1410	78.3	98	1420	78.9
20	51	.39	21.60	79.5	87	1520	84.3	98	1530	84.9
20	52	.42	21.60	85.5	87	1625	90.3	98	1635	90.9
20	53	.45	21.60	91.5	87	1735	96.3	98	1745	96.9
20	54	.48	21.60	97.5	87	1840	102.3	98	1855	102.9
20	55	.51	21.60	103.4	87	1950	108.2	98	1960	108.8
20	56	.54	21.60	109.3	87	2055	114.1	98	2065	114.7
24	50	.38	25.80	92.9	105	1775	98.7	123	1795	99.7
24	51	.41	25.80	100.1	105	1905	105.9	123	1925	106.9
24	52	.44	25.80	107.3	105	2035	113.1	123	2055	114.1
24	53	.47	25.80	114.4	105	2165	120.2	123	2180	121.2
24	54	.50	25.80	121.6	105	2295	127.4	123	2310	128.4
24	55	.53	25.80	128.8	105	2425	134.6	123	2440	135.6
24	56	.56	25.80	135.9	105	2550	141.7	123	2570	142.7
30	50	.39	32.00	118.5	170	2305	127.9	..	....	....
30	51	.43	32.00	130.5	170	2520	139.9	..	....	....
30	52	.47	32.00	142.5	170	2735	151.9	..	....	....
30	53	.51	32.00	154.4	170	2950	163.8	..	....	....
30	54	.55	32.00	166.3	170	3165	175.7	..	....	....
30	55	.59	32.00	178.2	170	3180	187.6	..	....	....
30	56	.63	32.00	190.0	170	3590	199.4	..	....	....
36	50	.43	38.30	156.5	239	3055	169.8	..	....	....
36	51	.48	38.30	174.5	239	3380	187.8	..	....	....
36	52	.53	38.30	192.4	239	3700	205.7	..	....	....
36	53	.58	38.30	210.3	239	4025	223.6	..	....	....
36	54	.63	38.30	228.1	239	4345	241.4	..	....	....
36	55	.68	38.30	245.9	239	4665	259.2	..	....	....
36	56	.73	38.30	263.7	239	4985	277.0	..	....	....

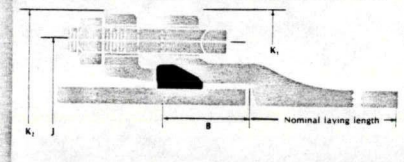
† Including Bell; calculated weight of pipe rounded off to nearest 5 lbs.
‡ Including Bell; average weight per foot, based on calculated weight of pipe before rounding. Weights and dimensions are nominal per above standards.
* Tolerances of OD of spigot end: 3-12 in., ±0.06 in.; 14-24 in., +0.05 in., −0.06 in.; 30-36 in., +0.08 in., −0.06 in.
3" - 4" Nominal 20' laying length.
6" - 36" Nominal 18' laying length.



Size Inches	Pipe Thickness Inches From	Pipe Thickness Inches To	Outside Diameter Inches	Dimensions in Inches A	Dimensions in Inches B
3	.25	.40	3.96	5.80	3.00
4	.26	.41	4.80	6.86	3.15
6	.25	.43	6.90	8.75	3.38
8	.27	.45	9.05	11.05	3.69
10	.29	.47	11.10	13.15	3.75
12	.31	.49	13.20	15.30	3.75
14	.33	.51	15.30	17.85	5.00
16	.34	.52	17.40	20.00	5.00
18	.35	.53	19.50	22.10	5.00
20	.36	.54	21.60	24.25	5.00
24	.38	.56	25.80	28.50	5.00
30	.39	.63	32.00	34.95	6.50
36	.43	.73	38.30	41.37	6.50

* 3" - 4" Nominal 20' laying length.
6" - 36" Nominal 18' laying length.
Dimensions subject to manufacturing tolerances.

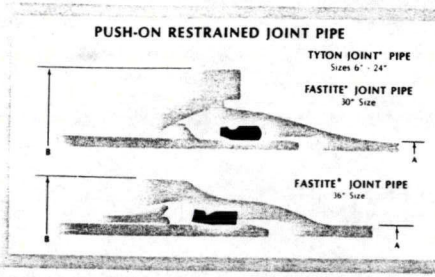
STANDARDIZED MECHANICAL JOINT PIPE
Joint Dimensions and Weights



Size Inches	Pipe Thickness Inches From	Pipe Thickness Inches To	Outside Diameter Inches	Dimensions in Inches B	J	K¹	K²	Bolts No.	Size Inches	Length Inches	Bell Weight Pounds	†Gland Bolts Gasket Weight Pounds
3	.25	.40	3.96	2.50	6.19	7.62	7.69	4	⅝	3	11	7
4	.26	.41	4.80	2.50	7.50	9.06	9.12	4	¾	3½	16	10
6	.25	.43	6.90	2.50	9.50	11.06	11.12	6	¾	3½	18	16
8	.27	.45	9.05	2.50	11.75	13.31	13.37	6	¾	4	24	25
10	.29	.47	11.10	2.50	14.00	15.62	15.62	8	¾	4	31	30
12	.31	.49	13.20	2.50	16.25	17.88	17.88	8	¾	4	37	40
14	.33	.51	15.30	3.50	18.75	20.25	20.25	10	¾	4½	61	45
16	.34	.52	17.40	3.50	21.00	22.50	22.50	12	¾	4½	74	55
18	.35	.53	19.50	3.50	23.25	24.75	24.75	12	¾	4½	85	65
20	.36	.54	21.60	3.50	25.50	27.00	27.00	14	¾	4½	98	85
24	.38	.56	25.80	3.50	30.00	31.50	31.50	16	¾	5	123	105

† Weight shown for regular Gray Cast Iron Follower Gland, Corten Bolts and rubber gasket.
* 3" - 4" Nominal 20' laying length.
6" - 24" Nominal 18' laying length.
Dimensions subject to manufacturing tolerances.

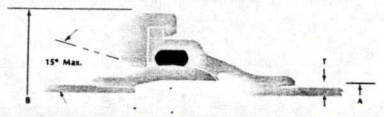
PUSH-ON RESTRAINED JOINT PIPE



Size	Pressure Rating	Joint Deflection Φ	Joint Deflection Inches In 18 Ft.	A Pipe O.D.	B Bell or Retainer O.D.
6	350	4°	15	6.90	11¼
8	350			9.05	14⅜
10	350			11.10	16¾
12	350			13.20	19⅛
14	350	3°	11	15.30	21¼
16	350			17.40	24
18	350			19.50	26⅜
20	350			21.60	28⅝
24	350			25.80	33¼
30	350			32.00	40⅛
36	250	1½°	5½	38.30	43⅞

Dimensions subject to manufacturer's tolerances.

BALL AND SOCKET JOINT PIPE



Size	Thickness Class (A21.51)	Thickness T	A Pipe O.D.	B Retainer O.D.	Full Length Weight - Lb.** As Shipped	Under Water Full of Air	Under Water Full of Water	Safe End Pull (Lb.)
6	55	.40	6.90	13⅞	545	240	465	50,000
8	55	.42	9.05	16⅝	770	240	655	70,000
10	55	.44	11.10	19¼	1005	220	860	95,000
12	55	.46	13.20	22	1270	155	1080	120,000
14	56	.51	15.30	24½	1655	160	1410	145,000
16	56	.52	17.40	27	1990	45	1685	165,000
18	56	.53	19.50	30	2375	−70	2015	195,000
	58*	.59			2560	110	2170	
20	56	.54	21.60	32¾	2810	−200	2375	210,000
	59*	.63			3110	100	2635	
24	56	.56	25.80	38¼	3700	−620	3110	260,000
	62*	.74			4415	95	3715	

*Thickness required to overcome buoyancy.
**Weights listed are for 18' - 0" laying lengths. Nominal full lengths vary by size.
Pipe, Bell, Ball and Retainer are ductile iron.
Dimensions and weights subject to manufacturing tolerances.
Pressure rating: 350 psi.

ASSEMBLY INSTRUCTIONS

TYTON AND FASTITE PUSH-ON JOINTS

THE PROCEDURES DESCRIBED BELOW SHOULD BE FOLLOWED TO ASSURE PROPER JOINT ASSEMBLY. SUPPLEMENTAL INFORMATION IS GIVEN IN THE ATLANTIC STATES INSTRUCTIONS FLYER.

THERE ARE SEVERAL DIFFERENT DESIGNS OF PUSH-ON JOINTS FOR DUCTILE IRON PIPE AND FITTINGS. **BE SURE THAT THE CORRECT GASKET IS USED.**

IT IS ESPECIALLY IMPORTANT THAT THE GASKET IS INSTALLED IN A CLEAN BELL.

THE GASKET GROOVE IN THE TYTON OR FASTITE BELL SHOULD **NOT** BE LUBRICATED PRIOR TO GASKET INSERTION.

JOINT ASSEMBLY PROCEDURE

STEP 1. **BELL CLEANING:** Thoroughly clean out the bell. Remove all foreign matter: dirt, sand, mud, ice or excess paint.

STEP 2. **PLAIN END PREPARATION:** Clean off the plain end, removing any dirt, foreign matter or excess paint. Make sure that the plain end is beveled. File smooth any sharp edges which might damage the gasket.

STEP 3. **GASKET INSERTION:** Insert the gasket in its recess in the bell, with the large end of the gasket entering first. Make sure that the gasket faces in the correct direction and is properly seated as illustrated below.

STEP 4. **LUBRICATION:** Apply a thin coating of lubricant to the inside surface of the installed gasket just prior to join assembly. Make certain the entire inner surface of the gasket is coated. Also apply a thin coating of lubricant to the beveled portion of the plain end.

STEP 5. **JOINING:** Guide the plain end into the bell and compress the gasket by pushing the plain end all the way into the bell socket. Keep the bell and plain end in reasonably straight alignment during assembly. Any deflection should be taken after the joint is assembled.

MECHANICAL JOINT

THE PROCEDURES DESCRIBED SHOULD BE FOLLOWED TO ASSURE PROPER JOINT ASSEMBLY.

THERE ARE SEVERAL DIFFERENT SIZES OF BOLTS. CHECK TO SEE YOU HAVE PROPER SIZE AND NUMBER.

STEP 1. **BELL AND SPIGOT CLEANING AND LUBRICATION:** Thoroughly clean bell gasket area and spigot of pipe of all foreign material. Lubrication and additional cleaning should be provided by brushing both the gasket and plain end with soapy water or pipe lubricant just prior to slipping gasket into the plain end.

STEP 2. **GLAND AND GASKET:** Place gland with lip extension toward the plain end, and the gasket with the narrow edge toward the plain end of the pipe.

STEP 3. **JOINING:** Insert the pipe into the bell and press the gasket firmly and **evenly** into the gasket recess. Keep the joint straight during assembly. Make deflection after joint assembly but before tightening bolts. (Lubrication as in Step #1 will help facilitate gasket seating)

STEP 4. **BOLTS:** Push the gland toward the bell and center around the pipe with the gland lip against the gasket. Insert bolts and hand-tighten nuts.

STEP 5. **TIGHTENING:** Tighten bolts to normal range of bolt torque as indicated in table. Maintain approximately the same distance between gland and the face of the bell flange. This is done by partially tightening the bottom bolts first then the top bolts next bolts on either side finally the remaining bolts. This is repeated as many times as required.

SPECIFICATIONS
FOR EPOXY LINED
DUCTILE IRON PIPE

I. Application of Lining — The pipe shall be blasted and cleaned to remove all loose oxides and rust. After cleaning, the lining material shall be applied in two coats to yield 24 mils for the complete system.

II. Lining Material — The material shall be a two component epoxy with the following minimum requirements:

a. A permeability rating of .15 perms when measured by ASTM D-1653-72.

b. A direct impact resistance of 100 in.-lbs. with no cracking when measured by ASTM D-2794.

c. The ability to build at least 40 mils dry in one coat.

d. The material shall be recoatable with itself for at least 7 days, with no additional surface preparation, when exposed to direct summer sun and a temperature of 90° F.

III. Inspection —

a. All pipe shall be checked for thickness using a magnetic film thickness gauge.

b. All pipe shall be holiday detected with a 67 volt detector.

c. Each pipe joint shall be marked with the date of application of the lining system and with its numerical sequence of application of that date.

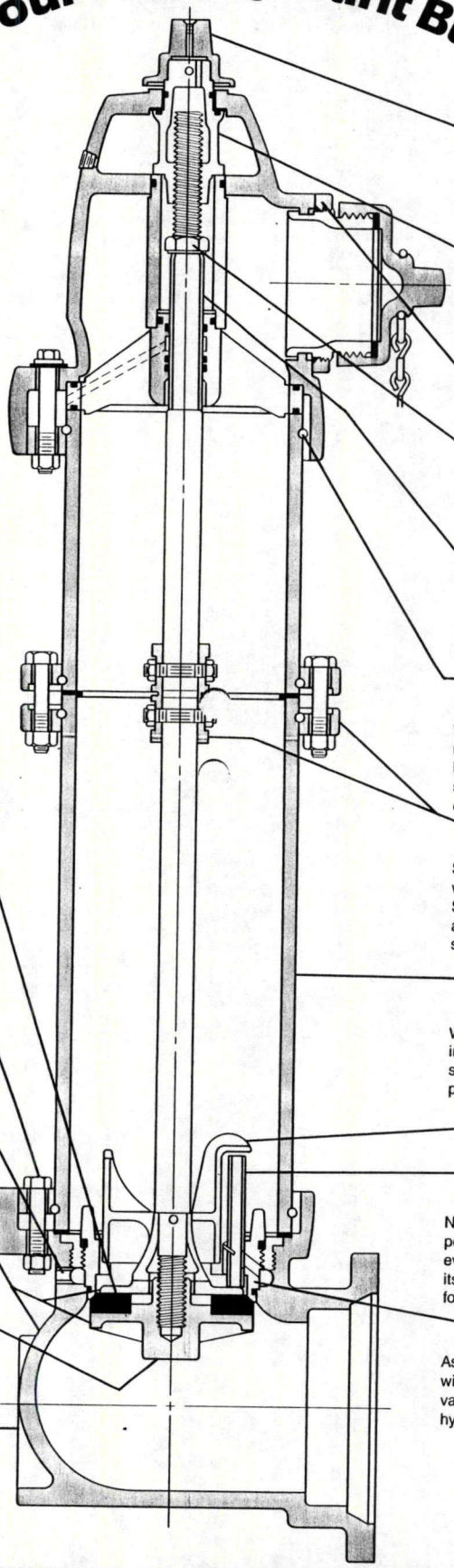
See For Yourself. . .Why
PACER 100
Is Your Best Hydrant Buy

The PACER 100 is no ordinary hydrant. It's distinctive styling and design set it apart from it's competitors.

When you need hydrants, you shop for a practical model that will give you simple, trouble-free maintenance. The PACER 100 will give you years of service combined with a clean, contemporary appearance.

A century of experience in manufacturing hydrants adds up to a WATEROUS reputation customers rely on.

You owe yourself—and your taxpayers a closer look at PACER 100 before you make your next hydrant purchase.



DUCTILE IRON WEATHERSHIELD NUT

Resists damage from wrench, provides added protection from weather.

BRASS OPERATING NUT

For smoother operation. Operating threads are bathed in oil. O-ring seals isolate the oil reservoir.

MECHANICALLY ATTACHED NOZZLES

For easy replacement.

TOP STOP

Provides a positive limit to travel of main rod, prevents damage to hydrant through carelessness or abuse.

RUST-FREE BRASS ROD BUSHING

Provides a permanently smooth, strong surface for O-ring seals. Prevents damage to critical O-rings.

HANDY 360° NOZZLE ROTATIO

Waterous exclusive stainless steel retaining ring allows 360° rotation by merely loosening flange bolts, and turnin[illegible]ozzle section to exact position desired. [illegible]mits easy installation and improves appearance.

TRAFFIC SECTION

Simplifies accident repairs. No need to dig when broken by impact of car or truck. Special components are designed to break at the ground line. Replace with new parts supplied in economical Traffic Repair Kit.

STRONGER CENTRIFUGALLY CAST BARREL

Waterous uses a centrifugally cast ductile iron barrel, just like water main. It is stronger, smoother, and more uniform than pit or static casting.

BRONZE CROSSARM

THE ORIGINAL ALL-BRONZE DRAIN

No composition, rubber, or leather face to peel, chip or crack. No leaks, no adjustment ever. Sliding valve is always free to center itself so it will always close tightly, even if a foreign object gets into the barrel.

VALVE SEAT

As well as all other internal parts - removes without digging. PACER's O-ring protected valve seat screws into a bronze insert in the hydrant bottom.

[illegible]SES WITH WATER PRESSURE

Waterous is a true-compression-type hydrant. The main valve closes with and is held shut by the water pressure. Valve is made of highest quality nitrile rubber that resists oils and temperature extremes.

STAINLESS STEEL BOLTS AND NUTS BELOW GRADE

PROTECTED OUTLET PREVENTS CLOGGING

Waterous drain outlets are bronze bushed to prevent corrosion, and are located under a flange to help prevent clogging.

FUSION BONDED EPOXY COATING

Fusion bonded epoxy on upper and lower valve washers. Bottom is fusion bonded epoxy coated inside and outside.

INTEGRAL CAP NUT AND LOWER WASHER

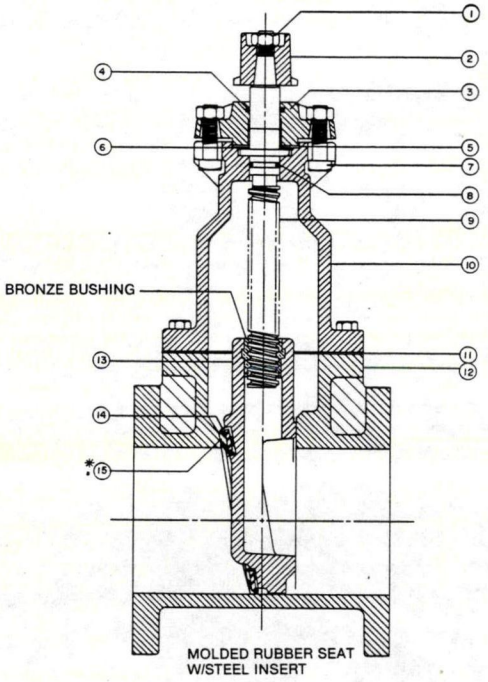
Protects rod threads from corrosion and makes servicing easy. Locked in place, it cannot detach accidentally.

FLAT BOTTOM, RIBBED BACK AND STRAPPING LUGS

All standard to make solid, straight installation faster and easier.

THE PACER 100 MEETS OR EXCEEDS ALL PERFORMANCE AND CONSTRUCTIONAL REQUIREMENTS OF AWWA STANDARD C-502-85

4" - 12" MUELLER® RESILIENT SEAT GATE VALVE
NRS -"O"- RING SEALED - AWWA 200 PSI WORKING PRESSURE - 400 PSI TEST PRESSURE

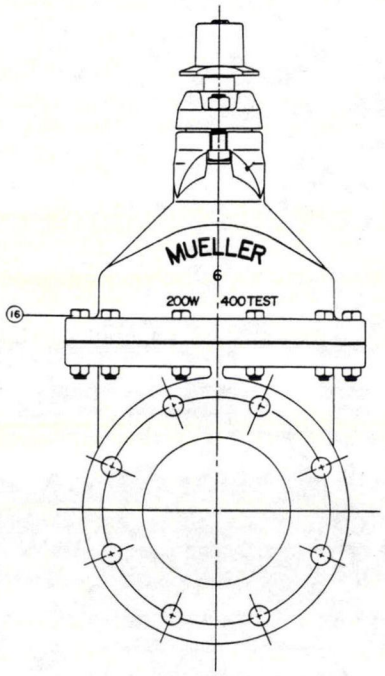


*SEAT RETAINING SCREWS NOT SHOWN

PARTS LIST

ITEM	DESCRIPTION	REQ'D	MATERIAL	ASTM	
1	Cap Nut	1	Steel	A307	GR. B PLT'D
2	Wrench Nut	1	Cast Iron	A126	CL. B
3	Stuffing Box	1	Cast Iron	A126	CL. B
4	Stuffing Box O-Ring	1	Rubber	D2000	
5	Stuffing Box Gasket	1	Red Fiber		
6	Friction Washer	1	Celcon		GR. M90-04
7	Flange Bolt	2	Steel	A307	GR. B PLT'D
8	Stem O-Ring	1	Rubber	D2000	
9	Stem	1	Bronze	*	CDA ALLOY 676
10	Bonnet	1	Cast Iron	A126	CL. B
11	Bonnet Gasket	1	Comp.	D1170	GR. P-1161-A
12	Body	1	Cast Iron	A126	CL. B
13	Disc W/Bronze Bushing	1	Cast Iron	A126	CL. B
14	Seat Ring	1	Rubber	D2000	
15	Seat Retaining Screw		Stainless Steel		
16	Bonnet Bolts		Steel	A307	GR. B PLT'D

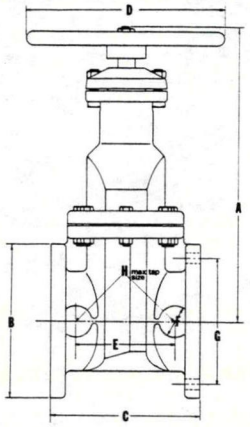
*Modified Manganese Bronze



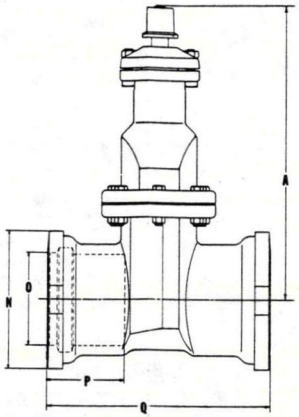
Dimensions for Mueller Resilient Seat Gate Valves — inches

Dimension	Valve size* 4"	6"	8"	10"	12"
A Centerline to top of stem	16.31	20.12	23.25	28.38	31.50
B Outside diameter	9.00	11.00	13.50	16.00	19.00
C Flanged — face-to-face	9.00	10.50	11.50	13.00	14.00
D Diameter of handwheel	11.00	13.00	14.00	16.00	16.00
E Center-to-center of tapping bosses		6.19	7.50	8.25	8.50
F Tapping boss diameter		2.25	2.50	2.50	3.00
G Bolt circle diameter	7.50	9.50	11.75	14.25	17.00
H Maximum tap size		1¼	1½	1½	2
K Inside diameter	4.90	7.00	9.15	11.20	13.30
L Depth of socket	2.50	2.50	2.50	2.50	2.50
M Mech. joint — end-to-end	10.00	11.50	11.50	13.00	14.00
N Outside diameter	7.12	9.25	11.62	14.36	16.75
O Inside diameter	4.91	7.01	9.21	11.76	14.02
P Depth of socket	3.50	3.50	3.50	3.50	4.00
Q A-C — end-to-end	11.75	12.00	13.50	14.36	16.50
R Fig. x M.J. — end-to-end	9.50	11.00	11.50	13.00	14.00
S Fig. x A.C. — end-to-end	10.36	11.25	12.50	13.69	15.25
T Slip-On — end-to-end	11.06	12.50	14.00	14.75	15.50
U Outside diameter	6.88	9.12	11.38	13.50	15.75
V Depth of socket	3.22	3.44	3.75	3.81	3.81
W See Note (Slip-On)	8.62	10.62	13.12	16.38	18.12
No. of turns to open	14.5	20.5	27	33.5	39.5

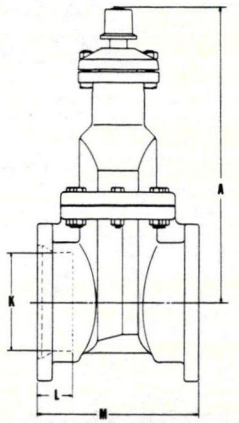
*Nominal sizes



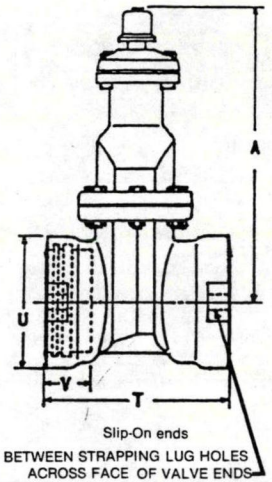
Flanged ends



Asbestos-cement ends



Mechanical joint ends



Slip-On ends

W-DISTANCE BETWEEN STRAPPING LUG HOLES ACROSS FACE OF VALVE ENDS

DR BY	T.A.B.	9-26-80	CH BY	WF	9-26-80	REF. NO.	PURCH ED YES ☐ NO ☐	C. O. NO.
CH	mll	9.26.80	TYPE					
ENGR			PROD			FINISH	SCALE NONE	
DRFT	mll	9.26.80						
STOCK NO.		MATERIAL						
TOLERANCES		LINEAR ± ———			ANGULAR ±		PATT. NO.	

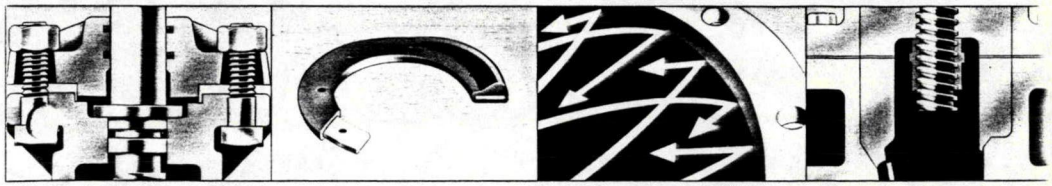
MUELLER CO.
DECATUR, ILLINOIS

MUELLER RSGV

NUMBER CT 1080

CT

The Mueller® Super-Seal™ Resilient Seat Valve out-performs and out-lasts other valves.





Mueller Resilient Seat Valve undergoes two hydrostatic pressure tests. The first checks for leakage in both directions across the seat at 200 psig. The second, performed at 400 psig (twice the normal working pressure), checks for leakage at the flanges, through the valve body and bonnet or past the stem's "O" rings.

You can count on it to do its job. It's that simple. Because the Super-Seal valve was designed to avoid problems inherent with other designs. It resists corrosion. It avoids binding. And above all, it lasts. In short, the Super-Seal valve doesn't let you down.

And in the long run, it costs less.

You won't have to pay for unscheduled maintenance and repairs which are typical with lesser valves. And more importantly, you won't have to pay for an early replacement. All of which makes the lifetime cost of the Super-Seal valve less than that of all other valves. Once you put a Super-Seal valve in the ground, your job is done.

Unique design makes the difference

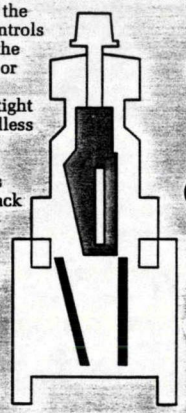
The American-designed Super-Seal Resilient Seat Valve is totally different from the European-based designs which have rubber encapsulated discs. One major benefit of the Mueller design is that you can close it leak-tight, with a consistent number of turns and applied torque, time after time.

The rubber seat ring of the Super-Seal valve is molded separately from the valve disc. It is reinforced with stainless steel and securely fastened to the disc with stainless steel screws. The body seating surface is precision-machined to mate precisely with the rubber seat ring. The close conformity of the seating elements assures consistent positive sealing with minimum torque applied to the operating stem. By machining the sealing surface rather than leaving it "as cast" it also provides a smooth, non-abrading surface for the rubber seat to seal against. This avoids the wear and tear on the seat that is so common in other designs.

One major benefit of the Mueller design is that you can close it leak-tight, with a consistent number of turns and applied torque, time after time.

Assures leak-tight shut-off regardless of direction of flow.

The disc is fully supported for bi-directionality, consistent sealing and throttling capability. Its flat backside travels along a machined surface in the valve body. Solid guide lugs on the disc move within channels in the sides of the valve. This controls movement of the disc either up or downstream, assuring leak-tight shut-off regardless of direction of flow. And the disc's center is open on the back to prevent solids build-up, which can occur in other designs, causing stem binding.



The bronze stem nut is cast as an integral part of the iron disc to prevent twisting, binding or angling of the nut or stem. This allows the torque applied to the valve to be efficiently converted to seating pressure on the seat ring. The result is a valve sealed leak-tight without wasted operating torque.

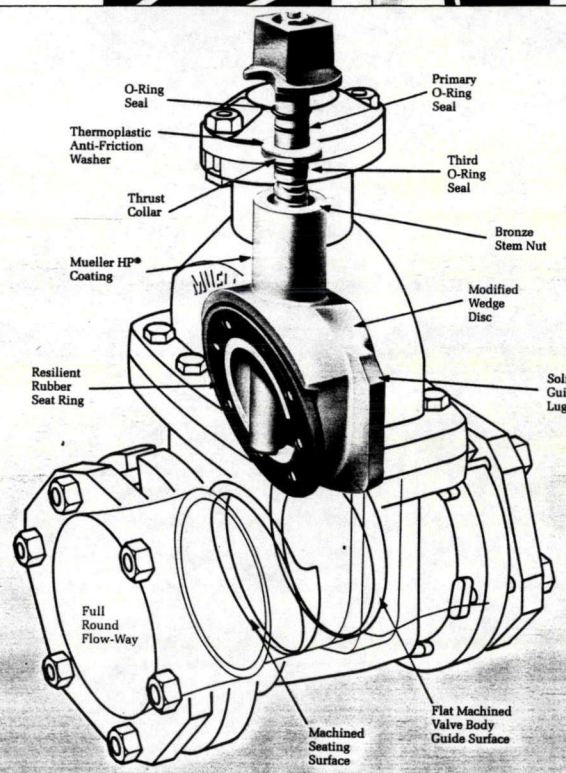
The bronze stem nut is cast as an integral part of the iron valve disc to prevent twisting, binding or angling of the nut or stem.

The seat ring of the Super-Seal valve is molded separately from the disc, so all internal surfaces can be epoxy coated — including all surfaces of the disc. Other manufacturers cannot do this as reliably because their discs are hollow and bottle-shaped. Their very shape makes them difficult to coat inside, and virtually impossible to verify full coverage.

There are no areas or "boundaries" between rubber and iron left unprotected for corrosion to get a toehold.

Mueller HP® Coating, a two-part thermosetting epoxy is what coats the internal surfaces of the Super-Seal valve. It provides an excellent physical, chemical and electrical barrier. And because we can coat the disc before the rubber seat ring is assembled, there are no areas or "boundaries" between rubber and iron left unprotected for corrosion to get a toehold.

The Super-Seal Resilient Seat Valve goes beyond AWWA requirements by using three "O" rings in the thrust collar area. Two are above the thrust collar with the outer one acting as a dirt seal to protect the second, primary seal. The third is below the collar to completely seal the critical thrust collar area from contamination. Our special lubricant is sealed in permanently by the "O" rings, and bathes the thrust collar for easier valve operation and less wear.



The Super-Seal valve doesn't have those variations in performance from one valve to the next, from one year to the next.

This design, in combination with a thermoplastic anti-friction collar, further aids the efficient conversion of torque to seating loads, for easy operation and positive sealing.

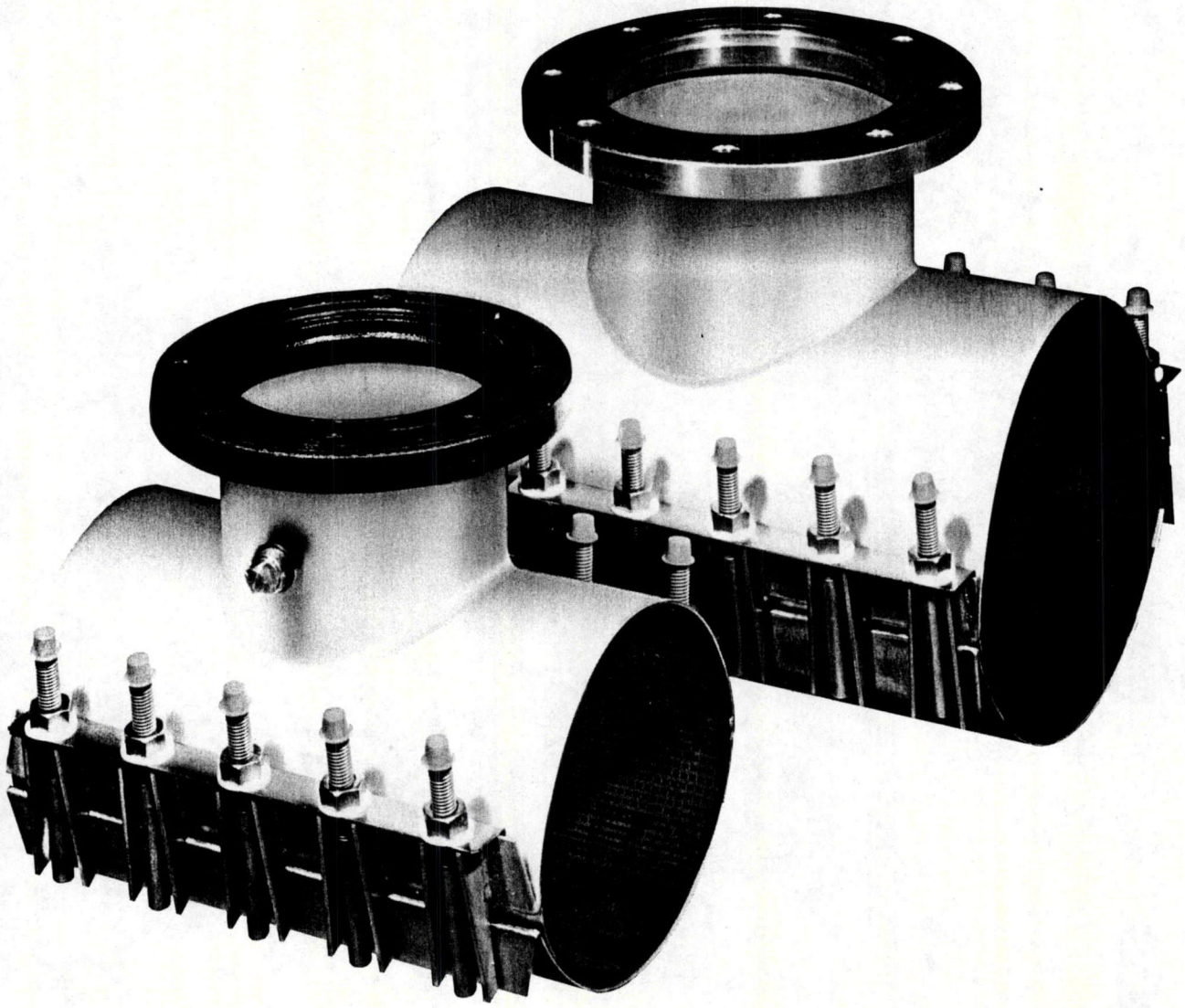
One major frustration with other valves is their inconsistency of operation. It takes a certain number of turns to seal one valve, and a different number of turns to seal the next one, even though they are the very same model. And that number may change after they've been in use for a few years.

The Super-Seal valve doesn't have those variations in performance from one valve to the next, from one year to the next. Just count the turns and you know it's closed. You can rely on the Super-Seal valve to provide consistent, predictable performance year after year after year.

ROMAC INDUSTRIES, INC.

EFFECTIVE DATE 9/15/89

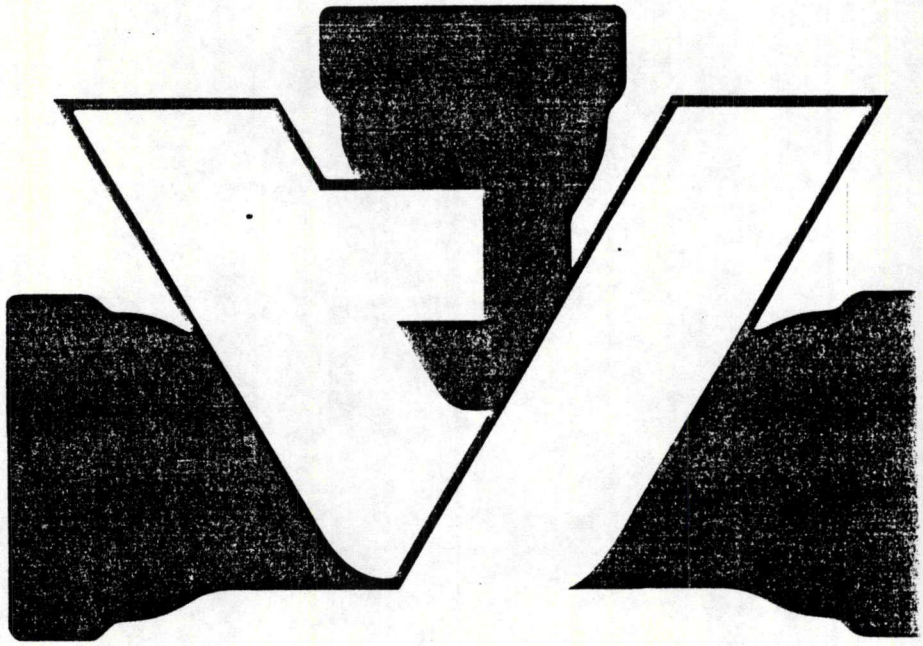
THE ROMAC "SST"™ STAINLESS STEEL TAPPING SLEEVE



SST™-9.45 x 6" FLG

DESIGN ADVANTAGES

- REDUCES INVENTORY . . . built in range means one sleeve fits various classes of cast iron or asbestos cement pipe.
- INSTALLS EASILY . . . no caulking, welding, specially trained personnel or tools needed. A wrench to tighten bolts is the only tool required to install Sleeve.
- FULL CIRCUMFERENTIAL SEAL . . . Allows you to tap size on size with confidence, assuring you of a full circumferential seal. No more need for heavy, hard to assemble cast iron sleeves.
- ALL STAINLESS STEEL . . . with the exception of the **Ductile+Plus** (ductile iron) Flange the complete sleeve is made of 304 Stainless Steel.
- LIGHT WEIGHT . . . the high tensile strength of stainless allows us to manufacture the lightest tapping sleeve in the industry, allowing you easy handling and reduces load on pipe.
- REINFORCES PIPE . . . Full circle design reduces stress on pipe opposite the tap.



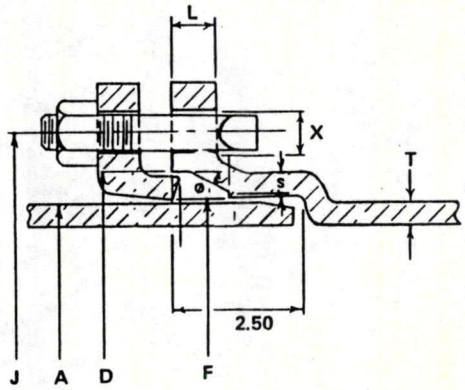
TRINITY VALLEY
COMPACT
MECHANICAL JOINT
DUCTILE IRON FITTINGS

U.L. LISTED

MADE IN U.S.A.

MECHANICAL JOINT COMPACT DUCTILE IRON CLASS 350 FITTINGS

Trinity Valley Ductile Iron Compact Mechanical Joint Fittings Class 350 are manufactured in accordance with and conform to ANSI/AWWA C153/A21.53-84. The cement lining conforms to ANSI/AWWA C104/A21.4-80.

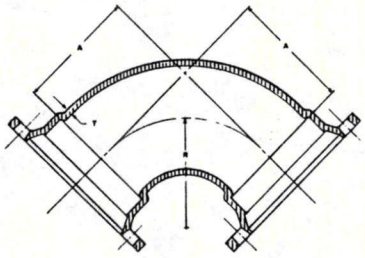


Joint Dimensions in Inches

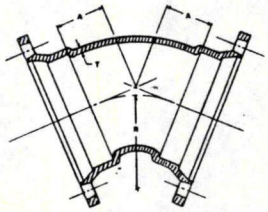
Size	A Dia.	D Dia.	F Dia.	J Dia.	L	S	T	X	Bolt Size
3	3.96	4.94	4.06	6.19	.60	.34	.34	.75	5/8 x 3
4	4.80	6.02	4.90	7.50	.60	.35	.35	.875	3/4 x 3 1/2
6	6.90	8.12	7.00	9.50	.63	.37	.37	.875	3/4 x 3 1/2
8	9.05	10.27	9.15	11.75	.66	.39	.39	.875	3/4 x 3 1/2
10	11.10	12.34	11.20	14.00	.70	.41	.41	.875	3/4 x 3 1/2
12	13.20	14.44	13.30	16.25	.73	.43	.43	.875	3/4 x 3 1/2

Note: See back page for additional accessory information.

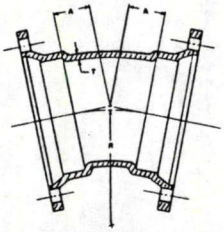
BENDS



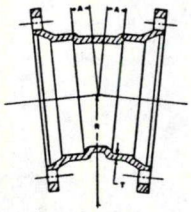
1/4 Bends (90°)
TV-700



1/8 Bends (45°)
TV-702



1/16 Bends (22½°)
TV-704

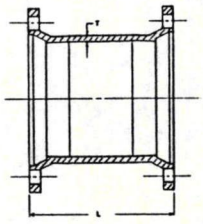


1/32 Bends (11¼°)
TV-706

Size		Dimensions		Weights	Dimensions		Weights	Dimensions		Weights	Dimensions		Weights
	T	A	R		A	R		A	R		A	R	
3	.34	4.0	3.5	18	2.0	3.32	15	1.5	4.40	12	1.25	6.34	11
4	.35	4.5	4.0	22	2.0	3.88	17	1.5	4.80	16	1.25	6.77	16
6	.37	6.0	5.5	39	3.0	6.24	31	2.25	8.47	28	1.5	9.38	25
8	.39	7.0	6.5	57	3.5	8.31	45	2.5	9.43	40	1.75	11.48	35
10	.41	9.0	8.5	90	4.5	10.05	69	3.0	11.94	59	2.0	13.95	52
12	.43	10.0	9.5	117	5.5	12.77	92	3.5	14.45	76	2.25	16.50	65

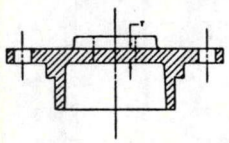
SLEEVES

Short
TV-721

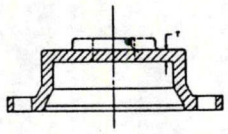


Long
TV-722

PLUGS & CAPS



MJ Plug
Solid Tapt
TV-740



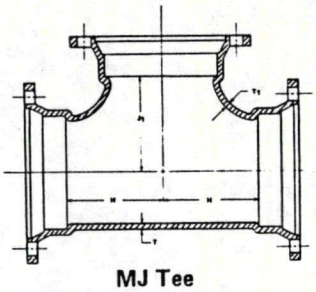
MJ Cap
Solid Tapt
TV-741

Size		Dimensions		Weights	
	T	Short L	Long L	Short	Long
3	.34	7.5	12	14	18
4	.35	7.5	12	16	23
6	.37	7.5	12	24	35
8	.39	7.5	12	33	48
10	.41	7.5	12	46	64
12	.43	7.5	12	55	78

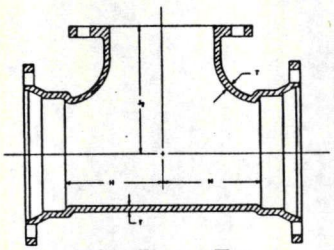
Size	Dimensions	Weights	
	T	Plugs	Caps
3	.46	6	7
4	.46	8	9
6	.46	15	14
8	.46	26	25
10	.56	38	33
12	.56	49	44

(Note: Weights shown do not include joint accessories)

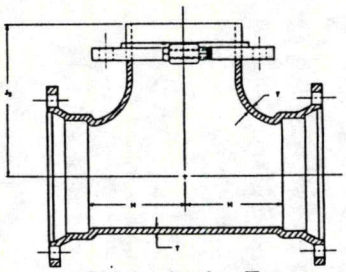
TEES



MJ Tee
TV-710



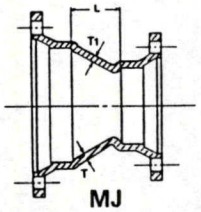
MJ X Flange Tee
TV-715



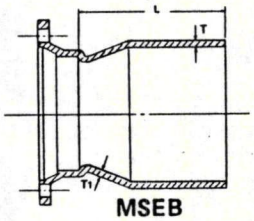
MJ Anchoring Tee
TV-770

Size			Dimensions				Weights		
	T	T1	H	J1	J2	J3	MJ	MJxFLG	MJ Anchoring
3	.34	.34	4.0	4.0	5.5	—	24	27	—
4x3	.35	.34	4.0	4.5	6.5	—	32	35	—
4	.35	.35	4.5	4.5	6.5	—	33	36	—
6x3	.37	.34	4.0	6.0	8.0	—	40	43	—
6x4	.37	.35	5.0	6.0	8.0	—	49	52	—
6	.37	.37	6.0	6.0	8.0	9.5	56	59	52
8x4	.39	.35	5.0	7.0	9.0	—	63	66	—
8x6	.39	.37	6.0	7.0	9.0	10.5	73	76	69
8	.39	.39	7.0	7.0	9.0	—	82	88	—
10x4	.41	.35	6.0	9.0	11.0	—	93	96	—
10x6	.41	.37	7.0	9.0	11.0	12.5	103	106	99
10x8	.41	.39	8.0	9.0	11.0	—	115	121	—
10	.41	.41	9.0	9.0	11.0	—	128	135	—
12x4	.43	.35	6.0	10.0	12.0	—	113	116	—
12x6	.43	.37	7.0	10.0	12.0	13.5	123	126	119
12x8	.43	.39	8.0	10.0	12.0	—	137	143	—
12x10	.43	.41	9.0	10.0	12.0	—	151	158	—
12	.43	.43	10.0	10.0	12.0	—	164	178	—

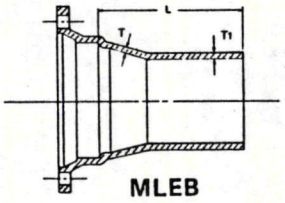
REDUCERS



MJ
TV-728



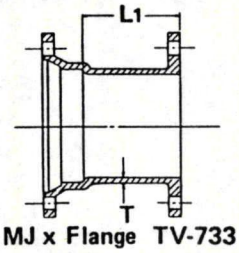
MSEB
TV-730



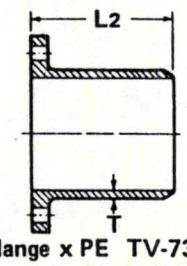
MLEB
TV-729

Size			Dimensions			Weights		
			MJ	MSEB	MLEB	MJ	MSEB	MLEB
	T	T1	L	L	L			
4x3	.35	.34	3.0	8.5	8.5	18	18	18
6x3	.37	.34	5.0	10.5	10.5	21	21	21
6x4	.37	.35	4.0	9.5	9.5	22	22	22
8x4	.39	.35	5.0	10.5	10.5	29	30	29
8x6	.39	.37	4.0	9.5	9.5	32	30	32
10x4	.41	.35	7.0	12.5	12.5	40	40	40
10x6	.41	.37	5.0	10.5	10.5	42	42	42
10x8	.41	.39	4.0	9.5	9.5	44	44	45
12x4	.43	.35	9.0	14.5	14.5	52	52	52
12x6	.43	.37	7.0	12.5	12.5	53	53	53
12x8	.43	.39	5.0	10.5	10.5	54	54	55
12x10	.43	.41	4.0	9.5	9.5	57	57	57

ADAPTERS



MJ x Flange TV-733



Flange x PE TV-735

Size	Dimensions			Weights	
	T	L1	L2	MJ x Flange	Flange x PE
3	.34	6	12	18	18
4	.35	6	12	21	24
6	.37	6	12	30	33
8	.39	6	12	42	51
10	.41	6	12	58	69
12	.43	6	12	76	93

DUCTILE IRON COMPACT MJ FITTINGS
ANSI/AWWA C153/A21.53-84

AWWA has established standard C153 for Ductile Iron Compact Fittings, 3 inch through 12 inch. The fittings are rated for 350 psi working pressure. The standard applies to all types of joints with the exception of flanged. Flanged joints are not included in the standard due to the importance of standardized center-to-flange dimensions. The standard defines minimum laying lengths and wall thicknesses. Increased dimensions are permissible at the discretion of the manufacturer. Therefore, metal thicknesses and bend radii may vary from manufacturer to manufacturer. Gray iron or ductile iron glands may be used with the Compact Ductile Iron Fitting. The Glands and Gaskets conform to ANSI/AWWA CIII/A21.11 (also used with ANSI/AWWA C110/A21.10 MJ fittings). Tee-head bolts used are 5/8" x 3" for 3" fittings and 3/4" x 3 1/2" for 4" through 12" fittings.

AWWA requires that each fitting be marked with the following information:

AWWA STANDARD IDENTIFICATION
PRESSURE RATING
DUCTILE IRON IDENTIFICATION
NOMINAL DIAMETER OF OPENINGS
NUMBER OF DEGREES ON BENDS
MANUFACTURER'S IDENTIFICATION
COUNTRY OF ORIGIN WHERE CAST

TRINITY VALLEY'S COMPACT DESIGN

Trinity Valley was an originator of the Compact design in 1961 when we first designed and produced AC Compact fittings. These many years of experience result in a Mechanical Joint Compact fitting designed for the Consulting Engineer as well as the user.

Trinity Valley's Compact design not only meets but exceeds the minimum criteria established by AWWA. For longer life we surpass the wall thicknesses listed in the standard. For better flow characteristics we exceed the bend radii minimums. Yet our fittings weigh less than other designs. Weight effective engineering builds in the ductile iron strength where it is required. Specifying Trinity Valley's Compact fitting assures you a quality product and lower installation and operating costs. Our Compact fitting is *engineered for strength and longevity with less weight.*

- **INCREASED WALL THICKNESS FOR LONGER LIFE**
- **BEND RADII DESIGNED FOR IMPROVED FLOW CHARACTERISTICS**
- **PRESSURE APPLIED CEMENT LINING FOR UNIFORMITY AND LONGEVITY**
- **LOWER INSTALLATION AND OPERATING COSTS**

MEMBER AWWA

Trinity Valley

P. O. BOX 2388
FT. WORTH, TEXAS 76113

iron & steel company

A DIVISION OF McWANE, INC.

817-738-1925
FAX 817-737-8615

H & W Industries, Inc.

IPS CLASSES — PVC GASKET PIPE
ASTM D-2241
(Quantity figured on 20 ft. lengths)

Size	Outside Diameter	Wall	Weight Per Foot	Pieces Bundle	Bundles Truckload	Truckload Pieces	Truckload Footage
PR 160 (SDR 26)							
1½"	1.900	.073	.296	196	24	4,704	94,080
2"	2.375	.091	.451	259	12	3,108	62,160
2½"	2.875	.110	.649	186	12	2,232	44,640
3"	3.500	.135	.956	125	12	1,500	30,000
4"	4.500	.173	1.561	76	12	912	18,240
6"	6.625	.255	3.394	28 14	12@28 4@14	392	7,840
8"	8.625	.332	5.778	24 18 20 15	4@24 2@18 4@20 2@15	242	4,840
10"	10.750	.413	9.001	12	12	144	2,880
12"	12.750	.490	12.728	8 4 6 3	6@8 2@4 6@6 2@3	98	1,960
PR 200 (SDR 21)							
1½"	1.900	.090	.354	196	24	4,704	94,080
2"	2.375	.113	.543	259	12	3,108	62,160
2½"	2.875	.137	.798	186	12	2,232	44,640
3"	3.500	.167	1.155	125	12	1,500	30,000
4"	4.500	.214	1.913	76	12	912	18,240
6"	6.625	.316	4.167	28 14	12@28 4@14	392	7,840
8"	8.625	.410	7.069	24 18 20 15	4@24 2@18 4@20 2@15	242	4,840
10"	10.750	.511	11.035	12	12	144	2,880
12"	12.750	.606	15.599	8 4 6 3	6@8 2@4 6@6 2@3	98	1,960

The above tables also apply to Classes 100, 125, 250, & 315 except for Wall Thicknesses and Weights Per Foot.

H & W Industries, Inc.

LARGE DIAMETER IRON-PIPE STANDARD O.D. PVC PIPE

- H & W is expanding its line of IPS O.D. PVC pipes to to 14", 16" & 18".
- H & W PVC Pressure Pipes with pressure rating of 160 PSI (SDR 26); 125 PSI (SDR 32.5) and 100 PSI (SDR 41).
- N.S.F. listed compound and pipe for potable water applications.
- Backed by H & W experience in large diameter PVC supply lines, force mains, irrigation systems.
- The deep bells of the H & W pipe joint with locked-in gaskets provide unmatched performance, proven in years of large diameter pipe service.

IPS CLASSES — PVC GASKET PIPE
ASTM D-2241
(Quantity figured on 20 ft. lengths)
I.P.S. O.D. PVC PIPE

SDR 26

Size	Outside Diameter	Wall	Weight Per Foot	Feet Per Bundle	Feet Per Truckload
14"	14.000	.538	16.8	120'	1,440'
16"	16.000	.615	20.1	60' & 40'	1,000'
18"	18.000	.693	25.8	60' & 40'	1,000'

SDR 32.5

Size	Outside Diameter	Wall	Weight Per Foot	Feet Per Bundle	Feet Per Truckload
14"	14.000	.431	12.2	120'	1,440'
16"	16.000	.492	16.0	60' & 40'	1,000'
18"	18.000	.554	20.8	60' & 40'	1,000'

SDR 41

Size	Outside Diameter	Wall	Weight Per Foot	Feet Per Bundle	Feet Per Truckload
14"	14.000	.341	9.9	120'	1,440'
16"	16.000	.390	13.0	60' & 40'	1,000'
18"	18.000	.439	16.8	60' & 40'	1,000'

DESIGN CRITERIA-PHYSICAL PROPERTIES FOR PVC 1120

PROPERTY	VALUE	UNITS	A.S.T.M. No.
Specific gravity	1.38		D792
Tensile strength (73°F.)	7,500	p.s.i.	D638
Modulus of elasticity in tension	415,000	p.s.i.	D638
Flexural strength	14,500	p.s.i.	D790
Izod impact (notched at 73°F.)	0.75	ft. lb./in.	D256
(unnotched at 73°F.)	45	ft. lb./in.	D256
Hardness (Shore "D")	78/82		D785
Hardness (Rockwell)	110		D785
Compressive strength	9,000	p.s.i.	D695
Hydrostatic Design Stress	2,000		
Coefficient of linear expansion	.0000278	in./in./°F.	D696
Heat distortion (°F. at 264 p.s.i)	173	degrees F.	D648
Coefficient of thermal conductivity	1.0	BTU/hr./sq. ft./in.	D177
Specific heat	0.25	BTU/lb./F.	
Water absorption (24 hrs. at 25 °C.)	.07	per cent	D570
Cell Classification		12454B	D1784

Above data compiled in accordance with ASTM test requirements and NSF.

BRONZE—MUELLER (CC) THREAD OR I.P. THREAD

Single and double strap service clamps for use on asbestos-cement, cast iron, ductile iron and cast iron O.D. PVC pipe

These clamps are furnished with an O-ring seal cemented in place.

The table below shows the sizes of tappings available. Where no check mark is shown, the clamp is not made with that size tapping.



Bronze service clamps with Mueller (CC) Thread

Pipe O.D. range		Kind and size* of pipe		Single strap with Mueller (CC) Thread					Double strap with Mueller (CC) Thread							
					Size of tapping					Size of tapping						
inch	mm	Asbestos-cement	Ductile or cast iron, cast iron O.D. PVC	Catalog number	1/2"	5/8"	3/4"	1"	Catalog number	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
4.74-5.32	121.0-135.0	4" Class 150	4"	H-16080	✓	✓	✓	✓	H-16123	✓	✓	✓	✓	✓	✓	✓
6.84-7.45	174.0-189.0	6" Class 150	6"	H-16084	✓	✓	✓	✓	H-16126	✓	✓	✓	✓	✓	✓	✓
8.99-9.67	229.0-245.0	8" Class 150	8"	H-16088	✓	✓	✓	✓	H-16130	✓	✓	✓	✓	✓	✓	✓
11.04-12.12	281.0-307.0	10" Class 150-200	10"	H-16091	✓	✓	✓	✓	H-16134	✓	✓	✓	✓	✓	✓	✓
13.14-14.58	334.0-370.0	12" Class 150-200	12"	H-16093	✓	✓	✓	✓	H-16137	✓	✓	✓	✓	✓	✓	✓

Bronze service clamps with I.P. Thread

Pipe O.D. range		Kind and size* of pipe		Single strap with I.P. Thread					Double strap with I.P. Thread							
					Size of tapping					Size of tapping						
inch	mm	Asbestos-cement	Ductile or cast iron, cast iron O.D. PVC	Catalog number	1/2"	5/8"	3/4"	1"	Catalog number	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
4.74-5.32	121.0-135.0	4" Class 150	4"	H-16058	✓		✓	✓	H-16102	✓		✓	✓	✓	✓	✓
6.84-7.45	174.0-189.0	6" Class 150	6"	H-16062	✓		✓	✓	H-16105	✓		✓	✓	✓	✓	✓
8.99-9.67	229.0-245.0	8" Class 150	8"	H-16066	✓		✓	✓	H-16109	✓		✓	✓	✓	✓	✓
11.04-12.12	281.0-307.0	10" Class 150-200	10"	H-16069	✓		✓	✓	H-16113	✓		✓	✓	✓	✓	✓
13.14-14.58	334.0-370.0	12" Class 150-200	12"	H-16071	✓		✓	✓	H-16116	✓		✓	✓	✓	✓	✓

*For service clamps to fit pipe not listed in these charts, use the pipe O.D. range as a guide to select the proper service clamp.

May be used with these machines:

Machine	Tap size						
	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
E-4	•	•	•	•			
E-5	•	•	•	•			
D-5		•	•	•	•	•	•
PL-2			•	•			

Service clamps with Mueller or I.P. Thread are suitable for pipe meeting the following specifications:

Asbestos-cement, class 150-200
Actual O.D. of pipe being used must fall within the pipe O.D. range as listed in the charts.

Centrifugally cast pipe, class 50-250
ANSI A21.6
ANSI A21.8
AWWA C106
AWWA C108
Federal Specifications WW-P-421

Ductile iron, all classes
ANSI A21.51
AWWA C151

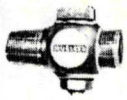
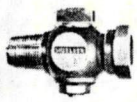
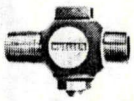
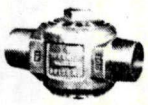
Cast iron O.D. PVC, class 150
AWWA C900 CI O.D.

Order by quantity, catalog number and size of tapping

New

CORPORATION STOPS AND VALVES
6 THREADED OUTLET CONNECTIONS

Stops with threaded outlet connections—for use with Mueller Corporation Stop couplings and threaded pipe

	Type inlet connection	Type outlet connection	Catalog number	Size*						
				1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
Ground Key Stops										
	Mueller (CC) Thread	Mueller Coupling Thread	H-9971■	✓	✓	✓	✓			
	Waterworks I.P. Thread		H-9976■	✓	✓	✓	✓			
	Mueller (CC) Thread	Increasing I.P. thread	H-10003■	✓	✓★	✓	✓	✓	✓	✓
	Waterworks I.P. Thread		H-9979■	✓	✓★	✓	✓		✓	✓
	Mueller (CC) Thread	Inside I.P. thread	H-10045	✓	✓	✓	✓	✓	✓	✓
	Waterworks I.P. Thread		H-10046	✓		✓	✓	✓	✓	✓
	Mueller (CC) Thread	Outside I.P. thread	H-9996			✓	✓		✓	✓
	Waterworks I.P. Thread		H-10013	✓	✓★	✓	✓	✓	✓	✓
	Standard I.P. thread†	Outside I.P. thread	H-10012	✓		✓	✓	✓	✓	✓
Oriseal® Stops										
	Mueller (CC) Thread	Outside I.P. thread	H-9968						✓	✓
	Waterworks I.P. Thread		H-9969						✓	✓**

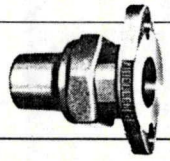
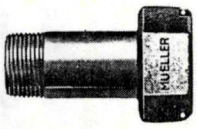
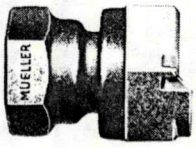
*Nominal size for both inlet and outlet connections.
**The 2" H-9969 stop is not recommended for machine insertion — use with service clamps listed in section B2.
■Also include inside screw plug thread in outlet.
★3/4" outlet thread.
†For use with service clamp only — cannot be machine inserted.

CONTINUED ON PAGE B1-7

Order by quantity, size and catalog number

METER SETTING EQUIPMENT
WATER METER COUPLINGS

Water meter couplings

	Type of tailpiece end	Type of meter connection	Catalog size*	Catalog number	Tailpiece length inch	Tailpiece length (mm)	Tailpiece machined inside/ outside	Tailpiece ribbed outside/ cored inside	Swivel nut drilled for wire seal	Quarter bend tailpiece	Insulated/ integral insulator in swivel nut
	Copper service thread connection**	Meter saddle nut	5/8" × 3/4"	H-14205	—			✓	✓		
				H-14200	—			✓	✓	✓	
			5/8" × 3/4" × 3/4"	H-14205	—			✓	✓		
				H-14200	—			✓	✓	✓	
			1"	H-14205	—			✓	✓		
				H-14200	—			✓	✓	✓	
		Meter flange	1 1/2"	H-14208	—			✓			
				H-14203	—			✓		✓	
			2"▲	H-14208	—			✓			
				H-14203	—			✓		✓	
	Outside I.P. thread	Meter swivel nut	5/8" × 1/2"	H-10890	2 3/8	(60)	✓				
				H-10892	—			✓		✓	
				H-10896	2 3/8	(60)	✓		✓		
			5/8" × 3/4" × 3/4"	H-10890	2 1/2	(64)	✓				
				H-10892	—			✓		✓	
				H-10896	2 1/2	(64)	✓		✓		
				H-10871	2 35/64	(65)	✓				✓
			1"	H-10890	2 37/64	(65)	✓				
				H-10892	—			✓		✓	
				H-10896	2 37/64	(65)	✓		✓		
				H-10871	2 21/32	(67)	✓				✓
			1 1/4"	H-10891	2 41/64	(67)		✓			
			1 1/2"	H-10891	2 27/32	(72)		✓			
			2"	H-10891	3 1/32	(77)		✓			
	Inside I.P. thread	Meter saddle nut	5/8" × 3/4"	H-14215	—			✓	✓		
				H-14210	—			✓	✓	✓	
			5/8" × 3/4" × 3/4"	H-14215	—			✓	✓		
				H-14210	—			✓	✓	✓	
			1"	H-14215	—			✓	✓		
				H-14210	—			✓	✓	✓	

*Nominal sizes.
**For ASTM B88 type "K" copper service tubing.
▲2" meter flange is double drilled to fit either 1-1/2" or 2" flanged meter.

Catalog size equivalents

Catalog size*	Meter size*	Tailpiece thread size*	Size I.P. thread in meter swivel nut*
5/8" × 3/4"	5/8"	1/2"	3/4"
5/8" × 3/4" × 3/4"	5/8" × 3/4", 3/4"	3/4"	1"
1"	1"	1"	1 1/4"
1 1/4"	1 1/4"	1 1/4"	1 1/2"
1 1/2"	1 1/2"	1 1/2"	2"
2"	2"	2"	2 1/2"

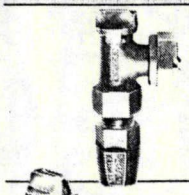
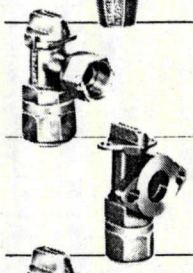
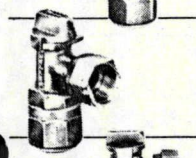
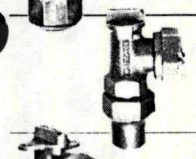
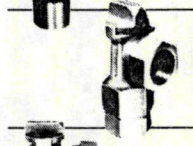
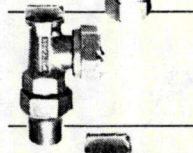
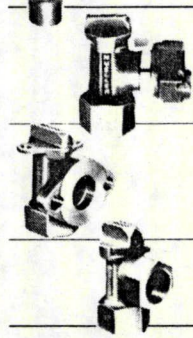
*Nominal sizes.
**For ASTM B88 type "K" copper service tubing
▲2" meter flange is double drilled to fit either 1-1½" or 2" flange meter.

Order by quantity size and catalog number

14 ANGLE METER STOPS

Ground key angle meter stops

Angle meter stops

	Type of inlet	Type of outlet	Catalog number: Plain flat head	Catalog number: Lock wing	Catalog size*	Meter size*	Inlet size*	Size I.P. thread in outlet*
	Insta-Tite® Connection for CTS O.D. PE plastic tubing**	Meter saddle nut†	H-14262	H-14267	5/8" × 3/4" × 3/4"	5/8" × 3/4", 3/4"	3/4"	1"
			H-14262	H-14267	5/8" × 3/4", 1"	5/8" × 3/4", 3/4"	1"	1"
			H-14262	H-14267	1"	1"	1"	1 1/4"
	Insta-Tite Connection for IPS PE plastic pipe**	Meter saddle nut†	H-14261	H-14266	5/8" × 3/4" × 3/4"	5/8" × 3/4", 3/4"	3/4"	1"
			H-14261	H-14266	5/8" × 3/4" × 1"	5/8" × 3/4", 3/4"	1"	1"
			H-14261	H-14266	1"	1"	1"	1 1/4"
	Mueller 110® Conductive Compression Connection for CTS O.D. tubing**	Meter saddle nut†	H-14253		5/8" × 3/4"	5/8"	3/4"	3/4"
			H-14253	H-14258	5/8" × 3/4" × 3/4"	5/8" × 3/4", 3/4"	3/4"	1"
			H-14253		5/8" × 3/4" × 1"	5/8" × 3/4", 3/4"	1"	1"
				H-14258	1"	1"	1"	1 1/4"
		Meter flange		H-14277	1 1/2"	1 1/2"	1 1/2"	—
				H-14277	2"	2"	2"	—
	Mueller 110 Compression Connections for IPS PE plastic pipe**	Meter saddle nut†	H-14254		5/8" × 3/4"	5/8"	3/4"	3/4"
				H-14259	5/8" × 3/4" × 3/4"	5/8" × 3/4", 3/4"	3/4"	1"
			H-14254		5/8" × 3/4" × 1"	5/8" × 3/4", 3/4"	1"	1"
				H-14259	1"	1"	1"	1 1/4"
	Copper service thread connection for ASTM B88 type "K" copper tubing	Meter saddle nut†	H-14250	H-14255	5/8" × 3/4"	5/8"	3/4"	3/4"
			H-14250	H-14255	5/8" × 3/4" × 3/4"	5/8" × 3/4", 3/4"	3/4"	1"
			H-14250	H-14255	5/8" × 3/4" × 1"	5/8" × 3/4", 3/4"	1"	1"
			H-14250	H-14255	1"	1"	1"	1 1/4"
		Meter flange	H-14276		1 1/2"	1 1/2"	1 1/2"	—
			H-14276		2"	2"▲	2"	—
	Copper service pipe connection for ASTM B88 type "K" copper tubing	Inside I.P. thread	H-14270	H-14275	3/4"	—	3/4"	3/4"
			H-14270	H-14275	1"	—	1"	1"
			H-14270		1 1/2"	—	1 1/2"	1 1/2"
			H-14270		2"	—	2"	2"
	Copper service thread connection with swivel bushing and O-ring seal for cold flaring CTS O.D. PE plastic tubing**	Meter saddle nut†	H-14251		5/8" × 3/4"	5/8"	3/4"	3/4"
			H-14251	H-14256	5/8" × 3/4" × 3/4"	5/8" × 3/4", 3/4"	3/4"	1"
				H-14256	1"	1"	1"	1 1/4"
	Inside I.P. thread	Meter saddle nut†	H-14260	H-14265	5/8" × 3/4"	5/8"	3/4"	3/4"
			H-14260	H-14265	5/8" × 3/4" × 3/4"	5/8" × 3/4", 3/4"	3/4"	1"
			H-14260	H-14265	5/8" × 3/4" × 1"	5/8" × 3/4", 3/4"	1"	1"
			H-14260	H-14265	1"	1"	1"	1 1/4"
		Meter flange		H-14286	1 1/2"	1 1/2"	1 1/2"	—
				H-14286	2"	2"▲	2"	—
		Inside I.P. thread	H-14280	H-14285	3/4"	—	3/4"	3/4"
			H-14280	H-14285	1"	—	1"	1"
			H-14280		1 1/2"	—	1 1/2"	1 1/2"

*Nominal sizes.

**See charts on page B5-15 for tubing and pipe that can be used with these connections.

†Meter saddle nut is drilled for wire seal.

▲2" flange is double drilled for either 1 1/2" or 2" flanged meters.

CONTINUED ON B5-15

Order by quantity, catalog size and catalog number

TOWN OF LONGBOAT KEY FLORIDA

INCORPORATED NOVEMBER 14, 1955

501 Bay Isles Road
Longboat Key, Florida 33548
(813) 383-3721

October 27, 1989

Jim Dickens
Arvida Contractors
595 Bay Isles Road
Longboat Key, Fl. 34228

Re: SABAL COVE

Dear Jim:

The utility work on the above referenced project is approved in accordance with the plans received 10/24/89 and the specifications received 9/25/89, with the following conditions:

1. The PVC fittings for sewer must be compatible with the pipe and approved by the Town.

2. All fire systems must be installed after the domestic meter with a double check valve assembly approved by the Town.

3. A temporary, above ground, hose connection with 3/4" male thread and vacuum breaker shall be installed and maintained on the consumer side of the meter until the permanent connection is made.

4. Manhole bases shall be monolithically cast with bottom section 4" outside of walls.

5. No SDR-35 pipe will be allowed on Longboat Key.

6. No corregated plastic drainage pipe will be allowed on Longboat Key.

7. This approval is issued on condition that construction comply with all Town standards whether shown or noted on the plans.

If there are any questions, please let me know.

Very truly yours,

Leonard A. Smally
Director of Public Works

/cmm
cc: William Bishop
Roy Wamsley
Town Inspector

Arvida / JMB Partners
GULF COAST DIVISION
595 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 34228
TELEPHONE (813) 383-9551

19 October 1989

Mr. Jay Brady, Town Planner
Town of Longboat Key
Longboat Key, FL 34228

Ref: **Sabal Cove Development Review Costs**

Dear Jay,

Please find enclosed check in the amount of $555.00, submitted as payment for staff review charges incurred in connection with the Outline Development Plan Amendment and the Site Plan Review for Sabal Cove.

Please give me a call if anything further is required before issuance of a building permit for this project.

Thanks for your continued cooperation.

Sincerely,

Herman Tom
Vice President, Planning & Development

Enclosure

RECEIVED
OCT 19 1989
Town of
Longboat Key

TOWN OF
LONGBOAT KEY

501 Bay Isles Road
Longboat Key, Florida 33
(813) 383-3721

September 29, 1989

Mr. Herman Tom
ARVIDA/JMB
595 Bay Isles Road
Longboat Key, Fl 34228

RE: Sabal Cove Development Review Costs

Dear Herman Tom:

Enclosed please find copies of the Development Review Time/Cost Accounting sheets for the Sabal Cove project together with a Cost Summary Sheet.

Per Section 159.01, Subparagraphs (A)(7) and (9) and Section 159.02(A) of the Town Code, be advised that staff review charges incurred in connection with the Outline Development Plan Amendment and the Site Plan Review for Sabal Cove amounted to $555.00.

A building permit cannot be issued until receipt of the above amount. If you have any questions concerning this matter, please feel free to contact me.

Sincerely,

Jay Brady, AICP
Planning Director

JB/dmh

Enclosures

cc: Public Works Director Smally
Finance Director Sullivan
Chief Building Official Nowlen
Project File
Reading File

SPECIFICATIONS

FOR

SABAL COVE

FOR

ARVIDA/JMB PARTNERS, INC.

SEPTEMBER 1989

Earthwork, Drainage and Paving
Water and Sewer Utilities

Contract ARVD-0478

BISHOP & ASSOCIATES
CONSULTING ENGINEERS - SURVEYORS
SARASOTA, FLORIDA



INDEX

FOR

SABAL COVE
SPECIFICATIONS

Section	Description
01300	Submittals
02100	Site Clearing and Preparation
02210	Earthwork and Grading
02221	Excavating, Backfilling and Compacting for Structures
02222T	Excavating, Backfilling and Compacting for Utilities
02230	Limerock and Shell Base
02511	Asphaltic Concrete Surface Course
02512	Concrete Pavers
02528	Concrete Curbs and Gutters
02668T	Domestic Waters Systems
02720	Inlets, Catch Basins, Junction Boxes, Stormwater Control Structure
02722T	Pipe Culverts and Storm Sewers
02730T	Sanitary Sewer
03310	Structural Concrete
03600	Non-Shrink Grout
15100	Valves

SECTION 01300

SUBMITTALS

PART I - GENERAL

1.0 Construction Schedules

1.01 The CONTRACTOR shall submit two copies of Progress Schedules indicating the starting and completion dates of the various stages of the work and estimated payments during the next three months to the ENGINEER. The proposed Progress Schedules shall be submitted to the ENGINEER prior to the preconstruction meeting. The CONTRACTOR shall distribute copies of the Progress Schedules during the preconstruction meeting for discussion. The Progress Schedules shall be updated by the CONTRACTOR and submitted to the ENGINEER, as a part of applications for progress payments, through completion of the Work. Failure to update progress schedule may be the basis for rejection of applications for progress payments.

1.02 The CONTRACTOR, if applicable, shall submit two copies of Schedules of Value of the work to the ENGINEER. A preliminary Schedule of values shall be submitted by the CONTRACTOR prior to the preconstruction meeting. A final Schedule of Values, prepared in accordance with Article 14.1 of the General Conditions and presented in sufficient detail to serve as the basis for payments during construction, shall be submitted to the ENGINEER for approval at least ten (10) days prior to submitting the first Application for payment.

1.1 Applications For Payment

1.11 The CONTRACTOR shall submit Applications for payment to the ENGINEER in accordance with the provisions of Article 14 of the General Conditions. Applications for Payment shall be made on forms provided by or approved by the ENGINEER.

1.2 Shop Drawings, Product Data and Samples

1.21 The CONTRACTOR shall submit shop drawings, product data and samples, as required by the individual Specification Sections, to the ENGINEER for review in accordance with the provisions of Paragraphs 6.23 through 6.28, inclusive, of the General Conditions.

1.22 Shop drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to Contract Drawing Number and Detail, and Contract Specification Section and Page Number.

1.23 The product data shall be presented in a clear and thorough manner, identified the same as the shop drawings. Included with the information shall be performance characteristics and capacities depicting dimensions and clearances required. The manufacturer's standard schematic drawings and diagrams shall be modified to delete information which is not applicable to the work. Manufacturer's standard information shall be supplemented to provide information specifically applicable to the work.

1.24 Samples shall be of sufficient size and quantity to clearly illustrate functional characteristics of the product with integrally related parts and attachments devices depicting full range of color, texture and pattern.

1.25 The CONTRACTOR shall make submittals in accordance with the approved schedule, and in such sequence as to cause no delay in the work or in the work of any CONTRACTOR. No damages will be awarded or extension of time granted due to the shop drawing and product data review process.

1.26 The CONTRACTOR shall submit an entire package of shop drawings and product data information for major items of work so that the ENGINEER can review the package as a unit.

1.27 The number of submittals required shall be seven (7) copies of each shop drawing or product data information sheet. Submittals shall contain the following information:

1. Field dimensions, clearly identified as such.
2. Relation to adjacent or critical features of the work or materials.
3. Applicable standards, such as ASTM or Federal Specification Numbers.
4. Identification of deviations from Contract Documents.
5. Identification of revisions on resubmittals.
6. CONTRACTOR'S stamp indicating as a minimum the Project Title, Date of Submission, Date of Previous Submission, and Contract Specification Section Reference which shall be initialed or signed, certifying the review and approval of submittal per General Conditions, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of Contract Documents.

1.28 The ENGINEER shall affix a stamp and initials or signature and indicate confirmation or requirements for resubmittal. The ENGINEER shall return to the CONTRACTOR two (2) copies of the product data information for distribution or for resubmission.

1.29 The CONTRACTOR shall make all corrections or changes in the submittals required by the ENGINEER and resubmit. The CONTRACTOR shall indicate any changes which have been made other than those requested by the ENGINEER.

1.3 Specification Section Requirements

1.31 Miscellaneous schedules, field reports, test reports, affidavits, certificates, permits, agreements and other items identified in the Technical Specification Sections, or as requested by the ENGINEER shall be submitted to the ENGINEER in duplicate. As a minimum, these submittals should be identified with the Project Tile, Date of Submission, and Contract Specification Section Reference.

1.4 Manufacturer's Operation And Maintenance Data

1.41 The CONTRACTOR shall furnish seven (7) copies of all operation and maintenance data required by the various Technical Sections. Prior to 50 percent completion of the Project, the CONTRACTOR shall have submitted one (1) acceptable copy to the ENGINEER for review.

1.42 The operation and maintenance data shall be bound in a suitable three-ring binder(s). A Table of Contents shall be provided in the front of each binder to list the various sections of the Manual.

1.43 The information to be provided in each section for each piece of equipment and project component shall include but not be limited to: detailed equipment drawings; sections cut through all of the major equipment and sub-assemblies; installation and operational procedures; complete wiring and piping schematics; lubrication materials and procedures; maintenance procedures; and parts lists complete enough to permit identification of parts by nomenclature, number and use.

1.44 At the front of each section a maintenance schedule shall be provided for each piece of equipment in the section. The schedule shall display the daily, weekly, monthly, semi-annual, annual or fraction thereof, lubrication and preventative maintenance required in order to meet warranty conditions and the manufacturer's recommendations for optimum performance and life of the unit. A common schedule format is to be developed and used for all of the sections.

1.5 Photographs

1.51 When required in the Summary of Work, Section 01010 the CONTRACTOR shall furnish the ENGINEER a total of four (4) prints, two (2) black and white and two (2) color photographs each month during construction of the project. Prints shall be 8 inches x 10 inches and shall be inserted in transparent sheet protection suitable for binding. All photographs shall be taken at such times and of such views as the ENGINEER directs. The following information shall be placed on the back of the photos: job name, contract number, description of view and date of photograph. The CONTRACTOR, at the completion of the job, shall submit to the ENGINEER all negatives.

1.52 The CONTRACTOR shall submit photographs monthly along with the Application for progress payment as described in Article 14 of the General Conditions.

1.6 Audio-Video Route Survey

1.61 When required in the Summary of Work, Section 01010, the CONTRACTOR shall furnish the ENGINEER with an "Audio-Video Route Survey" record of the existing conditions prior to the start of construction. CONTRACTOR must enlist the services of a firm having a minimum of one years experience in audio-video taping of construction projects.

1.62 Complete coverage shall include all surface features located within the public right-of-way, easement areas and adjacent private properties up to building line when such properties lie within the zone of influence of construction and will be supported by appropriate audio description made simultaneously with video coverage. Such coverage shall include but not be limited to all existing driveways, sidewalks, curbs, ditches, roadways, landscaping, trees, culvert, headwalls and retaining walls, or buildings located within such zone of influence.

1.63 When conventional wheeled vehicles are used, the distance from the camera lens to the ground shall be not less than twelve (12) feet to ensure proper perspective.

1.64 All recording must be made on continuous running audio-video tapes.

1.65 Audio-video to be on 1/2-inch VHS format cassettes suitable for recording and play-back on video color equipment.

1.66 Houses and buildings shall be identified visually by house number, when visible, in such a manner that structures of the proposed system can be located by reference. In all instances, however, location shall be identified by audio or visual means at intervals not to exceed 100 linear feet in the general direction of travel.

1.67 The rate of speed in the general direction of travel of the conveyance used during taping shall not exceed 30 feet/minute. Panning rates and zoom-in, zoom-out rates shall be controlled sufficiently such that stop action during play-back will produce clarity of detail of the object viewed.

1.68 All taping shall be done during times of good visibility. No taping shall be done during periods of visible precipitation, or when more than 10% of the ground area is covered with standing water, unless otherwise authorized by the OWNER.

1.69 Any taped coverage not acceptable to OWNER shall be refilmed at no additional charge.

1.70 The audio-video taping shall be done prior to placement of materials or equipment on the construction area and furnished one week prior to the preconstruction meeting.

1.71 To preclude the possibility of tampering or editing in any manner, all video recordings must, by electronic means, display continuously and simultaneously generated transparent digital information to include the date and time of recording, as well as the corresponding engineering stationing numbers. The date information will contain the month, day, and year. For example, 10/5/77, and be placed directly below the time information. The time information shall consist of hours, minutes, and seconds, separated by colons. For example 10:35:18. This transparent information will appear on the extreme upper left hand third of the screen.

END OF SECTION

SECTION 02100

SITE CLEARING AND PREPARATION

PART I - GENERAL

1.0 Scope

1.01 Under this section the CONTRACTOR shall furnish all supervision, labor, materials, tools and equipment necessary for the clearing and preparation of the site as may be required to carry out the construction.

1.02 No work under this section shall be performed outside of the Site Clearing Limits as shown on the Plans unless otherwise directed by the ENGINEER.

PART III - EXECUTION

3.0 Clearing and Grubbing

3.01 The CONTRACTOR shall remove from the site and dispose of all brush, trees, stumps, roots, logs, rocks, shrubs, debris and other vegetation as necessary for convenience in construction and as marked by the ENGINEER for removal. All organic material shall be removed from the right-of-way before filling. This material shall not be placed in the excavation. Any trees marked by the ENGINEER to be preserved shall be protected from damage. Trees, stumps and rubbish shall be disposed of by the CONTRACTOR in accordance with State and local requirements at no cost to the OWNER.

3.02 Topsoil where present on the site in areas to be disturbed shall be stripped off and stored in piles adjacent to the working area and convenient to the areas required to be top dressed and seeded.

3.03 Where on-site material is to be removed and stockpiled for reuse, the CONTRACTOR shall prepare a suitable stockpiled area on site where approved by the ENGINEER. No excess material is to be removed from the site without the written permission of the OWNER.

3.04 The stockpile area location is shown on the Plans.

END OF SECTION

SECTION 02210
EARTHWORK AND GRADING

PART I GENERAL

1.0 Scope

1.01 The work included under this specification shall include furnishing all labor, tools, material and equipment to form embankments and to excavate, remove, transport, store and satisfactorily dispose of all excavated material, regardless of nature, to grade the site to the lines and grades shown on the Plans. Included in this work is site preparation for depositing of excavated materials.

1.1 Related Technical Specifications

1.11 Additional specifications for excavating, backfilling and compacting for structures is included in Section 02221.

1.12 Additional specifications for excavating, backfilling and compacting for utilities is included in Section 02222.

PART III EXECUTION

3.0 Installation, Application and Testing

3.1 Dewatering

3.11 The area within the vicinity of the new work shall be dewatered sufficiently to allow the work to proceed in a dry condition.

3.2 Excavation

3.21 All excavations shall be carried to the elevations shown on the plans or as directed by the ENGINEER. Excavation shall include shaping, sloping and dressing necessary for construction of required cross sections as shown on the plans; supplemental cross sections furnished or as directed by the ENGINEER. The CONTRACTOR shall be responsible for washouts or mishap to the work caused by his workmanship and shall again excavate, slope and reshape these portions of the work at his own expense before completion and acceptance of the work. Excavated material may be cast, carried or stockpiled and carried in an approved manner with suitable equipment to disposal areas at the CONTRACTOR expense.

3.3 Backfilling

3.31 In fill areas all debris shall be removed from the area to be filled. All material detrimental to site improvement shall be removed from the site and acceptably disposed of.

3.32 Fill material shall be free of debris or other detrimental material and shall have a reasonable moisture content when placed. Fill to be installed under proposed structures or roadway base shall be compacted to 98% modified Proctor and placed as shown or specified herein. All other fill shall be compacted to 90% maximum density in accordance with AASHTO T-180 and placed in maximum of 12-inch lifts.

3.4 Rough Grading

3.41 The site shall be graded as necessary to comply with the Plans or as directed by the ENGINEER. The subgrade shall be roughly established by cut or fill, approximately parallel to proposed finished grades and to elevations which allow for thickness of topsoil and installation of site or roadway improvements.

3.5 Roadway Grading

3.51 The roadway indicated on the plans shall be cut to the required elevation. Fore slopes and back slopes indicated on the plans shall be strictly conformed to and back slopes shall be carried to the right-of-way limits as required. In the event unsuitable material is found at the level of the sub-base, the CONTRACTOR shall continue to excavate and dispose of such unsuitable material as ordered by the ENGINEER and shall back fill with suitable material to finish grade including compaction. Suitable material shall be deposited or spread in 6" maximum depths and suitably compacted with smooth rollers or construction equipment as approved by the ENGINEER or specified herein. No material shall be deposited on trees, shrubs, or trash. Unsuitable material encountered in the excavated material shall be removed and disposed of in a suitable manner. The CONTRACTOR shall provide and maintain at his own expense the necessary roads for hauling or transporting the material to the fill area. Where hauling is done over existing roads, the CONTRACTOR shall not permit such roads to deteriorate in condition due to his operations.

3.6 Finish Grading

3.61 The subgrade shall be smoothed parallel to proposed finished grades and elevations specified on the Plans.

3.62 The topsoil shall be spread uniformly to provide a smooth, even surface at a finish grade specified on the Plans or acceptable to the ENGINEER. After spreading, the topsoil shall be compacted lightly as necessary to minimize settlement.

END OF SECTION

SECTION 02221

EXCAVATING, BACKFILLING AND COMPACTING FOR STRUCTURES

PART I - GENERAL

1.0 Scope

1.01 This Section includes excavation for structures, removal and disposal of excavated materials, backfilling, backfill materials and compaction.

1.1 Submittals

1.11 The CONTRACTOR shall provide the ENGINEER with 2 certified copies of the test results of the compaction of the backfill as specified herein. The testing for compaction and the certification of the test results shall be performed by a testing laboratory approved by the ENGINEER.

PART III - EXECUTION

3.0 Installation, Preparation & Testing

3.1 Dewatering

3.11 The area within the vicinity of the new Work shall be dewatered as required to allow the excavation to remain in a dry condition during the construction of the structure, including the excavation, backfilling and compacting operations.

3.2 Excavation

3.21 Excavation shall include the excavating and disposing of all materials encountered, regardless of nature, the supporting and protecting of all structures and/or utilities encountered above and below the ground surface, and the removal of water from the construction site. Excavation shall also include the removal of existing structures, as shown on the Plans or as directed by the ENGINEER.

3.22 The CONTRACTOR shall keep the limits of his excavation operations within a reasonable close conformity with the location and grade, of each structure.

3.23 The excavated materials shall be temporarily stored in a manner that will not cause damage to trees, shrubs, fences, improvements, utilities, private property or traffic. The excavated materials shall not be placed at such locations that will endanger the banks of the excavation by imposing loads thereon.

3.24 When concrete is to bear on or against an excavated surface other than rock, special care shall be taken not to disturb the surface. The final removal of the foundation material to grade shall not be made until just prior to the placing of the concrete.

3.25 Excavated material, determined by the ENGINEER as suitable for backfill may be used. All excess materials shall be disposed by the CONTRACTOR, at his expense.

3.26 The surface of all rock or other hard material upon which concrete is to be placed shall be free from all loose fragments, cleaned and cut to a firm surface. The surface shall be level, stepped or serrated, as shown on the Plans.

3.27 All unsound material underlying proposed structures shall be removed and replaced with material approved by the ENGINEER, or in layers not exceeding 6 inches in depth. Each layer shall be compacted to 98 percent of maximum unit weight unless indicated otherwise on the Plans, or within these specifications.

3.3 Sheeting, Shoring and Bracing

3.31 The CONTRACTOR shall furnish, place and maintain at all times such sheeting, shoring and bracing of the excavated area as may be required for safety of the workmen and for protection of the new Work or adjacent structures, including pavement, curbs, sidewalks, pipelines and conduits next to, or crossing the excavated area, and for the protection and safety of pedestrian and vehicular traffic.

3.32 Sheeting, shoring and bracing shall conform to current federal or state regulations for safety.

3.33 Where indicated on the Plans and where necessary in the Work, install and leave sheeting, shoring and bracing in place. No extra compensation shall be paid to the CONTRACTOR for sheeting, shoring or bracing left in place.

3.34 Supports for pipes, conduits, etc., crossing the excavated area shall conform to the requirements of the OWNERs of such facilities and if necessary, shall be left in place.

3.35 The furnishing, placing, maintaining and removing of sheeting, shoring and bracing materials shall be at the CONTRACTOR's expense.

3.36 The CONTRACTOR shall not remove the sheeting, shoring or bracing until the structure has obtained sufficient strength to support the external loads. The sheeting, shoring and bracing material shall not come in contact with the structure, but shall be installed so that no concentrated loads or horizontal thrusts are transmitted to the structure.

3.4 Backfill

3.41 Backfill material shall be placed only after the new Work and backfill material have been inspected by the ENGINEER.

3.42 Backfill shall not be placed against any portion of the new Work until the required curing, surface finishing and waterproofing of such portions have been completed. Backfill which will place an unequalized horizontal loading on the new Work shall not be placed until the concrete has attained at least 70 percent of its design strength. To equalize horizontal loadings, the required backfill around the new Work shall be placed on opposite sides at the same time.

3.43 Granular material shall be used for backfilling the new Work unless otherwise indicated on the Plans or within these specifications.

3.44 All spaces excavated and not occupied by the new Work or by the specified backfill material, shall be backfilled with suitable material from the excavation.

3.45 Large stones, boulders, broken rocks, concrete, and masonry shall not be used in the backfill.

3.46 The backfill shall be carried up to the surface of the adjacent ground or to the elevation of the proposed earth grade, and its top surface shall be neatly graded. Fills around all new Work shall be trimmed to the lines shown on the Plans or as directed by the ENGINEER.

3.5 Compacting Backfill

3.51 All backfill behind and around the new Work shall be placed in layers, not more than 9 inches in depth, and shall be compacted to not less than 98 percent of the maximum unit weight.

3.52 Areas where the density does not affect the construction, as determined by the ENGINEER, shall be compacted to not less than 90 percent of maximum unit weight.

3.6 Cleanup

3.61 Immediately following the placing and compacting of the backfill, the excess material shall be removed and disposed of by the CONTRACTOR, at his expense.

3.62 The construction area shall be graded and left in a neat, workmanlike condition.

3.7 Testing

3.71 During the course of the Work, the ENGINEER shall require testing for compaction or density on each lift of the backfill below structures at a minimum of twice per structure with an additional test for each 1000 square feet of area in excess of 1000 square feet. The taking of samples and the testing required shall be performed by a testing laboratory approved by the ENGINEER. The cost for testing and sampling shall be at the expense of the CONTRACTOR.

3.8 Defective Work

3.81 Any portion of the backfill which is deficient in the specified density shall be corrected by the methods meeting the approval of the ENGINEER. Any extra testing or sampling required because of apparent deficiencies shall be at the CONTRACTOR's expense.

END OF SECTION

SECTION 02222

EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES

PART I - GENERAL

1.0 Scope

1.01 This Section includes open trench construction, complete with trenching, sheeting, bracing, backfilling, backfill materials and compaction.

1.1 Submittals

1.11 The CONTRACTOR shall provide the ENGINEER with 2 certified copies of the test results of the compaction of the backfill as specified herein.

PART III - EXECUTION

3.0 General

3.01 No main line utilities shall be laid within 10' of the building.

3.02 No curb shall be poured above new utilities until densities have been taken in the trench and on the subbase below.

3.03 No galvanized pipe shall be installed underground.

3.1 Dewatering

3.11 The area within the vicinity of the trenching operation shall be dewatered by a method approved by the ENGINEER. The depth of the dewatering shall be sufficient to allow the trench excavating operation including backfilling and compacting to proceed in a dry condition.

3.2 Trench Excavation

3.21 Open cut trench excavation shall include the excavating of all materials encountered, regardless of nature, the supporting and protecting of all structures and/or utilities encountered above below the ground surface, and the removal of water from the construction site.

3.22 The trenching operation shall commence at the downstream or outlet end of the new Work and proceed upstream unless otherwise specified on the Plans or directed by the ENGINEER.

3.23 The trench shall be excavated in reasonably close conformity with the lines and grades specified on the Plans or as established by the ENGINEER.

3.24 The excavated materials shall be temporarily stored along the trench in a manner that will not cause damage to trees, shrubs, fences, improvements, utilities, private property, public property or traffic. The excavated materials shall not be placed at such locations that will endanger the trench banks by imposing loads thereon.

3.25 The trench shall be of sufficient width to provide adequate working space to permit the installation of the pipe and the compaction of the bedding material under and around the pipe. However, the width of the trench from below the pipe bedding to 12 inches above the top of the pipe shall not exceed the following dimensions:

6-inch thru 12-inch pipe	30 inches wide
15-inch thru 36-inch pipe	Outside diameter plus 16 inches
42-inch thru 60-inch pipe	Outside diameter plus 20 inches
Over 60-inch pipe	Outside diameter plus 24 inches

3.26 To support the additional load of the backfill when the maximum trench width as specified for rigid pipe is exceeded, the CONTRACTOR shall install, at his expense, concrete encasement which shall completely surround the pipe and shall have a minimum thickness at any point of one fourth of the outside diameter of the pipe or 4 inches, whichever is greater, or at his expense, install another type bedding, approved by the ENGINEER. The concrete encasement shall consist of 3000 psi strength concrete.

3.27 To support the additional load of the backfill when the maximum trench width as specified for flexible or semi-rigid pipe is exceeded, the CONTRACTOR shall install, at his expense, standard pipe bedding to the full width between undisturbed trench walls or at least 2.5 pipe diameters on each side of the pipe.

3.28 When, through the CONTRACTOR's construction procedure or because of unsuitable existing ground conditions, it becomes impossible to maintain alignment and grade properly, the CONTRACTOR, at his expense, shall excavate below the normal trench bottom grade and shall fill the void with course aggregate, FDOT size 4, crushed shell as defined by FDOT or 3000 psi concrete as approved by the ENGINEER to insure that the pipe when laid in the proper bedding will maintain correct alignment and proper grade.

3.3 Sheeting, Shoring and Bracing

3.31 The CONTRACTOR shall furnish, place and maintain at all times such sheeting, shoring and bracing of the trench and/or shaft as may be required for safety of the workmen and for protection of the new Work or adjacent structures, including pavement, curbs, sidewalks, pipelines, conduits next to or crossing the trench, and the protection and safety of pedestrian and vehicular traffic.

3.32 Sheeting, shoring and bracing shall conform to the current federal or state regulations for safety.

3.33 Where indicated on the Plans and where necessary in the Work, install and leave sheeting, shoring and bracing in place. No extra compensation shall be paid to the CONTRACTOR for sheeting, shoring or bracing left in place.

3.34 Supports for pipes, conduits, etc., crossing the trench shall conform to the requirements of the OWNERs of such facilities, and if necessary, shall be left in place.

3.35 The furnishing, placing, bracing, maintaining and removing of sheeting, shoring and trenching materials shall be at the CONTRACTOR's expense. The CONTRACTOR shall not remove the trench sheeting, shoring and bracing unless the pipe has been properly bedded, and the trench backfilled to sufficiently support the external loads. Also the sheeting, shoring and bracing material shall not come in contact with the pipe, but shall be installed so that no concentrated loads or horizontal thrusts are transmitted to the pipe.

3.4 Backfill

3.41 Backfill material shall be placed on sections of bedded pipes only after such pipe bedding and backfill materials have been approved by the ENGINEER.

3.42 The trench backfilling shall follow the pipe laying as closely as possible. However, at no time shall the pipe laying in any trench precede backfilling of that trench by more than 100 feet, unless otherwise directed by the ENGINEER.

3.43 All backfill shall be free of all organic, brush, debris or other harmful materials. Rocks or stones having a dimension of larger than 6-inches shall not be placed within three (3) feet of the top of the pipe.

3.44 The initial backfill shall be carefully deposited on both sides of the pipe at the same time and thoroughly tamped and rammed around the barrel of the pipe until enough has been placed to provide a cover of one (1') foot above the crown of the pipe.

In no case shall backfill material be placed in the trench in a manner that will cause shock to, or unequal pressure on, the pipe.

3.45 The trench shall be backfilled in conformance with the following requirements based on its location and function:

Trench "A"

Trenches under road surfaces, pavement, curb, driveway, sidewalk and where the trench edge is within 3 feet of the pavement or in areas under or within 3 feet of pavement to be constructed in the near future as noted on the Plans shall be backfilled with clean native sand. The material shall be placed by the controlled density method or other effective means having the approval of the ENGINEER and shall be compacted as detailed on the Plans.

Trench "B"

All other trenches shall be backfilled with suitable excavated material free of debris, large amounts of clay, muck, etc. Each layer shall be thoroughly compacted by approved mechanical methods, or other effective means having the approval of the ENGINEER, and shall be compacted as detailed on the Plans.

3.5 Cleanup

3.51 Immediately following the placing and compacting of the backfill, the excess material shall be removed and disposed of by the CONTRACTOR, at his expense. The construction area shall be leveled and left in a neat workmanlike condition.

3.6 Testing

3.61 During the course of the Work, the ENGINEER will require testing for compaction or density of the backfill. A minimum of one set of tests shall be required for every 250 L.F. of trench or portion thereof at locations selected by the ENGINEER. Each set of tests shall consist of a test 12-inches above the top of pipe and an additional test in every 12-inches of backfill up to finish grade.

3.62 In addition to the above one set of density tests will be required at each of the project jack and bore pit locations and at each sanitary manhole or storm sewer structures (if any).

3.63 The taking of samples and the testing required shall be performed by a testing laboratory approved by the ENGINEER and OWNER. The cost for testing and sampling shall be at the expense of the CONTRACTOR.

3.7 Defective Work

3.71 Any portion of the backfill which is deficient in the specified density shall be corrected by methods meeting the approval of the ENGINEER.

3.72 Any extra testing or sampling required because of deficiencies shall be at the CONTRACTOR's expense.

END OF SECTION

SECTION 02230
LIMEROCK AND SHELL BASE

PART I - GENERAL

1.0 Scope

1.01 The work specified in this Section consists of construction of a base course composed of limerock or shell. It shall be constructed on the prepared subgrade in accordance with these specifications and in conformity with the lines, grades, notes, and typical cross sections shown on the plans in accordance with Sections 200 and 250 of the Florida Department of Transportation Standard Specification for Road and Bridge Construction - latest edition or as amended hereinafter. Where base course thickness is greater than 6 inches, the base shall be constructed in two courses.

1.1 Submittals

1.11 CONTRACTOR shall submit 2 certified copies of the subgrade density test results to the ENGINEER. Testing of the subgrade shall be performed by a testing lab acceptable to the ENGINEER. All testing shall be at the expenses of the CONTRACTOR.

PART II - PRODUCTS

2.0 Materials

2.1 Limerock

2.11 The material used shall conform with requirements as specified in the Florida Department of Transportation Specifications.

2.2 Shell

2.21 Shell material shall not contain silica sand in sufficient quantity to prevent proper bonding.

2.22 Gradation Requirements. At least ninety-seven (97%) percent of the material shall pass a three and one-half (3-1/2") inch sieve. Not more than twenty (20%) percent of the material shall pass the No. 200 sieve by washing.

2.23 Plasticity Requirements. The portion of the material passing the No. 40 sieve shall be non-plastic.

2.24 Bearing Ratio Requirements. Shell for base construction shall have an average LBR value of not less than one hundred (100). Each source of shell base material must be specifically approved for usage.

2.3 Quality Assurance

2.31 Each deposit of lime rock or shell proposed for use shall be inspected by the County ENGINEER prior to placement. Acceptance or rejection will be made on production of a uniform material consistently meeting this specification. The County ENGINEER may require a certified copy of current Florida D.O.T. quality assurance for each source.

PART III - EXECUTION

3.0 Subgrade

3.01 The work shall consist of bringing the bottom of excavations and the top of embankments of the roadway to a surface conforming to the grades, lines and cross sections shown on the plans.

3.02 All soft and yielding material and other portions of the subgrade which will not compact readily shall be removed and replaced with suitable material and the whole subgrade brought to line and grade, allowing for subsequent compaction.

3.03 All submerged stumps, roots or other organic matter encountered in the preparation of the subgrade shall be removed.

3.04 The subgrade shall be stabilized to a minimum LBR (Limerock Bearing Ratio) of 40%. If the natural in-place soils do not meet the required stability, sufficient borrow material for stabilization shall be uniformly mixed with in-place soils to produce the minimum load Bearing Ratio.

3.05 The stabilized subgrade shall be compacted to the density shown on the Plans. The subgrade shall be shaped prior to making the density tests. When load Bearing Ratio determinations are made by the Limerock Bearing Ratio Method, Test Method D. of A.A.S.H.T.O. T-180 as modified by the Florida Department of Transportation's Research Bulletin 22-B, revised April 1972, will be used. The subgrade shall be firm and able to support the construction equipment without displacement. Soft or yielding subgrade shall be corrected and made stable before construction proceeds.

3.06 Density tests shall be made before work proceeds.

3.07 The required density shall be maintained until the base of pavement has been laid or until the aggregate materials for the base of pavement course have been spread in place.

3.08 After the subgrade has been prepared, and immediately before any base of paving course is laid, the subgrade shall be tested for substantial compliance as to crown and elevation. Material shall be removed or added, as the condition necessitates, and again stabilized and compacted to bring all portions of the subgrade to the specified elevation, stability and density.

3.1 Transporting Limerock or Shell

3.11 The limerock or shell shall be transported (over material previously spread) to the point where it is to be used. It shall then be dumped on the end of the preceding spread. In no case shall rock be dumped directly on the subgrade.

3.2 Shell

3.21 The shell shall be spread uniformly. All segregated areas of fine or coarse material shall be removed and replaced with well-graded shell. For double-course base, the material shall be spread in two (2) courses. The thickness of the first course shall be approximately one-half (1/2) the total thickness of the finished base, or enough additional to bear the weight of the construction equipment without disturbing the subgrade.

3.3 Compacting and Finishing Base

3.31 For double-course base, the first course shall be bladed if necessary to secure a uniform surface and shall be compacted to the density specified below immediately prior to spreading the second course. No other finishing of this course is required.

3.32 After spreading is completed, the entire surface shall be scarified and shaped so as to produce the exact grade and cross section after compaction. For double-course bases, this scarifying shall extend to a depth sufficient to penetrate slightly the surface of the first course.

3.33 As soon as proper conditions of moisture are attained, the material shall be compacted to the density shown on the Plans. Where the base is being constructed in one course, the density specified above shall be obtained in both the bottom half and the top half of the base.

During final compacting operations, if blading of any areas is necessary to obtain the true grade and cross section, the compacting operations for such areas shall be completed prior to making the density determinations on the finished base.

3.34 The surface shall be "hard-planed" with a blade grader immediately prior to the application of the prime coat to remove the thin-glazed or cemented surface, leaving a granular or porous condition that will allow free penetration of the prime material. The materials planed from the base shall be removed from the base area.

3.35 If, at any time, the subgrade material should become mixed with the base course material, the CONTRACTOR shall excavate and remove the mixture. He shall reshape and compact the subgrade, and replace the materials removed with clean base material. The clean base material shall then be shaped and compacted as specified above.

3.4 Testing Surface

3.41 The finished surface of the base course shall be checked with a template cut to the required cross section and with a fifteen (15') foot straight edge laid parallel to the centerline of the road or other approved testing devices. All irregularities greater than one-fourth (1/4") inch shall be corrected by scarifying and removing or adding rock, as may be required, after which the entire areas shall be recompacted as specified herein. On every project at least one of each of the following density tests may be made by the ENGINEER at intervals not exceeding one hundred (100') feet:

A. MODIFIED PROCTOR MAXIMUM DENSITY DETERMINATION TESTS

B. FIELD IN-PLACE DENSITY TESTS.

3.42 Thickness

3.43 After the base is completed, test holes shall be dug or cores taken at intervals of not more than five hundred (500') feet, or at closer intervals if necessary. Where the base is more than one-half (1/2") inch deficient in thickness, the area covered by this deficient base shall be reworked by scarifying to a depth of at least three (3") inches and adding more base material, so that after proper compacting the thickness will conform to the plans.

END OF SECTION

SECTION 02511

ASPHALTIC CONCRETE SURFACE COURSE

PART I - GENERAL

1.0 Scope

1.01 The work consists of the application of asphaltic concrete surface course which shall be composed of a mixture of (1) aggregate, (2) mineral filler, if necessary to produce the desired stability hereinafter described, and (3) asphalt cement. The surface course shall be properly laid upon a prepared base in accordance with these specifications and Section 332 of the FDOT Specifications, and in conformity with the lines, grades, thickness and typical cross section shown on the plans. This work shall include the conditioning of the existing surface or base.

1.1 References

1.11 FDOT Specifications shall mean the Florida Department of Transportation Standard Specifications for Road and Bridge Construction 1986 edition unless specifically noted otherwise.

PART II - Products

2.0 Asphalt Mixes

2.01 Asphalt types shall be as specified in the plans and specifications. Only Types S-I, II, III and approved skid resistant types as described in Section 337, FDOT specifications, will be acceptable. For type II, however, the minimum stability shall be seven hundred and fifty (750) psi as determined by the Marshall Design Method. The flow shall be between 0.08 and 0.15 inches.

PART III - EXECUTION

3.0 Construction Methods

3.01 The mixture shall be spread only when the surface previously prepared is intact, firm, properly cured and dried. Unless otherwise directed the following requirements shall also apply:

A. The spread shall occur only when the air temperature in the shade and away from artificial heat is above forty (40 F.) degrees Fahrenheit and rising. When the temperature in the shade and away from artificial heat is between forty (40 F.) degrees and sixty (60 F.) degrees Fahrenheit, the mixture shall be spread only when conditions are suitable.

B. The mixture shall be delivered on the road in ample time to permit the spreading, rolling and surface testing during daylight hours. The mixture shall be compacted to a minimum of ninety-five (95%) percent of the ENGINEER'S required compacted density.

C. The temperature of the mixture at the time of spreading shall be within thirty (30 F.) degrees Fahrenheit of the temperature set by the ENGINEER for this stage of the operation. Temperatures thus set by the ENGINEER shall be between two hundred fifty (250 F.) degrees Fahrenheit and three hundred and forty (340 F.).

D. Depressions which may develop after the initial rolling shall be remedied by loosening or removing the mixture laid and by adding new material to bring such depressions to a true surface. Such portions of the completed course that are defective in surface, compression or composition, or that do not comply with the requirements of these specifications, shall be taken up and replaced with suitable mixture properly laid in accordance with these specifications. All replacement work due to unsatisfactory surface course shall be performed at the CONTRACTOR'S expense.

3.1 Finished Surface Requirements

3.11 For the purpose of testing the finished surface, the CONTRACTOR shall provide a fifteen (15') foot straight edge and a standard template cut to the true cross section of the road. These shall be available at all times during construction so that the ENGINEER may check the finished surface. Vertical measurements from a string line between curbs to determine crown may be accepted as an alternate. The finished surface shall be such that it will not vary more than one-fourth (1/4") inch from the fifteen (15') foot straight edge applied parallel to the centerline of the pavement. Any irregularity of the surface exceeding the above limits shall be corrected.

3.2 Skid Resistant Surfaces

3.21 Asphaltic concrete friction courses shall comply with the provisions of Section 337, FDOT Specifications.

3.3 Tests

3.31 Any or all of the following tests may be required by the ENGINEER.

A. Determination of the job-mix formula.
B. Tests of the asphalt cement.
C. Sieve analysis of the aggregate.
D. Determination of bitumen content of the asphaltic concrete.
E. Determination of density of finished asphaltic concrete pavement.
F. Determination of stability of finished asphaltic concrete pavement.
G. Plant inspection and verification of aggregate mix.

3.32 Any of the above tests as required by the ENGINEER shall be paid for by the OWNER. Any retests however, due to materials or workmanship failing the initial tests shall be performed at the expense of the CONTRACTOR.

END OF SECTION

SECTION 02512
CONCRETE PAVERS

PART I - GENERAL

1.0 Related Work Specified Elsewhere

1.01 Earthwork

1.1 Work Included

1.11 Precast concrete pavers as indicated on the drawings installed on a sand/bed layer.

1.2 Quality Assurance

1.21 ASTM C936-82 "Specifications for Solid Concrete Interlocking Paving Units".

PART II - PRODUCTS

2.0 Pavers

2.01 Paving units shall be the shape and color as selected by the Architect, as manufactured by a company to be chosen by the OWNER.

2.1 Bedding Sand Material

2.11 Bedding sand shall be coarse graded concrete sand conforming to ASTM C-33 for fine aggregates, as specified in the following table. NOTE: Do not use masonry sand.

Coarse Graded Sand

Sieve Size	Mass Percent Passing
3/8"	100
No. 4	85 - 100
No. 100	10 - 30

The bedding sand shall be free of deleterious soluble salts or other contaminants likely to cause efflorescence or lead to reduce skid resistance.

2.12 Moisture Content: The sand shall be of uniform moisture content when spread and shall be protected against rain when stockpiled on site prior to spreading. Sand moisture shall be maintained at 3% to 7%.

2.2 Base Material

2.21 Base material shall comply with the requirements of the Florida D.O.T. Specifications or local Government Authorities for the supply of material suitable for pavement base construction.

Before commencing the placing of the sand bedding course and the laying of units, the base shall be inspected and approved by the paver installer.

PART III - EXECUTION

3.0 Base Installation

3.01 Existing Base: Bring the base grade to 3 1/8" below finish grade elevation for 2-3/8" thick pavers and 3 7/8" below finish grade for 3-1/8" thick pavers. The existing base shall be trimmed to within 1/4" of nominated design levels, including where necessary the addition of suitable base materials to correct levels in any depressed areas. The base materials should not deviate by more than 1/4" from the bottom of a 8" straight-edge laid in any direction. Sub-base compaction shall be to 98% modified Proctor.

3.02 Where directed, any unsuitable materials shall be removed from the subgrade and replaced by approved fill or base materials and suitably compacted. Where subgrade stabilization has been specified the subgrade shall be prepared accordingly.

3.03 New Base: Where a new base is being constructed the base shall nowhere be of lesser thickness than that shown on the drawings. The subgrade shall be of sufficient width to extend past the rear face of all edge restraints except where the pavement abuts established structures offering suitable edge restraint. Materials shall be spread, brought to optimum moisture content and compacted to the required depth and specified density in layers, each not exceeding 6" loose depth.

3.04 The upper layer of the base shall be sufficiently well graded and compacted to prevent infiltration of the bedding sand into its surface both during construction and throughout the life of the pavement. If available subgrade materials are unsuited to this requirement then the upper surface shall either be blinded by the application of crushed fines, which shall then be watered and compacted into the surface or suitably sealed.

3.1 Bedding Sand Installation

3.11 Spreading Bedding Sand: An uncompacted sand bed base shall be screeded over the compacted base to the thickness of 1", and not exceeding 1-1/2". This assumes that after the stones are placed and vibrated the elevation will be approximately 1/2" lower.

3.12 Screeding of Bedding Sand. The spread sand shall be carefully maintained in a loose condition and protected against precompaction both prior to and following screeding. Any precompacted sand or screeded sand left overnight shall be loosened before further paving units are placed. Sand shall be lightly screeded in a loose condition to the predetermined depth only, slightly ahead of the laying of the paving units. Under no circumstances shall the sand be screeded in advance of the laying face to an extent to which paving will not be completed that day.

Screeded sand must be fully protected against accidental precompaction including compaction by rain or dew. Any screeded sand which is precompacted prior to laying of units shall be removed and brought to profile in a loose condition.

3.2 Paver Installation

3.21 Laying Paver Units

Paving units shall be placed on the uncompacted screeded sand bed to the nominated laying pattern, care being taken to maintain the specified bond throughout the job. Paving units shall be placed to achieve gaps nominally 1/16" to 1/8" wide between adjacent units such that all joints are correctly aligned. Paving stones will be laid in the approved pattern as noted on the drawings. Laying pattern shall be herringbone or as noted on the drawing.

The first row shall abut an edge restraint with a gap of 1/8" and shall be laid at a suitable angle to the edge restraint to achieve the required visual orientation of paving units in the completed pavement.

In each row all full units shall be laid first. Closure units shall be cut and fitted subsequently. Such closure units shall consist of not less than 25% of a full unit. Units may be cut using a mechanical or hydraulic guillotine bolster, or by power sawing. A dry grout mix shall be used to fill a larger edge space.

No other construction traffic shall be allowed on pavement during the paver installation until pavers have been compacted and sanded.

3.22 Paver Compaction

After laying the paving units they shall be compacted to achieve consolidation of the sand bedding and brought to design levels and profiles by not less than two, preferably three, passes of a suitable plate compactor.

The compactor shall be high-frequency, low-amplitude mechanical flat plate vibrator having a plate area sufficient to cover a minimum of 12 paving units. This plate type soil compactor shall be capable of 3,500 to 5,000 lb. centrifugal compaction force.

Compaction shall proceed as closely as possible following laying and prior to the acceptance of any traffic.

Compaction should not be attempted, however, within three feet of the laying face. Compaction shall continue until lipping has been eliminated between adjoining units. Joints shall then be filled and compacted as herein described.

All work to within three feet of the laying face must be left fully compacted at the completion of each day.

Damaged Units: Damaged units which are structurally damaged during compaction shall be immediately removed and replaced.

3.23 Filling Joints: As soon as practical after compaction, and in any case prior to the termination of work on that day and prior to the acceptance of construction traffic, sand for joint filling shall be spread over the pavement. The filling sand should be allowed to dry and then swept to fill the joints. At least one pass of the plate vibrator is required to achieve compaction of the joint filling sand.

3.24 Pavement Preloading: As soon as possible after the filling of joints light construction traffic should be encouraged to use the pavement to assist in the development of "lock-up". Such traffic should traverse the greatest possible area of the pavement.

3.25 Upon completion of work covered in this Section, the CONTRACTOR shall clean up all work areas by removing all debris, surplus material, and equipment from the site.

END OF SECTION

SECTION 02528

CONCRETE CURBS AND GUTTERS

PART I - GENERAL

1.0 Scope

1.01 The work to be performed under this specification shall include the furnishing of all labor, material, tools and equipment necessary to construct concrete curbs and gutters of cast-in-place concrete or precast concrete as shown on the drawings and as specified herein.

PART II - PRODUCTS

2.0 Material

2.01 All work under this specification shall be constructed of Portland cement concrete, 3,000 psi in 28 days.

PART III - EXECUTION

3.0 Installation

3.01 Forms shall be made of either wood or metal. They shall be straight and true, free from warps or bends and of sufficient strength when staked to resist the pressure of the concrete and hold true to line and grade. Forms shall not be removed until concrete has reached sufficient strength.

3.02 Concrete shall be placed in the forms in four or five inch layers and tamped or spaded until mortar entirely covers its surface. The top of the concrete shall be floated smooth and the edges rounded with a 3/4" radius edge. Unless otherwise shown on the plans, the curbs shall be constructed in 20' sections with expansion joints at 40' centers. Gutters shall be constructed in 10' sections and expansion joints at 40' centers. Forms shall be removed within 24 hours after concrete has been placed and minor defects filled with 1:2 mortar. The exposed faces of all concrete curb shall be rubbed with a wetted wood float while the concrete it still green. Gutters shall be broom finished.

END OF SECTION

SECTION 02668
DOMESTIC WATER SYSTEMS

PART I GENERAL

1.0 Scope

1.01 This section includes water system up to 36-inch diameter complete with piping, valves, fire hydrants, fittings, thrust blocks and retainers, and plugs and accessories required for installation as indicated on the plans and specified herein. Work in this section also includes sterilization, flushing, and bacterial and hydrostatic testing of completed portions of new watermain.

1.1 Submittals

1.11 The CONTRACTOR shall submit five (5) complete sets of shop drawings to the ENGINEER for approval, prior to ordering any equipment.

1.12 The CONTRACTOR shall also provide five (5) parts lists for all special fittings, hangars, etc., to the ENGINEER prior to final payment.

1.2 Storage of Materials

1.21 Piping shall not be stacked higher than four feet. Suitable racks, chairs and other supports shall be provided to protect preformed pipe mating surfaces from damage. Store bottom tiers off the ground, alternate tiers and chock tier ends.

1.22 All pipe and other materials subject to ultraviolet or ozone attack shall be protected from the sunlight, atmosphere and weather and stored in suitable enclosures until ready for installation.

PART II PRODUCTS

2.0 Materials

2.01 All pipe shall be National Sanitation Foundation approved for potable water use.

2.1 Ductile Iron Pipe

2.12 All push-on or mechanical joint ductile iron pipe shall be a minimum Class 52 meeting A.N.S.I. 21.51, with a standard cement mortar lining in accordance with ANSI/AWWA C104/A21.4 and 1 mil thickness minimum of coal tar enamel inside and outside.

2.2 PVC Pipe

2.21 All P.V.C. pipe shall be C900, DR-18, or DR-25 as specified in paragraphs 2.22 and 2.23 below, unless otherwise shown or specified on the contract drawings.

2.22 P.V.C. pipe of 4 to 12-inch diameter shall be A.W.W.A. C900, DR 18. P.V.C. pipe shall be joined by a rubber ring bell joint which shall be an integral part of the pipe barrel and the rubber gasket push type joint shall be suitable for operation at a working pressure of 160 psi. Joints shall conform to A.S.T.M. D3139 or D1869.

2.23 P.V.C. pipe of 14 to 36-inch diameter shall be in accordance with UNI-B-11-84, DR-25 and pressure rating of 165 psi. P.V.C. pipe shall connect directly to cast iron mechanical joint or push-on fittings with no adapters necessary and shall comply with the requirements of UNI-B-1.

2.24 If Schedule 80 P.V.C. Main is shown or specified on the contract drawings, it shall consist of 12454-B or 12454-C material, and meet the requirements of ASTM D-1785. All joints shall be solvent welded in accordance with ASTM D-2855 requirements. All Schedule 80 P.V.C. pipe must have the approval of the ENGINEER prior to installation.

2.3 Fittings

2.31 Fittings shall be cast or ductile iron pipe conforming A.N.S.I. A21.10 and A21.11 with push-on or mechanical joints. If some fittings are available only with flange joints, flange to mechanical and/or push-on joint adapters shall be used. Fittings shall have a cement mortar lining in accordance with ANSI/AWWA C104/A21.4 with a minimum 1 mil coal tar enamel coating inside and outside. All fittings shall be designed for a pressure rating of 250 psi. All bolts and nuts for flanged fittings shall be 316 stainless steel.

2.32 If shown or specified on the contract drawings, fittings for Schedule 80 P.V.C. shall be solvent welded or flanged fittings meeting ASTM D-2466 requirements. Flange dimensions shall conform to A.N.S.I. B16.5, Class 150.

2.4 Valves

2.41 All valves shall be as located on the Plans and as specified in Section 15100 "Valves".

2.5 Hydrants

2.51 All hydrants shall be as located and detailed on the Plans.

2.6 Service Lines

2.61 All water service lines shall be of the size specified on the contract drawings and shall be Schedule 40 P.V.C. pipe unless otherwise shown or specified. All joints shall be solvent welded in accordance with ASTM D-2855 requirements.

PART III EXECUTION

3.0 Installation

3.01 All excavating, backfilling and compacting shall be done in accordance with Section 02222, Excavating, Backfilling and Compacting for Utilities, included herein.

3.02 All pipe shall be installed in accordance with the pipe manufacturer's recommendations, the Uni-Bell PVC Pipe Association Handbook and the Ductile Iron Pipe Research Associations Recommendations, with each section of pipe having a firm bearing on the trench bedding throughout its length between bell holes. Foreign matter shall be prevented from entering the pipe during and after laying operations. All pipe ends shall be plugged when construction stops overnight or for extended periods. Any pipe cutting shall be performed using the recommendations of the pipe manufacturer and in accordance with the best trade practices. When cutting pipe or fittings, care shall be taken to prevent damage to linings and coatings. Damage to linings shall be cause for rejection of the complete section of pipe. Damage to exterior coatings shall be corrected to original specifications.

3.03 Service connections shall be made as shown on the Contract Drawings.

3.04 The minimum spacing between two service connections shall be eighteen (18) inches.

3.05 For protection against corrosive soils, ductile iron pipe and fittings shall be enclosed in a polyethylene sheet or tube and each length joined with 2" wide polyethylene adhesive tape. The sheet or tube shall be made from polyethylene resin meeting the requirements of ASTM D1248-72, and shall be Type I, Class C, Category 5, Grade J-3 with minimum carbon black content of 2.5% and 8 mils thickness. The sheet or tube shall be as manufactured by Polytube Corporation, Birmingham, Alabama, or approved equal. The sheet or tube shall be in accordance with the provisions of ANSI A21.5 - AWWA C105-72. Methods shall be such as to minimize damage to the sheet or tube but where required the adhesive tape shall also be used to repair tears or punctures.

3.06 Each building requires a minimum of one water meter, including pool buildings.

3.07 Valves should be located so that new water mains can be properly isolated for testing.

3.08 Blow-offs are required at end of water mains.

3.09 The maximum cover for water mains shall be 48" unless crossing under other utilities, as approved by the Town of Longboat Key.

3.1 Hydrostatic Testing

3.11 After the pipe has been laid and backfilled, the pipe shall be hydrostatically tested for leakage. The CONTRACTOR shall furnish the pump, pipe connection, blow off valves and any other necessary apparatus including gauges and meters and all personnel necessary for conducting the test. Before applying the test pressure, all air shall be expelled from the pipe. If necessary, threaded taps shall be made at the points of higher elevation and then closed with brass plugs.

3.12 When practicable, tests shall be made on sections between valves, or sections not exceeding 2,000 feet in length. Dead ends, bends and other fittings shall have a firm foundation and be securely blocked against the trench walls before testing or completing the backfill as specified.

3.13 The full test pressure of 150 pounds per square inch (psi) shall be held for no less than two hours or longer as necessary to permit thorough examination of all exposed joints in the section of main being tested. Test pressure shall be maintained at 150 psi by pumping water into the pipe in accordance with the requirements of AWWA C600.

3.14 Leakage shall be measured by the quantity of water pumped into the pipe to maintain test pressure during test period. Maximum permissible leakage shall be less than the number of gallons per hour determined by the following formula:

$$L = \frac{S \times D \times (P)^{.5}}{133200}$$

L = allowable leakage in gph
S = length of section tested, in feet
D = nominal diameter of the pipe in inches
P = average pressure maintained during the leakage test in psi. The test pressure shall be one hundred fifty (150) psi

3.15 Water for testing shall be obtained from an approved water source. The CONTRACTOR shall provide all water required at his own expense and shall make all necessary arrangements with the authority which controls the source of water system and shall be governed in his use of water by all rules and regulations imposed thereon by said authority. The CONTRACTOR shall provide and remove temporary connections between the source water system and the mains constructed under this contract. All temporary connections shall meet the approval of the ENGINEER, the authority controlling the source water system and Public Health authorities having jurisdiction.

3.16 All leaks shall be located and repaired until the test meets the above requirements. Any faulty fittings, valves or other accessories which leak during testing shall be replaced by the CONTRACTOR with sound material and testing shall be repeated as specified above. Any replacement of faulty material or retesting shall be at the expense of the CONTRACTOR.

3.2 Flushing

3.21 Water for testing shall be removed from the watermain by pumping to waste. Water discharge shall be controlled adequately to protect any surface water resource or adjacent property from potential environmental damage or from creation of hazard to traffic.

3.22 Immediately prior to sterilization, all new piping shall be flushed for a minimum of one-half (1/2) hour or until no traces of cuttings, oil, dirt or other foreign matter are visible.

3.3 Sterilization

3.31 The CONTRACTOR shall sterilize all new piping by pumping into the system a liquid chlorine or sodium hypochlorite solution containing a minimum chlorine concentration of 50 ppm. All air shall be expelled from the pipe, and the solution shall remain in the pipe for a minimum of eight (8) hours. Following the specified contact period, all valves and piping shall be flushed until flushed water contains a maximum of 0.02 ppm chlorine residual, plus any chlorine residual present in the approved water source.

3.4 Bacterial Tests

3.41 The system shall be sampled as designated by and in conjunction with the Public Health Department for bacterial examination. A minimum of two (2) consecutive daily samples shall be satisfactorily completed or the system must be re-sterilized until this requirement is met.

3.42 Testing for chlorine residual, sampling and biological examination shall be performed by Public Health Department personnel.

END OF SECTION

SECTION 02720

INLETS, CATCH BASINS, JUNCTION BOXES, STORMWATER CONTROL STRUCTURE

PART I - GENERAL

1.0 Scope

1.01 The work to be performed under this specification shall include the furnishing of all labor, material, tools and equipment necessary to construct inlets, catch basins, junction boxes and stormwater control structure in accordance with Section 425 of the FDOT Specifications as shown on the plans and as specified hereinafter.

1.1 Referenced Standards

1.11 FDOT Specifications shall mean the Florida Department of Transportation Standards Specifications for Road and Bridge Construction, latest edition.

PART II - PRODUCTS

2.0 Materials

2.01 Material for masonry and cast-in-place structures shall meet the requirements of FDOT Section 425-3.

2.02 Precast concrete inlets, catch basins, junction boxes and stormwater control structures may be substituted for cast-in-place or masonry structures as long as they conform to the requirements set forth in Section 425-5 of the FDOT Specifications.

PART III - EXECUTION

3.0 Construction

3.01 All items under this specification shall be constructed as shown on the plans or reasonably implied therefrom. They shall be constructed of approved materials and built plumb and square with all joints satisfactorily sealed to water tightness at pipe entrances and exits. Inlet covers and catch basin grates shall be furnished as shown on the plans and the inverts shall be paved to conform to the inlet and outlet pipes to insure no deposition of material in the bottom. Grading shall be performed as shown on the plans immediately adjacent to the inlet and catch basin and the entire work performed in a neat, workmanlike manner. Rock rubble shall be placed as and where shown on the plans.

END OF SECTION

SECTION 02722

PIPE CULVERTS AND STORM SEWERS

PART I - GENERAL

1.0 Scope

1.01 The work in this Section shall consist of furnishing and installing reinforced concrete or corrugated metal pipe in conformance with the sizes, material and dimensions shown on the plans and in accordance with Section 430 of the FDOT Specifications except as modified herein.

1.1 Referenced Standards

1.11 FDOT Specifications shall mean the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition.

PART II - PRODUCTS

2.0 Materials

2.1 Pipe

2.11 Concrete pipe shall be of first quality, conforming to the most current A.S.T.M. Designation C76, C506 or C507. Pipe requirements shall be a minimum Class III, reinforced concrete pipe, unless otherwise shown or specified in the contract documents.

2.12 Corrugated Metal Pipe shall be first quality conforming to the requirements of FDOT Standard Specifications, Section 943 with a bituminous coating per AASHTO M190, Type A, unless otherwise shown on the plans.

2.2 Joints

2.21 Pipe joints shall be in accordance with Section 430 of FDOT Specifications.

2.22 In addition to the requirements specified in FDOT, each joint on concrete pipe culverts and storm sewers shall be wrapped in filter cloth approved by The Town of Longboat Key and The ENGINEER.

III - EXECUTION

3.0 Foundation

3.01 Where the nature of the foundation material is of poor supporting value, the foundation shall be consolidated by replacing the material with a layer of sand or other firm material or by constructing supporting cradles.

3.1 Laying Pipe

3.11 All pipe shall be carefully laid, true to the lines and grades as shown on the plans. In general pipe shall be installed in accordance with FDOT Section 430-4. All pipe shall be laid "in the dry", unless specifically authorized otherwise by the ENGINEER.

3.12 Installation of concrete pipe shall also meet the requirements of FDOT Section 430-7.

3.13 Installation of corrugated metal pipe shall meet the specific requirements of FDOT Section 430-8.

3.2 Backfilling

3.21 All backfill and compaction shall conform to Section 02222, Excavating, Backfilling and Compacting For Utilities and shall meet all requirements as specified or shown on the contract drawings.

END OF SECTION

SECTION 02730

SANITARY SEWER

1.0 General

1.01 This section includes sanitary sewer work up to 27-inch diameter including service laterals. This section also includes testing of completed portions of new sanitary sewer.

1.02 All work shall be in accordance with applicable Codes of the County, City, Town or Utility having jurisdiction.

1.1 Storage of Materials

1.11 Piping shall not be stacked higher than four feet. Suitable racks, chairs and other supports shall be provided to protect preformed pipe-mating surfaces from damage. Store bottom tiers off the ground, alternate tiers and chock tier ends.

1.12 All pipe and other materials subject to ultraviolet or ozone attack shall be protected from the sunlight, atmosphere and weather and stored in suitable enclosures until ready for installation.

PART II - PRODUCTS

2.0 Materials

2.1 Clay Pipe

2.11 Pipe and fittings shall conform to ASTM-C700, extra strength vitrified clay pipe.

2.12 Joints for all clay pipe shall meet the requirements of ASTM C425. Only lubricant as supplied by the pipe manufacturers shall be used on the bell and spigot in making up joints and the joints shall be coupled in accordance with the pipe manufacturer's requirements.

2.2 Ductile Iron Pipe

2.21 All push-on or mechanical joint ductile iron pipe shall be a minimum Class 52 meeting ANSI 21.51. The pipe shall have a minimum 40 mil polyethylene internal coating in accordance with ASTM D1248 and a 1 mil thickness (minimum) of coal tar enamel outside. All bolts must be corrosion resistant material.

2.22 Fittings shall be short body cast or ductile iron pipe conforming to ANSI A21.10 and A21.11 with push-on or mechanical joints. If some fittings are available only with flange joints, flange to mechanical and/or push-on joint adapters shall be used. Fittings shall be inside and out the same as specified above for ductile iron pipe. All fittings shall be designed for a pressure rating of 250 psi.

2.3 PVC Pipe

2.31 All PVC pipe within the right-of-way, sizes 4-inch through 12-inch, shall be AWWA C900, DR 18. Any laterals outside the right-of-way may be in accordance with ASTM D1785, Sch. 40. PVC pipe shall be joined by a rubber ring bell joint which shall be an integral part of the pipe barrel and the rubber gasket push type joint. Gaskets shall meet the requirements of ASTM F477. Joints shall conform to ASTM D3212. Pipe shall be color code green either with four side continuous marking or by being solid color. In lieu of green pipe the CONTRACTOR may utilize white pipe. If white pipe is used after the pipe is installed the pipe shall be painted on top with heavy green paint. In addition, a piece of green marker tape must be placed on top of the pipe and again at a vertical clearance of 18 to 24 inches above the pipe.

2.32 Fittings shall be PVC C900, DR 18, as manufactured by Head Manufacturing Co., or approved equal. Couplings between the C900 main line pipe and Sch. 40 laterals (as allowed above) shall be furnished with a stainless steel shear ring and all stainless steel bands and nuts as supplied by FERNCO, or approved equal.

2.4 Manholes

2.41 Manholes shall be precast concrete, in accordance with ASTM C478 except the wall thickness shall be a minimum of 8 inches. The minimum inside diameter allowed shall be 48 inches. No outside lifting holes will be allowed.

2.42 The manhole base shall be monolithically cast with the bottom manhole section. The base shall have a minimum thickness of 8 inches.

2.43 Joints between manhole sections shall be a preformed gasket plastic joint sealer meeting the Federal Specification SS-S-00210, as supplied by Atlantic Concrete Products, or "Ram Neck" as supplied by K.T. Snyder Co., or an approved equal.

2.44 All manhole surfaces shall be protected with 2 coats of Koppers 300M Bitumastic. Exterior surfaces shall receive 2 coats of Koppers 300M superblack for total dry film thickness (DFT) of 16-18 mils. Interior shall also receive two coats of Koppers 300M to a total DFT of 16-18 mils, except the first coat shall be red and the top coat black.

PART III - EXECUTION

3.0 Installation

3.01 All excavating, backfilling and compacting shall be done in accordance with Section 02222, Excavating, Backfilling and Compacting for Utilities, included herein.

3.02 All pipe shall be installed in accordance with the pipe manufacturers recommendations, and the Uni-Bell PVC Pipe Association Handbook, Vitrified Clay Pipe Institute or Ductile Iron Pipe Research Association recommendations, with each section of pipe having a firm bearing on the trench bedding throughout its length between bell holes. Foreign matter shall be prevented from entering the pipe during and after laying operations. ALl pipe ends shall be plugged when construction stops overnight or for extended periods. Any pipe cutting shall be performed using the recommendations of the pipe manufacturer and in accordance with the best trade practices. When cutting pipe or fittings, care shall be taken to prevent damage to linings and coatings. Damage to linings shall be cause for rejection of the complete section of pipe. Damage to exterior coatings shall be corrected to original specifications.

3.1 Corrosion Protection

3.11 For protection against corrosive soils, ductile iron pipe and fittings shall be enclosed in a polyethylene sheet or tube and each length joined with 2" wide polyethylene adhesive tape. The sheet or tube shall be made from polyethylene resin meeting the requirements of ASTM D1248-72, and shall be Type I, Class C, Category 5, Grade J-3 with minimum carbon black content of 2.5% and 8 mils thickness. The sheet or tube shall be as manufactured by Polytube Corporation, Birmingham, Alabama, or approved equal. The sheet or tube shall be in accordance with the provisions of ANSI A21.5 - AWWA C105-72. Methods shall be such as to minimize damage to the sheet or tube but where required the adhesive tape shall also be used to repair tears or punctures.

3.2 Testing- General

3.21 The CONTRACTOR shall perform testing of all new sanitary sewers in the presence of representatives of the Utility; the City, County or Town having jurisdiction, the OWNER and the ENGINEER of Record. The CONTRACTOR shall be required to give a minimum of three working days notice to all parties involved prior to performing any testing. All piping shall be thoroughly cleaned prior to testing.

3.22 All official testing of mains will be held after densities are obtained in trenches and subbase is installed and has passed densities required. Preliminary testing including, but not limited to, lamping, pressure tests, video, grade verifications, infiltrations and exfiltration may be done at any time.

3.3 Lamping

3.31 The first test shall be the lamping of all sewers between each manhole to assure they are clear and correctly aligned. A successful test shall show no vertical reduction and no more than a twenty percent (20%) horizontal reduction of the pipe inside diameter.

3.4 Leakage

3.41 A final air test shall be performed as outlined herein.

3.42 The procedure for air testing shall be in accordance with ASTM C828 and as follows:

3.43 All house leads shall be properly plugged and blocked to withstand the air pressure. The sewer line shall be tested in increments between manholes. The line shall be cleaned and plugged at each manhole. Such plugs shall be designed to hold against the test pressure and shall provide an airtight seal. One of the plugs shall have an orifice through which air can be introduced into the sewer. An air supply line shall be connected to the orifice. The air supply line shall be fitted with suitable control valves and a pressure gauge for continually measuring the air pressure in the sewer. The pressure gauge shall have a minimum diameter of 3-1/2 inches and range of 0-10 PSIG. The gauge shall have minimum divisions of 0.10 PSIG and an accuracy of $\pm$ 0.04 PSIG.

3.44 The sewer shall be pressurized to 4.0 PSIG greater than the greatest back pressure caused by ground water over the top of the sewer pipe. At least 2 minutes shall be allowed for the air pressure to stabilize between 3.5 and 4.0 PSIG. If necessary, air shall be added to the sewer to maintain a pressure of 3.5 PSIG or greater.

3.45 After the stabilization period, the air supply control valve shall be closed so that no more air will enter the sewer. The sewer air pressure shall be noted and timing for the test begun. The test shall not begin if the air pressure is less than 3.5 PSIG, or such other pressure as is necessary to compensate for ground water level.

3.46 The time required for the air pressure to decrease 1.0 PSIG during the test shall not be less than the time shown in Table 1 for PVC and DIP or Table 2 for VCP. The total length of line being tested including any service laterals shall be used in calculating the test time required.

3.5 System Failure

3.51 Should any test fail, necessary repairs shall be accomplished by the CONTRACTOR and the test repeated until results within the established limits are met. If for any reason the repairs require excavating the sewer line and relaying it the disturbed line shall be retested as if it were a newly laid line. The CONTRACTOR shall furnish the necessary labor, water and all other items required to conduct the required testing and shall perform the necessary system repairs to comply with the specified test, at no cost to the OWNER.

3.52 Special consideration shall be given to the repair of any vitrified clay pipe (VCP) which fails any of the above tests. Not only shall the CONTRACTOR be responsible for making the necessary repairs and retesting at no additional cost he shall be limited to the use of one (1) repair sleeve per one hundred (100) feet or fraction thereof. Any line requiring more than the acceptable number of repair sleeves shall necessitate the entire sewer between manholes to be removed and replaced. No additional payment shall be made for any line requiring to be relaid or associated testing. Measurements shall be made from center of manhole to center of manhole to calculate the number of acceptable repair sleeves per manhole run.

3.6 Televising

3.61 Televising of sanitary sewers by the CONTRACTOR is not required since the Town of Longboat Key will televise the lines at the OWNER'S expense when all official tests are passed. The Town reserves the right to have the OWNER televise the lines ~~at~~ by an outside contractor at the OWNER'S expense.

The following table is to be used for PVC and Ductile Iron Pipe:

TABLE 1
FROM UNI-BELL HANDBOOK OF PVC PIPE
SPECIFICATION TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP
FOR SIZE AND LENGTH OF PIPE INDICATED FOR Q = 0.0015

1 Pipe Diam. (in.)	2 Minimum Time (min: sec)	3 Length for Minimum (ft)	4 Time for Longer (sec)	Specification Time for Length (L) Shown (min:sec)*							
				100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft
4	3:46	597	.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38.27	44:52	51:16	57:41
21	19:50	114	10.470 L	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:40	99	13.674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17.306 L	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	28:20	80	21.366 L	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15
33	31:10	72	25.852 L	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	34:00	66	30.768 L	51:17	76:55	102:34	128:12	153:50	179:29	205:07	230:46

Note: Interpolate between valves on table as shown in Example for Table 2

a) For pipe lengths greater than 450 feet but less than length in Column 3, use minimum time in Column 2.

b) For pipe lengths greater than 450 feet and greater than length in Column 3, subtract length in Column 3 from actual pipe length, then multiply difference by time in Column 4 and add to time in Column 2.

The following table is to be used for vitrified clay pipe:

TABLE 2

Air Test Table
(from ASTM C828-78T)

Specification time (min:sec) required for pressure drop from 3.5 to 2.5 psi when testing one pipe diameter only.

Length of Line - ft.	Pipe Diameter - in.				
	4	6	8	10	12
25	0:04	0:10	0:18	0:28	0:40
50	0:09	0:20	0:35	0:55	1:19
75	0:13	0:30	0:53	1:23	1:59
100	0:18	0:40	1:10	1:50	2:38
125	0:22	0:50	1:28	2:18	3:18
150	0:26	0:59	1:46	2:45	3:58
175	0:31	1:09	2:03	3:13	4:37
200	0:35	1:19	2:21	3:40	5:17
225	0:40	1:29	2:38	4:08	5:40
250	0:44	1:39	2:56	4:35	5:40
275	0:48	1:49	3:14	4:43	5:40
300	0:53	1:59	3:31	4:43	
350	1:02	2:19	3:47	4:43	5:40
400	1:10	2:38	3:47	4:43	6:03
450	1:19	2:50	3:47	4:43	6:48
500	1:28	2:50	3:47	5:14	7:34

Example: Determine test time for 425 feet of 12-inch VCP.

Convert min:sec to seconds
(min X 60) + sec; t400 = 363s t450 = 408s
Interpolate $t425 = 363s + (408-363)\frac{(425-400)}{(450-400)}$
$t425 = 386s$
Convert seconds to min:sec
(386 sec/60) = 6.43 min 6.43 min = 6 min + (60 X .43)
t425 = 6 min 26 sec

Note: For lengths greater than 500 feet, contact ENGINEER.

END OF SECTION

SECTION 03310

STRUCTURAL CONCRETE

PART I - GENERAL

1.0 Scope

1.01 The work to be performed under this specification shall include the furnishing of all labor, materials, forms, supplies, embedded items, sleeves and fixtures necessary to complete all concrete work shown on the plans and specified.

1.1 Referenced Standards

1.11 ASTM - American Society for Testing Materials

1.12 ACI - American Concrete Institute

1.13 FDOT Specifications - Florida Department of Transportation "Standard Specifications for Road and Bridge Construction", 1988 edition.

1.2 Submittals

1.21 The CONTRACTOR shall submit the concrete mix design, bonding agent information, waterstop shop drawings, and the name of the testing laboratory to the ENGINEER for approval, prior to the placing of any concrete.

1.22 The CONTRACTOR shall furnish the ENGINEER with a certified copy of the required compressive strength test results.

1.3 Design Requirements

1.31 The design of concrete will follow the recommended practices, stresses, design practices, and specifications of the ACI and ASTM. Concrete shall be as defined in FDOT Specifications.

1.32 Only one brand of cement shall be used in any individual structure unless approved by the ENGINEER. Cement which has become damaged, partially set, lumpy or caked shall not be used and the entire contents of the sack or container which contains such cement will be rejected. No salvaged or reclaimed cement shall be used.

1.33 Ready-mixed concrete, when used, shall be hauled directly from the batching plant to the job site in truck mounted transit mixers. No concrete shall be utilized if it has been longer than 1-1/2 hours from the time the load was first mixed.

1.34 Fine and coarse aggregate shall be measured in gated hoppers or weighed. Concrete shall be mixed in a standard type batch mixer until there is a uniform distribution of materials. The entire contents of the drum shall be discharged before recharging. The volume of the mixed material per batch shall not exceed the manufacturer's rated capacity of the mixer. The mixer shall be operated at the speed recommended by the manufacturer and the mixing time shall not be less than 1-1/2 minutes.

1.35 Waterstops where shown on the drawings shall be "Greenstreak", "Progress Unlimited", or "Schlegel" PVC waterstops or approved equal. Care shall be taken to correctly position waterstops prior to pouring concrete. Splices shall be formed for continuity and watertightness as per manufacturer's recommendations to the approval of the ENGINEER. Waterstops shall be ribbed with a center bulb, shall be minimum 3/8" x 6", and suitable for minimum hydrostatic heads of 125 feet.

1.36 No admixtures of any type will be permitted without the prior written approval of the ENGINEER.

1.37 Slumps shall be as low as possible consistent with proper placing. Low slump concrete shall be used for footing and slabs on grade. Medium slump concrete shall be used for walls, columns and suspended slabs. Concrete shall conform to the following schedule:

Class of Concrete	Minimum Cement Content (lbs/CY)	Maximum Water Content (gal/CY)	Medium Slump	Low Slump
I	508	33.5	0-6 in.	0-3-1/2 in.
II	564	33.0	3-5 in.	0-3-1/2 in.
III	611	36.6	5-7 in.	0-3-1/2 in.

1.4 Delivery, Storage and Handling

1.41 All material to be used in the concrete, including cement and coarse and fine aggregates, shall be carefully stored in such a manner as to prevent deterioration or intrusion of foreign matter.

PART II - PRODUCTS

2.0 Materials

2.01 Cement for all concrete shall be domestic Portland cement that conforms to the requirements of ASTM Designation C-150, Type I, Type II, Type III or Type V. Type III cement for high early strength concrete shall be used only for special locations and only with the approval of the ENGINEER. Type II or Type V cement shall be used in the construction of sanitary sewer manholes, wetwells, wastewater tanks, and pump stations.

2.02 Concrete aggregate shall conform to ASTM C-33 requirements. Water used in mixing concrete shall be fresh, clean and free from injurious amounts of oil, acid, alkali salts, organic matter, or other substances that may be deleterious to concrete or reinforcement.

2.03 Ready mixed concrete may be used at the option of the CONTRACTOR provided that such concrete meets the requirements of these specifications and of ASTM Designation C-94 for "Ready-Mixed Concrete".

PART III - EXECUTION

3.0 Installation

3.01 Forms shall be of wood, steel, or other approved material and will be designed to withstand the action of vibrators. The type, shape, size, quality and strength of all materials used for forms will be subject to approval by the ENGINEER.

3.02 Forms will be built to line and grade. Form work shall be done in a workmanlike manner so that concrete surfaces will be free of excessive ridges and depressions. Wire ties will not be permitted where the concrete surface will be exposed to weathering and where discoloration will be objectionable.

3.03 Forms for exposed surfaces will be coated with a nonstaining mineral oil which will be applied shortly before the concrete is placed. Forms for unexposed surfaces may be thoroughly wetted in lieu of oiling immediately before the concrete is placed.

3.04 Forms shall be clean. Concrete shall be deposited on wet forms as nearly in its final position as possible. The concreting shall be carried on at such a rate to insure that the concrete is at all times plastic and flows readily into the spaces between the bars. When concreting has been once started, it shall be carried on as a continuous operation until the panel or section is completed. Beams or slabs shall be poured together

unless otherwise shown on plans. All concrete in vertical members, including columns and walls, shall be placed at least four hours before concrete is placed for beams, girders or slabs directly over the column or wall.

3.05 Before depositing new concrete on or against concrete that has set, existing surfaces will be thoroughly roughened and cleaned of glaze, foreign matter, and loose particles. An epoxy bonding agent shall be applied for bonding the new concrete to the old.

3.06 During the placing operation, all concrete will be properly vibrated or compacted by suitable means, and shall be properly worked around reinforcing and into the corners of the forms. All corners shall be chamfered unless shown otherwise on the plans.

3.07 Contact with forms shall be insured by rodding and spading and shall be done by experienced men who have no other duties. All concrete except that shown on the plans as tremie concrete shall be placed in the dry and shall be protected from running water, or contamination from subgrade. Pipes, steps, castings, fittings or fixtures as shown on the plans or as specified, shall be placed by the CONTRACTOR in the concrete or in the forms prior to concreting. Special care shall be taken to place them on the proper line and grade and to vibrate the concrete to prevent passage of water through the concrete. Voids or defects in concrete which will be covered shall be carefully filled with mortar and plastered or otherwise suitably repaired as directed. Voids which will be exposed shall be cut out and the space filled with suitable material, or otherwise suitably repaired as directed by the ENGINEER to insure a sightly and watertight surface.

3.08 No concrete shall be allowed a free fall of more than four feet or allowed to strike against a vertical or inclined surface or reinforcement above the point of deposit. Tremies shall be used when placing concrete lifts greater than four feet or through dense reinforcing. The concrete shall be placed in layers not over two feet deep and each layer shall be vibrated into place. A sufficient number of vibrators shall be employed so that at the required rate of placement vibration throughout the entire layer and complete compaction are secured. At least one extra vibrator shall be on hand.

3.09 Concrete shall be kept continuously damp for a period of at least five consecutive days by covering with water or an approved saturation covering. Water for curing shall be clean and free from any elements which might cause staining or discoloration of the concrete surface. Floors and vertical surfaces may be

sprayed with an approved preparation to retard evaporation of water if spraying is not objectionable because of subsequent finish. Curing operations shall begin as soon as the concrete has attained initial set. All materials and facilities for curing concrete shall be on hand and ready for use before concrete is placed.

3.10 Forms may be removed in accordance with the following schedule unless directed otherwise by the ENGINEER:

Walls, slabs on grade, and columns: 5 days.
Centering to slabs, beams, girders or any suspended units: 21 days.

3.11 No loads shall be placed on any concrete structures until the concrete has been in place at least 21 days, unless approved by the ENGINEER.

3.12 Special care shall be taken to secure a smooth finish on all concrete exposed to view or exposed to water after completion of the work. Immediately upon removal of forms such areas shall be rubbed to a smooth and satisfactory finish with a carborundum brick. The finishing shall be completed on the day of removing the forms. Other concrete shall generally be acceptable with the finish from form work, with slabs receiving a trowel or broom finish, unless shown otherwise on the plans. Wall form ties shall be cut off one inch below the surface and the voids filled prior to finishing.

3.2 Testing

3.21 Concrete class and strength shall meet the minimum compressive strength requirements shown in the following table. The compressive strengths shall be by standard laboratory cylinder tests in accordance with the procedures set forth in ASTM C-31 and C-39.

COMPRESSIVE STRENGTH IN POUNDS PER SQUARE INCH

Class	For Design Purpose	3 Consecutive Cylinder Average		Low Cylinder	
		7 days	28 days	7 days	28 days
I	2,500	1,800	2,675	1,550	2,150
II	3,400	2,450	3,640	2,100	2,920
III	5,000	3,600	5,350	3,100	4,300

3.22 All concrete furnished shall be Class II unless otherwise specified.

3.23 To determine the quality of concrete being used in the work, two cylinders for each 50 cubic yards of concrete, but not less than four cylinders for each day's pour of each concrete class, shall be made. Of every four cylinders, one shall be broken at 7 days and three at 28 days. Cylinders shall be made and cured in accordance with ASTM C-31 and tested in accordance with ASTM C-39.

3.24 The three 28 day cylinders shall constitute a strength test. The average strength of all the 28 day cylinders of any three consecutive strength tests representing each class of concrete shall be equal to, or greater than the specified strength. No individual cylinder strength test shall have a value less than 86% of the specified strength and not more than one strength test in ten shall have an average value of less than 90% of the specified strength.

3.25 When there is a question as to the quality of the concrete in a structure or where any strength test falls below 90% of the specified strength, the ENGINEER may require cores to be taken and tested in accordance with ASTM C-42 and C-39. Cores shall be tested at an age of 45 to 60 days, and the average strength of the cores shall be at least 90% of the specified strength.

3.64 The CONTRACTOR shall provide the equipment and make sure cylinders and other samples are taken, as required for testing, and as specified herein, under the direction of the ENGINEER. All testing shall be at the CONTRACTOR's expense.

END OF SECTION

SECTION 03600

NON-SHRINK GROUT

PART I - GENERAL

1.0 Scope

1.01 The CONTRACTOR shall provide a non-shrink grout where shown on the drawings and as specified.

1.1 Basis of Measurement and Payment

1.11 Work under this Section shall be considered as incidental to construction and no additional payment shall be made for work specified herein.

1.2 Submittals

1.21 If grouts other than those specified are proposed to be used CONTRACTOR shall submit two copies of the manufacturers information to the ENGINEER for his review and approval.

PART II - PRODUCTS

2.0 Installation

2.01 The grout shall be a non-metallic non-shrink grout equal to Master Builders' "Masterflow 713," or Sonneborn's "Sonogrout." Up to 40 percent by weight, of clean, well graded aggregate may be added to the grout mixture if allowed by the manufacturer.

PART III - EXECUTION

3.0 Installation

3.01 All grout shall be prepared in accordance with the manufacturers requirements. A bonding agent shall be utilized unless the grout manufacturer recommends otherwise. Grouting operations shall require the vibrating or rodding of the grout mixture when air pockets may develop unless the grout mixture is fluid enough to flow into all such areas.

END OF SECTION

SECTION 15100

VALVES

PART I - GENERAL

1.0 Scope

1.01 This section shall cover all drain, water main, force main, air, surge, and miscellaneous valves as shown on the drawings and as specified.

1.1 Submittals

1.11 The CONTRACTOR shall submit complete sets of shop drawings to the ENGINEER for approval, prior to ordering any equipment.

1.12 The CONTRACTOR shall also provide parts lists for all valves, special fittings, hangars, etc., to the ENGINEER prior to final payment.

PART II - PRODUCTS

2.0 Materials

2.1 Gate Valves

2.11 Gate valves shall be cast iron body solid wedge resilient seat valves meeting AWWA C-509 requirements. All gate valves shall open counterclockwise and have non-rising stems with 2" square operating nuts unless indicated otherwise on the drawings. End connections shall be mechanical joint unless shown otherwise. Underground valves shall be furnished with cast iron valve boxes and covers to grade. Small valves in accessible locations shall be furnished with handwheels.

2.12 All gate valves shall be Mueller resilient wedge type, or approved equal.

2.2 Mud Valves

2.21 Mud valves shall have cast iron bodies with bronze stems, stem nuts, disc rings and seat rings. All mounting hardware and assembly bolts and nuts are to be of stainless steel. All mud valves are to have flanged ends and be equipped with rising stems unless shown otherwise. Each mud valve is to be equipped with a corrosion resistant extension stem, extension support bracket and handwheel. Position the handwheels approximately 1 foot above the top of the walkway.

2.3 Butterfly Valves

2.31 Butterfly valves shall have cast or ductile iron bodies with resilient seats and shall meet AWWA, C-504 requirements. Valves for above ground service shall be flanged (unless shown otherwise), suitable for operation at temperatures of 200 degrees F. and equipped with 10 position locking levers for variable flow control. Valve for buried service shall have mechanical joint ends and actuators suitable for underground use.

2.32 Butterfly valves shall be as manufactured by BIF, Centerline, M & H or approved equal.

2.4 Check Valves

2.41 Check valves shall be bronze fitted iron body and shall meet AWWA, C-508 requirements. Valves shall be of the clear waterway type and shall have composition to metal seat construction. All check valves shall be flanged with outside levers and weights unless shown otherwise. Check valves shall be installed in a horizontal position. Valves smaller than 4 inches shall be of PVC construction.

2.5 Plug Valves

2.51 Plug valves shall be eccentric resilient plug design with bodies of stainless steel or bronze in sizes to 3" unless used for chlorine solution where PVC is required. Valves larger than 3" shall have bodies of epoxy coated cast iron, and be bi-directionally sealing.

2.52 Three inch and smaller valves shall have Victaulic end connections, or true union ends on PVC valves. Metal body valves for above ground service shall be flanged and have adjustable memory stops and valve position indicators. Valves for buried service shall have mechanical joint ends and actuators suitable for underground use. Valves larger than 3 inches shall have 2 inch square actuating nuts and valves 3 inches and smaller shall be furnished with non-removable levers.

2.53 All plug valves shall be a M & H Style 820, or approved equal.

2.6 Shear Gates

2.61 Shear gates shall be iron body valves with replaceable wedges. All valves shall have flanged ends, unless shown otherwise on the drawings, and lifting handles of proper length to allow operation from the walkways. All mounting hardware and handle brackets shall be provided as required. Bolts and hardware shall be of corrosion resistant material.

2.7 Ball Valves

2.71 Ball valves 3" and smaller, utilized for air control, shall be screwed end stainless steel lever operated valves suitable for operation at temperatures of 200 degrees F. Ball valves 3" and smaller utilized on sewage or water lines shall be true union PVC valves with permanently lubricated Teflon seats and Viton "O" ring seal. End connections shall be threaded or flanged and valves shall be rated for operation at 150 psi.

2.8 Solenoid Valves

2.81 All solenoid valves shall be threaded quick acting PVC or bronze body valves with 120 volt coils and replaceable seats and diaphragms.

2.9 Air and Vacuum Relief

2.91 Air and vacuum relief shall be constructed of cast iron body and cover, stainless steel trim and float, with an adjustable Buna-N seal to insure positive seating. Valve shall be of the type that automatically releases air, gas or vapor under pressure during system operation. The valve shall have working pressure of 150 psi. Valves shall be equipped with flushing attachments including an inlet shut off valve, clear water inlet valve, rubber supply hose and quick connect coupling.

2.92 Air and vacuum relief valves shall be APCO Model 400, Golden-Anderson (GA), or approved equal.

PART III - EXECUTION

3.0 Installation

3.01 All valves shall be located as shown on the Plans. Any underground valves shall be furnished with an adjustable cast iron valve box and cover marked "sewer" or "water" as required. Covers on valve boxes shall be set to finished grade and a concrete box formed around the cover as detailed on the Plans.

3.02 Buried valves with operating nuts greater than 3 feet below finished grade shall be provided with a valve stem extension. Where stem extensions are used, they shall extend to within 3 feet of the finish grade and be pinned to the valve operating nut.

END OF SECTION

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors

PRINCIPALS
William F. Bishop, P.E.
Alex S. Esber, P.L.S.
William B. Houghton, P.E.
Clyde L. Johnson, P.E.
Azad R. Shah, P.E.
David M. Wachtel, P.E.
Glen L. Stickler

ASSOCIATE
Dennis R. Hoover, P.L.S.



August 22, 1989

Town of Longboat Key
501 Bay Isles Road
Longboat Key, Florida 34228

Attention: Mr. Leonard Smally

Re: Sabal Cove Bonding Estimate

Dear Len:

Please find enclosed a revised Bonding Estimate showing minor changes in the site plan. This Bonding Estimate is resubmitted in hopes that the project may be bonded by September 25, 1989, pending approval by the Town Commission.

Should you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

William F. Bishop, P. E.

WFB:pjg(#12)
Enclosure

ARVD-0484

cc: Herman Tom
Russell Luce

78 SARASOTA CENTER BLVD. • SARASOTA, FLORIDA 34240
813/371-6362 • FAX 813/378-3215

dwja
LANDSCAPE ARCHITECTS

August 16, 1989

Mr. Steve Schield
Town of Longboat Key
501 Bay Isles Rd.
Longboat Key, FL 34228

Re: Sabal Cove (Parcel HR-C)

Dear Mr. Schield:

I have recently reviewed the minutes of the planning and zoning meeting of June 6, 1989 and wish to clarify Arvida's position on several issues.

1. **Central Irrigation well:** This procedure for a single family subdivision is unworkable due to the inability to program specific water usage. With thirty eight (38) different homeowners requiring water all at the same time, it is virtually impossible to satisfy their needs both in delivery volumes and pressure. Coordination to specific times and days fails to work as residents change their programs to meet changing landscape and turf needs. We recommend deletion of this condition for site plan approval as it is unworkable.

2. **Exotic plant removal:** To completely remove all exotic plants at this time and then await construction on individual lots does not serve a useful purpose. Each homeowner should be able to selectively clear his or her lot and preserve existing vegetation suitable to their needs. In addition, disturbing this amount of land will only encourage the proliferation of other exotics that will, in turn, need removal. We feel that the minimum amount of clearing be accomplished in development of this parcel.

3. **Littoral zone development:** As agreed in the planning and zoning hearing, Mr. Wilhelm stipulated that Arvida/JMB Partners would construct littoral zones in accordance with the work done in Winding Oaks. Attached is a sketch produced by my office that represents a typical littoral zone. Arvida agrees to develop two such zones, one each at the north and south portions of the project adjacent to Harbourside Drive.

DAVID W. JOHNSTON ASSOCIATES, INC., LANDSCAPE ARCHITECTS
2055 WOOD STREET, SUITE 206 SARASOTA, FL 34237 PHONE 813-366-3159 or 365-7506

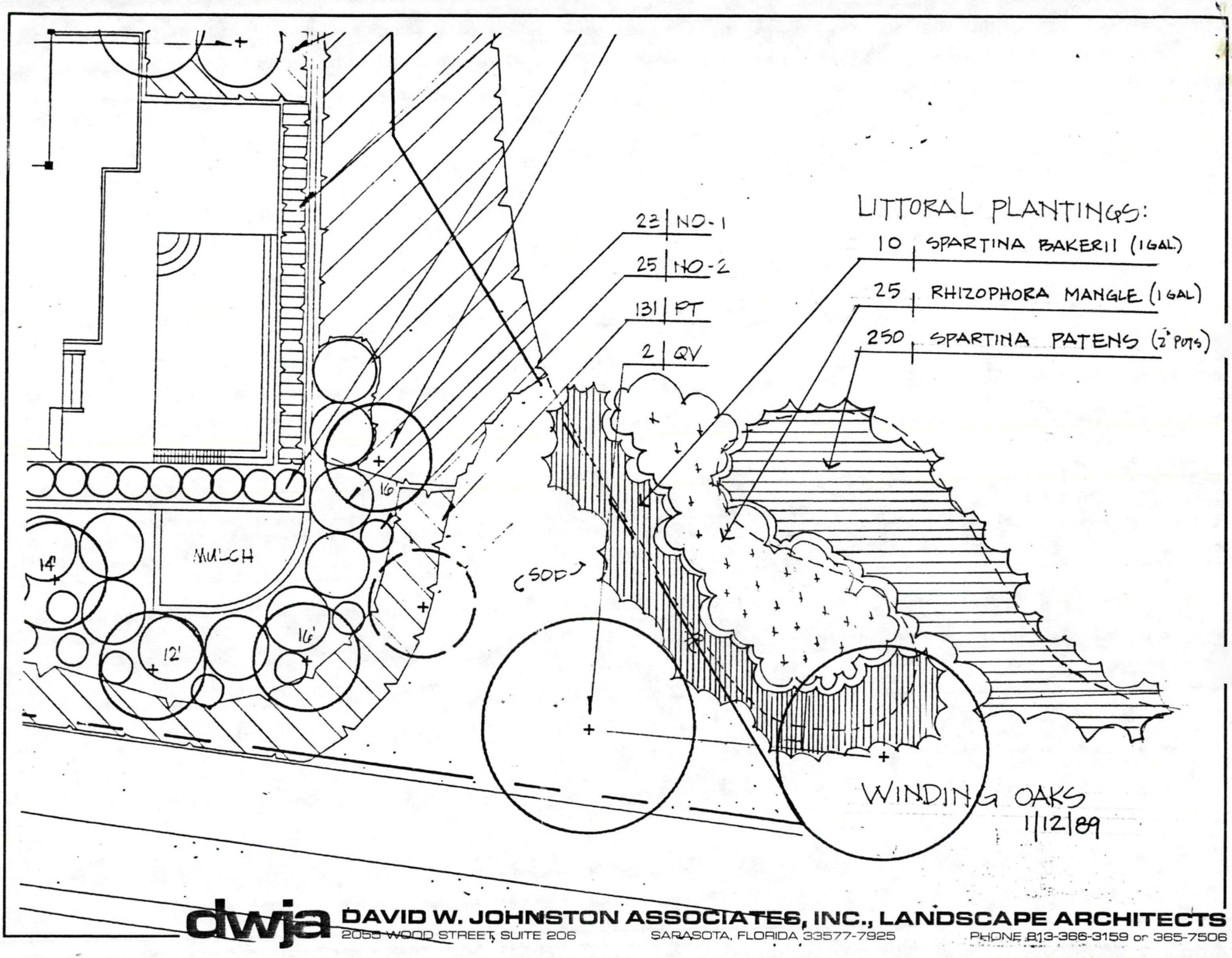
4. **Xeriscape:** As a Landscape Architect concerned with water quality and conservation, I agree with your comments and position in the use of plant materials that are low consumers of water. In an effort to respond to this situation I have been specifying drought tolerant species for many years, particularly as my practice has related to Longboat Key. I have attached a copy of SWFWMD's 'Xeriscape Plant Guide' for your use and underlined many of the species we will continue to use. You will see that many of the plants highlighted are those commonly seen throughout the Arvida development.

Sincerely,

David W. Johnston, ASLA

DAVID W. JOHNSTON ASSOCIATES, INC., LANDSCAPE ARCHITECTS

2055 WOOD STREET, SUITE 206 SARASOTA, FL 34237 PHONE 813-366-3159 or 365-7506



dwja DAVID W. JOHNSTON ASSOCIATES, INC., LANDSCAPE ARCHITECTS
2055 WOOD STREET, SUITE 206 SARASOTA, FLORIDA 33577-7925 PHONE 813-366-3159 or 365-7506

ARVIDA

ARVIDA / JMB PARTNERS
595 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 34228

No. 55 029721

CITIBANK (NEW YORK STATE)
NORTH AMERICAN FINANCIAL GROUP

50/817
213

VOID AFTER 60 DAYS

CONTROL NO.	CHECK DATE	PAY THIS AMOUNT
29721	JUNE 1, 1989	**$650.00**

PAY TO THE ORDER OF TOWN LONGBOAT KEY

GENERAL ACCOUNT

Elizabeth L. Coleman

⑈55029721⑈ ⑆021308176⑆ 30771017⑈

GrayLine BUSINESS FORM—PRODUCT OF WILSON JONES

TOWN OF LONGBOAT KEY
Finance Department

RECEIPT Date 06/09 1989 No. 983887

Received From Arvida/JMB

Address Parcel HR "C" - Sabal Cove

Dollars $ 650.00

For Amendment to ODP

ACCOUNT			HOW PAID		
AMT. OF ACCOUNT			CASH		
AMT. PAID	650	00	CHECK	# 029721	
BALANCE DUE			MONEY ORDER		

001.0900.341.2001

By Sandy Montoya

BONDING ESTIMATE

ARVIDA/JMB PARTNERS **SABAL COVE**
PROJECT ARVD-0430
PAGE 1 **JUNE 5, 1989**

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
1.	Offsite Fill	3,400 CY	$ 7.00	$ 23,800.00
2.	1" Asphalt Surface, Type II	7,210 SY	$ 3.50	$ 25,235.00
3.	6" Soil Cement Base	6,950 SY	$ 6.50	$ 45,175.00
4.	Type "H" Curb	5,990 LF	$ 7.00	$ 41,930.00
5.	Type "A" Curb	360 LF	$ 7.00	$ 2,520.00
6.	Valley Gutter	210 LF	$ 7.00	$ 1,470.00
7.	Sodding Parkways	10,355 SY	$ 2.00	$ 20,710.00
8.	Special Pavers	2,800 SF	$ 3.50	$ 9,800.00
		SUB-TOTAL		**$ 170,640.00**

NOTE: Rock Rip-Rap is not considered at this time in this estimate.

STORM DRAINAGE SYSTEM

1.	Curb Inlets	14 EA	$1,200.00	$ 16,800.00
2.	Junction Box	1 EA	$1,000.00	$ 1,000.00
3.	15" RCP	350 LF	$ 18.00	$ 6,300.00
4.	18" RCP	788 LF	$ 20.00	$ 15,760.00
5.	Flared End Sections	5 EA	$ 300.00	$ 1,500.00
		SUB-TOTAL		**$ 41,360.00**

ARVD0430.J03(ESTIMATES DISK #2)

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
WATER DISTRIBUTION SYSTEM				
1.	10" X 6" Tapping sleeve and valve	2 EA	$1,500.00	$ 3,000.00
2.	Jack & Bore 6" W. M. including casing pipe	180 LF	$ 50.00	$ 9,000.00
3.	6" PVC Water Main	2,360 LF	$ 10.00	$ 23,600.00
4.	6" Gate Valves	7 EA	$ 500.00	$ 3,500.00
5.	2" Gate Valves	6 EA	$ 300.00	$ 1,800.00
6.	Fire Hydrant Assembly	5 EA	$1,500.00	$ 7,500.00
7.	1" & 2" Service Leads (Domestic & Fire)	38 EA	$ 500.00	$ 19,000.00
		SUB-TOTAL		**$ 67,400.00**
SANITARY SEWER SYSTEM				
1.	Connect to Existing System	2 EA	$ 800.00	$ 1,600.00
2.	8" PVC Sanitary Sewer	2,591 LF	$ 18.00	$ 46,638.00
3.	Standard Sanitary Manhole	17 EA	$1,500.00	$ 25,500.00
4.	6" Service Lead Connection (Double)	19 EA	$ 500.00	$ 9,500.00
		SUB-TOTAL		**$ 83,238.00**
		TOTAL ESTIMATED COST		**$ 363,638.00**
		ADD 25% CONTINGENCIES		**$ 90,909.50**
		GRAND TOTAL		**$ 454,547.50**

William F. Bishop

WILLIAM F. BISHOP, P.E. #8189

ARVD0430.J03(ESTIMATES DISK #2)Revised August 22, 1989

STAFF REVIEW

PRELIMINARY PLAT - SABAL COVE SUBDIVISION

Location: Bay Isles P.D. (Parcel HR-"C")
Applicant: Arvida/JMB Partners
No. of Lots: 38

1. Lots do not meet the 100' width requirement at building setback line. This can be accomplished by the ODP approval.

2. Proposed centerline of Sabal Cove Lane (N. Leg) is off-set +/- 60 feet from centerline of Winding Oaks Drive (N. Leg). Section 157.46(E) reads "Street jogs with centerline off-sets of less than 125 feet shall not be permitted unless the Town determines their necessity". Due to extremely light traffic which could make difficult movements, this should not be a problem.

RECOMMEND APPROVAL OF THE PRELIMINARY PLAT.

LAS:cmm
6/22/89

LONGBOAT KEY PLANNING DEPARTMENT

OUTLINE DEVELOPMENT PLAN AMENDMENT

AND SITE PLAN REVIEW

"SABAL COVE" (PD TRACT HR-C)

Applicant:	Arvida/JMB Partners 595 Bay Isles Road Longboat Key, FL 34228
Site Location:	PD Tract HR-C Longboat Key, FL 34228
Existing Zoning:	Planned Development District: 17.4 D.U./A.
Existing Land Use Designation:	Planned Development: Residential Multifamily High-rise
Existing Use:	Vacant

Proposed Change:	**Amend Outline Development Plan Land Intensity Schedule from multifamily high-rise to single family, and reduce permitted dwelling units from 330 to 38, an 88.4% density reduction. Applicant seeks subdivision and site plan approval for 38 single family lots with setback schedule.**

Date: June 22, 1989

OUTLINE DEVELOPMENT PLAN AMENDMENT

Staff Comments and Recommendations to the Board.

Comments. The applicant proposes to amend the Outline Development Plan for Bay Isles Planned Development creating one single family subdivision and revising the Land Intensity Schedule as described above. The Schedule currently provides for 17.4 units per acre on the 19.04 acre site located immediately west of Winding Oaks. The proposed density is 2.0 units per acre, an 88.4% reduction in density. The outline development plan amendment is required because the applicant proposes to vary the proposed residential density by more than 10%.

The proposed project deviates from regulations of the code which would be applicable to non-planned development projects. In accordance with Town Ordinance No. 88-25, the applicant has submitted as part of the application Exhibit "A-4", which compares the lot, yard, and bulk regulations of the R-2SF and R-3SF zoning districts against the proposed project. The R-3SF zoning district is used as a basis of comparison because the minimum lot size requirement of that district is most similar to the project. The R-2SF district is also compared due to the similar densities. Please refer to applicants Exhibit "A-4" for comparisons.

Recommendations. Staff recommends approval of the above referenced outline development plan amendment with the following conditions:

---

1. All applicable provisions of Resolution No. 75-27 and as subsequently amended, shall be adhered to.

2. Deviations from the Town's subdivision regulations requested by the preliminary plat application which require Outline Development Plan amendment(s) are approved except as provided herein.

3. The Planned Development Land Intensity Schedule shall be updated to reflect the above referenced outline development plan amendment. A revised schedule shall be submitted and approved by the Town's Planning Department and 25 copies of the approved schedule shall be furnished to the Planning Department prior to issuance of a building permit.

4. Approval of the proposed Outline Development Plan Amendment shall be subject to payment of all staff review charges.

SITE PLAN REVIEW

Staff Comments and Recommendations to the Board

Comments. The applicant has submitted plans with a street layout that has a street entrance offset with the eastern entrances of Sabal Cove and Winding Oaks of less than 125 feet. Please refer to the preliminary plat staff review. The lot widths are generally 100 feet wide, but nine (9) lots have less than 100 feet widths at the building line. These are located primarily on the curve of the streets.

In accordance with Section 158.103 of the Town Code staff finds that the site plan would not be adverse to the public interest and finds and concludes the following:

(A) The plan is consistent with the comprehensive plan and the purpose and intent of the zoning district in which it is located.

(B) The plan is in conformance with all applicable regulations of the zoning district in which it is located.

(C) The plan is in conformance with the town's subdivision regulations, Chapter 157, and all other applicable town requirements.

(D) The plan is consistent with good design standards in respect to all external relationships, including but not limited to relationship to adjoining properties; internal circulation, both vehicular and pedestrian; disposition and use of open space, provision of screening and buffering, and preservation of existing natural features including trees; size and apparent bulk of structures; and building arrangements both between buildings in the proposed development and those adjoining the site.

(E) The plan is in conformance with town policy in respect to sufficiency of ownership, guarantees for completion of all required improvements, and, if private, the guarantees for continued maintenance.

Recommendations. Staff recommends approval of the above referenced Site Plan with the following conditions:

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1. All nuisance exotic species of trees on the entire site shall be removed including Australian Pine (Casuarina spp.) and Brazilian Pepper (Schinus terebinthifolius) and every effort will be made to adjust the location of the proposed facility to avoid the removal of native vegetation. Wherever such vegetation has to be removed, however, (i.e., having a diameter of four inches or more), the applicant shall replace each tree on the site at the rate of at least two (2) trees for every tree removed. All landscaping activities and work resulting from this condition shall be incorporated into a detailed landscaping plan for all common areas to be submitted to the Town and approved by the Planning and Building Departments prior to the issuance of a building permit. All landscaping work activities shall not only meet the conditions of this development order but also the provisions of the Town's Tree Ordinance.

2. Approval of utilities, storm water system and all site work must be received from the Public Works Department prior to the commencement of any work.

3. Work to be accomplished within the development phases specified below shall be as follows:

Complete application for the issuance of building permits to be submitted and a building permit issued on or before the

PHASES	DESCRIPTION	following dates:*
I	All common site work, recreational area, gatehouse, emergency vehicle/sidewalk access, and landscaping	October 1, 1990

*A complete building permit application must be filed at least 30 calendar days prior to the building permit issuance deadline.

4. The proposed landscape plan shall be meet the requirements of Section 158.148 and a preservation and location plan of existing trees shall be submitted prior to the issuance of a building permit.

5. All utilities shall be placed underground.

6. A construction fence shall be provided to secure the construction site.

7. Native and drought resistant plant species should be used in the buffer and other common areas to reduce water requirements.

8. Approval of the proposed Site Plan shall be subject to payment of all staff review charges.

9. All necessary outside agency permits shall be obtained prior to issuance of a building permit.

10. The provisions of the site plan application for the subject property dated June 12, 1989, and received on June 12, 1989, shall be complied with unless waived or modified by the above conditions or by written agreement between the Town and the applicant or amended pursuant to the code.

11. In accordance with Section 158.099(F) of the Town Code, an approved site plan becomes null and void if:

(1) The applicant shall abandon the plan or the section thereof that has been finally approved, and shall so notify the Town Commission in writing; or

(2) Within 12 months of the date of approval of an application for site plan review, a complete application for building permit has not been submitted to the Town and a building permit issued; or

(3) A final certificate of occupancy for all phases of the project has not been issued within three years from the date set for receipt of a complete application for building permit for the final building or development phase of the project.

All work stated in these conditions shall be completed prior to issuance of a temporary Certificate of Occupancy or Certificate of Occupancy (C.O.) if the former has not been issued, unless otherwise indicated above.

STAFF REVIEW

2

PRELIMINARY PLAT - SABAL COVE SUBDIVISION

Location: Bay Isles P.D. (Parcel HR-"C")
Applicant: Arvida/JMB Partners
No. of Lots: 38

1. Lots do not meet the 100' width requirement at building setback line. This can be accomplished by the ODP approval.

2. Proposed centerline of Sabal Cove Lane (N. leg) is off-set +/- 60 feet from centerline of Winding Oaks Drive (N.leg). Section 157.46(E) reads "Street jogs with centerline off-sets of less than 125 feet shall not be permitted unless the Town determines their necessity". Normally, roads "line up" or must be over 125 feet apart to avoid dangerous conditions.

   In this case, however, there is an insignificant amount of traffic that will turn north from Sabal Cove and there should not be a problem at these intersections.

3. Setbacks are incorrect on interior lots. This shall be addressed at Site Plan Review.

LAS:cmm
8/28/89

TOWN OF LONGBOAT KEY
PLANNING DEPARTMENT
PRE-APPLICATION CONFERENCE

MEMORANDUM

DATE: MAY 31, 1989

TO: Town Manager
Police Department
Fire Department
Utilities Department
Code Enforcement
Public Works Department

FROM: Steve Schield, Associate Planner

SUBJECT: PRE-APPLICATION CONFERENCE

PROJECT: PD PARCEL HR-"C"

TYPE OF APPLICATION: OUTLINE DEVELOPMENT PLAN AND SITE PLAN

Your presence is requested at a pre-application conference concerning the above referenced project on FRIDAY, JUNE 2, 1989 at 11:00 A.M. in the ANTE CHAMBERS.

Please contact the Planning Department if you have any questions concerning the above. Thank you very much.

JB/gg

cc: Project File
Reading File

TOWN OF LONGBOAT KEY
PLANNING DEPARTMENT
PRE-APPLICATION CONFERENCE

MEMORANDUM

DATE: May 23, 1989

TO: Town Manager
Police Department
Fire Department
Utilities Department
Code Enforcement
Public Works Department

FROM: Steve Schield, Associate Planner

SUBJECT: PRE-APPLICATION CONFERENCE

PROJECT: PD PARCEL HR-"C"

TYPE OF APPLICATION: OUTLINE DEVELOPMENT PLAN AND SITE PLAN.

Your presence is requested at a pre-application conference concerning the above referenced project on Tuesday, May 30, 1989 at 10:30 A.M. in the Ante Chambers.

Please contact the Planning Department if you have any questions concerning the above. Thank you very much.

JB/gg

cc: Project File
Reading File

TOWN OF LONGBOAT KEY
PLANNING DEPARTMENT
PRE-APPLICATION CONFERENCE

CC: JAY

MEMORANDUM

DATE: May 4, 1989

TO: Town Manager
Police Department - not to show
~~Fire Department~~ - not to show
Utilities Department
Code Enforcement
Public Works Department

FROM: Steve Schield, Associate Planner

SUBJECT: PRE-APPLICATION CONFERENCE

PROJECT: Parcel HRC and Marina Bay

TYPE OF APPLICATION: Outline Development Plan Amendment.

Your presence is requested at a pre-application conference concerning the above referenced project on Tuesday, May 9, 1989 at 3:00 P.M. in the Ante Chambers.

Please contact the Planning Department if you have any questions concerning the above. Thank you very much.

JB/gg

cc: Project File
Reading File
Marina Bay file

For Saval Core

Report

of

C - BASE

SOIL-CEMENT MIX DESIGN

TEST PROGRAM

for

Chapman Contracting Company

TAMPA BAY SHELL PIT

RUSKIN, FLA.

TEST LAB INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC.

March 10, 1989

Chapman Contracting Company
1910 Orient Road
Tampa, Florida 33619

Attention: Mr. Dennis Kirkpatrick

Subject: Product Check
Tampa Bay Shell Pit
Ruskin, Florida
Project No. TL-3025

Gentlemen:

As requested, Test Lab, Inc. has completed two soil-cement mix designs which were formulated using sandy shell material obtained from your Tampa Bay Shell Pit in Ruskin. The purpose of this testing program was to determine the cement content necessary to meet state and local requirements for soil-cement to be used as road base material. We understand that the recommendations resulting from this program are to be incorporated into pug mill or plant run soil-cement base material to be produced at your Ruskin shell pit. Test results of four mix designs are attached. Design Nos. 1 and 2 are from recently completed roadway projects; whereas, Design Nos. 3 and 4 were formulated using materials sampled during the past two weeks. The testing program was accomplished in accordance with the following.

Test specimens for each design were molded and tested in accordance with FDOT Method FM 5-520. The designs consisted of mixing cement in varying percentages with the sandy shell material from Tampa Bay Shell Pit. Specimens were subsequently molded, cured and tested. The shell material incorporated in Design Nos. 1 and 2, with the exception of the cement, was sampled for two

recently completed roadway projects. The materials for Design Nos. 3 and 4 were sampled within the past two weeks specifically for this testing program. The cement for each design, which we provided, was Type I Portland Cement.

Based on the results of the individual designs incorporated into this report, it is our recommendation that 5.5 percent cement by weight be used during production of soil-cement base material at your new plant. This recommendation is based on a minimum 300 psi unconfined compressive strength of laboratory specimens tested seven days after molding.

It should be noted that the principal requirement of a hardened soil-cement mixture is that it can be capable of withstanding exposure to the elements. Therefore, the wet-dry cyclic durability test could be conducted, time permitting, to confirm the recommended minimum cement content determined from the strength tests. In addition, even though the test results are very consistent, due to various inconsistencies which could be encountered during production of your base material, test specimens should be molded to verify that the plant produced soil-cement mixture is equivalent to that formulated in the laboratory.

If you have any questions concerning this report, or if we can be of further service, please do not hesitate to call.

Sincerely,

David M. Carron
Materials Engineer

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 W CURTIS STREET • P O BOX 15732 • TAMPA, FLORIDA 33614

LABORATORY DESIGN OF SOIL-CEMENT MIXTURES
(FDOT METHOD FM 5-520)

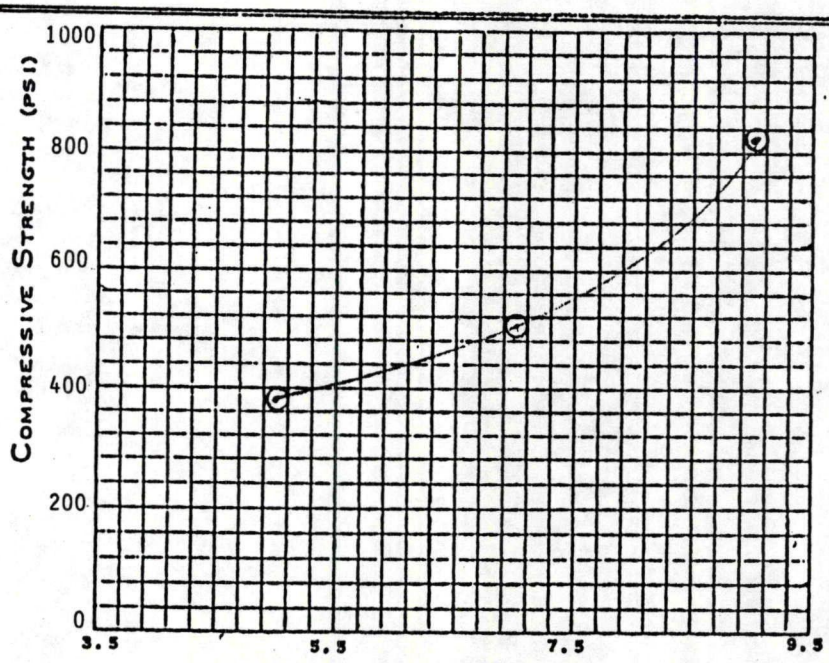
Design No. 1

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989



ADJUSTED PEAK COMPRESSIVE STRENGTH (PSI)				
CEMENT CONTENT (PERCENT BY WEIGHT)	AGE IN DAYS			AVERAGE
	7	7	7	
5	358	370	382	370
7	510	520	500	510
9	800	820	840	820

CYLINDERICAL SPECIMENS, 4" IN DIAMETER AND 4.6" HIGH, MOIST-CURED FOR 7 DAYS AND ALLOWED TO DRAIN TO SATURATED SURFACE DRY CONDITION PRIOR TO TESTING.

RECOMMENDED CEMENT CONTENT 5.0 PERCENT BY WEIGHT. 6.2 PERCENT BY VOLUME. WHICH IS EQUIVALENT TO 4.42 POUNDS PER SQUARE YARD PER INCH OF MIXING DEPTH.

David M. Carson
TEST LAB INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 W. CURTIS STREET • P.O. BOX 15732 • TAMPA, FLORIDA 33614

SIEVE ANALYSIS
Design No. 1

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989

SAMPLE LOCATION: Stockpile at Pit

SOIL DESCRIPTION: Tan sandy shell

Sieve Number	Percent Passing
3/4"	100
1/2"	90
3/8"	88
No. 4	80
No. 10	75
No. 20	72
No. 40	68
No. 60	63
No. 100	25
No. 200	6

ATTERBERG LIMITS - LL: 20 PL: NP PI: NP

DATE SAMPLED: 3/1/89
DATE TESTED: 3/1/89

REPORTS TO: Chapman Contracting Company (2)

David M. Carron
TEST LAB, INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 WEST CURTIS STREET • P. O. BOX 15732 • TAMPA, FLORIDA 33614

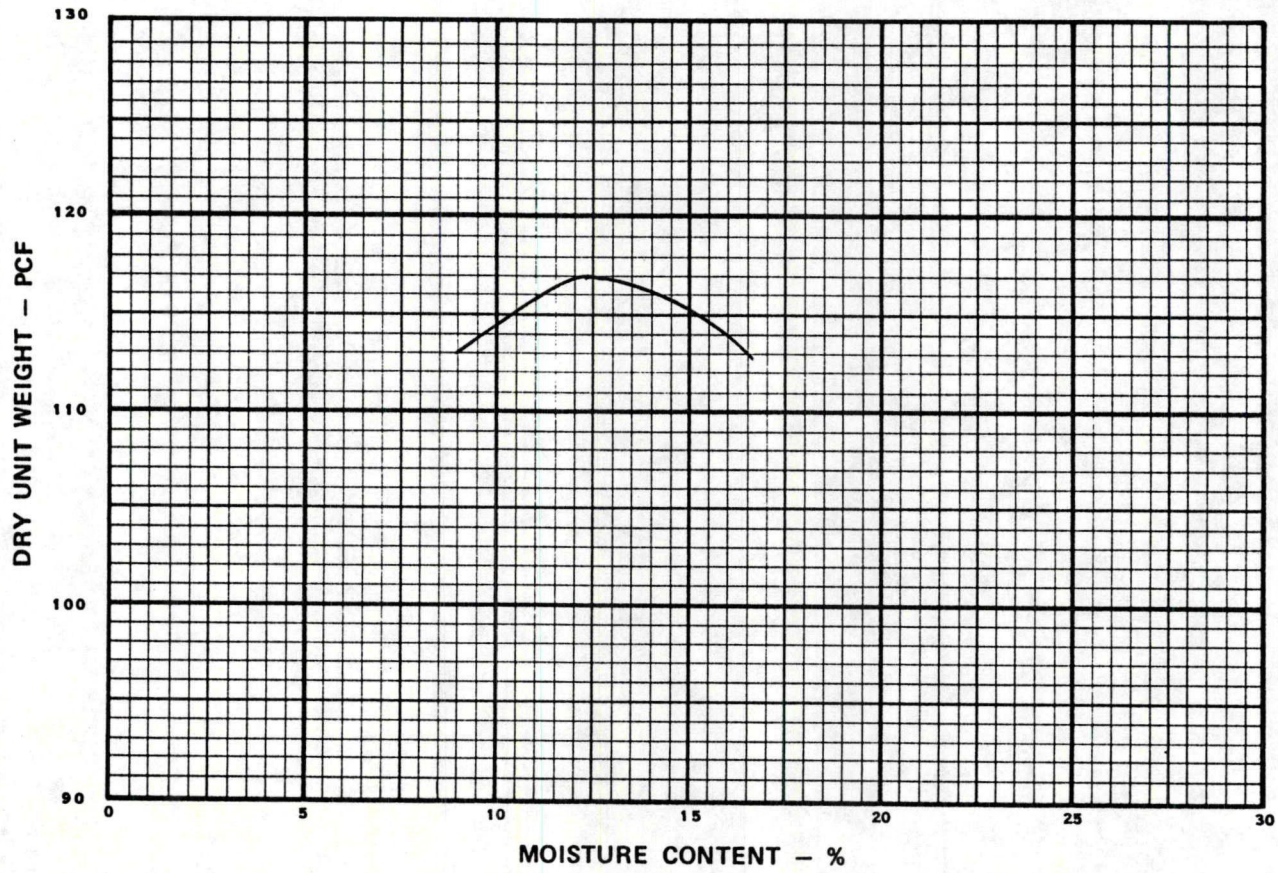
COMPACTION TEST

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989



TEST METHOD: ASTM D 558, Method B

SOIL DESCRIPTION: Tan fine sandy shell with 7% cement (Soil Cement)

DATE TESTED: 3/2/89
Date Received: 3/1/89
REPORTS TO:

Chapman Contracting Company (2)

COMPACTION TEST NO:	1
MAXIMUM DRY DENSITY:	117.0 PCF
OPTIMUM MOISTURE CONTENT	12.3 %

REMARKS:

LOCATION: Stockpile at Pit

David M. Carron
TEST LAB, INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC.
4619 W CURTIS STREET • P O BOX 15732 • TAMPA, FLORIDA 33614

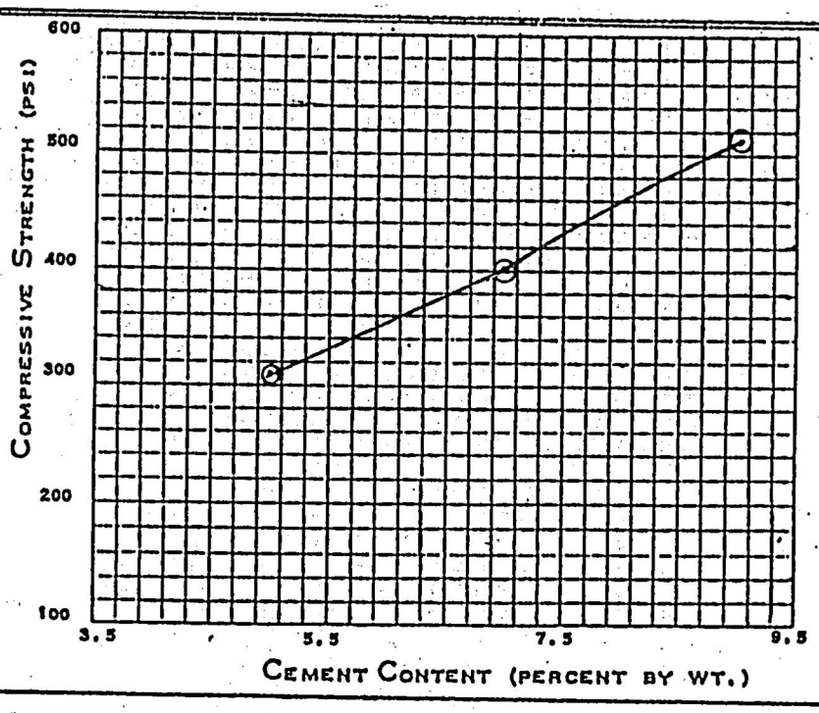
LABORATORY DESIGN OF SOIL-CEMENT MIXTURES
(FDOT METHOD FM 5-520)
Design No. 2

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989



ADJUSTED PEAK COMPRESSIVE STRENGTH (PSI)				
CEMENT CONTENT (PERCENT BY WEIGHT)	AGE IN DAYS			AVERAGE
	7	7	7	
5	315	305	310	310
7	390	390	410	400
9	500	520	500	510

CYLINDERICAL SPECIMENS, 4" IN DIAMETER AND 4.6" HIGH, MOIST-CURED FOR 7 DAYS AND ALLOWED TO DRAIN TO SATURATED SURFACE DRY CONDITION PRIOR TO TESTING.

RECOMMENDED CEMENT CONTENT 5.5 PERCENT BY WEIGHT, 6.5 PERCENT BY VOLUME, WHICH IS EQUIVALENT TO 4.58 POUNDS PER SQUARE YARD PER INCH OF MIXING DEPTH.

David M. Carson
TEST LAB INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 WEST CURTIS STREET • P. O. BOX 15732 • TAMPA, FLORIDA 33614

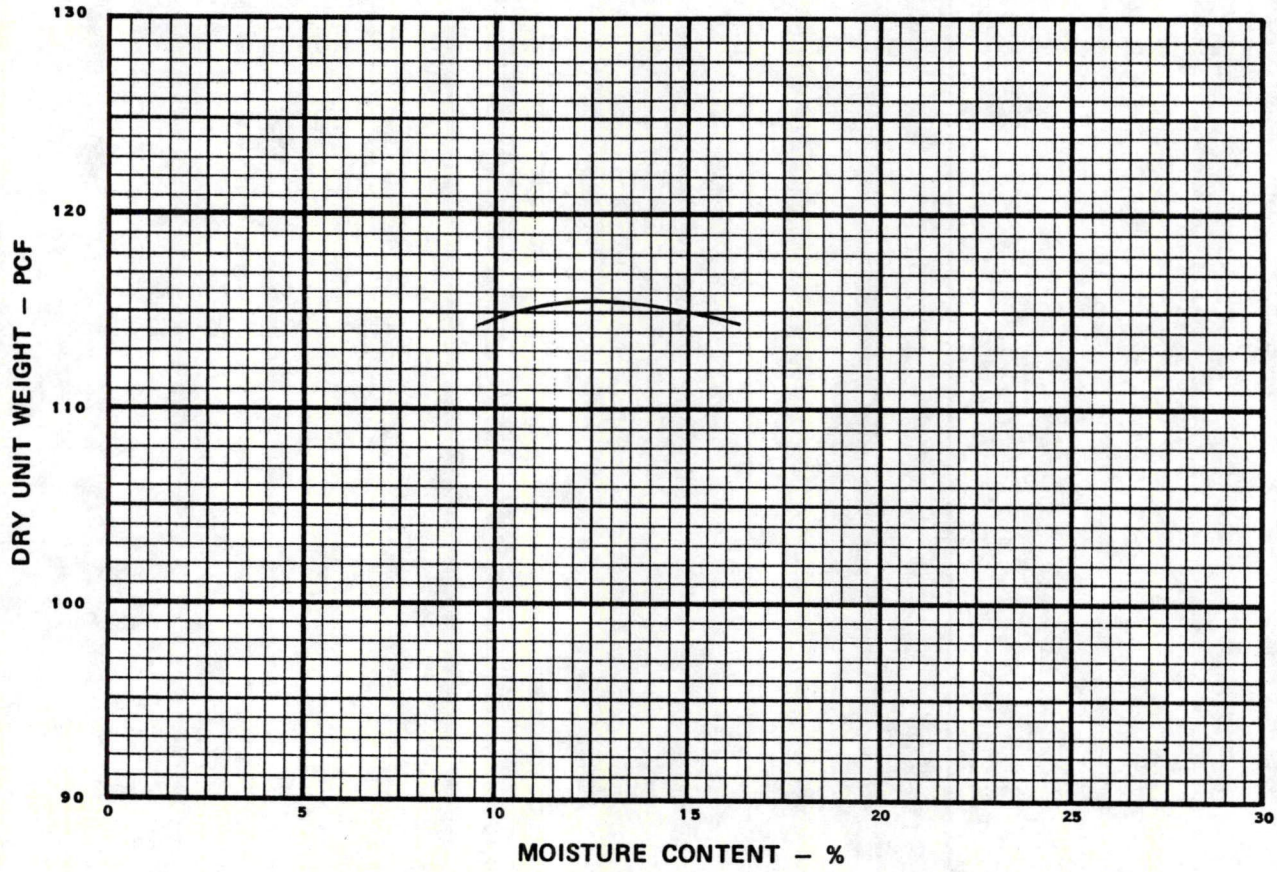
COMPACTION TEST

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989



TEST METHOD: ASTM D 558, Method B

DATE TESTED: 9/22/87
Date Received: 9/15/87

SOIL DESCRIPTION: Tan and gray sandy shell with 7% cement (Soil Cement)

REPORTS TO:

Chapman Contracting Company (2)

COMPACTION TEST NO:	2	
MAXIMUM DRY DENSITY:	115.5	PCF
OPTIMUM MOISTURE CONTENT	12.5	%

REMARKS:

LOCATION: Stockpile at Pit

David M. Carron
TEST LAB, INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 W. CURTIS STREET • P.O. BOX 15732 • TAMPA, FLORIDA 33614

SIEVE ANALYSIS
Design No. 2

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989

SAMPLE LOCATION: Stockpile at Pit

SOIL DESCRIPTION: Tan fine sandy shell

Sieve Number	Percent Passing
3/4"	100
1/2"	96
3/8"	89
No. 4	77
No. 10	70
No. 20	67
No. 40	65
No. 60	60
No. 100	33
No. 140	10
No. 200	7

ATTERBERG LIMITS - LL: 19 PI: NP

DATE SAMPLED: 9/15/87
DATE TESTED: 9/18/87

REPORTS TO: Chapman Contracting Company (2)

David M. Carson
TEST LAB, INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC.
4619 W CURTIS STREET • P O BOX 15732 • TAMPA, FLORIDA 33614

LABORATORY DESIGN OF SOIL-CEMENT MIXTURES
(FDOT METHOD FM 5-520)

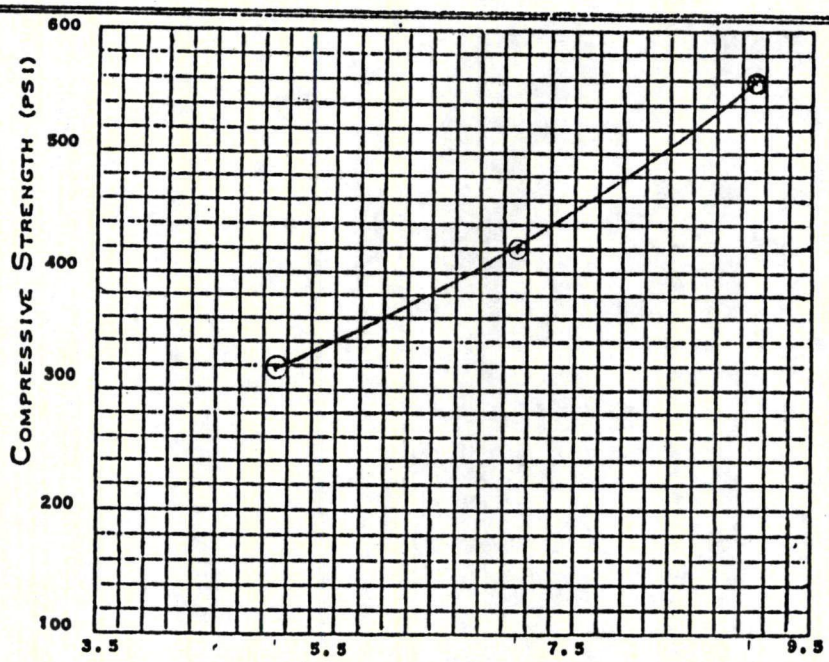
Design No.3

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989



ADJUSTED PEAK COMPRESSIVE STRENGTH (PSI)				
CEMENT CONTENT (PERCENT BY WEIGHT)	AGE IN DAYS			AVERAGE
	7	7	7	
5	300	340	320	320
7	410	430	420	420
9	540	570	570	560

CYLINDERICAL SPECIMENS, 4" IN DIAMETER AND 4.6" HIGH, MOIST-CURED FOR 7 DAYS AND ALLOWED TO DRAIN TO SATURATED SURFACE DRY CONDITION PRIOR TO TESTING.

RECOMMENDED CEMENT CONTENT 5.5 PERCENT BY WEIGHT, 6.5 PERCENT BY VOLUME, WHICH IS EQUIVALENT TO 4.58 POUNDS PER SQUARE YARD PER INCH OF MIXING DEPTH.

David M. Carson
TEST LAB INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 WEST CURTIS STREET • P. O. BOX 15732 • TAMPA, FLORIDA 33614

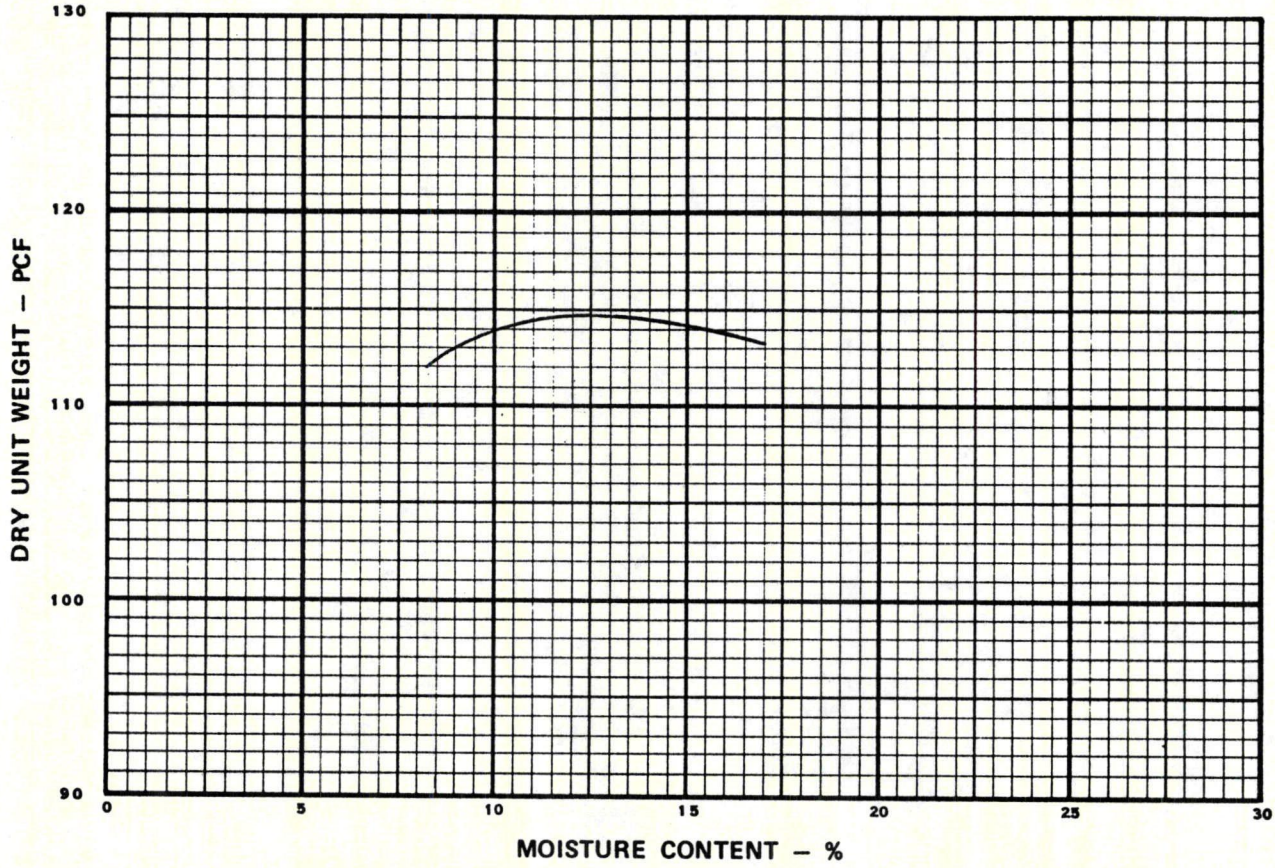
COMPACTION TEST

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989



TEST METHOD: ASTM D 558, Method B

SOIL DESCRIPTION: 7% cement & 100% brown sandy shell (Soil Cement)

DATE TESTED: 3/2/89
Date Received: 3/1/89
REPORTS TO:

Chapman Contracting Company (2)

COMPACTION TEST NO:	3	
MAXIMUM DRY DENSITY:	114.8	PCF
OPTIMUM MOISTURE CONTENT	12.4	%

REMARKS:

LOCATION: Stockpile at Pit

David M. Carson
TEST LAB, INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 W. CURTIS STREET • P.O. BOX 15732 • TAMPA, FLORIDA 33614

SIEVE ANALYSIS
Design No. 3

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989

SAMPLE LOCATION: Stockpile at Pit

SOIL DESCRIPTION: Brown fine sandy shell

Sieve Number	Percent Passing
3/4"	100
1/2"	98
3/8"	92
No. 4	83
No. 10	71
No. 20	66
No. 40	60
No. 60	48
No. 100	37
No. 140	16
No. 200	12

ATTERBERG LIMITS - LL: 18 PI: NP

DATE SAMPLED: 3/1/89
DATE TESTED: 3/1/89

REPORTS TO: Chapman Contracting Company (2)

David M. Carron
TEST LAB, INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC.
4619 W CURTIS STREET • P O BOX 15732 • TAMPA, FLORIDA 33614

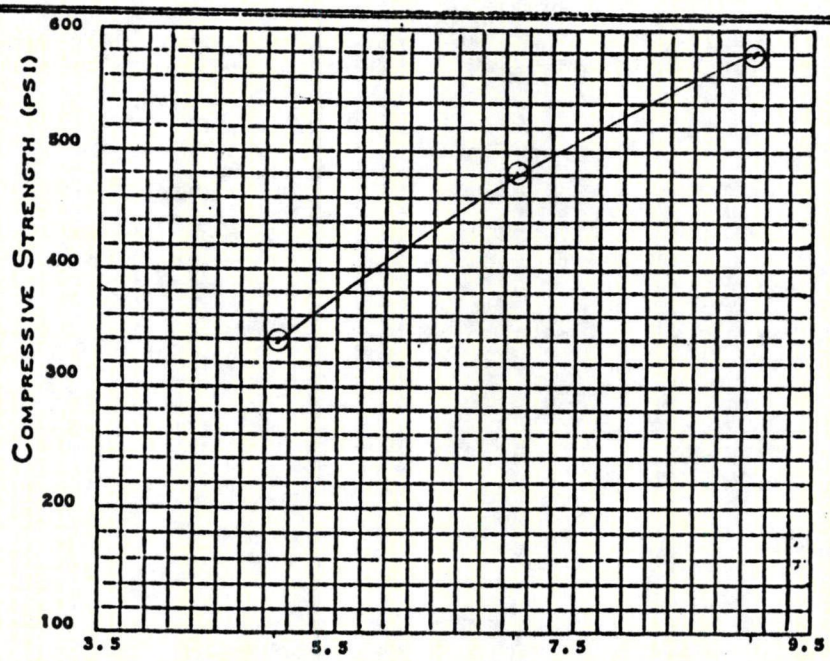
LABORATORY DESIGN OF SOIL-CEMENT MIXTURES
(FDOT METHOD FM 5-520)
Design No. 4

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989



ADJUSTED PEAK COMPRESSIVE STRENGTH (PSI)				
CEMENT CONTENT (PERCENT BY WEIGHT)	AGE IN DAYS			AVERAGE
	7	7	7	
5	350	310	360	340
7	440	520	480	480
9	590	590	560	580

CYLINDERICAL SPECIMENS, 4" IN DIAMETER AND 4.6" HIGH, MOIST-CURED FOR 7 DAYS AND ALLOWED TO DRAIN TO SATURATED SURFACE DRY CONDITION PRIOR TO TESTING.

RECOMMENDED CEMENT CONTENT 5.5 PERCENT BY WEIGHT. 6.5 PERCENT BY VOLUME, WHICH IS EQUIVALENT TO 4.58 POUNDS PER SQUARE YARD PER INCH OF MIXING DEPTH.

David M. Carson
TEST LAB INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 WEST CURTIS STREET • P. O. BOX 15732 • TAMPA, FLORIDA 33614

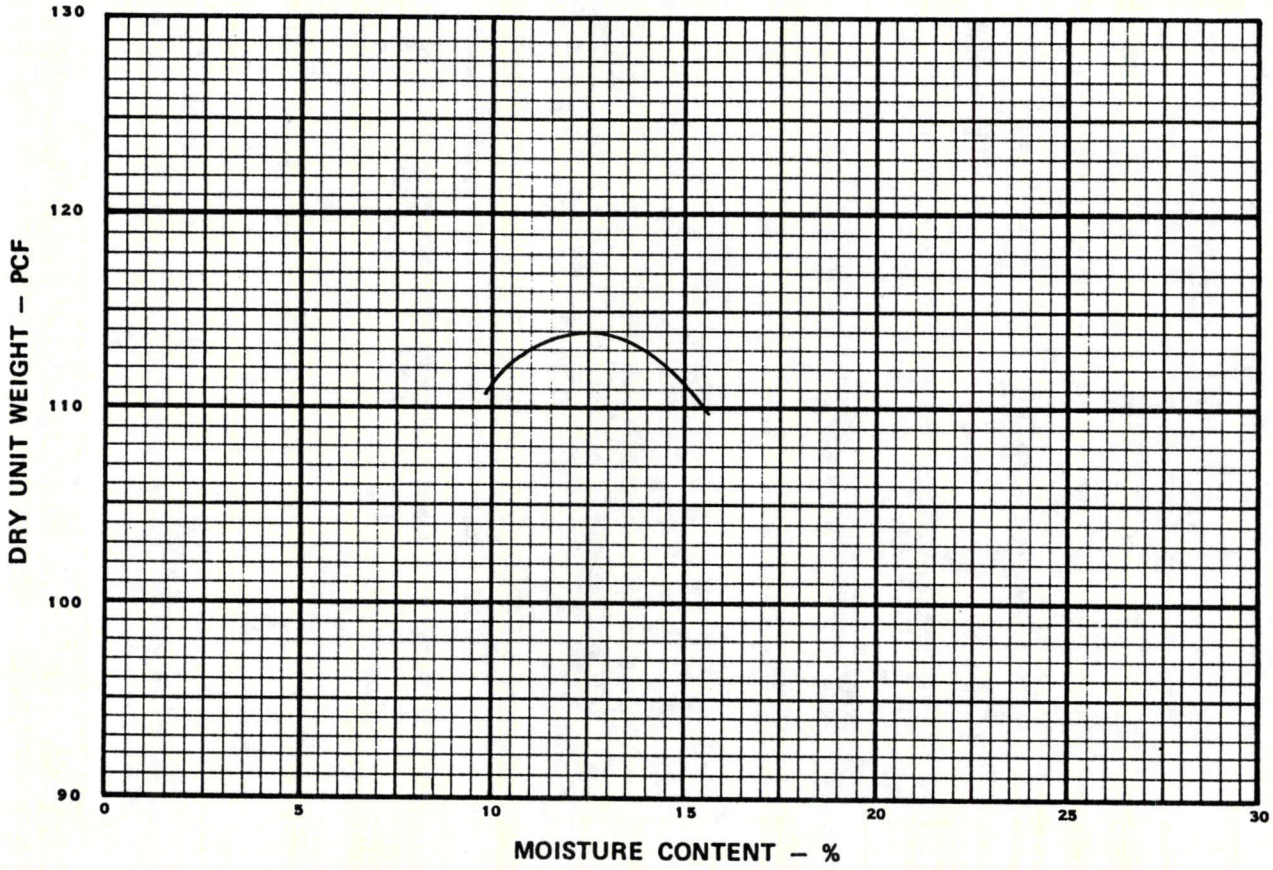
COMPACTION TEST

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989



TEST METHOD: ASTM D 558, Method B

SOIL DESCRIPTION: 7% cement and 100% brown sandy shell
(Soil Cement)

DATE TESTED: 3/2/89
Date Received: 3/1/89
REPORTS TO:

Chapman Contracting Company (2)

COMPACTION TEST NO:	4	
MAXIMUM DRY DENSITY:	114.0	PCF
OPTIMUM MOISTURE CONTENT	12.4	%

REMARKS:

LOCATION: Stockpile at Pit

David M. Carson
TEST LAB, INC.

MATERIALS ENGINEERING, TESTING AND INSPECTION
TEST LAB INC
4619 W. CURTIS STREET • P.O. BOX 15732 • TAMPA, FLORIDA 33614

SIEVE ANALYSIS
Design No. 4

PROJECT: Tampa Bay Shell Pit
Product Check

PROJECT NO: TL-3025

CLIENT: Chapman Contracting Company

DATE: March 10, 1989

SAMPLE LOCATION: Stockpile at Pit

SOIL DESCRIPTION: Brown fine sandy shell

Sieve Number	Percent Passing
3/4"	100
1/2"	96
3/8"	93
No. 4	87
No. 10	78
No. 20	68
No. 40	61
No. 60	50
No. 100	36
No. 140	17
No. 200	13

ATTERBERG LIMITS - LL: 19 PI: NP

DATE SAMPLED: 3/1/89
DATE TESTED: 3/2/89

REPORTS TO: Chapman Contracting Company (2)

David M. Carson
TEST LAB, INC.

BENNETT & BISHOP
Consulting Engineers
Surveyors

THOMAS J. BENNETT P.E., R.L.S.
WILLIAM F. BISHOP P.E.

4509 BEE RIDGE ROAD
SARASOTA, FLORIDA 33583
PHONE 371-6362

9 August 1984

Mr. Mark Gumula, A.I.C.P.
Planning Director
Town of Longboat Key
P.O. Box 107
Longboat Key, Florida 33548

Re: Littoral Zones - Bay Isles PD

Dear Mr. Gumula:

It has been a pleasure to meet with you and your staff with relation to the canal systems on the Bay Isles project and to be able to work out with you a satisfactory resolution of the problems of continued water quality improvement throughout the project. The final resolution of the problem appears to be as shown graphically and in color on a copy of our Drawing No. 191-25 (01) which illustrates a littoral zone intended to receive water from the undeveloped golf course and land development areas remaining in the project. Seventeen such littoral zones are illustrated and their scale and quality are shown in plan and section on that drawing. It is my understanding that the owners, Arvida Corporation, intend to construct these seventeen zones in the course of the completion of the development at the Bay Isles project and that the Town of Longboat Key will accept the construction in that form and on the appropriate time schedule to be a satisfactory resolution of the problem of water quality on existing canals in the project.

The first two zones, located at the Harbourside Clubhouse site and the Harbourside Tennis Club site, are currently under design and will serve to be the detailed delineation of the schematic proposal which has been accepted by you and has been made a part of the approval of both Harbourside Tennis Club and the Harbourside Clubhouse site by the Town Commission of the Town of Longboat Key.

It has been a pleasure to have worked with you on this and we will look forward to the satisfactory construction of these improvements to water quality in the project area.

(191-25/191-33/191-36A)

RECEIVED
SEP 6 1984
Town of
Longboat Key

If there is any further question in this matter, please feel free to call on the undersigned.

Sincerely yours,

William F. Bishop, P.E.

Enclosure: Drawing No. 191-25 (01)

WFB:mlm

CC: W. Tom Hale
Herman Tom
George A. Dietz w/enclosures (2 each)

RECEIVED
SEP 6 1984
Town of
Longboat Key

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors

PRINCIPALS
William F. Bishop, P.E.
Alex S. Esber, P.L.S.
William B. Houghton, P.E.
Clyde L. Johnson, P.E.
Azad R. Shah, P.E.
David M. Wachtel, P.E.
Glen L. Stickler

ASSOCIATE
Dennis R. Hoover, P.L.S.

RECEIVED
JUN 22 1989
Town of
Longboat Key

June 7, 1989

Mr. Jay Brady, AICP, Planning Director
Town of Longboat Key
501 Bay Isles Road
Longboat Key, Florida 34228

Re: Sabal Cove
Bay Isles P.D. (Parcel HR-"C")

Dear Mr. Brady:

We are submitting for review and comment, on behalf of Arvida/JMB Partners, an Application for Subdivision Approval, together with application fees and twenty-five copies of all appurtenant supporting documents and drawings for the referenced project.

Because the proposed site plan submitted reduces the dwelling unit total for the parcel by more than ten percent, your zoning ordinance indicates that amendment to the Outline Development Plan is required. Arvida/JMB Partners is therefore requesting an amendment to the Bay Isles P.U.D. Outline Development Plan to reflect the changes in dwelling unit count and site density (D.U./acre). A Land Intensity Schedule drawing showing the existing and proposed figures is attached in the Outline Development Plan drawings submitted.

Sincerely yours,

William F. Bishop, P.E.

WFB/pjg(LTR-J07.WFB Site #1)
Enclosures

ARVD-0430
Approved by
Town Commission
TOWN CLERK'S OFFICE
RECEIVED
Sept. 12, 1989
SEP 14 1989
P.L. Acenda
TOWN OF LONGBOAT KEY

78 SARASOTA CENTER BLVD. • SARASOTA, FLORIDA 34240
813/371-6362 • FAX 813/378-3215

OUTLINE DEVELOPMENT AMENDMENT AND PRELIMINARY PLAT EXHIBITS

FOR

SABAL COVE

Owner: Arvida/JMB Partners
595 Bay Isles Road
Longboat Key, Florida 34228
(813) 383-9551

Engineer: Bishop & Associates
78 Sarasota Center Boulevard
Sarasota, Florida 34240
(813) 371-6362

Land Planner: David Johnston & Associates, Inc.
2055 Wood Street, Suite #206
Sarasota, Florida 34237
(813) 366-3159

GENERAL DATA:

1. NAME: Sabal Cove

2. OWNER: Arvida/JMB Partners
595 Bay Isles Road
Longboat Key, Florida 34228
(813) 383-9551

3. LAND PLANNER: David Johnston & Associates, Inc.
2055 Wood Street, Suite 206
Sarasota, Florida 34237
(813) 366-3159

4. ENGINEER: Bishop & Associates
78 Sarasota Center Boulevard
Sarasota, Florida 34240
(813) 371-6362

5. SEWAGE COLLECTION SYSTEM: Town of Longboat Key
Manatee County
Utility Systems

6. WATER DISTRIBUTION: Town of Longboat Key
Manatee County
Utility Systems

7. DRAINAGE SYSTEM: Surface run-off to various inlets. Underground pipes to retention pond within the golf course.

8. All construction in accordance with applicable provisions of The Town of Longboat Key Tree Ordinance.

9. Zoning: P.D. (Parcel HR-C) 330 dwelling units approved in Bay Isles P.U.D. Land Intensity Schedule.

10. Proposed: 38 units on 19.05± acre parcel (829,818± S.F.) at 1.99 dwelling units per acre, previously approved for 17.4 dwelling units per acre (330 dwelling units on 19.05 acres).

Sabal Cove
Project: ARVD-0430

INDEX

Exhibit	Description
A	**Application and Concurrent Processing Letter**
A-1	Letter of Transmittal to Owner
A-2	Application for Subdivision Approval
A-3	Letter Regarding Tree Preservation and Location
A-4	Statement of Concurrence with Ordinance 88-25
B	**Engineer's Package - Bishop & Associates (Attached)**
B-1	Preliminary Plat and Outline Development Amendment

Drawing Number	Description
	PRELIMINARY PLAT
1.	Cover Sheet
2.	Master Location Plan
3.	Topographic Map
4.	Aerial Plan
5.	General Plan-Paving, Drainage and Utilities
6.	Preliminary Plat
7.	Tree Preservation and Location Plan
	OUTLINE DEVELOPMENT AMENDMENT
8.	Land Intensity Schedule

Sabal Cove
Project: ARVD-0430

APPENDIX

AP-1 Master Thoroughfare Plan and Bicycle Path Plan

AP-2 Master Water Plan

AP-3 Master Sewer Plan

AP-4 Master Drainage Plan

B-2 Application for Wastewater Collection System

B-3 Application for Drinking Water Distribution System

B-4 Bonding Estimate

B-5 Drainage Calculations

C Attorney's Package

Home Owners Association Charter Restrictions (Draft)

Home Owners Association Charter Bylaws (Draft)

D Affidavit of Ownership

E Schedule of Construction

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors

PRINCIPALS
William F. Bishop, P.E.
Alex S. Esber, P.L.S.
William B. Houghton, P.E.
Clyde L. Johnson, P.E.
Azad R. Shah, P.E.
David M. Wachtel, P.E.
Glen L. Stickler

ASSOCIATE
Dennis R. Hoover, P.L.S.

June 2, 1989

Arvida/JMB Partners
595 Bay Isles Road
Longboat Key, Florida 34228

Attention: Mr. Robert Wilhelm

RE: Sabal Cove, Longboat Key, Florida

Dear Mr. Wilhelm:

In accordance with your request, we have prepared outline development amendment and preliminary plat for the referenced project on Longboat Key and enclose herewith the necessary documentation for transmission to the Town of Longboat Key in accordance with their requirements for Outline Development Plan Approval and Preliminary Plat Application.

I. Section 157.16, "Preliminary Plat Specifications" of Chapter 157, "Subdivision Regulations".

All requirements of this section of the Subdivision Regulations will be followed.

A. Enclosed herewith, please find 25 copies of proposed site plans, Exhibit "B-1".

B. The Preliminary Plat is enclosed herewith as a portion of Exhibit "B-1".

C. The name of the proposed project is "Sabal Cove".

D. The information required on the Preliminary Plat is furnished as follows:

78 SARASOTA CENTER BLVD. • SARASOTA, FLORIDA 34240
813/371-6362 • FAX 813/378-3215

1. The name of the proposed development shall be referred to as "Sabal Cove".

2. The date of survey, north point, flood zones, etc., including signature and seal of a registered surveyor is enclosed herewith as Drawing Number 3 of Exhibit "B-1".

3. The location, size of the subdivision in acres and the number of lots, etc., are shown on Sheet No. 2, 5 and 6 of the attached Exhibit "B-1".

4. An aerial location map is enclosed as a portion of Exhibit "B-1".

5. The land parcel for this development has been previously subdivided and is referred to as Parcel HR "C" and is a Part of Bay Isles P.D.

6. Boundary lines of the entire tract to be subdivided eventually are shown on the Preliminary Plat, Drawing No. 6 included in Exhibit "B-1".

7. Contour lines at 6" intervals are shown on the plans for the project, a portion of Exhibit "B-1".

8. Natural features within the area, at least 300' beyond the boundary of the proposed plan, including drainage channels, bodies of water, existing vegetation and other significant features are illustrated on the plans collectively enclosed as Exhibit "B-1", including Drawing Numbers 2, 3, 4, 5, and, 7 specifically.

9. Cultural features including existing and proposed road rights-of-way and other significant information are shown on the plans comprising Exhibit "B-1", including the Tree Preservation and Location Plan, Drawing Number 7, and the Aerial Plan, Drawing Number 4.

10. The preliminary layout is shown on the General Plan included in Exhibit "B-1". This layout shows the walk ways, easement access, private streets and grades, easements for common uses and other such information.

11. The preliminary layout of all utilities including sizes, easements and other provisions for water supply and wastewater collection are shown on the appropriate drawings in the enclosed plans comprising Exhibit "B-1".

12. The general plan of the drainage for the development area is shown on the General Plan and copies of the drainage calculations are attached herewith labeled Exhibit "B-5".

13. The proposed project is planned as a single Phase and the construction is contemplated to start within 12 months after Town approval and end 2 years after approval.

14. All section and quarter section lines lying on the development area are shown on the Map of Survey enclosed as Drawing Number 3 of Exhibit "B-1".

15. All contiguous properties are identified on the Aerial Plan and other drawings included in Exhibit "B-1".

16. Street names are shown on the General Plan and the Preliminary Plat included in Exhibit "B-1".

17. An internal street lighting plan will be submitted prior to construction approval.

18. The Town bulkhead line is not applicable to this site.

II. Section 157.17, "Final Plat Specifications" of Chapter 157, "Subdivision Regulations".

All requirements of this section of the Subdivision Regulations will be followed with the submission for final plat approval.

In addition:

A. Fire protection includes fire hydrants located as shown.

B. Refuse collection will be provided by a franchised collector.

C. Security protection is provided by Arvida Corporation at the entrance to Bay Isles P.U.D..

D. The master storm drainage system was approved by D.E.R. Permit #58-31-0064 and subsequently accepted by The Town.

Should there be any questions concerning any aspect of the project or its submittal, please do not hesitate to contact this office.

Sincerely yours,

William F. Bishop, P.E.

WFB:pjg(LT2-J02.WFB Site Disk #1) ARVD-0430
Enclosures

Town of Longboat Key
501 Bay Isles Road
Longboat Key, Florida 33548

No. S. D. _____

Date: _____

APPLICATION

FOR

SUBDIVISION APPROVAL

The undersigned hereby applies for Subdivision Approval and submits the following information in connection therewith:

Location: HR"C"

Owner-Applicant: Arvida/JMB Partners

Address: 595 Bay Isles Road

S.D. Name: Sabal Cove

Longboat Key, Florida 34228

Section No. 5, 6, T36S, R17E

Phone: (813) 383-9551

Acreage: 19.05 No. Lots: 38

Regist. Engineer: Bishop & Associates

Average Lot Area: 0.45 Ac±

Address: 78 Sarasota Center Boulevard

Average Road Frontage

Sarasota, Florida 34240

Per Lot: 75'±

Engineer's Phone: (813) 371-6362

PLEASE ANSWER FOLLOWING QUESTIONS COMPLETELY:

1. Is construction and development contemplated in near future? Yes
2. Approximate price range of houses contemplated: $600,000 - $800,000
3. Improvements to be installed by subdivider (list): _____
4. What lands will be offered for dedication? None. Roads are private.
5. What lots are to be used for what uses other than single-family residential?

   None.
6. State type and location of water supply: Town of Longboat Key (Manatee County Utilities) in Harbourside Drive at Site
7. State type and location of sanitary waste disposal system:

   Manatee County Southwest Regional Treatment Plant at Harbourside Drive
8. Zoning District in which property is located: Current Zone PD
9. State zoning minimums for lot area: P.D. Frontage: P.D.

   and set back: P.D.

Fees and plans showing all public improvements are submitted with this application. Any additional plans or information required by the Public Works Department will be submitted promptly. The undersigned agrees to comply with all requirements of the Town of Longboat Key Subdivision Ordinance No. 74-27, as amended, and further agrees to execute contract, submit required bonds within stipulated time limit, and obtain all necessary permits in connection with the subject subdivision.

SIGNED: Robert Wilhelm
Owner-Applicant

Form S.D. #1 Ed. 2/75

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors

PRINCIPALS
William F. Bishop, P.E.
Alex S. Esber, P.L.S.
William B. Houghton, P.E.
Clyde L. Johnson, P.E.
Azad R. Shah, P.E.
David M. Wachtel, P.E.
Glen L. Stickler

ASSOCIATE
Dennis R. Hoover, P.L.S.

June 2, 1989

Town of Longboat Key
Planning Department
501 Bay Isles Road
Longboat Key, Florida 34228

Attention: Mr. Jay Brady, Director

Re: Sabal Cove Tree Preservation & Location

Dear Mr. Brady:

In regards to the upcoming Preliminary Plat for Sabal Cove (Parcel H.R. "C"), a preliminary tree count reveals approximately 4,167 trees, 3,545 of which are not pines. We feel that a tree location, at this stage of approval, would serve little use to us, since the position of building, based on setbacks, will change several times before the construction phase. We are therefore requesting that you accept a Tree Count in the Preliminary Plat submittal and stipulate a Tree Preservation and Location plan as a condition for approval of construction plans.

We would greatly appreciate your consideration of this proposal. If you have any questions, please feel free to call.

Sincerely,

Susan H. Richard, E.I.

SHR:pjg(Site Plan Disk #1)

ARVD-0430

EXHIBIT "A-3"

78 SARASOTA CENTER BLVD. • SARASOTA, FLORIDA 34240
813/371-6362 • FAX 813/378-3215

EXHIBIT "A - 4"

CONCURRENCE WITH ORDINANCE 88-25

Departure from the Section 158-145, "Schedule of Lot, Yard and Bulk Regulations" of Chapter 158 of Zoning Code.

Minimum lot size is 100' x 150' = 15,000 S.F. which is most similar to zoning district R-3SF of Section 158.145, which requires a minimum lot size of 15,000 S.F. For a project in a P.D. District, departures are calculated from the Zoning District most similar to the use proposed for the parcel being considered.

	Section 158-145 Requirement	Proposed Site Plan
Minimum Lot Area:	15,000 S.F.	15,000 S.F.
Minimum Lot Width:	100 Ft.	66 Ft.
Minimum Lot Depth:	100 Ft.	135 Ft.
Maximum Gross Residential Density:	3 DU/Ac.	1.99 DU/Ac.
Minimum Front Yard:	20 Ft.	20 Ft.
Minimum Side yard (Both/One):	25 Ft./10Ft.	25 Ft./10Ft.
Minimum Rear Yard:	25 Ft.	25 Ft.
Minimum Floor Area:	1,600 S.F.	1,600 S.F.
Maximum Height (Stories):	2 Story/30 Ft. measured from FEMA min. elv.	2 Story/34 Ft. measured from FEMA min. elv.
Maximum Coverage:	25%	35% (P.D. 30% maximum coverage)

EXHIBIT "A - 4"

CONCURRENCE WITH ORDINANCE 88-25

Departure from the Section 158-145, "Schedule of Lot, Yard and Bulk Regulations" of Chapter 158 of Zoning Code.

Minimum lot size is 100' x 150' = 15,000 S.F. which is most similar to zoning district R-2SF of Section 158.145, which requires a minimum lot size of 16,500 S.F. For a project in a P.D. District, departures are calculated from the Zoning District most similar to the use proposed for the parcel being considered.

	Section 158-145 Requirement	Proposed Site Plan
Minimum Lot Area:	16,500 S.F.	15,000 S.F.
Minimum Lot Width:	100 Ft.	66 Ft.
Minimum Lot Depth:	100 Ft.	135 Ft.
Maximum Gross Residential Density:	2 DU/Ac.	1.99 DU/Ac.
Minimum Front Yard:	20 Ft.	20 Ft.
Minimum Side yard (Both/One):	25 Ft./10Ft.	25 Ft./10Ft.
Minimum Rear Yard:	25 Ft.	25 Ft.
Minimum Floor Area:	1,600 S.F.	1,600 S.F.
Maximum Height (Stories):	2 Story/30 Ft. measured from FEMA min. elv.	2 Story/34 Ft. measured from FEMA min. elv.
Maximum Coverage:	25%	35% (P.D. 30% maximum coverage)

Susan R.

Arvida/JMB Partners
GULF COAST DIVISION
595 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 34228
TELEPHONE (813) 383-9551

RECEIVED
JUN 19 1989
BISHOP & ASSOC.

June 14, 1989

Mr. Jay Brady, Town Planner
Town of Longboat Key
Longboat Key, Florida 34228

Ref: Sabal Cove - Pending Development Application

Dear Mr. Brady:

During the meeting on June 12, 1989, with you and Bill Bishop, the subject of maximum allowable building coverage was raised by Staff with regard to Arvida/JMB's application for 35% coverage. Staff considers our request to be at variance with standards set forth for PUD zoning districts, Sec. 158.145, and amended in Sec. 158.149. To the contrary, Bill Bishop and I question this interpretation, believing it to be incorrect and unreasonable. If maximum single-family lot coverage is 30%, and the same 30% maximum is also applied to the entire 720-acre PUD District, then we and other builders are being penalized for developing extensive ground areas on 372.90 acres of open space and recreational amenities. Sec. 158.149 appears to be contradictory. It is our opinion that 30% coverage (i.e., 216.12 acres of building area) is permitted within the planned community area (720.40 acres) in Bay Isles, as set forth by Sec. 158.145.

Please refer to the attached copy of my letter to Bill Bishop, which illustrates, from a practical standpoint, the need for a per-lot building coverage of 35% for single-family development. I note that the Board of Zoning Appeals is processing four or five applications per month from homeowners requesting coverage in excess of 30%.

Lest we lose perspective, this development application asks only for single-family lots on 19.05 acres of highrise property, a dramatic reduction from 330 dwelling units in five to ten-story buildings, to 38 dwelling units 34 feet above flood elevation. This land may be better suited for multifamily development. In view of this, it seems reasonable that 35% building coverage and a few minor yard proposals is a fair exchange for high density and highrise architecture.

If, however, our application is "incomplete" due to the coverage restrictions, we rescind any coverage criteria in this phase of the application, but plan to discuss the subject in public hearing before the Planning & Zoning Board and the Town Commission. We look forward to the opportunity.

Sincerely,

Herman Tom

Herman Tom, Vice President
Planning & Development

HT:b
Attachment
Copy: William F. Bishop
George A. Dietz, Esq.
Robert Wilhelm

Arvida/JMB Partners
GULF COAST DIVISION
595 BAY ISLES ROAD
LONGBOAT KEY, FLORIDA 34228
TELEPHONE (813) 383-9551

JUN 14 19[illegible]

June 12, 1989

Mr. William F. Bishop, President
Bishop & Associates
78 Sarasota Center Blvd.
Sarasota, FL 34240

Ref: Sabal Cove Lot Coverage Restrictions

Dear Bill:

For your information, the attached sketch attempts to prove the point that, to avoid de facto two-story houses, the Town should be reasonable and allow 35% lot coverage. The two-foot roof overhang contributes as much as 4% to lot coverage coming from the house and garage. Of course, roof overhangs could be eliminated, but that is very impractical in the Florida environment.

In order to comply with 30% lot coverage, the garage space would be forced under the house, creating a high first floor elevation, possibly at 15 feet MSL. This, in turn, creates a hardship on physically handicapped residents, who would have to climb a full flight of stairs to access the house. My intent was to allow single-story homes to be built at 11-foot elevation.

It's just better planning to do it this way.

Sincerely,

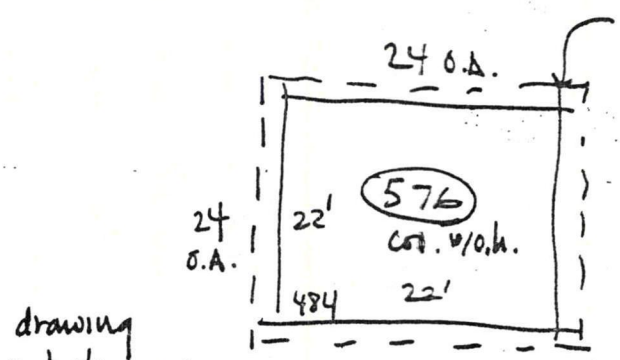
Herman Tom

Herman Tom
Vice President
Planning & Development

HT:b
Enclosure
Copy: Jay Brady

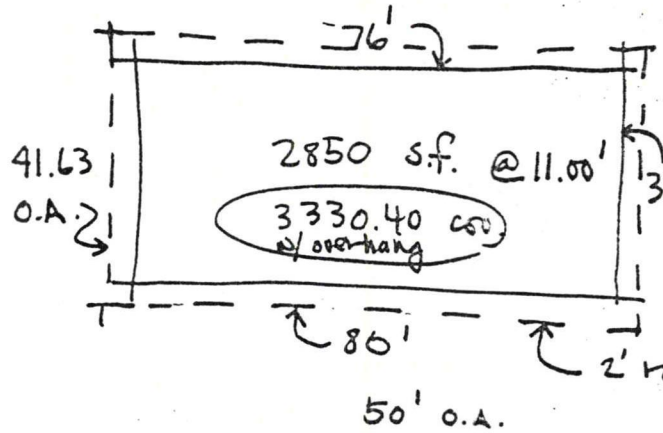
HERMAN TOH
Vice Pres. Planning & Development
ARVIDA/JMB PARTNERS
595 Bay Isles Road
Longboat Key, Florida 34228
Tel. 813/383-9441, Ext. 228

June 12, 89

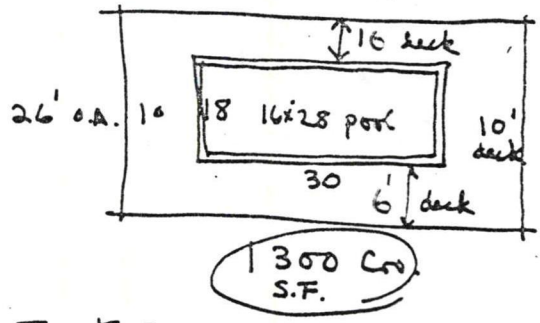


Attached or Detached 2-car Garage at Grade elevation (6'.0" ground level)

drawing not to scale



1-Level S.F. House @ 11.0 El.



Pool Coverage

Σ 5,206 SF = 35%

$$\text{w/o car} = \frac{4,630 \text{ sf}}{15,000 \text{ LOT S.F.}} = 31\%$$

$$\text{w/ Garage} = \frac{5,206 \text{ SF}}{15,000} = 35\%$$

Note: 572.4 s.f. of roof overhang area contributes 4% to lot coverage.

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors

PRINCIPALS
William F. Bishop, P.E.
Alex S. Esber, P.L.S.
William B. Houghton, P.E.
Clyde L. Johnson, P.E.
Azad R. Shah, P.E.
David M. Wachtel, P.E.
Glen L. Stickler

ASSOCIATE
Dennis R. Hoover, P.L.S.

June 21, 1989

Town of Longboat Key
Planning Department
501 Bay Isles Road
Longboat Key, Florida 34228

Attention: Jay Brady

RE: Sabal Cove Building Coverage

Gentlemen:

We have had a number of conversations regarding the coverage requirements between single family subdivision zonings and PD districts within the Town of Longboat Key. It has been our contention, from the earliest work we have performed on the Island, that coverage requirements in single family developments are associated with the fact that no other space requirements are made of individual lots except for the provision of rights-of-way. Therefore, the coverage factor of 30% is applied to the entire lot area, excluding only rights-of-way from that measurement. We have enclosed an exhibit which illustrates graphically a typical RSF subdivision where the right-of-way allowance of 10% would be appropriate with 90% of the area within the subdivision allowed for lots. Therefore, the allowable building coverage would be 30% of 90% or 27% of the land and would represent the total coverage allowed for buildings.

In the case of a PD, also illustrated on the attached exhibit, the same 10% allowance for right-of-way has been made which is reasonable in view of our experience on the Island. In the case of both Bay Isles and Longboat Key Club approximately 65% of the total land area within the PD area is set aside for open space, recreation and other amenities. If the remaining land within the PD were assigned to individual lots, they would total approximately 25% of the total land area. If the code is interpreted to mean that those lots must bear the same relationship of building coverage to lots as they do in a single family subdivision then

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813/371-6362 • FAX 813/378-3215

Town of Longboat Key
RE: Sabal Cove
June 21, 1989

you will note that taking 30% of the 25% allowed for the lots would give a total building coverage of 7.5% of the land. Since a PD is formulated from the standpoint of providing large quantities of open space in favor of relatively high density and, therefore, relatively high building coverage on the land remaining for recreational purposes it is not appropriate to make such a dramatic reduction in coverage.

With this in mind, it would seem appropriate that the Town Code should be applied in such a way that the 30% building coverage is applied on a PUD basis less rights-of-way in the same way it is applied in a RSF single family subdivision in other portions of the Town and, therefore, coverage substantially larger than 30% should be allowed on the 25% of residential land remaining in the PD.

Should you have any further questions in this matter, please do not hesitate to contact the undersigned.

Sincerely,

William F. Bishop, P.E.

WFB:mt(#47LT2)
Enclosure

ARVD-0470

COMPARISON OF BUILDING COVERAGE USING LOT AREA FOR RSF AND PUD DISTRICTS - TOWN OF LONGBOAT KEY

EXHIBIT "B"

ENGINEER'S PACKAGE - BISHOP & ASSOCIATES

EXHIBITS ATTACHED: B-1, B-2, B-3, B-4 AND B-5

EXHIBIT "B-1"

PRELIMINARY PLAT AND
OUTLINE DEVELOPMENT AMENDMENT

Drawing Number	Description
	PRELIMINARY PLAT
1.	Cover Sheet
2.	Master Location Plan
3.	Topographic Map
4.	Aerial Plan
5.	General Plan - Paving, Drainage and Utilities
6.	Preliminary Plat
7.	Tree Preservation and Location Plan
	OUTLINE DEVELOPMENT AMENDMENT
8.	Land Intensity Schedule
	APPENDIX
AP-1	Master Thoroughfare Plan and Bicycle Path
AP-2	Master Water Plan
AP-3	Master Sewer Plan
AP-4	Master Drainage Plan

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
501 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

WILLIAM K. HENNESSEY
DISTRICT MANAGER

APPLICATION TO CONSTRUCT DOMESTIC WASTEWATER COLLECTION/TRANSMISSION SYSTEMS

PART I - GENERAL

SUBPART A: Directions

(1) All items must be completed in full in order to avoid delay in processing of this application. Where attached sheets (or other technical documentation) are utilized in lieu of the blank spaces provided, indicate appropriate cross reference in the space and provide copies to the department in accordance with (4) below.

(2) The applicability of requirements to new facilities and modifications of existing facilities is described in Florida Administrative Code Rule 17-6. Where certain items do not appear applicable to the proposed project, indicate N/A in the appropriate space provided.

(3) All information is to be typed or printed in ink.

(4) Four (4) copies of this application (with supporting information) and a check for the application fee in accordance with Florida Administrative Code Rule 17-4.05 and made payable to the State of Florida, Department of Environmental Regulation, will be submitted with this application when sent to the appropriate District Office or approved local program.

(5) This application is to be accompanied by two sets of engineering drawings, specifications and design data as prepared by a Professional Engineer registered in Florida, where required by Chapter 471, Florida Statutes. An engineering report (two copies) is also required to be submitted in support of this application pursuant to Florida Administrative Code Rule 17-6.150(1). For projects of limited scope (as determined by the Department), information contained in the application may suffice as the engineering report.

(6) Attach 8 1/2" x 11" sketch of the proposed project showing relationship to entire service area, how it ties into the existing system, and location of the treatment plant and effluent disposal area.

SUBPART B.

Project Name: Sabal Cove

Location: County Sarasota City Longboat Key

Vicinity East of Gulf of Mexico Drive (S.R. 789) Harbourside Drive

Section 5 Township 36 South Range 17 East

Applicant: Name Arvida/JMB Partners
Robert Wilhelm Title President

Address 595 Bay Isles Road

City Longboat Key, Florida Zip 34228

Telephone Number (813) 383-9551

PART II - PROJECT DOCUMENTATION

SUBPART A: General Project Description

(1) Project status: [X] New [ ] Modification (specify) _____

(2) Location, size, and development characteristics of service area covered by this application:

This system is located at the East of Gulf of Mexico Drive (S.R. 789) on Harbourside Drive and will serve 38 subdivision lots.

(3) Treatment plant serving project

a. Name: Manatee County Southwest Regional Treatment Plant at Harbourside Drive

b. County: Manatee City: Bradenton

c. FDER Permit Number: _____ Expiration Date: _____

d. Moratorium in effect? [ ] Yes [ ] No

e. Current average daily flow:

_____ MGD over the past [ ] months or [ ] years

f. Design capacity: _____ MGD

g. Current outstanding flow commitments (including this project) against treatment plant capacity: _____

h. Date this information valid: _____

(4) Start of construction, completion of construction and estimated date of connections to existing system or treatment plant:
Within 12 months of Town approval; 2 years after Town approval.

(5) Is the project design in accordance with the standards and criteria contained in the appropriate standard engineering references listed in Florida Administrative Code Rule 17-6.040? [ ] Yes [ ] No If no, supporting information shall be submitted in accordance with Rule 17-6.040 addressing the proposed design.

SUBPART B. Project Details

(1) Design peak flow proposed: 0.0095 MGD

a. Design population to be served: 95 people

b. Indicate the following:

Number and Type of Unit		Population	Per Capita Flow	Total Average Daily Flow (GPD)
38	single family homes			
	apartments			
	motel rooms			
	mobile homes			
	other (describe)	95 people	100 gallons	9,500

c. Contribution from industrial sources: N/A % by flow
commercial sources: N/A % by flow

(2) Attach in tabular form the pipe material and specification (e.g., ASTM number), joint specification, pipe length, minimum and maximum velocity for force mains, and peak flow for each pipe size comprising the proposed gravity or force main system.

(3) Identify the drawing(s) on which manhole types, sizes, location, spacing and joint specifications are detailed.

Sheet 5

(4) Type of leakage test: Infiltration [X] Exfiltration [ ]

(5) Maximum allowable leakage rate: 100 GPD per inch pipe diameter per mile.

(6) Identify the drawing(s) on which sewer lines crossing under or over potable water mains, to meet requirements of Rule 17-6.050 are detailed.

Sheet 5

(7) Identify the drawing(s) on which design and construction provisions for conflict manholes, to meet requirements of Rule 17-6.050 are detailed.

N/A

(8) Describe provisions for sewer lines involving subaqueous crossings to assure structural integrity of lines, to test the integrity of the lines, to prevent discharge in the event lines are damaged, and to identify the nature and location of the crossings, in accordance with Rule 17-6.050. In lieu of this description, identify the drawing(s) on which the information is detailed.

N/A

(9) Pump station data (where more than one station is involved, supporting information shall be submitted which addresses the items listed below for each station):

a. Location: N/A

b. Type: _____

c. Estimated flow of each tributary to the station: Average _____ GPD
Maximum _____ GPD Minimum _____ GPD

d. Operating conditions: _____ GPM @ _____ TDH

(10) Other design considerations for pump stations in accordance with Fla. Admin. Code Rule 17-6.050 (abstract and cross-reference where supporting technical documentation is submitted and contains this information):

a. Describe features such as emergency provisions which provide assurances of uninterrupted flow.

N/A

b. Describe features to control adverse effects resulting from odors, noise, and lighting.

N/A

c. Describe access-control features.

N/A

d. Describe design criteria and measures which minimize damage or interruption of operation due to flooding (where required).

N/A

PART III - CERTIFICATIONS

A. Applicant

I, the applicant of Arvida/JMB Partners am fully aware that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. I agree to retain the design engineer, or another professional engineer registered in Florida, to conduct on-site observation of construction, to prepare a certification of completion of construction, and to review record drawings for adequacy as referenced in F.A.C. Rule 17-6.140(2)(a). Further, I agree to provide an appropriate operation and maintenance manual for the facilities pursuant to F.A.C. Rule 17-6.150(2) and to retain a professional engineer registered in Florida to examine (or to prepare if desired) the manual.

* Signed: Robert Wilhelm * Date: 6-6-89

Name and Title (please type): Robert Wilhelm, President

B. **Professional Engineer Registered in Florida (where required by Chapter 471, F.S.)**

I hereby certify that the engineering features of this collection/transmission system have been designed by me or by individual(s) under my direct supervision in conformity with sound engineering principles, consistent with F.A.C. Rule 17-6.

Signature of Engineer

William F. Bishop, P.E. 8189
Name (Please type) Florida Registration No.

Bishop & Associates
Company Name

78 Sarasota Center Boulevard
Company Address

(Affix Seal)

Sarasota, Florida 34240

Date: _____ Telephone No. (813) 371-6362

C. **Professional Engineer Registered in Florida (where required by Chapter 471, F.S. and if different from project design engineer in B.)**

This is to acknowledge that this firm has been retained by the applicant to prepare a certification of completion of construction and to review record drawings for adequacy as referenced in F.A.C. Rule 17-6.140(2)(a).

Signature of Engineer

Name (Please type) Florida Registration No.

Company Name

Company Address

(Affix Seal)

Date: _____ Telephone No. _____

D. **Treatment plant permittee**

The undersigned permittee of _____ hereby certifies that the above referenced plant has adequate reserve capacity to accept the wastewaters from this project and will provide the necessary treatment and disposal as required by Chapter 403, Florida Statutes and applicable rules of the department.

Signed: _____ Date: _____

Name and Title (please type): _____

E. **Operation and Maintenance Authority**

The undersigned, of _____, hereby certifies that the applicant's proposed pump station(s) and lift station(s) would be compatible with available temporary service power generating and pumping equipment of the system for which I have the responsiblity to operate and maintain.

Signed: _____ Date: _____

Name (please type): _____ Telephone No. _____

Company Name: _____

Address: _____

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
3601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

WILLIAM K. HENNESSEY
DISTRICT MANAGER

NOTICE OF INTENT TO USE GENERAL PERMIT FOR WASTEWATER COLLECTION SYSTEM/~~DRINKING WATER DISTRIBUTION SYSTEM~~

Instructions: This form is to be completed and submitted to the Department along with one set of engineering plans and specifications, AT LEAST 30 DAYS PRIOR TO INITIATING CONSTRUCTION. All blanks must be filled.

I. General Description

1. Person(s) or entity that will own the CS/DS

Name and Title Arvida/JMB Partners

Address 595 Bay Isles Road, Longboat Key, Florida 34228

Phone (813) 383-9551 Latitude 27 ° 22 ' 35 "N Longitude 82 ° 37 '32 "W

2. Estimated cost of project $83,238.00

3. CS/~~DS~~ Description This system will be known as: Sabal Cove

This system will serve 38 family homes, No commercial facilities and _____ multifamily units. Other: _____

Estimated Increase in Flow/~~Demand~~ (MGD) 0.0095. Estimated increase in Equivalent Residential Connections (ERC's) (An ERC = 3.5 persons) 28

The wastewater treatment plant/~~drinking water plant~~ serving this system will be Southwest Regional County Manatee

II. Statement by Applicant

The undersigned owner or authorized representative* of Arvida/JMB Partners is fully aware that the statements made in this notice are true and complete to the best of his knowledge. The undersigned is fully aware that it is his responsibility to operate and maintain this facility in such a manner as to function as it was designed. Responsibility may be transferred to another entity upon written notice to the Department from the entity assuming responsibility. The undersigned also accepts responsibility for retaining the project engineer as indicated on this notice to observe that construction of the project is in accordance with engineering plans as submitted.

*Attach a letter of authorization

X Robert Wilhelm
Signature of the Owner or Authorized Representative

Robert Wilhelm, President
Name and Title (Please Type)

595 Bay Isles Road, Longboat Key, Florida 34228
Address

Telephone No. (813) 383-9551 Date 6-6-89

DER Form 17-1.205(9)
Effective November 30, 1982

EXHIBIT B-2

III. Statement by Utility

The undersigned states that _____ treatment plant has sufficient capacity to provide wastewater/drinking water treatment to serve this system when completed, that the treatment plant will operate in compliance with Florida Administrative Code Rule 17-6/17-22, and any other applicable regulations, and that the facility is not under a moratorium of any kind.

Existing plant capacity (MGD)_____

Existing plant flow/demand (MGD) (from operation reports) _____

Existing number of Equivalent Residential Connections served_____

Existing number of Equivalent Residential Connections presently approved_____

_____
Signature

_____
Name and Title (Please Type)

_____
Address (Please Type)

_____
Date Telephone Number

IV. Statement by Engineer

This is to certify that the engineering features of this system have been designed by me in accordance with Florida Administrative Code Rule 17-6/17-22 and any applicable local requirements. It is also stated that the undersigned has furnished the applicant with written instructions for the operation and maintenance of the system. A statement certifying completion of the system and appropriate clearances will be submitted to the Department in order to obtain approval to place the system in service.

_____
Signature

(Affix Seal)

William F. Bishop, P.E. 8189
Name (Please Type) Florida Registration Number

Bishop & Associates
Company Name (Please Type)

78 Sarasota Center Boulevard, Sarasota, Florida 34240
Company Address (Please Type)

_____ (813) 371-6362
Date Telephone Number

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

WILLIAM K. HENNESSEY
DISTRICT MANAGER

NOTICE OF INTENT TO USE GENERAL PERMIT FOR WASTEWATER COLLECTION SYSTEM/DRINKING WATER DISTRIBUTION SYSTEM

Instructions: This form is to be completed and submitted to the Department along with one set of engineering plans and specifications, AT LEAST 30 DAYS PRIOR TO INITIATING CONSTRUCTION. All blanks must be filled.

I. General Description

1. Person(s) or entity that will own the CS/DS

Name and Title Arvida/JMB Partners

Address 595 Bay Isles Road, Longboat Key, Florida 34228

Phone (813)383-9551 Latitude 27 ° 22 ' 35 "N Longitude 82 ° 37 ' 32 "W

2. Estimated cost of project $80,200.00

3. CS/DS Description This system will be known as: Sabal Cove

This system will serve 38 family homes, No commercial facilities and _____ multifamily units. Other: _____

Estimated Increase in Flow/Demand (MGD) 0.0095. Estimated increase in Equivalent Residential Connections (ERC's) (An ERC = 3.5 persons) 28

The wastewater treatment plant/drinking water plant serving this system will be Manatee County Utilities County Manatee

II. Statement by Applicant

The undersigned owner or authorized representative* of Arvida/JMB Partners is fully aware that the statements made in this notice are true and complete to the best of his knowledge. The undersigned is fully aware that it is his responsibility to operate and maintain this facility in such a manner as to function as it was designed. Responsibility may be transferred to another entity upon written notice to the Department from the entity assuming responsibility. The undersigned also accepts responsibility for retaining the project engineer as indicated on this notice to observe that construction of the project is in accordance with engineering plans as submitted.

*Attach a letter of authorization

X Robert Wilhelm
Signature of the Owner or Authorized Representative

Robert Wilhelm, President
Name and Title (Please Type)

595 Bay Isles Road, Longboat Key, Florida 34228
Address

Telephone No. (813) 383-9551 Date 6-6-89

DER Form 17-1.205(9)
Effective November 30, 1982

EXHIBIT B-3

III. Statement by Utility

The undersigned states that _____ treatment plant has sufficient capacity to provide ~~wastewater~~/drinking water treatment to serve this system when completed, that the treatment plant will operate in compliance with Florida Administrative Code Rule 17-6/17-22, and any other applicable regulations, and that the facility is not under a moratorium of any kind.

Existing plant capacity (MGD)_____

Existing plant flow/demand (MGD) (from operation reports) _____

Existing number of Equivalent Residential Connections served_____

Existing number of Equivalent Residential Connections presently approved_____

_____
Signature

_____
Name and Title (Please Type)

_____
Address (Please Type)

_____
Date Telephone Number

IV. Statement by Engineer

This is to certify that the engineering features of this system have been designed by me in accordance with Florida Administrative Code Rule 17-6/17-22 and any applicable local requirements. It is also stated that the undersigned has furnished the applicant with written instructions for the operation and maintenance of the system. A statement certifying completion of the system and appropriate clearances will be submitted to the Department in order to obtain approval to place the system in service.

_____
Signature

(Affix Seal)

William F. Bishop, P.E. 8189
Name (Please Type) Florida Registration Number

Bishop & Associates
Company Name (Please Type)

78 Sarasota Center Boulevard, Sarasota, Florida 34240
Company Address (Please Type)

(813) 371-6362
Date Telephone Number

BONDING ESTIMATE

ARVIDA/JMB PARTNERS
PROJECT ARVD-0430
PAGE 1

SABAL COVE

JUNE 5, 1989

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
1.	Offsite Fill	3,400 CY	$ 7.00	$ 23,800.00
2.	1" Asphalt Surface, Type II	6,950 SY	$ 3.50	$ 24,325.00
3.	6" Soil Cement Base	6,950 SY	$ 6.50	$ 45,175.00
4.	Type "H" Curb	5,990 LF	$ 7.00	$ 41,930.00
5.	Type "A" Curb	360 LF	$ 7.00	$ 2,520.00
6.	Valley Gutter	210 LF	$ 7.00	$ 1,470.00
7.	Sodding Parkways	10,355 SY	$ 2.00	$ 20,710.00
8.	Special Pavers	2,800 SF	$ 3.50	$ 9,800.00
		SUB-TOTAL		**$ 169,730.00**

NOTE: Rock Rip-Rap is not considered at this time in this estimate.

STORM DRAINAGE SYSTEM

1.	Curb Inlets	10 EA	$1,200.00	$ 12,000.00
2.	15" RCP	217 LF	$ 18.00	$ 3,906.00
3.	18" RCP	788 LF	$ 20.00	$ 15,760.00
4.	Rip-Rap Endwalls	5 EA	$ 300.00	$ 1,500.00
		SUB-TOTAL		**$ 33,166.00**

ARVD0430.J03(ESTIMATES DISK #2)

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
WATER DISTRIBUTION SYSTEM				
1.	10" X 6" Tapping sleeve and valve	2 EA	$1,500.00	$ 3,000.00
2.	Jack & Bore 6" W. M. including casing pipe	180 LF	$ 50.00	$ 9,000.00
3.	6" PVC Water Main	3,720 LF	$ 10.00	$ 37,200.00
4.	6" Gate Valves	9 EA	$ 500.00	$ 4,500.00
5.	Fire Hydrant Assembly	5 EA	$1,500.00	$ 7,500.00
6.	1" & 2" Service Leads (Domestic & Fire)	38 EA	$ 500.00	$ 19,000.00
		SUB-TOTAL		**$ 80,200.00**
SANITARY SEWER SYSTEM				
1.	Connect to Existing System	2 EA	$ 800.00	$ 1,600.00
2.	8" PVC Sanitary Sewer	2,591 LF	$ 18.00	$ 46,638.00
3.	Standard Sanitary Manhole	17 EA	$1,500.00	$ 25,500.00
4.	6" Service Lead Connection (Double)	19 EA	$ 500.00	$ 9,500.00
		SUB-TOTAL		**$ 83,238.00**
		TOTAL ESTIMATED COST		**$ 366,334.00**
		ADD 25% CONTINGENCIES		**$ 91,583.50**
		GRAND TOTAL		**$ 457,917.50**

WILLIAM F. BISHOP, P.E. #8189

ARVD0430.J03(ESTIMATES DISK #2)

BISHOP & ASSOCIATES
CLIENT: Arvida/JMB Partners for Sabal Cove

RATIONAL FORMULA
STORM SEWER TABULATION FORM

DATE 6-5-89 PROJECT NO. ARVD-0430 COUNTY Sarasota BY SHR SHEET NO. 1 OF 1

FROM	TO	TYPE OF STRUCTURE	TYPE OF LINE	LENGTH FT	DRAINAGE AREA (ACRES) C	A	SUB TOTAL C A	TIME OF CONCENTRATION MIN	TIME OF FLOW SECTION MIN	INTENSITY I	TRAVEL TIME MIN	INCREMENT FLOW CFS	TOTAL FLOW CFS	FLOW LINE ELEV. UPPER END	LOWER END	FALL	DIAMETER IN	SLOPE %	VELOCITY FPS	CAPACITY CFS	NOTES / ZONE FREQUENCY YR. / REMARKS
S-1	S-2	Curb Inlet	RCP	50	0.50	1.72	0.86	12	12	7.9	0.15	6.79	6.79	1.10	0.98	0.12	15	1.20	5.5	6.80	HGL.El. 3.7
S-2	S-3	Curb Inlet	RCP	160	0.50	0.81	0.41	12.15	12	7.9	0.46	3.24	10.03	0.98	0.00	0.98	18	1.00	5.8	10.1	HGL.El. 3.1
S-4	S-5	Curb Inlet	RCP	37	0.50	1.11	0.55	12	12	7.9	0.17	4.35	4.35	1.10	1.01	0.09	15	0.50	3.6	4.35	HGL.El. 2.4
S-5	S-6	Curb Inlet	RCP	156	0.50	0.665	0.33	12.17	12	7.9	0.65	2.61	6.96	1.01	0.00	1.01	18	0.46	4.0	7.0	HGL.El. 2.2
S-7	S-8	Curb Inlet	RCP	45	0.60	1.29	0.64	12	12	7.9	0.18	5.08	5.08	1.90	1.79	0.11	15	0.65	4.2	5.1	HGL.El. 2.8
S-8	S-9	Curb Inlet	RCP	158	0.50	0.83	0.42	12.18	12	7.9	0.55	3.28	8.36	1.00	0.00	1.00	18	0.66	4.8	8.4	HGL.El. 2.5
S-10	S-11	Curb Inlet	RCP	54	0.50	1.35	0.68	12	12	7.9	0.17	5.37	5.37	2.05	1.99	0.06	15	0.72	4.4	5.4	HGL.El. 3.1
S-11	S-12	Curb Inlet	RCP	159	0.50	0.89	0.45	12.17	12	7.9	0.51	3.56	8.93	1.00	0.00	1.00	18	0.78	5.2	9.0	HGL.El. 2.7
S-13	S-14	Curb Inlet	RCP	31	0.50	1.04	0.52	12	12	7.9	0.15	4.13	4.13	1.10	0.99	0.11	15	0.44	3.4	4.15	HGL.El. 2.6
S-14	S-15	Curb Inlet	RCP	155	0.50	1.04	0.52	12.15	12	7.9	0.54	4.13	8.26	0.99	0.00	0.99	18	0.65	4.8	8.3	HGL.El. 2.5

RATION.SHR(C:WS5/mt)

EXHIBIT C

ATTORNEY'S PACKAGE

LAW OFFICES

WILLIAMS, PARKER, HARRISON, DIETZ & GETZEN

PROFESSIONAL ASSOCIATION

1550 RINGLING BOULEVARD

POST OFFICE BOX 3258

SARASOTA, FLORIDA 34230

TELEPHONE (813) 366-4800

TELECOPIER (813) 366-5109

WILLIAM T. HARRISON, JR.
GEORGE A. DIETZ
WILLIAM E. GETZEN
MONTE K. MARSHALL
JAMES L. RITCHEY
A. LAMAR MATTHEWS, JR.
HUGH McPHEETERS, JR.
WILLIAM G. LAMBRECHT
JOHN T. BERTEAU
JOHN W. CANNON III
CHARLES D. BAILEY, JR.
J. MICHAEL HARTENSTINE
MICHELE BOARDMAN GRIMES
JAMES L. TURNER
WILLIAM M. SEIDER
THEODORE C. EASTMOORE
STEVEN D. HUTTON
ELIZABETH C. MARSHALL
TERRI JAYNE SALT
THOMAS R. ARNOLD
DAVID A. WALLACE
DONALD W. SMUCKER
JEANNE S. MEDAWAR
CLIFFORD M. KING
ELVIN W. PHILLIPS

J. J. WILLIAMS, JR. (1886-1968)
W. DAVIS PARKER (1920-1982)

FRAZER F. HILDER
OF COUNSEL

ROBERT W. BENJAMIN
SPECIAL COUNSEL
ADMITTED IN N.Y. ONLY

June 6, 1989

Town of Longboat Key
Longboat Key, Florida 34236

Re: Platting of Sabal Cove

Gentlemen:

We have examined the title to the following described property located in Sarasota County, Florida:

> That certain tract of land lying in Section 5, Township 36 South, Range 17 East, Town of Longboat Key, Sarasota County, Florida, to be subdivided into a subdivision known as "Sabal Cove" which Tract was previously known and designated as Parcel HR-C, Bay Isles, Unit No. 8, as per Plat Book 29, Pages 21 through 21B, Public Records of Sarasota County, Florida.

From this examination, we find that ARVIDA/JMB PARTNERS, a Florida general partnership, is the owner of a good, marketable fee simple title to the property free and clear of any lien or encumbrance of record, except:

1. Standard Exception:

   (a) Ad valorem taxes for the current year (the taxes became a lien on the property January 1.)
   (b) All laws, ordinances and other applicable governmental regulations.
   (c) Rights of persons in possession, if any, other than the present owner.
   (d) Such encroachments, overlaps, or other matters as an accurate survey might show.

2. Declaration of Maintenance Covenants and Restrictions on The Commons for Bay Isles as recorded in Official Records Book 1116, Pages 1858, as amended in Official Records Book 1554, Page 1222, Public Records of Sarasota County, Florida. Note: The Articles of Incorporation of Bay Isles Association, Inc., were amended in Official Records Book 1939, Page 1512, Public Records of Sarasota County, Florida.

3. Declaration of Restrictions for Bay Isles, Unit No. 8, recorded in Official Records Book 1558, Page 1926, as amended by Addendum to Restrictions recorded in Official Records Book 1664, Page 1435, Public Records of Sarasota County, Florida.

4. Easements and other matters shown on the Plat of Bay Isles, Unit No. 8, recorded in Plat Book 21, Pages 21 through 21B, Public Records of Sarasota County, Florida.

5. Easement granted to Florida Power and Light Company by instrument recorded in Official Records Book 1567, Page 1454, Public Records of Sarasota County, Florida.

6. No opinion is expressed as to the status of riparian rights.

Very truly yours,

William M. Seider

William M. Seider
For the Firm

WMS:msb

ARTICLES OF INCORPORATION

OF

SABAL COVE HOMEOWNERS ASSOCIATION, INC.

(A Corporation Not For Profit)

In order to form a corporation under and in accordance with the provisions of the laws of the State of Florida for the formation of Corporations Not for Profit, we, the undersigned, do hereby associate ourselves together into a corporation for the purposes and with the powers hereinafter set forth, and to accomplish that end we do hereby adopt and set forth these Articles of Incorporation, viz:

ARTICLE I

NAME OF CORPORATION

The name of this corporation shall be:

SABAL COVE HOMEOWNERS ASSOCIATION, INC.,

hereinafter in these Articles referred to as the "Association".

ARTICLE II

PURPOSES

The general nature, objects and purposes of the Association are:

A. To promote the health, safety and social welfare of the owners of property located within that portion of "Bay Isles" known and referred to as "Sabal Cove."

B. To maintain and replace landscaping and to maintain and repair sidewalks and bicycle paths, structures and other improvements, if any, located in the Neighborhood Common Areas of Sabal Cove, for which the obligation to maintain and repair has been delegated to the Association by Arvida/JMB Partners, as Developer of said subdivision (hereinafter referred to as "Developer").

C. To supervise and control the specifications, architecture, design, appearance, elevation and location of all buildings, structures and improvements of any type, including houses, walls, fences, swimming pools, docks, seawalls and bulkheading, antenna, water and sewer lines, grading, drainage, disposal

systems and all other structures constructed, place or permitted to remain in Sabal Cove, as well as the alteration, improvement, addition, or changes thereof, including the landscaping surrounding the same.

D. To provide such services as may be deemed necessary or desirable by the Board of Directors of Association and to acquire the capital improvements and equipment related thereto.

E. To purchase, acquire, replace, improve, maintain and repair such buildings, structures, and equipment related to the health, safety and social welfare of the members of the Association, as the Board of Directors of Association, in its discretion determines to be necessary or desirable.

F. To carry out all of the duties and obligations assigned to it as a neighborhood property owner's association under the terms of the Declaration of Restrictions applicable to Sabal Cove or the Declaration of Maintenance Covenants and Restrictions on The Commons for Bay Isles, as recorded in Official Records Book 1116, Page 1858, Public Records of Sarasota County, Florida.

G. To operate without profit and for the sole and exclusive benefit of its members.

ARTICLE III

GENERAL POWERS

The general powers that the Association shall have are as follows:

A. To purchase, accept, lease, or otherwise acquire title to, and to hold, mortgage, rent, sell or otherwise dispose of, any and all real or personal property related to the purposes or activities of the Association; to make, enter into, perform and carry out contracts of every kind and nature with any person, firm, corporation or association; and to do any and all other acts necessary or expedient for carrying on any and all of the activities of the Association and pursuing any and all of the objects and purposes set forth in these Articles of Incorporation and not forbidden by the laws of the State of Florida.

B. To establish a budget and to fix assessments to be levied against all property located in Sabal Cove pursuant to the Declaration of Restrictions applicable to said subdivision for the purpose of defraying expenses and costs of effectuating the objects and purposes of the Association, and to create reasonable reserves for such expenditures, including providing a reasonable contingency fund for the ensuing year and a reasonable annual reserve for anticipated major capital repairs, maintenance and improvements, and capital replacements.

C. To place liens against any property in Sabal Cove for delinquent and unpaid assessments and to bring suit for the foreclosure of such liens or to otherwise enforce the collection of such assessments for the purpose of obtaining revenue in order to carry out the purposes and objectives of the Association.

D. To hold funds solely and exclusively for the benefit of the members of the Association for the purposes set forth in these Articles of Incorporation.

E. To adopt, promulgate and enforce rules, regulations, bylaws, covenants, restrictions and agreements in order to effectuate the purposes for which the Association is organized.

F. To delegate power or powers of the Association where such is deemed to be in its best interest by its Board of Directors.

G. To charge recipients for services rendered by the Association and to charge the user for use of Association property where such is deemed appropriate by its Board of Directors.

H. To pay all taxes and other charges or assessments, if any, levied against property owned, leased or used by the Association.

I. To enforce by any and all lawful means the provisions of these Articles of Incorporation, the Bylaws of the Association which may be hereafter adopted, and the terms and provisions of the aforesaid Declaration of Restrictions applicable to Sabal Cove.

J. In general, to have all powers which are or may be conferred upon a corporation not for profit by the laws of the State of Florida, except as prohibited herein.

ARTICLE IV

MEMBERS

The membership of this Association shall consist of all of the owners of lots located in Sabal Cove as described in Paragraph A of Article II hereof, and all such lot owners shall be members of the Association. There shall be two classes of such members, as follows:

1. Class A Members. Class A members shall be all lot owners in Sabal Cove, other than the Class B member. Owners of such lots shall automatically become Class A members upon taking title to a lot in Sabal Cove. Applicants for membership shall be of good moral character and shall otherwise fully comply with such other qualifications as may be prescribed in the Bylaws of the Association or in Rules and Regulations adopted by the Board of Directors.

2. Class B Member. The Class B member shall be Developer. or its successor, designee or assignee, if such membership is specifically assigned.

The membership of any Class A member in the Association shall automatically terminate upon conveyance or other divestment of title to such member's lot, except that nothing herein contained shall be construed as terminating the membership of any member who may own two or more lots or parcels of property in Sabal Cove, so long as such member owns one lot. The membership of the Class B member in the Association shall continue until such time as said member, in its sole discretion, submits its resignation as such Class B member or, in lieu thereof, elects to become a Class A member while it still owns a lot in Sabal Cove.

The interest of a member in the funds and assets of the Association cannot be assigned, hypothecated or transferred in any manner, except as an appurtenance to the property which is the basis of his membership in the Association.

The words "owner" and "lot" are used herein with the same definition and meaning as given to such words in the aforesaid Declaration of Restrictions for Sabal Cove.

ARTICLE V

VOTING

A. Subject to the restrictions and limitations hereinafter set forth, each member shall be entitled to one vote for each lot in which he holds a fee simple ownership. When more than one person holds such interest in any one lot or dwelling unit, all such persons shall be members of the Association, but the total vote of such co-owners shall be the same as if said lot or dwelling unit was in single ownership and, further, such vote shall not be divided between or among such co-owners, but shall be cast as a unit vote by one of such co-owners in the manner provided in the Bylaws. Any member holding title to a fractional portion of a lot shall not be entitled to a fractional vote therefor. Except where otherwise required under the provisions of these Articles, the Declaration of Restrictions for Sabal Cove, the Declaration of Maintenance Covenants and Restrictions on the Commons for Bay Isles or by law, the affirmative vote of the owners of a majority of lots represented at any meeting of the members duly called and at which a quorum is present, shall be binding upon the members.

B. The Developer shall have the right to appoint a majority of the Board of Directors of Association so long as it owns at least one lot in Sabal Cove.

ARTICLE VI

BOARD OF DIRECTORS

A. The affairs of the Association shall be managed by a Board of Directors consisting of not less than three or more than seven directors, as determined by resolution of the membership from time to time. The initial Board shall consist of three directors. So long as developer shall have the right to appoint a majority of the Board of Directors under the provisions of Paragraph B of Article V, such appointed directors need not be

members of the Association and need not be residents of the State of Florida. Thereafter, all directors shall be members of the Association and residents of the State of Florida. Elections shall be by plurality vote. At the first annual election to the Board of Directors, the term of office of the elected director receiving the highest plurality of votes shall be established at two years. In addition, the Class B member shall appoint one director to serve for a term of two years and one director to serve for a term of one year. Thereafter, as many directors shall be elected or appointed, as the case may be, as there are regular terms of office of directors expiring at such time, and the term of the directors so elected or appointed at each annual election after the first election shall be for two years expiring at the second annual election following their election, and thereafter until their successors are duly elected and qualified, or until removed from office with or without cause either (a) if appointed by Class B member, then at any time the Class B member may determine; or (b) if elected by the Class A members, then upon the affirmative vote of a majority of such members. In no event, however, can a board member appointed by the Class B member be removed except by action of the Class B member, nor can a board member elected by the Class A members be removed except by action of the Class A members. Any director appointed by the Class B member shall serve at the pleasure of the Class B member and may be removed from office, and a successor director appointed to fill his remaining term, at any time by the Class B member.

B. The names and addresses of the members of the first Board of Directors who shall hold office until the annual meeting of the members to be held in the year 1990, and until their successors are elected or appointed in accordance with the provisions of Paragraph A, above, are as follows:

Herman Tom	595 Bay Isles Road Longboat Key, FL 34228

Julie Bartley	595 Bay Isles Road Longboat Key, FL 34228
Elizabeth Coleman	595 Bay Isles Road Longboat Key, FL 34228

ARTICLE VII

OFFICERS

A. The officers of the Association, to be elected by the Board of Directors, shall be a President, a Vice President, a Secretary and a Treasurer, and such other officers as the Board of Directors shall deem appropriate from time to time. The President shall be elected from among the membership of the Board of Directors, but no other officer need be a director. The same person may hold two offices, the duties of which are not incompatible; provided, however, that the office of President and Secretary shall not be held by the same person. The affairs of the Association shall be administered by such officers under the direction of the Board of Directors. Officers shall be elected for a term of one year in accordance with the procedure set forth in the Bylaws.

B. The names of the officers who are to manage the affairs of the Association until the first annual meeting of the Board of Directors to be held in the year 1990, and until their successors are duly elected and qualified, are as follows:

President -	Herman Tom
Vice President -	Elizabeth Coleman
Secretary / Treasurer -	Julie Bartley

ARTICLE VIII

CORPORATE EXISTENCE

The Association shall have perpetual existence.

ARTICLE IX

BYLAWS

The first Board of Directors of the Association shall adopt Bylaws consistent with these Articles. Thereafter, the Bylaws may be altered, amended or rescinded by the Directors in the manner provided by such Bylaws.

ARTICLE X

AMENDMENT TO ARTICLES OF INCORPORATION

These Articles may be altered, amended or repealed by resolution of the Board of Directors; provided, however, that no amendment affecting the rights of developer, or it successor or assigns, as developer of Bay Isles, shall be effective without the prior written consent of said developer, or its successor or assigns, as developer.

ARTICLE XI

REGISTERED OFFICE

The registered office of the Association shall be located at 595 Bay Isles Road, Longboat Key, Sarasota County, Florida, but the Association may maintain offices and transact business in such other places within or without the State of Florida as may from time to time be designated by the Board of Directors.

ARTICLE XII

BUDGET AND EXPENDITURES

The Board of Directors shall annually adopt a budget for the operation of the Association for the ensuing year and for the purpose of levying assessments against all assessable property in Sabal Cove, which budget shall be conclusive and binding upon all persons; provided, however, that the Board of Directors, may thereafter at any time approve or ratify variations from such budget in respect of expenditures.

ARTICLE XIII

ASSESSMENTS

The Association will obtain funds with which to operate by means of annual dues and/or by assessment of its members in accordance with the provisions of the Declaration of Restrictions for Sabal Cove, as the same may be supplemented by the provisions of these Articles and the Bylaws of the Association relating thereto. In order to enforce collection of said dues and assessments, Association shall have the power to place liens against property in Sabal Cove, and to enforce the same in the manner

prescribed in the Bylaws of the Association and in the aforementioned Declaration of Restrictions.

ARTICLE XIV

SUBSCRIBERS

The names and residence addresses of the subscribers of these Articles are as follows:

Herman Tom	595 Bay Isles Road Longboat Key, FL 34228
Julie Bartley	595 Bay Isles Road Longboat Key, FL 34228
Elizabeth Coleman	595 Bay Isles Road Longboat Key, FL 34228

ARTICLE XV

INDEMNIFICATION OF OFFICERS AND DIRECTORS

A. The Association hereby indemnifies any Director or officer made a party or threatened to be made a party to any threatened, pending or completed claim, action, suit or proceeding:

(1) Whether civil, criminal, administrative, or investigative, other than one by or in the right of the Association to procure a judgment in its favor, brought to impose a liability or penalty on such person for an act alleged to have been committed by such person in his capacity of Director or officer, employee or agent of any other corporation, partnership, joint venture, trust or other enterprise which he served at the request of the Association, against judgments, fines, amounts paid in settlement and reasonable expenses, including attorneys' fees, actually and necessarily incurred as a result of such action, suit or proceeding or any appeal therein, if such person acted in good faith in the reasonable belief that such action was in the best interests of the Association, and in criminal actions or proceedings, without reasonable ground for belief that such action was unlawful. The termination of any such action, suit or proceeding by judgment, order, settlement, conviction or upon a

plea of nolo contendere or its equivalent shall not in itself create a presumption that any such Director or officer did not act in good faith in the reasonable belief that such action was in the best interests of the Association or that he had reasonable grounds for belief that such action was unlawful.

(2) By or in the right of the Association to procure a judgment in its favor by reason of his being or having been a Director or officer of the Association, or by reason of his being or having been a Director, officer, employee or agent of any other corporation, partnership, joint venture, trust or other enterprise which he served at the request of the Association, against the reasonable expenses, including attorneys' fees, actually and necessarily incurred by him in connection with the defense or settlement of such action, or in connection with an appeal therein, if such person acted in good faith in the reasonable belief that such action was in the best interests of the Association. Such person shall not be entitled to indemnification in relation to matters as to which such person has been adjudged to have been guilty of negligence or misconduct in the performance of his duty to the Association unless and only to the extent that the court, administrative agency, or investigative body before which such action, suit or proceeding is held shall determine upon application that, despite the adjudication of liability but in view of all circumstances of the case, such person is fairly and reasonably entitled to indemnification for such expenses which such tribunal shall deem proper.

B. The Board of Directors shall determine whether amounts for which a Director or officer seeks indemnification were properly incurred and whether such Director or officer acted in good faith and in a manner he reasonably believed to be in the best interests of the Association, and whether, with respect to any criminal action or proceeding, he had no reasonable ground for belief that such action was unlawful. Such determination shall be made by the Board of Directors by a majority vote of a

quorum consisting of Directors who were not parties to such action, suit or proceeding.

C. The foregoing rights of indemnification shall not be deemed to limit in any way the powers of the Association to indemnify under applicable law.

ARTICLE XVI

TRANSACTION IN WHICH DIRECTORS OR OFFICERS ARE INTERESTED

A. No contract or transaction between the Association and one or more of its Directors or officer, or between the Association and any other corporation, partnership, association, or other organization in which one or more of its Directors or officers are Directors or officers, or have a financial interest, shall be invalid, void or voidable solely for this reason, or solely because the Director or officer is present at or participates in the meeting of the Board or committee thereof which authorized the contract or transaction, or solely because his or their votes are counted for such purpose. No Director or officer of the Association shall incur liability by reason of the fact that he is or may be interested in any such contract or transaction.

B. Interested Directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorized the contract or transaction.

ARTICLE XVII

DISSOLUTION OF THE ASSOCIATION

A. The Association may be dissolved upon a resolution to that effect being approved by two-thirds (2/3) of the members of the Board of Directors, and, if such decree be necessary at the time of dissolution, after receipt of an appropriate decree as set forth in Section 617.05, Florida Statutes, or any statute of similar import.

B. Upon dissolution of the Association, all of its assets remaining after making provision for payment of creditors and all

costs and expenses of such dissolution shall be distributed in the following manner:

(1) Real property contributed to the Association without the receipt of other than nominal consideration by the Class B member (or its predecessor in interest) shall be returned to the Class B member (whether or not a Class B member at the time of such dissolution), unless it refuses to accept the conveyance (in whole or in part).

(2) Dedication to any applicable municipal or other governmental authority of any property determined by the Board of Directors of the Association to be appropriate for such dedication and which the authority is willing to accept.

(3) Remaining assets shall be distributed among the members, each member's share of the assets to be determined by multiplying such remaining assets by a fraction, the numerator of which is all amounts assessed by the Association since its organization against the property which is owned by the member at that time, and the denominator of which is the total amount assessed by the Association against all properties which at the time of dissolution are part of Sabal Cove. The year of dissolution shall count as a whole year for purposes of the preceding fractions.

IN WITNESS WHEREOF, the aforesaid subscribers have hereunto set their hands and seals this ____ day of _____, 1989.

Herman Tom

Julie Bartley

Elizabeth Coleman

STATE OF FLORIDA

COUNTY OF SARASOTA:

I HEREBY CERTIFY that on this 6th day of June, 1989, before me, the undersigned authority, personally appeared HERMAN TOM, JULIE BARTLEY, and ELIZABETH COLEMAN, to me known to be the persons who executed the foregoing Articles of Incorporation, and acknowledged the execution of such instrument for the uses and purposes therein expressed.

WITNESS my hand and official seal at Sarasota, said County and State, the date aforesaid.

Betty N. Martin
Notary Public, State of
Florida at Large

My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV. 2,1991
BONDED THRU GENERAL INS. UND.

DECLARATION OF

RESTRICTIONS, LIMITATIONS, CONDITIONS AND AGREEMENTS

FOR

SABAL COVE

THIS DECLARATION is made and executed this ____ day of _____, 19___, by ARVIDA/JMB PARTNERS, a Florida general partnership, hereinafter referred to as "Developer",

W I T N E S S E T H :

WHEREAS, Developer is the fee simple owner and developer of a large tract of land located on Longboat Key in Sarasota County, Florida, commonly known and referred to as "Bay Isles", and has heretofore developed portions of the same and intends to continue to improve, develop and subdivide said tract of land and thereafter to grant, sell and convey subdivided portions of said lands for various purposes, including residential, recreational and commercial uses, and such other purposes as may be deemed appropriate by Developer, all in accordance with an Outline Development Plan heretofore approved by the Town of Longboat Key pursuant to the Town's Planned Unit Development Ordinance, as said Development Plan may be changed and modified by Developer from time to time hereafter; and

WHEREAS, Developer has heretofore adopted a Declaration of Maintenance Covenants and Restrictions on The Commons for Bay Isles ("Covenants") relating to the ownership, development, use and management of certain of the Common Areas to be established within Bay Isles, which Declaration of Maintenance Covenants is recorded in Official Record Book 1116, Page 1858, Public Records of Sarasota County, Florida; and

WHEREAS, contemporaneously herewith Developer has platted a portion of Bay Isles into a subdivision known as "Sabal Cove", and Developer desires to establish protective covenants covering the development, improvement and usage of the lands contained in

this subdivision for the benefit and protection of said subdivision, the Developer and the purchasers of lots in this subdivision.

NOW, THEREFORE, Developer does hereby declare that the land hereinafter described in Article II shall be and is hereby bound by the restrictions, limitations, conditions and agreements set forth in these presents and that said property shall henceforth be held, used and enjoyed subject to and with the benefit and advantage of the following restrictions, limitations, conditions and agreements, which shall constitute covenants running with the title to said land, to wit:

ARTICLE I

DEFINITIONS

The following words, when used in this Declaration (unless the context shall prohibit such construction) shall have the following meanings:

A. "Developer" shall mean and refer to Arvida/JMB Partners, its successors or assigns.

B. "Bay Isles" shall mean and refer to all of the property commonly known and referred to by such name and developed as a planned unit development (PD) on Longboat Key.

C. "Property" shall mean and refer to any lot, tract or other parcel of land, or condominium unit, located in Bay Isles, including all improvements located thereon.

D. "Lot" shall mean and refer to any numbered lot as reflected on the plat of Sabal Cove, as described in Article II hereof, including all improvements located thereon.

E. "Owner" shall mean and refer to the record owner, whether one or more persons, corporations or other legal entities, of the fee simple title to any lot or parcel of land which is a part of the Property.

G. "Common Area" or "The Commons" shall mean and refer to all real property located in Bay Isles which has heretofore or which may hereafter be specifically set aside by Developer or

deeded to Bay Isles Association for the common use and enjoyment of all property owners in Bay Isles as members of Bay Isles Association.

H. "Neighborhood Common Area" shall mean and refer to any and all real Property located within Sabal Cove, which may hereafter be specifically set aside by Developer or deeded to Sabal Cove Homeowners Association for the common use and enjoyment of all owners of lots in Sabal Cove, as members of Sabal Cove Homeowners Association.

I. "Bay Isles Association" shall mean and refer to Bay Isles Association, Inc., a Florida corporation not for profit, which corporation has been formed for the primary purpose of owning, improving, maintaining and managing the Common Areas of Bay Isles and whose membership shall be comprised of all Owners of Property in Bay Isles.

J. "Sabal Cove Homeowners Association" or "Association" shall mean and refer to Sabal Cove Homeowners Association, Inc., a Florida corporation not for profit, which corporation has been formed for the primary purpose of assuring that all prospective owners of lots in Sabal Cove, are compatible and congenial and, also, for the purpose of enforcing these Restrictions and improving and maintaining any Neighborhood Common Areas of Sabal Cove. This document is the Declaration of Restrictions to which the Articles of Incorporation and Bylaws of said Sabal Cove Homeowners Association make reference. Copies of the Articles of Incorporation and Bylaws are attached hereto as Exhibits "A" and "B", respectively, and made a part hereof.

K. "Public Roads" shall mean and refer to those roads or streets within Bay Isles heretofore or hereafter dedicated to the Town of Longboat Key or other governmental authority and to be maintained at public expense. At the present time, however, no public roads are contemplated within the planned unit other than a portion of Bay Isles Road adjacent to the Avenue of the Flowers.

L. "Private Roads" shall mean and refer to those roads which are common to Bay Isles as a whole and which are available for the common use and enjoyment of all Owners in Bay Isles, which roads are to be maintained by Bay Isles Association.

M. "Limited Private Roads" shall mean and refer to those roads which are common only to a certain limited area of Bay Isles (such as a specific subdivision or condominium) and which are available for the common use and enjoyment only of the Owners of Property in such limited area, which road shall be maintained by a neighborhood or condominium association.

ARTICLE II

PROPERTY SUBJECT TO THIS DECLARATION

The real property which is owned by Developer and which shall henceforth be held, transferred, sold, conveyed and occupied subject to the terms and provisions of this Declaration is located in Sarasota County, Florida, and is legally described as follows:

> Sabal Cove, as per plat thereof recorded in Plat Book ____, Pages _____, Public Records of Sarasota, County, Florida

Said property is sometimes hereinafter referred to as "this subdivision".

ARTICLE III

REQUIRED MEMBERSHIP IN PROPERTY OWNERS' ASSOCIATIONS

This subdivision is an integral part of a larger development known as "Bay Isles". All of Bay Isles is being developed as a planned unit development in accordance with an Outline Development Plan heretofore approved by the Town of Longboat Key in accordance with the Town's planned unit development ordinances, as such plan may be changed or modified by Developer from time to time hereafter. In connection with such development, certain land areas, referred to as "Common Areas", may from time to time hereafter be set aside by Developer or deeded to Bay Isles Association as a portion of the required open space of said development and will thereupon become available for

advertised public sale with open bidding which is provided by law, such as, but not limited to, execution sale, foreclosure sale or tax sale.

ARTICLE V

DEVELOPER'S RIGHT OF REDEMPTION OF DEFAULTED MORTGAGE

All grantees of conveyances of title to lots in this subdivision expressly stipulate and agree for themselves and their respective heirs, executors, administrators, legal representatives and assigns, that in the event proceedings are instituted to foreclose any mortgage on any property herein, and should the mortgagor fail to redeem from such mortgagee, the Developer, or its successors or assigns, shall have the right to redeem from the mortgagee for the amount due thereon or to purchase said property at the foreclosure sale for the amount set forth to be due by the mortgagee in the foreclosure proceedings; and, in case of such redemption by the Developer, the Developer, or its successors or assigns so redeeming, shall acquire, take and have absolute fee simple title to the property redeemed, free from any claim or right of the mortgagor, or any grantee of the mortgagor, their respective heirs, successors or assigns, and any party claiming by, through or under said mortgagor or grantee. Nothing herein contained in these reservations and restrictive covenants shall preclude a mortgage lending institution, bank, savings and loan association, an insurance company, or any other recognized lending institution, from owning a mortgage on any lot or property situate in this subdivision, and such mortgage lending institution, bank, savings and loan association, insurance company or other recognized lending institution shall have an unrestricted, absolute right to receive a voluntary conveyance of title to the property in settlement and satisfaction of said mortgage or to foreclose the mortgage in accordance with the terms thereof, and the laws of the State of Florida, and to bid upon said property at the foreclosure sale, provided said mortgage institution, bank, savings and loan association, insurance company, or other recognized lending institution owning said

mortgage shall give to Developer, its successors or assigns, written notice by certified mail of the said default at least thirty (30) days prior to the institution of foreclosure proceedings, and should the said Developer, its successors or assigns (which may include Bay Isles Association, Inc. or any member thereof, individually or collectively), fail to purchase said mortgage, including any costs incident thereto, from such mortgagee or shall fail to redeem said mortgage, then and in that event, the mortgagee taking title on said foreclosure sale or taking title in lieu of foreclosure sale, may acquire said property and occupy and sell the same without complying with the restriction limiting the ownership of said property to members of Bay Isles Association and Sabal Cove Homeowners Association.

ARTICLE VI

ARCHITECTURAL CONTROL

1. Necessity of Architectural Review and Approval. No improvement or structure of any kind, including, without limitation, any building, fence, wall, swimming pool, screen enclosure, water or sewer line, drain, mailbox, solar energy device, antenna, decorative structure or building, landscaping, landscape device or object, or any other improvement, shall be commenced, erected, installed, placed or maintained upon any lot, nor shall any addition, change or alteration therein or thereof be made, unless and until the plans, specifications and location of the same shall have been submitted to, and approved in writing by, the Association. All plans and specifications shall be evaluated as to harmony of external design and location in relation to surrounding structures and topography and as to conformance with these Restrictions and the Architectural Planning Criteria of the Association, a copy of which is attached hereto as Exhibit "C", as the same may be amended from time to time hereafter. Furthermore, refusal of approval of plans and specifications by Association may be based upon any ground, including purely aesthetic grounds, which in the sole and uncontrolled discretion of Association shall seem sufficient.

2. Architectural Review Board. The architectural review and control functions of the Sabal Cove Homeowners Association (hereinafter referred to as the "Association") shall be administered and performed by the Architectural Review Board (the "ARB"), which shall consist of no less than three (3) nor more than five (5) members, who need not be members of the Association. The Developer shall have the right to appoint (and, at its discretion, to replace) all of the members of the ARB, or such lesser number as it may choose, until such time as Developer, in its sole discretion, assigns such right to Association, regardless of Developer's ownership of any property in this subdivision. Members of the ARB as to whom Developer may have relinquished the right of appointment, and all members of the ARB after Developer assigns such right to Association, shall be appointed by, and shall serve at the pleasure of, the Board of Directors of the Association. A majority of the ARB shall constitute a quorum to transact business at any meeting of the ARB, and the action of a majority present at a meeting at which a quorum is present shall constitute the action of the ARB. Any vacancy occurring on the ARB because of death, resignation, or other termination of service of any member thereof, shall be filled by the Board of Directors of the Association; except that Developer, to the exclusion of the Board, shall fill any vacancy created by the death, resignation, removal or other termination of services of any member of the ARB appointed by Developer.

3. Powers and Duties of the ARB. The Architectural Review Board shall have the following powers and duties:

(a) Modification of Architectural Planning Criteria. To recommend, from time to time, to the Board of Directors of the Association modifications and/or amendments to the Architectural Planning Criteria. Any modification or amendment to the Architectural Planning Criteria shall be consistent with the provisions of this Declaration, and shall not be effective until adopted by a majority of the members of the Board of Directors of the Association at a meeting duly called and noticed for such

purpose and at which a quorum is present and voting. Notice of any duly adopted modification or amendment to the architectural planning criteria, including a verbatim copy of such change or modification, shall be delivered to each member of the Association; provided that, the delivery to each member of the Association of notice and a copy of any modification or amendment to the architectural planning criteria shall not constitute a condition precedent to the effectiveness or validity of such change or modification.

(b) Submission of Plans. To require submission to the ARB of two (2) complete sets of all plans and specifications for any improvement or structure of any kind, including without limitation, any building, fence, wall, swimming pool, screen enclosure, water or sewer line, drain, mailbox, solar energy device, antenna, decorative structure or building, landscaping, landscape device or object, or other improvement, the construction or placement of which is proposed upon any lot in this subdivision. In addition, the ARB may require submission of plans for the grading of any lot and plans reflecting the proposed elevation of the floor slab of any house to be built on such lot. Any increase in the elevation of the existing grade of a lot shall be accomplished by the lot owner so as to not increase the surface water runoff from such lot onto neighboring properties. Whenever required by the ARB, the owner of such lot shall also furnish a drainage plan for his lot. The ARB may also require submission of samples of building materials proposed for use on any lot, and may require such additional information as reasonably may be necessary for the Board to completely evaluate the proposed structure or improvement in accordance with this Declaration and the architectural planning criteria. The ARB shall have the right to hire a registered architect to review the plans and specifications submitted by any Lot Owner and the cost of such consultant shall be borne by such Lot Owner. In order to facilitate the preparation and ultimate approval of construction plans, any Lot Owner may submit preliminary drawings or other

writings prior to the preparation and submission of the final working drawings and specifications and the ARB agrees to review and indicate its approval, disapproval or recommendation on the matters reflected thereon.

(c) Approval of Plans. To approve or disapprove any improvement or structure of any kind, including, without limitation, any building, fence, wall, swimming pool, screen enclosure, water or sewer line, drain, mailbox, solar energy device, antenna, decorative structure or building, landscaping, landscape device or object, or other improvement or change or modification thereto, the construction, erection, performance or placement of which is proposed upon any lot in this subdivision, and to approve or disapprove any exterior additions, changes, modifications or alterations therein or thereon. Upon final approval of an owner's plans either as originally submitted or as subsequently modified in accordance with the recommendations of the ARB, one set of such plans shall be marked "Approved" and returned to the owner and one set shall be retained in the permanent files of the ARB. All final decisions of the ARB shall be submitted in writing to the Board of Directors of the Association, and evidence thereof may be made by a certificate, in recordable form, executed under seal by the president or any vice president of the Association. Any party aggrieved by a decision of the ARB shall have the right to make a written request to the Board of Directors of the Association, within thirty (30) days of the mailing of notice of such decision, for a review thereof. The determination of the Board upon reviewing any such decision shall in all events be dispositive.

(d) Fees. To adopt a schedule of reasonable fees for processing requests for ARB approval of proposed improvements. Such fees, if any, shall be payable to the Association, in cash, at the time that plans and specifications are submitted to the ARB.

(e) Failure to Approve. Should the Association fail to either approve or disapprove the plans and specifications submitted to it by the Owner of a lot or lots within this subdivision within thirty (30) days after written request therefor, then such approval shall not be deemed to be required in such instance; provided, however, that in no event shall any building or other structure be erected or be allowed to remain on any lot which violates any of the other covenants or restrictions herein contained.

4. Time Limitation on Completion of Construction. All construction shall be completed within twelve (12) months of the commencement date of construction. In order to insure completion within this time limitation, a surety bond or cash bond of $5,000 shall be posted by the owner. No certificate of occupancy shall be approved by Association until structures and landscaping shall have been completed according to approved plans. No occupancy of such premises shall be permitted until a certificate of occupancy is issued by Association, which shall be in addition to the Certificate of Occupancy issued by the Town of Longboat Key.

ARTICLE VII

RESTRICTIONS

1. Residential Use. The lots subject to these covenants and restrictions may be used for the construction of single-family residential living units and for no other purpose; provided, however, that this restriction shall not be deemed to apply to Common Areas or to Neighborhood Common Areas. No business or commercial building may be erected on any lot and no business may be conducted on any part thereof. No building or other improvement shall be erected upon any lot without prior ARB approval thereof as elsewhere herein provided. Notwithstanding the foregoing, Developer shall have the right from time to time to permit the construction of model homes in this subdivision and also to erect and maintain temporary sales offices in this subdivision.

2. No Trailers or Temporary Buildings. No tents, trailers, vans, shacks, or temporary or accessory buildings or structures shall be erected, placed or permitted to remain on any lot without the written consent of the Developer.

3. Garages Required. No house shall be constructed on any lot without provision for a garage adequate to house at least two large-sized American automobiles. Garages on all lots shall be constructed so that cars are parked within the garage parallel to the front property line and garage doors shall be perpendicular to such front property line. All garages must have doors that are to be maintained in a usable, working condition and which are operated by electric door openers. Except when a garage is in actual use, garage doors must be kept closed.

4. Antenna. No aerial or antenna (including TV dishes) shall be placed or erected upon any lot or affixed in any manner to the exterior of any building in this subdivision.

5. Boats and Motor Vehicles. No boats, campers, motorcycles, vans, trailers, recreational vehicles or other motor vehicles, except four-wheel passenger automobiles, shall be placed, parked or stored upon any lot, nor shall any maintenance or repair be performed upon any boat or motor vehicle upon any lot, except for minor emergency repairs or where such repairs are made within a building where such vehicle is totally screened from public view. Trucks owned by residents may be permitted provided that they are kept inside the garage while on the premises.

6. Landscaping. A basic landscaping, grading, irrigation and drainage plan for each home must be prepared by a registered landscape architect and shall be submitted to and approved by the ARB prior to commencement of landscaping. A landscaping plan shall include: (a) a landscaping scheme; (b) a listing of the plant stock included in the scheme; and (c) the size of such stock at the time of planting. A minimum of six shade trees (excluding palms) shall be included in the landscaping plan. Sodding will be required on all yards. An underground sprinkler

system of sufficient size and capacity to irrigate all sodded and landscaped areas must be installed and maintained in good working order on all lots. Developer shall have the right to hire a registered landscape architect to review the submitted landscape plans and the cost of such consultant shall be borne by the lot Owner.

7. Trees. No tree or shrub, the trunk of which exceeds four (4) inches in diameter (measured four [4] feet above the ground), shall be cut down or otherwise destroyed without the prior express written consent of the ARB.

8. Artificial Vegetation. No artificial grass, plants or other artificial vegetation shall be placed or maintained upon the exterior portion of any lot, unless approved by the ARB.

9. Screening of Air Conditioner Compressors, Electrical Transformers, Garbage Containers and Clothes Drying Area. All garbage or trash containers must be located under ground or placed within screened or walled-in areas so that they shall not be visible from adjoining streets, lots, fairways or waterways. No portion of any lot shall be used as a drying or hanging area for laundry of any kind, except upon being adequately screened from public view and approved by the ARB. Air conditioner compressors and electrical transformers shall be similarly screened from view and buffered by a masonry wall so as to reduce the noise level resulting from operation thereof. Screening required hereunder is not exempt from stated set-back requirements.

10. Nuisances. Nothing shall be done or permitted to be done or maintained, or failed to be done, on any lot which may be or become an annoyance or nuisance to the neighborhood, including, without limitation, the following:

(a) Animals. No horses, cattle, swine, goats, poultry, or other animal or fowl not customarily regarded as a household pet, shall be kept on any lot.

(b) Trades. No manufacturing, trade, business, commerce, industry, profession, or any other occupation whatsoever shall be conducted or carried on upon any lot or any part thereof, or in any building or other structure erected thereon.

(c) Maintenance of Lots and Landscaping. No weeds, underbrush or other unsightly growth shall be permitted to grow or remain uncut or unmowed upon any lot, and no refuse pile or unsightly objects shall be allowed to be placed or suffered to remain anywhere thereon. The owners of the lots in this subdivision shall be responsible for the maintenance of parkways located between their respective lot lines and the streets upon which said lots face. All owners shall maintain their hedges, plants, lawns and shrubs in a neat and trim condition at all times.

(d) Maintenance of Improvements. Owners shall maintain their residences and all other improvements, including walls, fences, screen enclosures, and so forth, in a good and safe condition and the repair of any damage, decay or evidence of wear and tear on the exterior of any building shall be made promptly.

(e) Boarding up Homes. Houses may be boarded up only during the time of imminent threat of storm, but in no event shall remain boarded up for periods beyond the threat of storm or in excess of ten (10) days, whichever is shorter.

(f) Maintenance and Repair by Association. In the event that any Owner shall fail or refuse to maintain his residence, lot, or other improvements situate on said lot, in full compliance with these restrictions, Association shall have the right to take remedial action to correct any such deficiencies. Such right shall include the right of reasonable access to the premises and such entry by Association and its duly authorized agents shall not be deemed to be a trespass. The expense of any such repairs or maintenance shall be chargeable to and paid by said Owner to the Association within thirty (30) days after submission of a bill therefor.

the common use, enjoyment, or benefit of all property owners in Bay Isles. Said Common Areas may include, by way of illustration and not by way of limitation, private roads, waterways, lakes, ponds, bicycle and other paths, walkways, parks and other open areas. These Common Areas will be designated as such either on plats or in other documents which will be recorded from time to time by Developer. In addition, certain land areas, referred to as "Neighborhood Common Areas", may be set aside by Developer in some subdivision or condominium areas or deeded to subdivision or condominium associations as a portion of the required PUD open space and, in such event, will be available for the common use and enjoyment only of the Owners of property in such designated subdivision or condominium areas. These Neighborhood Common Areas will be designated as such either on plats or in other documents which will be recorded by Developer from time to time. The lands comprising the golf course are a part of the required open space of Bay Isles, but are not a part of the Common Areas or Neighborhood Common Areas of the planned unit development.

In order to establish, protect and preserve the quality of this subdivision, all prospective purchasers and Owners of lots in this subdivision shall be required to become members of Sabal Cove Homeowners Association and to maintain such membership in good standing. Furthermore, membership of each and every lot owner in Sabal Cove, in the Bay Isles Association is hereby stated and recognized to be a necessary and essential part of the orderly development of Bay Isles as a planned unit development. Therefore, all prospective purchasers and Owners of lots in this subdivision shall be required to become members of Bay Isles Association and to maintain such membership in good standing.

Accordingly, no lot or any part thereof, except Common Areas or Neighborhood Common Areas, shall be sold, conveyed, leased, rented, given, or in any other manner transferred to anyone other than a member in good standing in Bay Isles Association and in Sabal Cove Homeowners Association. It is an express condition of the estate or title conveyed to any Lot that the holder of any

interest therein shall not transfer the title to said property to any person not at the time of such transfer a member in good standing in each of the aforementioned associations. Any deed, lease or other conveyance of any interest in said property, directly or indirectly (other than by Will or judicial proceedings), in violation of this covenant shall be voidable by Bay Isles Association, Sabal Cove Homeowners Association or Developer.

The purpose and objective of each of said associations is as follows:

A. Sabal Cove Homeowners Association. The primary purpose of this association is to insure to all property owners and other members of said corporation that the property in this subdivision shall at all times be occupied by a colony of compatible and congenial persons and, in addition, to insure such grantees and owners of property in this subdivision of a continuing and concerted program for maintenance and management of the properties in this subdivision, including enforcement of these restrictions wherever applicable and appropriate, so as to establish, protect and preserve the quality of this subdivision; provided, however, that this restriction shall not be construed or applied so as to preclude anyone from membership in said Association based upon race, color, creed or national origin. Any applicant for membership shall submit such information as may reasonably be deemed appropriate by Sabal Cove Homeowners Association and such application shall be processed as provided in said Association's Articles of Incorporation and Bylaws.

B. Bay Isles Association. The purpose of this association is to own, improve, maintain and manage the common areas of Bay Isles in accordance with said corporation's Charter, Bylaws, the Covenants, and in accordance with any and all applicable ordinances of the Town of Longboat Key regulating planned unit developments.

C. Right of Assessment. Each of the aforesaid associations shall have the right to levy assessments for administration and maintenance purposes and other lawful purposes and to enforce collection thereof by placing liens against the property in this subdivision.

D. Transfer Fee. Sabal Cove Homeowners Association shall have the right to charge a reasonable fee to any seller for approval of a prospective purchaser.

Notwithstanding anything hereinabove set forth, this Article shall not apply to bona fide nursing aides or domestic servants domiciled upon the premises where they are employed nor shall it apply to temporary house guests where the owner is simultaneously in residence.

ARTICLE IV

DEVELOPER'S RIGHT OF FIRST REFUSAL

No lot, nor any part thereof, shall be sold, conveyed or otherwise transferred unless and until the Owner of such lot shall have first offered to sell such lot to Developer and Developer has waived, in writing, its right to purchase said lot. The procedure for compliance with this requirement shall be as follows:

1. Notice To Developer. Any Owner having a bona fide intention of accepting an offer for the sale of his lot or any interest therein shall give to Developer notice of such intention, together with a fully executed copy of the proposed contract of sale (the "proposed contract"). Within thirty (30) days of receipt of such notice and information, Developer shall either exercise, or waive the exercise of, its right of first refusal. If Developer elects to exercise its right of first refusal, it shall, within thirty (30) days after receipt of such notice and proposed contract, deliver to the Owner an agreement to purchase the lot upon terms and conditions customarily used in real estate sales contracts in Sarasota County, Florida, and, also, the following terms:

(a) The price to be paid and the terms of payment shall be the same as that stated in the proposed contract;

(b) The sale shall be closed within thirty (30) days after the execution of said agreement to purchase or at the time prescribed in the proposed contract first executed by Owner, whichever date shall last occur.

If Developer shall fail to exercise or waive exercise of its right of first refusal within the said thirty (30) days of receipt of the proposed contract, the Developer's right of first refusal shall be deemed to have been waived and Developer shall furnish a certificate of waiver as hereinafter provided.

3. Certificate of Waiver. If Developer shall elect to waive its right of first refusal, or shall fail to exercise said right within thirty (30) days of receipt of the proposed contract Developer's waiver shall be evidenced by a certificate executed by Developer in recordable form which shall be delivered either to Owner or to the proposed contract purchaser and shall be recorded by the purchaser in the Public Records of Sarasota County, Florida.

3. Violation of Transfer Covenant. Any deed or conveyance of title to said property, either directly or indirectly (other than by Will or judicial proceedings), without Developer's waiver in violation of this covenant shall be void and of no effect.

4. Exceptions. The provisions of this Article IV shall not apply to a transfer to or sale by any bank, life insurance company, federal or state savings and loan association, or real estate investment trust, which acquires its title as a result of owning a mortgage upon the lot concerned, and this shall be so whether the title is acquired by deed from the mortgagor or his successors in title or through foreclosure proceedings; nor shall this Article IV apply to a sale by any such institution which so acquires title. Neither shall this Article IV require the waiver by Developer as to any transfer of title to a lot at a duly

(g) Lien Rights of Association. In the event of Owner's failure or refusal to pay such expense, Association shall have the right to file a lien against the property. Said lien shall be filed in the Public Records of Sarasota County, Florida, and a copy thereof mailed to such Owner at his last known mailing address. If such lien is not paid within ten (10) days after the filing thereof, Association shall have the right to foreclose the same in the same manner as a mortgage or mechanics lien foreclosure or in such other manner as may be permitted by law. In addition to recovery of such expenses, Association shall be entitled to recover from the Owner of said Property all costs, including reasonable attorney's fees, incurred in connection with the preparation and bringing of such foreclosure proceedings, and all such costs and fees shall be secured by said lien.

(h) Resolution of Disputes. In the event of a dispute or question as to what may be or become a nuisance, such dispute or question shall be submitted to the Board of Directors of Association, which shall render a decision in writing, and such decision shall be dispositive of such dispute or question.

11. Signs. No sign of any kind shall be displayed to the public view on any lot except for the following:

(a) Homeowners shall not display or place any sign of any character including "For Rent" or "For Sale" signs, except that a sign displaying only the word "Open", not to exceed two (2) square feet, may be displayed during any time the homeowner or his designated representative is in attendance and said house is actually open for inspection by the public.

(b) During the course of construction of improvements, the general contractor may erect a construction sign not more than four (4) square feet in size containing the name of the builder, the job number and phone number, which sign shall be promptly removed when the certificate of occupancy is issued.

(c) Prior to erection of any of the foregoing signs, such signs must be approved by the ARB as to size, design, location and content.

12. Construction of Docks. No dock or other structure shall be constructed into the adjacent waterway from any lot.

13. Setback Line. No dwelling, building or any other structure (which shall be deemed to include a porch, patio, veranda, garage, pool cage, lanai, screen enclosure, and so forth), shall be erected or placed upon any part of a lot so that any portion of said dwelling, building or structure (including eaves or overhangs) is closer than twenty (20) feet to any portion of the front property line of said premises, within ten (10) feet from any side lot line, or within twenty (20) feet from any rear lot line. Where lots have curved property lines, then the aforesaid setback distances shall be measured at right angles with tangents to the curve from one lot corner to the other. All other setbacks shall be measured at right angles to the property line. No building shall be erected on a corner lot so that the setback from the street on which the building faces is less than twenty (20) feet or so that the setback from the side street is less than twenty (20) feet.

14. Exceptions to Setback Restrictions. Terraces, patios, walls, fences, low platforms or steps, swimming pools and similar low, open, unroofed and unscreened construction may be erected within the setback areas, provided that such construction shall be no more than two (2) feet in height above existing ground level (i.e., prior to any filling) and shall not interfere with the exposure or view or reasonable privacy of adjoining or facing properties, upon approval by the ARB.

15. Underground Wiring. No lines or wires for communication or the transmission of current shall be constructed, placed or permitted to be placed upon any lot unless the same shall be contained in conduits, and as to any part or parts of said wires or lines which shall be outside the dwelling house, the same shall be constructed or placed and maintained underground.

ARTICLE VIII

UTILITY AND DRAINAGE EASEMENTS

Developer hereby reserves, for itself, its successors or assigns, a ten (10) foot easement along the rear of each waterfront line of each lot for access in connection with

maintenance of the adjacent lake and for public utility purposes, and an easement ten (10) feet in width along the front line of each lot and five (5) feet in width along the side lot line of each lot for drainage and public utility purposes. Developer reserves the right to assign, in whole or in part, any and all of such reserved easement rights for such purposes as may be deemed necessary or desirable for the servicing of said lands. Any walls, fences, paving, planting or other improvements constructed, placed or planted on the property over which the easement lies may be removed, if required for utility installation or access or maintenance purposes, by the Developer, or its assigns, at the expense of the Owner of any such lot and Developer shall not be required to replace the same. Where a single residence is located on more than one lot, or portions of several lots, then the aforementioned side lot line easement shall not be located along the side lines of each lot as platted, but, in lieu thereof, shall be located along the side property lines of the lots or portions of lots combined for a building site.

ARTICLE IX

COMMON AREAS AND NEIGHBORHOOD COMMON AREAS EXEMPTED FROM RESTRICTIONS

Except as specifically referred to and provided herein, the Common Areas and Limited Common Areas of Bay Isles and the Neighborhood Common Areas of this subdivision, if any, are not subject to the general terms and conditions of this Declaration. Developer reserves the right to transfer at any time and from time to time, all or any part of the Common Areas and Limited Common Areas either to the Town of Longboat Key or to Bay Isles Association and to transfer the Neighborhood Common Areas, if any, to Sabal Cove Homeowners Association. Developer further reserves the right in the making of such transfers to place such restrictions, covenants and limitations of usage thereon as it may deem appropriate, and said Associations shall be obligated to accept the title thereto subject to such restrictions.

ARTICLE X

USAGE OF PRIVATE ROADS AND COMMON AREAS

1. Private Roads. On the plat of this subdivision, Developer granted to all property owners in this subdivision the nonexclusive and perpetual right of ingress and egress over and across the private road reflected on said plat; reserving, however, the right to grant similar rights of ingress and egress over and across said private road to the public and to property owners in other sections of Bay Isles as the same is hereafter developed. Such grant shall be deemed to include the right of use of said road not only by each property owner but, also, their respective guests, invitees and domestic help, delivery, pickup and sanitation services, representatives of utilities servicing said property, United States mail carriers, representatives of fire departments, police departments, and other necessary municipal, county, special district, state or federal agencies, holders of mortgage liens on said property and such other similar persons as Developer or any owner or lessee of property in this subdivision may from time to time designate. This right of ingress and egress shall be appurtenant to and shall pass with the title to each lot in this subdivision as the same may be conveyed from time to time without necessity of specific reference thereto.

Developer hereby reserves the fee simple title to said private road and shall have the sole and absolute right at any time, with the consent of the Board of County Commissioners of Sarasota County and/or the Town of Longboat Key (or the consent of any other appropriate governmental authority), to dedicate to the public all or any portion of said private road as reflected on the plat of this subdivision. In addition, Developer shall have the right at any time to convey the title to said road to Bay Isles Association, or its successors or assigns, and to assign to such grantee any and all rights retained by Developer together with all obligation for future maintenance of said road.

ARTICLE XI

MAINTENANCE AND OPERATION ASSESSMENTS

In addition to the specific rights of assessment of members of the Association as hereinabove set forth, Association shall also have the right to assess the owners of lots in this subdivision such amounts as may be deemed appropriate by the Association's Board of Directors for the management and operation of said Association and for the general purposes and objectives of said Association as set forth herein and in the Articles of Incorporation and Bylaws of said Association. Such assessments shall be prorated on the basis of one thirty-eighth (1/38) of the total assessment per platted lot in this subdivision.

In the event a lot is subdivided between two owners, then the assessment applicable to such lot shall be divided between the two owners on the basis either of square footage or roadway lineal footage, whichever is deemed most equitable by the Association's Board of Directors.

Procedures for the adoption of an annual budget, mailing of assessment notices and collection of such assessments shall be as set forth in the Articles of Incorporation and Bylaws of the Association. If the aforementioned assessment is not paid when due, Association shall have the right either to bring suit against the delinquent owner or to file a lien against such Owner's lot or lots, or both, and said lien may be enforced as hereinabove provided in Paragraph 10(g) of Article VII.

ARTICLE XII

RESUBDIVIDING

No lot or contiguous group of lots shall ever be resubdivided or replatted in any manner which would bring about a greater number of lots than that shown on the plat of this subdivision for the same area. A residential site may consist of one (1) or more lots; all of one lot; one lot and a part of a contiguous lot or lots; or any other combination of contiguous parts of lots which shall form one plot of land suitable for use as a site for a residence, provided that it extends from the

fronting street to the adjacent waterway or platted rear lot line, but no site which changes the lot, as originally platted, shall have a front or rear dimension of less than is contained in the smallest adjoining lot shown on the original plat of this subdivision. In the event of the division or subdivision of any lot, as aforesaid, the obligation for Association expenses attributable to the divided or subdivided lot shall be and become proportionately attributable and chargeable to the contiguous lot, and the owner thereof, to and with which all or portions of the divided or subdivided lot become consolidated. In the event that more than one lot is developed as a building site, the provisions of these covenants and restrictions shall apply thereto as to a single lot (except as to assessments). No dwelling or other structure or improvement shall be erected, altered, placed or permitted to remain on any site not including at least one (1) full platted lot according to the recorded plat of this subdivision.

ARTICLE XIII

MODIFICATION AND AMENDMENT

Developer hereby reserves the right to enter into agreements with the grantee of any lot or lots (without the consent of the grantees of other lots or adjoining or adjacent property) to modify those conditions, restrictions, limitations and agreements herein set forth which refer to setback lines, square footage content, areas of improvement, easements, underground wiring, right of first refusal, mortgage redemption privileges, building plans, signs, architectural committee, maintenance of parkways, screening of garbage receptacles, clotheslines and air conditioner compressors, and any such deviation or variance shall be evidenced by agreement in writing. Such variance shall not constitute a waiver of any such condition, restriction, limitation or agreement as to the remaining lots in this subdivision, and the same shall remain fully enforceable as to all other lots located in this subdivision, by the Developer, its successors or assigns, and the grantees of other lots except as against the lot

where such deviation is permitted. Developer reserves the right to add additional restrictions in the conveyance of title to any lot or lots in this subdivision.

ARTICLE XIV

ASSIGNMENT BY DEVELOPER

Developer may assign any and all of its rights, title, interest, powers, duties, obligations and privileges reserved hereunder to Bay Isles Association, Sabal Cove Homeowners Association, or to any other corporation, association or person.

ARTICLE XV

GENERAL PROVISIONS

1. Duration. The covenants and restrictions of this Declaration shall run with the title to the lots, and shall inure to the benefit of and be enforceable in accordance with its terms by the Developer, the Association or the Owner of any lot subject to this Declaration, and their respective legal representatives, heirs, successors and assigns, for a term of fifty (50) years from the date hereof, after which time said covenants and restrictions shall automatically be extended for successive periods of ten (10) years each unless an instrument signed by the then Owners of two-thirds (2/3) of the lots in this subdivision has been recorded, agreeing to change or terminate said covenants and restrictions in whole or in part.

2. Notice. Any notice required to be sent to any member or Owner under the terms and provisions of this Declaration shall be deemed to have been properly sent when mailed, postage prepaid to the last known address of the person who appears as member or Owner on the records of the Association at the time of such mailing.

3. Remedies for Violation. The violation or breach of any condition, covenant or restriction herein contained shall give the Developer, Sabal Cove Homeowners Association, or any Owner, in addition to all other remedies, the right to proceed at law or in equity to compel compliance with the terms of said conditions, covenants or restrictions, and to prevent the violation or breach

of any of them, and the expense of such litigation shall be borne by the then owner of the property alleged to be in violation, provided such proceeding results in a finding that such owner was in violation of said covenants or restrictions. Such expenses of litigation shall include reasonable attorney's fees incurred by Developer or the Association in seeking such enforcement.

4. Severability. Invalidation of any one of these covenants and restrictions by Stipulation, Agreement, Judgment or Court Order shall in no way affect any other provisions which shall remain in full force and effect.

5. Amendment. This Declaration may be amended at any time and from time to time upon the execution and recordation of an instrument executed by Owners holding not less than two-thirds (2/3) of the voting interest of the membership; provided, however, that so long as Developer is the owner of any lot or property affected by this Declaration no amendment will be effective without Developer's express written joinder and consent.

6. Usage. Whenever used herein the singular shall include the plural and the use of any gender shall include all genders.

IN WITNESS WHEREOF, the Developer has caused these presents to be executed by its undersigned duly authorized officers, the day and year first above written.

ARVIDA/JMB Partners, a Florida general partnership
BY: Arvida/JMB Managers, Inc., an Illinois corporation, General Partner

Kathryn Crawford
Betty H. Martine

By: Robert Wilhelm
Vice President

Attest: Elizabeth A. Coleman
Asst. Secretary

STATE OF FLORIDA)
COUNTY OF SARASOTA)

The foregoing instrument was acknowledged before me this _____ day of _____, 19____, by ROBERT WILHELM, as Vice President, and ELIZABETH A. COLEMAN, as Assistant Secretary, respectively, of ARVIDA/JMB MANAGERS, Inc., an Illinois corporation authorized to do business in the State of Florida, on behalf of the corporation as General Partner of ARVIDA/JMB PARTNERS, a Florida general partnership.

_____
Notary Public
My Commission Expires:

APPROVAL BY SABAL COVE HOMEOWNERS ASSOCIATION, INC.

SABAL COVE HOMEOWNERS ASSOCIATION, INC., a Florida corporation not for profit, as the Property Owner's Association for Sabal Cove, does hereby accept the duties, obligations, and responsibilities set forth for such Property Owner's Association in the foregoing Declaration of Restrictions for Sabal Cove, and said Association agrees to exert its best efforts to accomplish the objectives and purposes of these Restrictions and thereby to progress the plan of development and maintain the amenities afforded to the Owners of Property in Sabal Cove. Association further agrees to exercise the powers granted to it under its Articles of Incorporation and Bylaws and under the foregoing Declaration of Restrictions and to levy an assessment against the Property Owners in Sabal Cove, pursuant to the formula set forth in these Restrictions, which will be sufficient to accomplish the purposes and objectives of the Association.

Association further agrees to accept title to the Neighborhood Common Areas of Sabal Cove, if any, as determined by and transferred to it from time to time by Developer, subject to such easements, reservations, restrictions and limitations upon usage as Developer deems appropriate, and thereafter to maintain said Neighborhood Common Areas for the benefit of the Property Owners in Sabal Cove, to use the same as prescribed or limited, and to pay all taxes which may subsequently become due and owing thereon.

Association further agrees to accept such other duties and obligations as may be properly assigned or delegated to it by Developer, whether such duties be established under the Resolution adopted by the Town of Longboat Key approving development of Bay Isles as a planned unit development, the ordinances of the Town relative to planned unit development, or such other duties as may be appropriately assigned under the aforesaid Restrictions.

SABAL COVE HOMEOWNERS ASSOCIATION, INC.

By: Herman Tom
As President

By: Julie A. Bartley
As Secretary

STATE OF FLORIDA
COUNTY OF SARASOTA

I HEREBY CERTIFY that on this day, before me, an officer duly authorized to take acknowledgments, personally appeared HERMAN TOM and JULIE BARTLEY as the President and Secretary, respectively, of SABAL COVE HOMEOWNERS ASSOCIATION, INC., a Florida corporation not for profit, and they acknowledged before me that they executed the foregoing document in the name of and on behalf of said corporation as such officers for the purposes therein set forth.

Witness my hand and official seal in the County and State aforesaid, this 6th day of June, 1989.

Dede H. Marlow
Notary Public

My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV. 2,1991
BONDED THRU GENERAL INS. UND.

Prepared by: William M. Seider
Williams, Parker, Harrison, Dietz & Getzen
1550 Ringling Boulevard
Sarasota, Florida 34230

BYLAWS

of

SABAL COVE HOMEOWNERS ASSOCIATION, INC.

Sabal Cove Homeowners Association, Inc., a corporation not for profit under the laws of the State of Florida, hereinafter referred to as "Association", does hereby adopt the following as its Bylaws.

ARTICLE I

IDENTITY AND DEFINITIONS

Association has been organized for the purpose of enforcing the Declaration of Restrictions hereinafter referred to, preserving and enhancing the natural beauty of the properties in this subdivision, and promoting the health, safety and welfare of the owners of property located within that portion of Bay Isles known and referred to as "Sabal Cove". The terms and provisions of these Bylaws are expressly made subject to the terms, provisions, conditions and authorizations contained in the Declaration of Restrictions, Limitations, Conditions and Agreements for of Restrictions"), executed by Arvida/JMB Partners (hereinafter referred to as "Developer"), which will hereafter be recorded in the Public Records of Sarasota County, Florida.

All words and terms used herein which are defined in the aforesaid Declaration of Restrictions for Sabal Cove, shall be used herein with the same meanings as defined in said Declaration.

ARTICLE II

LOCATION OF PRINCIPAL OFFICE

The principal office of the Association shall be located at 595 Bay Isles Road, Longboat Key, Florida, or at such other place as may be established by resolution of the Board of Directors of the Association.

ARTICLE III

MEMBERSHIP, VOTING, QUORUM AND PROXIES

1. The qualification of members, the manner of their admission to membership and termination of such membership, and voting by the members, shall be as set forth in Articles IV and V of the Association's Articles of Incorporation.

2. A quorum at any meeting of the Association's members shall consist of persons entitled to cast votes representing more than fifty percent of the total votes of the Association as determined in the manner set forth in Articles IV and V of the Association's Articles of Incorporation.

3. Where a lot in this subdivision is owned by more than one person or by a corporation, partnership or other entity, the vote of the owner or owners shall be cast by the person named in a certificate signed by all of the individual owners of such lot or by appropriate officials of any other legal owner. Such certificate shall be filed with the Secretary of the Association and shall remain valid until revoked by subsequent certificate. If such a certificate is not on file with the Association's Secretary, then the vote of any such owner or owners shall not be considered in determining the requirement for a quorum or for any other purpose.

4. Votes may be cast either in person or by proxy. Proxies shall be valid only for the particular meeting designated thereon and must be filed with the Secretary at or before the designated time of the meeting.

5. Except where otherwise required under the provisions of the Articles of Incorporation of the Association, these Bylaws, the aforesaid Declaration of Restrictions or where the same may otherwise be required by law, the affirmative vote of the holders of more than one-half of the total votes of the Association represented at any duly called members' meeting at which a quorum is present shall be necessary for approval of any matter and shall be binding upon all members.

6. The Association shall be entitled to give all notices required to be given to the members of the Association by these Bylaws or the Articles of Incorporation or the aforesaid Declaration of Restrictions to the person or entity shown by the Association's records to be entitled to receive such notices at the last known address shown by the records of the Association, until the Association is notified in writing that such notices are to be given to another person or entity or at a different address.

ARTICLE IV

ANNUAL AND SPECIAL MEETINGS OF MEMBERSHIP

1. The annual meeting of the membership of the Association shall be held at the office of the Association, or at such other place as may be designated by the Board of Directors, or such day in April as designated by the Board of Directors, for the purpose of electing directors and transacting any other business authorized to be transacted by the members.

2. Special meetings of the members of the Association shall be held whenever called by the President or Vice-President or by a majority of the Board of Directors. Such meeting must be called by such officers upon receipt of a written request from members of the Association whose votes represent more than one-half of the total votes of the Association as determined in the manner set forth in Article IV and V of the Articles of Incorporation.

3. Notice of all members meetings, regular or special, shall be given by the President, Vice-President or Secretary of the Association, or other officer of the Association designated by the Board of Directors, to each member, unless waived in writing, such notice to be written or printed and to state the time, place and the object for which the meeting is called. Such notice shall be given to each member not less than ten days nor more than thirty days prior to the date set for such meeting, which notice shall be mailed or presented personally to each member within said time. If presented personally, a receipt of

such notice shall be signed by the member indicating the date on which such notice was received by him. If mailed, such notice shall be deemed to be properly given when deposited in the United States mails, postage prepaid, addressed to the member at his post office address as the same appears on the records of the Association. Proof of such mailing shall be given by the affidavit of the person giving the notice and filed in the Association's minute book. Any member may, by written waiver of notice signed by such member, waive such notice, and such waiver, when filed in the records of the Association, whether executed and filed before or after the meeting, shall be deemed equivalent to the giving of such notice to such member.

4. If any members meeting cannot be organized because a quorum has not attended or because the greater percentage of the membership required to constitute a quorum for particular purposes has not attended, wherever the latter percentage of attendance may be required as set forth in the Articles of Incorporation, these Bylaws or the aforesaid Declaration of Restrictions the members who are present, either in person or by proxy, may adjourn the meeting from time to time until a quorum is present.

5. At meetings of the membership, the President or, in his absence, the Vice-President, shall preside, or in the absence of both, the membership shall select a chairman.

6. The order of business at the annual meeting of the members and, as far as applicable and practical, at any other members' meeting, shall be as follows:

A. Calling of the roll and certifying of proxies;

B. Proof of notice of meeting or waiver of notice;

C. Reading of minutes;

D. Reports of officers;

E. Reports of committees;

F. Appointment by the President of inspectors of election;

G. Election of directors;

H. Unfinished business;

I. New business;

J. Adjournment.

ARTICLE V

BOARD OF DIRECTORS

1. The affairs of the Association shall be managed by a Board of Directors consisting of three directors. A majority of the Board of Directors shall constitute a quorum to transact business at any meeting of the Board, and the is present shall constitute the action of the Board of Directors.

2. Any vacancy occurring on the Board of Directors because of death, resignation, removal or other termination of services of any Director, shall be filled by the Board of Directors after consulting with the nominating committee (whose recommendations shall not be binding upon the Board); except that the Class B member, to the exclusion of other members and/or the Board itself, shall fill any vacancy created by the death, resignation, removal or other termination of services of any Directors appointed by the Class B member. A director appointed to fill a vacancy, whether by the Board or by the Class B member, shall be appointed for the unexpired term of his predecessor in office and shall continue to serve until his successor shall have been elected and/or appointed and qualified.

ARTICLE VI

ELECTION OF DIRECTORS;NOMINATING AND ELECTION COMMITTEES

1. At the discretion of the Board of Directors, nominations for director may be made on the floor or by Nominating Committee.

2. If a Nominating Committee is used, at least thirty (30) days prior to the date set for the annual meeting of the Association, the Nominating Committee shall notify the Secretary of the names of the candidates nominated by it for election to

the Board of Directors. The Secretary shall, after such notification from the Nominating Committee, prepare and mail election ballots to the Class A members.

3. The Nominating Committee shall make as many nominations for election to the Board of Directors as it shall in its discretion determine. Only Class A members of the Association may be nominated to serve on its Board of Directors. Notification of the vacancies being filled by the Class B member shall be provided at the annual meeting.

4. All elections to the Board of Directors (for non-appointed directors) shall be made by written ballots, unless the election is uncontested, in which event a voice vote or raise of hands is permissible.

5. The total number of votes which are allocated to each Class A member, as determined under the provisions of the Articles of Incorporation and these Bylaws, may be cast for each vacancy shown on the ballot. Cumulative voting shall not be permitted.

6. The completed ballots shall be returned to the Secretary at the principal office of the corporation or at such other address as may be designated upon each ballot. Upon receipt of each ballot, the secretary shall immediately place it in a safe or other locked place until the day set for the counting of such ballots. On that day the ballots shall be turned over to an Election Committee which shall consist of three members appointed by the Board of Directors. The Election Committee shall then adopt a procedure which shall:

(a) establish that the number of votes cast by each Class A member corresponds to the number of votes allowed to each such member; and

(b) establish that the signature of the member is genuine.

7. The members of the Board of Directors elected or appointed in accordance with the procedures set forth in this Article shall take office as of the date of the first meeting of the Board of Directors following the meeting of members at which they were elected.

ARTICLE VII

POWERS AND DUTIES OF THE BOARD OF DIRECTORS

1. The Board of Directors shall have power:

(a) To call meetings of the members.

(b) To appoint and remove at pleasure all officers, agents and employees of the Association, prescribe their duties, fix their compensation, and require of them such security or fidelity bond as it may deem expedient. Nothing contained in these Bylaws shall be construed to prohibit the employment of any member, officer or director of the Association in any capacity whatsoever.

(c) To establish, levy and assess, and collect the assessments necessary to operate the Association and carry on its activities, and to crate such reserves for extraordinary expenditures as may be deemed appropriate by the board of directors.

(d) To adopt, promulgate and enforce rules and regulations governing the use of any Neighborhood Common Area or any portion thereof in Sabal Cove, and, also, governing the personal conduct of the members and their guests thereon, including levying reasonable membership admission charges if deemed appropriate.

(e) To authorize and cause the Association to enter into contracts for the day-to-day operation of the Association and the discharge of its responsibilities and obligations.

(f) To exercise for the Association all powers, duties and authority vested in or delegated to this Association, except those reserved to members in the Declaration of Restrictions for Sabal Cove, or the Articles of Incorporation of the Association.

2. It shall be the duty of the Board of Directors:

(a) To cause to be kept a complete record of all its acts and corporate affairs.

(b) To supervise all officers, agents and employees of this Association, and to see that their duties are properly performed.

(c) With reference to assessments of the Association:

(1) To fix the amount of the assessment against each member for each assessment period in accordance with the provisions of the Declaration of Restrictions, Articles of Incorporation of the Association and these Bylaws at least thirty (30) days in advance of such date or period.

(2) To prepare a roster of the members and assessments applicable thereto which shall be kept in the office of the Association and shall be open to inspection by any member; and,

(3) To send written notice of each assessment to every member subject thereto.

(d) To issue or to cause an appropriate officer to issue, upon demand by any authorized person, a certificate in recordable form setting forth whether any assessment has been paid; and, if not, the amount then due and owing. Such certificate shall be conclusive evidence of payment of any assessment therein stated to have been paid.

(e) To make payment of all ad valorem taxes assessed against Association property, real or personal.

(f) To pay all expenses incurred by the Association for repairs, maintenance, services, insurance and other operating expenses.

(g) To enforce by appropriate legal means the provisions of the Articles of Incorporation and Bylaws of the Association, the aforesaid Declaration of Restrictions, and any and all applicable laws and regulations.

ARTICLE VIII

MEETINGS OF DIRECTORS

1. The organizational meeting of a newly elected Board of Directors, which shall also be the Board's annual meeting, shall be held within twenty days of their election at such time and at such place as shall be fixed by the Directors at the annual meeting of members at which they were elected.

2. Regular meetings of the Board of Directors shall be held at such time and place as provided by appropriate resolution of the Board of Directors.

3. Special meetings of the Board of Directors shall be held when called by an officer of the Association or by any two directors.

4. Notice of regular or special meetings of the Board shall be given to each Director, personally or by mail, telephone or telegram, at least three (3) days prior to the day named for such meeting, which notice shall state the time, place and purpose of the meeting, unless such notice is waived.

5. The transaction of any business at any meeting of the Board of Directors however called and noticed, or wherever held, shall be as valid as though made at a meeting duly held after regular call and notice provided that a quorum is present and, if either before or after the meeting, each of the Directors not present signs a written waiver of notice, or a consent to the holding of such meeting, or an approval of the minutes thereof. All such waivers, consents or approvals shall be filed with the corporate records and made a part of the minutes of the meeting.

ARTICLE X

OFFICERS

1. The officers shall be a President, a Vice-President, a Secretary, and a Treasurer, and such other officers as may be elected in accordance with the Articles of Incorporation. The President shall be a member of the Board of Directors. The offices of Secretary and Treasurer may be combined into one officer by the Board of Directors.

2. All of the officers of the Association shall be elected by the Board of Directors at the annual meeting of the Board of Directors. If the election of such officers shall not be held at such meeting, such election shall be held as soon thereafter as convenient. New offices may be created and filled at any meeting of the Board of Directors. Each officer shall hold office until his successor shall have been duly elected and qualified, or until his earlier resignation or removal.

3. In order to carry out the provisions for representative voting as established under the Articles of Incorporation and Bylaws of Bay Isles Association, Inc., of which organization each member of this Association is also a member, the Board of Directors shall annually appoint one of the officers of the Association to serve as voting delegate and to represent the members of this Association at any and all meetings of members of said Bay Isles Association, Inc.

4. A vacancy in any office because of death, resignation, or other termination of service, may be filled by the Board of Directors for the unexpired portion of the term.

5. All officers shall hold office at the pleasure of the Board of Directors; except that if an officer is removed by the Board, such removal shall be in accordance with the contract rights, if any, of the officer so removed.

6. The President shall preside at all meetings of the Board of Directors, shall see that orders and resolutions of the Board of Directors are carried out, and shall sign all notes,

leases, mortgages, deeds and all other written instruments. The President may, but need not, be a required signatory on checks of the Association.

7. The Vice-President, or the Vice-President so designated by the Board of Directors if there is more than one Vice-President, shall perform all the duties of the President in his absence. The Vice-President(s) shall perform such other acts and duties as may be assigned by the Board of Directors.

8. The Secretary shall be ex officio the Secretary of the Board of Directors and shall record the votes and keep the minutes of all proceedings in a book to be kept for that purpose. He or any Assistant Secretary shall sign all certificates of membership. He shall keep the records of the Association. He shall record in a book kept for that purpose the names of all of the members of the Association together with each member's current address as registered by such member.

9. The Treasurer shall receive and deposit in appropriate bank accounts all monies of the Association and shall disburse such funds as directed by resolution of the Board of Directors, provided, however, that a resolution of the Board of Directors shall not be necessary for disbursements made in the ordinary course of business conducted within the limits of a budget adopted by the Board. The Treasurer may, but need not, be a required signatory on checks and notes of the Association.

10. The Treasurer, or his appointed agent, shall keep proper books of account and cause an annual audit of the Association books to be made by a certified public accountant at the completion of each fiscal year in accordance with the provisions of Paragraph 5 of Article XII hereof. He or his appointed agent shall prepare an annual budget, a statement of receipts and disbursements, and a balance sheet, and the same, together with the report of the certified public accountant, shall be available for inspection upon reasonable request of a member.

11. The salaries, if any, of the officers and assistant officers of the Association shall be determined from time to time by the Board of Directors.

ARTICLE X

COMMITTEES

1. Whenever appointed, a committee shall consist of a chairman and two or more members and shall include a member of the Board of Directors. A Nominating Committee and Maintenance Committee may be appointed by the Board of Directors, and the members of each committee shall serve until the succeeding committee members have been appointed.

2. The Nominating Committee would have the duties and functions pertaining to the nomination of members to the Board of Directors as described in Article VI of these Bylaws.

3. The Maintenance Committee would advise the Board of Directors on all matters pertaining to the maintenance, repair or improvement of properties in Sabal Cove, and shall perform or see to the performance of such other functions as the Board, in its discretion, determines.

4. The Architectural Review Board ("ARB") shall be appointed by the Class B member and shall have the duties and functions described in the Declaration of Restrictions for Sabal Cove. A party aggrieved by a decision of the ARB shall have the right to make a written request to the Board of Directors, within thirty (30) days of such decision, that the Board review such decision. The determination of the Board upon reviewing such decision of the Committee shall in all events be final.

5. The Board of Directors may appoint such other committees from time to time as it deems desirable.

6. The Maintenance Committee and other committees appointed and so empowered by the Board of Directors (but not the Nominating Committee or the ARB) shall have power to appoint sub-committees from among their membership and may delegate to any such sub-committees any powers, duties, and functions.

7. It shall be the duty of each committee to receive complaints from members on any matter involving Association functions, duties, and activities within its field of responsibility. It shall dispose of such complaints as it deems appropriate or refer them to such other committee, director or officer of the Association which is specifically concerned with the matter presented.

ARTICLE XI

ASSESSMENTS

Association shall have the right to obtain funds with which to operate by assessment of its members in accordance with the provisions of the Declaration of Restrictions applicable to Sabal Cove, and its Articles of Incorporation and these Bylaws. Assessments not paid when due shall bear interest from date when due until paid at the rate set forth in said Declaration of Restrictions and shall also result in the suspension of voting privileges during any period of such non-payment. The method of assessment and the manner of enforcing collection thereof shall be as set forth in said Declaration of Restrictions.

ARTICLE XII

FISCAL MANAGEMENT

The provisions for fiscal management of the Association, as set forth in the aforesaid Declaration of Restrictions and Articles of Incorporation, shall be supplemented by the following provisions:

1. The annual maintenance assessment roll, hereinafter called "assessment roll", shall be maintained in a set of accounting books in which there shall be an account for each owner of an individual lot or portion of a lot (herein referred to as a "parcel") subject to the annual maintenance assessment as set forth in said Declaration of Restrictions. Where a lot has been divided between two abutting lot owners (parcel owners) then such assessment roll shall contain appropriate information reflecting the method adopted by the Association Board of Directors for prorating the assessment of such divided lot

between the two owners thereof. Such account shall designate the name and address of the owner or owners of such lot or parcel, the amount of the annual maintenance assessment against the lot or parcel, the dates and amounts in which such assessments come due, the amounts paid upon the account and the balance due on prior assessments.

2. The fiscal year of the Association shall be the calendar year. The Board of Directors shall adopt a budget for each calendar year which shall contain estimates of the cost of performing the functions of the Association, and which shall include, but not be limited to, the following items:

(a) Common expense budget, which shall include provision for the accomplishment of those duties and objectives contemplated by the aforesaid Declaration of Restrictions and by the Association's Articles of Incorporation and these Bylaws.

(b) Proposed annual maintenance assessment against each individual lot or parcel, subject to the annual maintenance assessment as set forth in the Declaration of Restrictions.

Copies of the proposed budget and proposed annual maintenance assessments shall be transmitted to each member on or before December 15th of the year preceding that for which the budget is made. If the budget is subsequently amended before the assessments are made, a copy of the amended budget shall be furnished each member concerned. Delivery of a copy of such budget or amended budget shall not be considered as a condition precedent to the effectiveness of said budget and assessments levied pursuant thereto, and nothing herein contained shall be construed as restricting the right of the Board of Directors, at any time in their sole discretion, to levy any additional assessment in the event that the budget originally adopted shall appear to be insufficient to pay costs and expenses of operation and management, or in the event of emergencies.

3. Notices of the annual maintenance assessment applicable to each individual lot or parcel subject to the lien of the annual maintenance assessment as set forth in the Declaration of

Restrictions, together with a copy of the common expense budget, shall be transmitted to each member on or before February 1st of the year for which the budget is made, and such assessment shall be due and payable on or before March 1st of that year and shall become delinquent after such date.

4. The depository of the Association shall be such bank or banks as shall be designated from time to time by the Directors and in which the monies of the Association shall be deposited. Withdrawal of monies from such accounts shall be only by checks signed by such persons as are authorized by the Directors.

5. An audit of the accounts of the Association shall be made annually by a Certified Public Accountant, and a copy of the report shall be available in the Association offices for review by each member not later than April 1st of the year following the year for which the report is made.

6. Fidelity bonds may be required by the Board of Directors from all officers and employees of the Association and from any contractor handling or responsible for Association funds. The amount of such bonds shall be determined by the Directors. The premiums on such bonds shall be paid by the Association and be a common expense of the Association.

ARTICLE XIII

PARLIAMENTARY RULES

Roberts Rules of Order (latest edition) shall govern the conduct of Association proceedings when not in conflict with the Articles of Incorporation and these Bylaws or with the Statutes of the State of Florida.

ARTICLE XIV

OFFICIAL SEAL

The Association shall have an official seal which shall be in circular form bearing the name of the Association, the word "Florida", the words "Corporation Not For Profit", and the year of incorporation.

An impression of such official seal is set forth to the right hereof:

ARTICLE XV

BOOKS AND RECORDS

The books, records and other papers of the Association shall be available at the Association's office and subject to the inspection of any of the Association members during regular business hours.

ARTICLE XVI

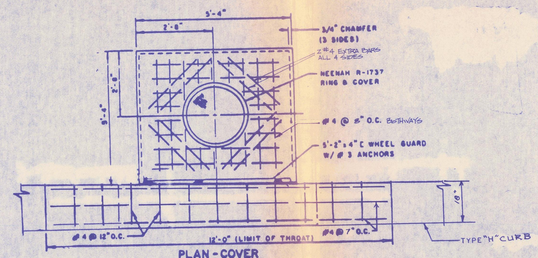
AMENDMENTS

These Bylaws may be altered, amended or repealed by a majority vote of the Directors present at a duly constituted meeting of the Board of Directors provided that the proposed alteration, amendment or repeal is contained in the notice of such meeting. No amendment affecting Arvida/JMB Partners, or its successors or assigns, as Developer of Sabal Cove, shall be effective without the written consent of Arvida/JMB Partners, or its successors or assigns.

SCHEDULE OF CONSTRUCTION

Start within 12 months after Town approval and complete within 2 years of Town approval

EXHIBIT "E"



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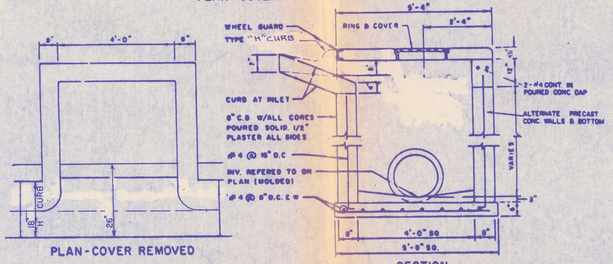

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SECTION

TYPICAL CURB INLET

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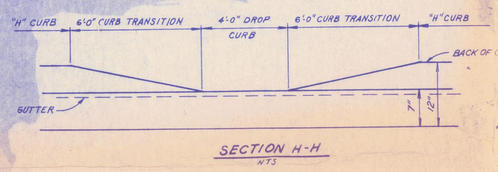
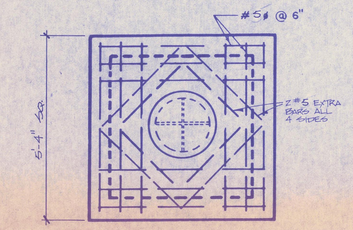


SECTION H-H

NTS



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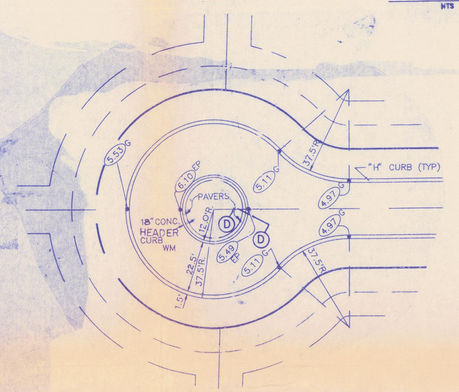
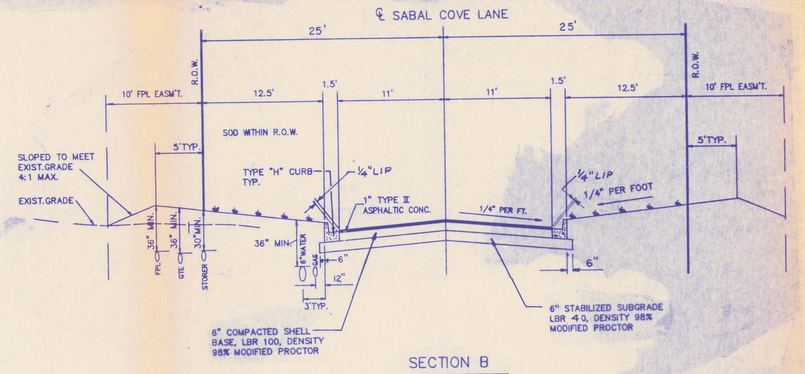


CUL-DE-SAC DETAIL ⚠

SCALE: 1" = 30' (SEE SHEET C5)



SECTION B

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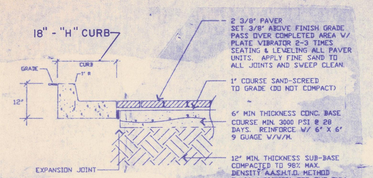

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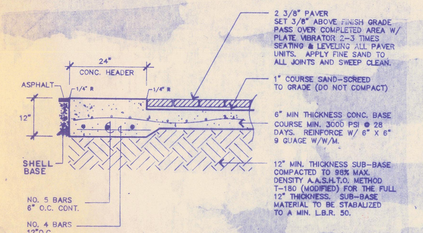

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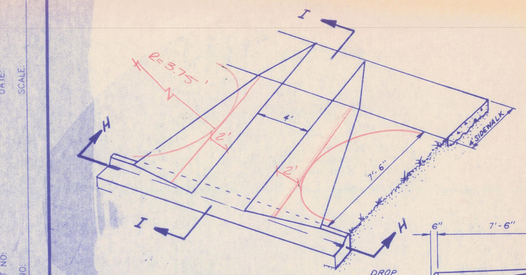


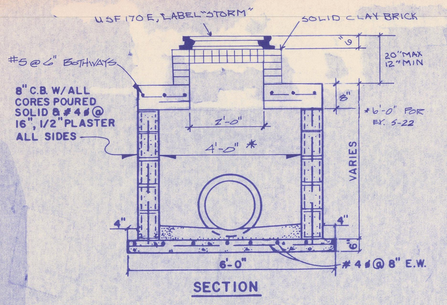
ISOMETRIC VIEW

CURB CUT RAMP

N.T.S.

SECTION I-I

NTS



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JUNCTION BOX DETAIL

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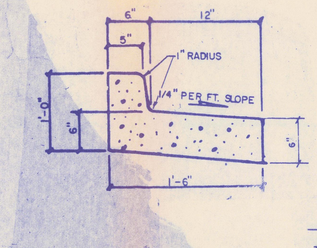

TYPE "H" CURB MODIFIED

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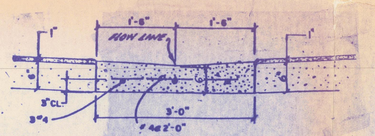
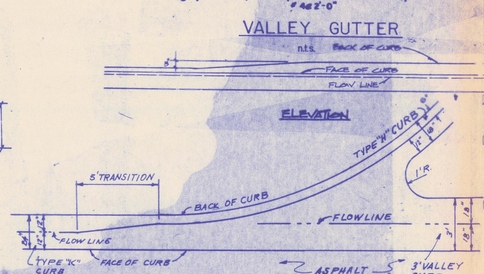


VALLEY GUTTER

n.t.s.


FACE OF CURB
FLOW LINE
6"
12"
ELEVATION
TYPE "H" CURB
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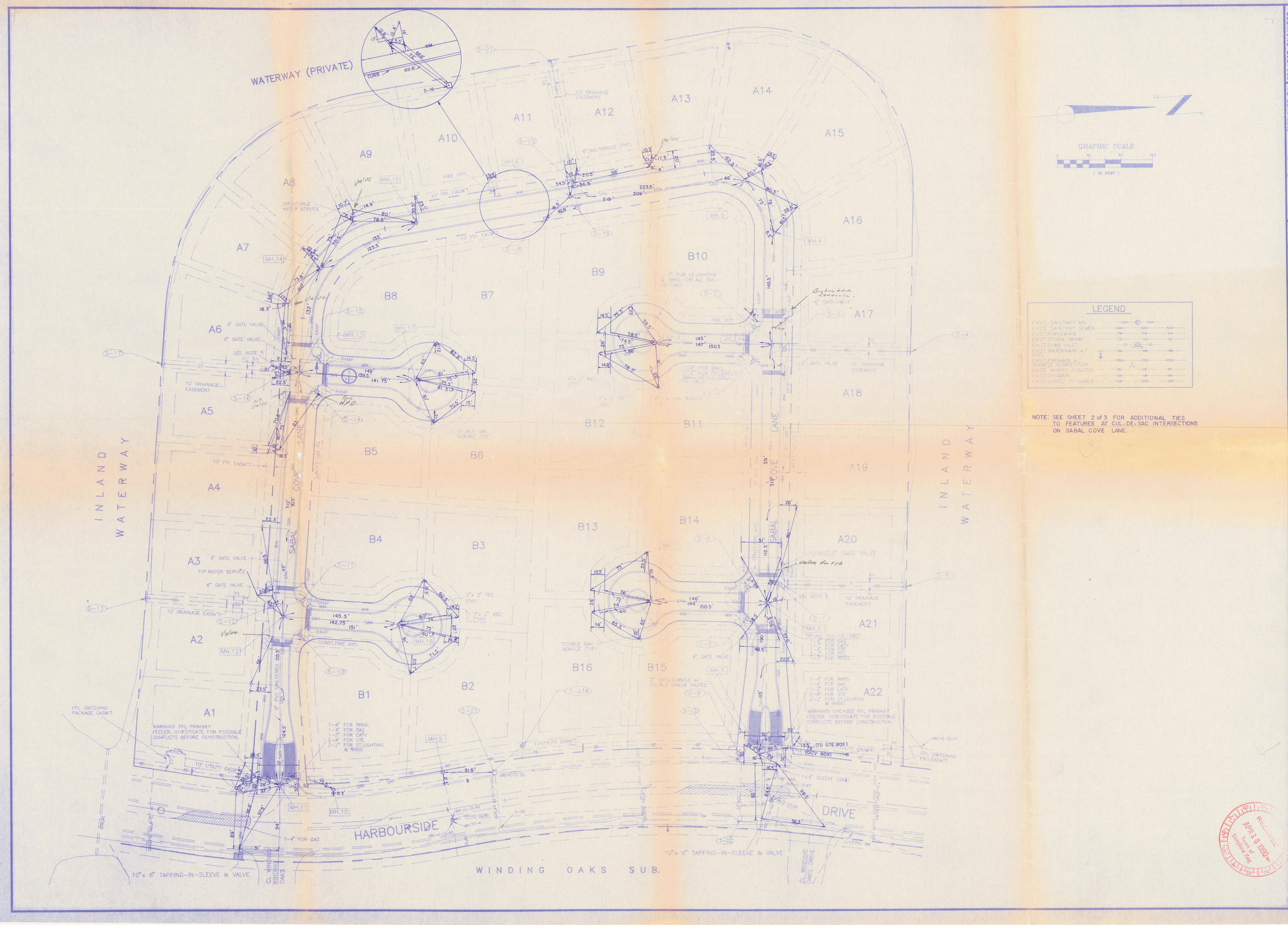


PROJECT ENGINEER
WILLIAM F. BISHOP
PE No. 8189

DESIGNED BY S.R./F.I.C.
PROJECT NO. ARVD-0478
DATE: 2/06/89
CHECKED BY
SCALE: 1" = 50'
DRAWN BY R.W.C./T.D.

BY
REVISION
LTR. DATE

TOWN OF LONGBOAT KEY, FLORIDA

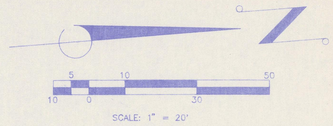
SABAL COVE
ARVIDA / JMB PARTNERS, INC.

RECORD DRAWING

ENGINEER & LOCATION: BISHOP & ASSOCIATES, INC. CONSULTING ENGINEERS • SURVEYORS
78 Sarasota Center Blvd. Sarasota, Florida 34240 Ph (813) 371-6362

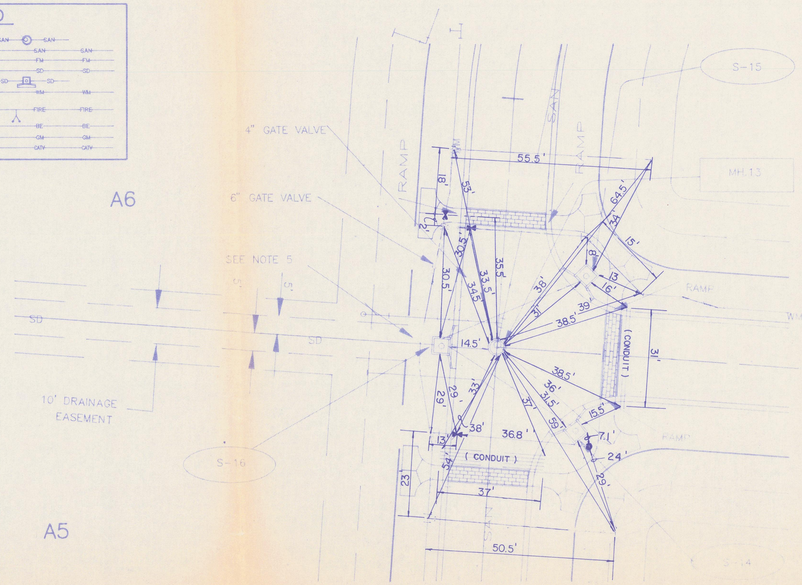
SHEET NUMBER
ARVD-0478
1 of 3
REVISION

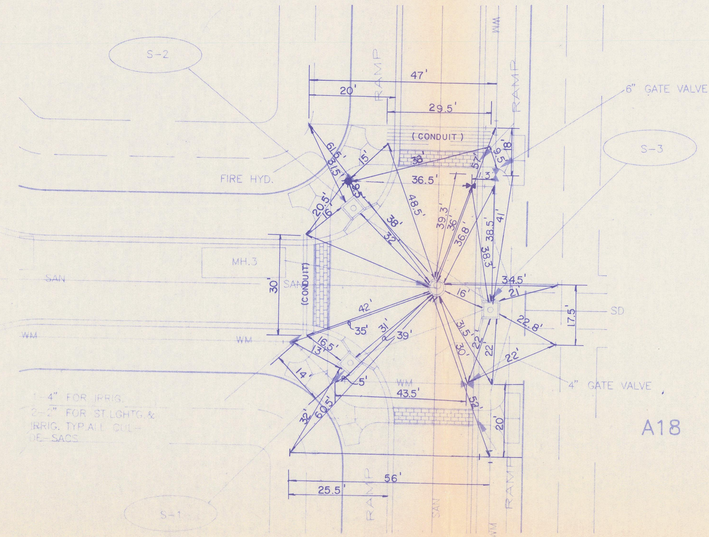
T.L.K. FILE NO.



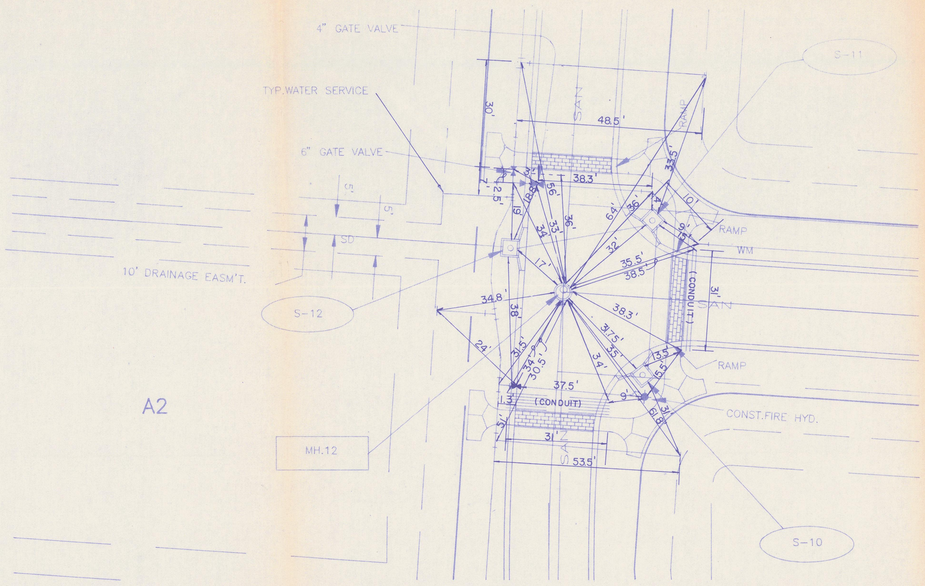
LEGEND

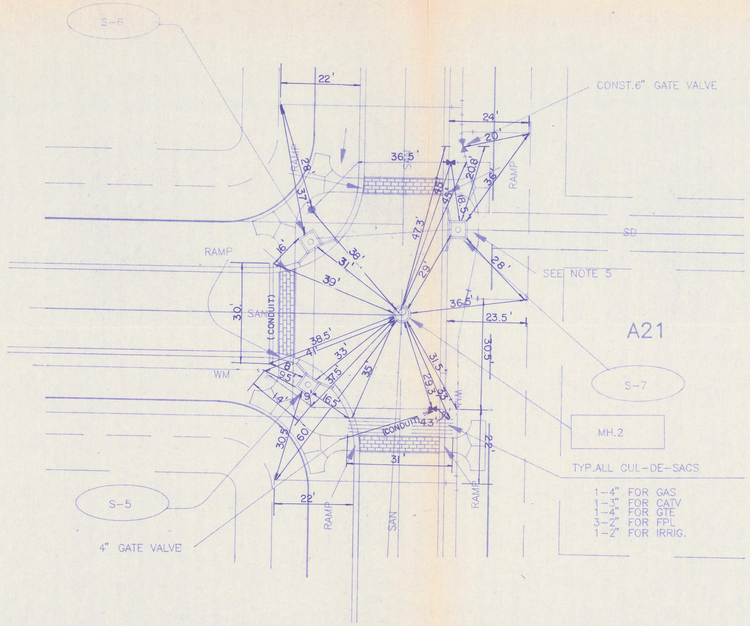
EXIST. SANITARY MH.	SAN
EXIST. SANITARY SEWER	SAN
EXIST.FORCEMAIN	FM
EXIST.STORM DRAIN	SD
EXIST.CURB INLET	SD
EXIST.WATERMAIN w/ HYD.	WM
EXIST.FIREMAIN w/ SIAMEZE CONNECTION	FIRE
EXIST. BURIED ELECTRIC	BE
EXIST.GASMAIN	GM
EXIST.BURIED TV CABLE	CATV





NOTE: SEE SHEET 1 of 3 FOR ADDITIONAL TIES AT INTERSECTIONS.





LTR.	DATE	REVISION	BY

SCALE: 1"=20'
DRAWN BY R.W.C.\T.D
DATE: 2/06/89
CHECKED BY
DESIGNED BY S.R./E.I.C.
PROJECT NO. ARVD-0478
PROJECT ENGINEER WILLIAM F. BISHOP PE No. 8189

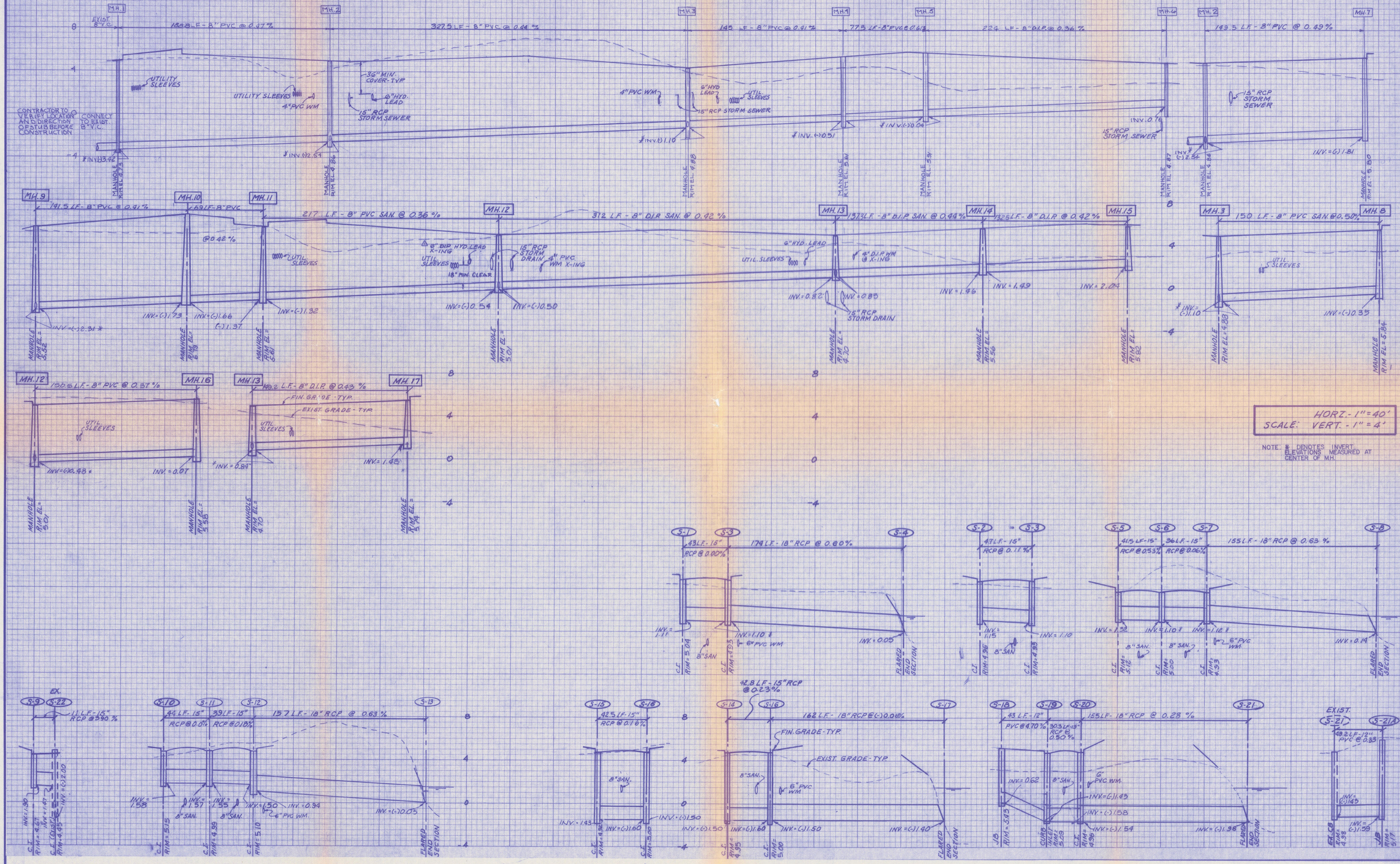
TOWN OF LONGBOAT KEY, FLORIDA

SABAL COVE
ARVIDA / JMB PARTNERS, INC.
RECORD DRAWING

ENGINEER & LOCATION: BISHOP & ASSOCIATES, INC. CONSULTING ENGINEERS · SURVEYORS
78 Sarasota Center Blvd. Sarasota, Florida 34240 Ph (813) 371-6362

SHEET NUMBER ARVD-0478
2 of 3
REVISION

T.L.K. FILE NO.



FORMERLY SHEET NO. C-6

TOWN OF LONGBOAT KEY, FLORIDA
SABAL COVE
ARVIDA / JMB PARTNERS, INC.
RECORD DRAWING

BISHOP & ASSOCIATES, INC. CONSULTING ENGINEERS • SURVEYORS
78 Sarasota Center Blvd. Sarasota, Florida 34240 Ph (813) 371-6362

DESIGNED BY: S.R./F.I.C.
DATE: 9-89
CHECKED BY
PROJECT NO. ARVD-0478
DRAWN BY S.R./R.W.C.
T.L.K.
PROJECT ENGINEER

SCALE: NOTED

REVISION | BY | LTR. | DATE

ENGINEER & LOCATION
T.L.K. FILE NO.

SHEET NUMBER ARVD-0478
3 of 3
REVISION

SABAL COVE

ARVIDA / JMB PARTNERS

595 BAY ISLES ROAD
LONGBOAT KEY, FL. 34228

PRELIMINARY PLAT

OUTLINE DEVELOPMENT AMENDMENT

GENERAL NOTES

1. C A U T I O N

   THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. PRIOR TO THE COMMENCEMENT OF EXCAVATION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES BY CONTACTING:

   SARASOTA CO. ENVIRONMENTAL ENGINEERING (UTILITIES DEPT.)
   FLORIDA POWER & LIGHT
   GENERAL TELEPHONE COMPANY OF FLORIDA
   STORER CABLE TV

   CALL CANDY 1-800-282-8881 48 HOURS BEFORE YOU DIG

2. RESPONSIBILITY REGARDING EXISTING UTILITIES & STRUCTURES

   THE EXISTENCE AND LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT GUARANTEED AND SHALL BE INVESTIGATED AND VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING WORK. EXCAVATION IN THE VICINITY OF EXISTING STRUCTURES AND UTILITIES SHALL BE CAREFULLY DONE, BY HAND IF NECESSARY. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGES TO, AND FOR MAINTENANCE AND PROTECTION OF, EXISTING UTILITIES AND STRUCTURES.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE POINT OF CONNECTION OF ALL BUILDING SERVICE LINES AT THE BUILDING, PRIOR TO INSTALLATION.

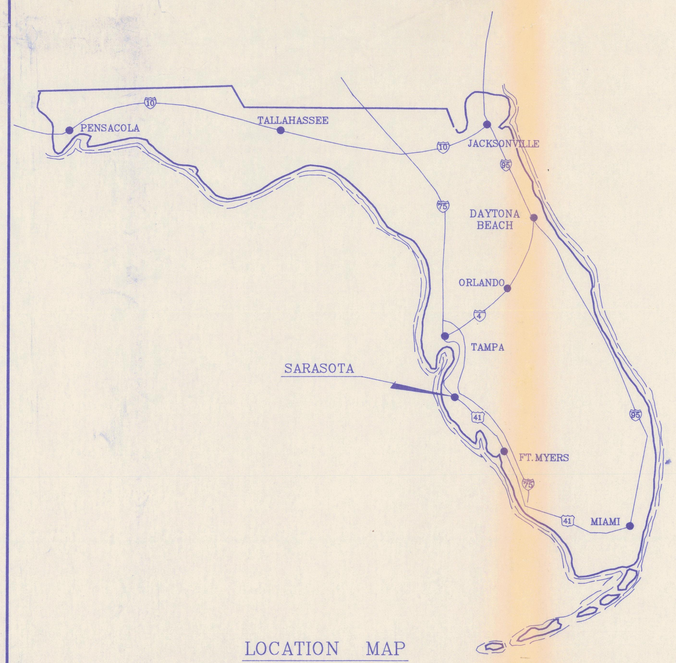
4. EROSION CONTROL DURING CONSTRUCTION

   THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT THE RUNOFF OF ERODED SOIL MATERIAL FROM LEAVING THE CONSTRUCTION SITE AND BEING DEPOSITED ON THE PROPERTY OF OTHERS OR ON PORTIONS OF THE SITE OUTSIDE THE CONSTRUCTION LIMITS.

5. THE CONTRACTOR SHALL INSURE THAT ALL NECESSARY PERMITS ARE OBTAINED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.

6. LAWS TO BE OBSERVED

   THE CONTRACTOR IS ASSUMED TO BE FAMILIAR WITH, AND AT ALL TIMES SHALL OBSERVE AND COMPLY WITH, ALL FEDERAL, STATE, AND LOCAL LAWS, BYLAWS, SAFETY LAWS, BUILDING & CONSTRUCTION: CODES, AND ORDINANCES AND REGULATIONS IN ANY MANNER AFFECTING THE CONDUCT OF THE WORK.



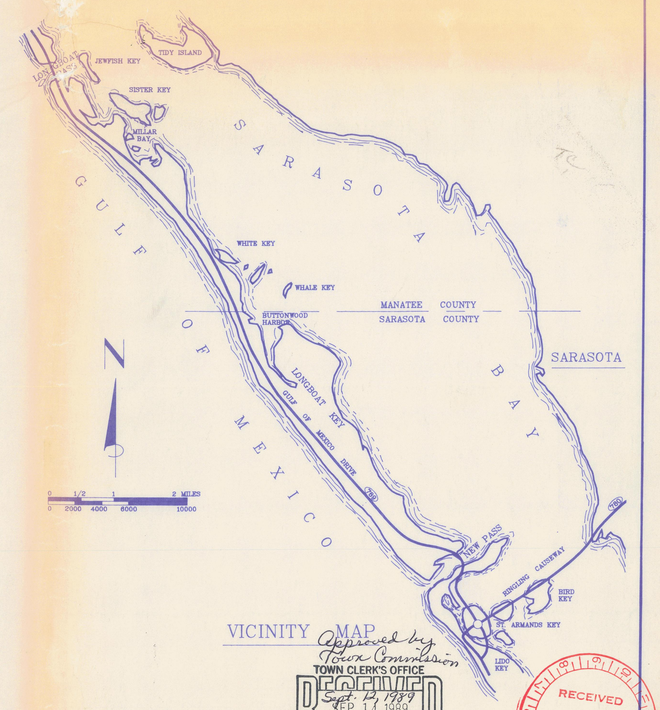
LOCATION MAP

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
78 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240
813/371-6362 • Fax 813/378-3215

INDEX

PROJECT NO. ARVD-0430

DWG. NO.	DESCRIPTION
PRELIMINARY PLAT	
1	COVER SHEET
2	MASTER LOCATION PLAN
3	TOPOGRAPHIC MAP
4	AERIAL PLAN
5	GENERAL PLAN—PAVING, DRAINAGE, & UTILITIES
6	PRELIMINARY PLAT
7	TREE PRESERVATION & LOCATION PLAN
OUTLINE DEVELOPMENT PLAN	
8	LAND INTENSITY SCHEDULE
APPENDIX	
AP-1	MASTER THOROUGHFARE & BICYCLE PATH PLAN
AP-2	MASTER WATER PLAN
AP-3	MASTER SEWER PLAN
AP-4	MASTER DRAINAGE PLAN

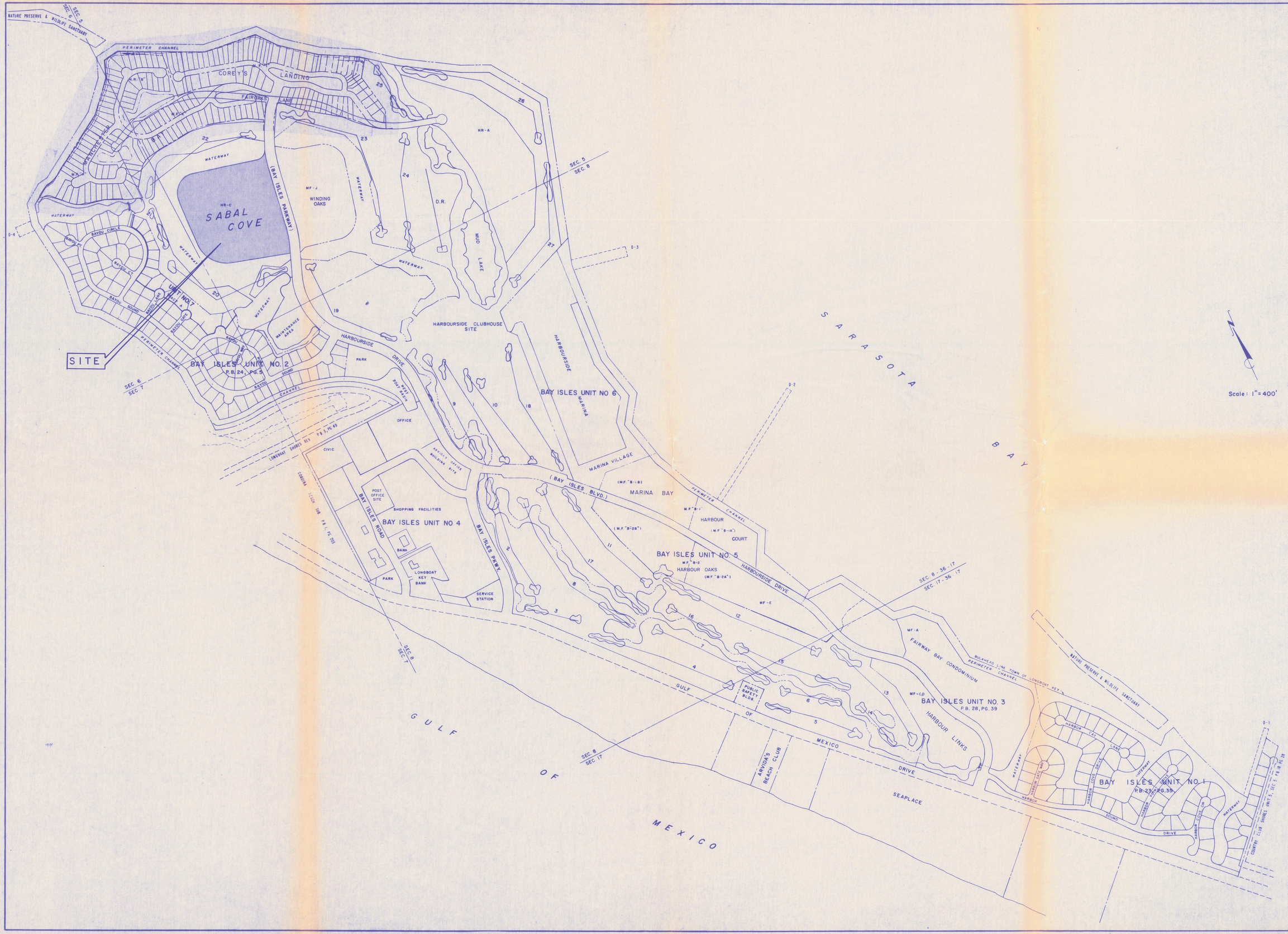


VICINITY MAP

Approved by Town Commission
TOWN CLERK'S OFFICE
RECEIVED
Sept. 12, 1989
SEP 14 1989
TOWN OF LONGBOAT KEY

APPROVED: _____

RECEIVED
JUN 22 1989
Town of Longboat Key



BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
75 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240
813/378-1852 FAX 813/378-3240

APPROVED BY

REVISED			
		R.W.C.	BY
6-3-89	REV. PER CURRENT RECORDS		
DATE	DESCRIPTION		

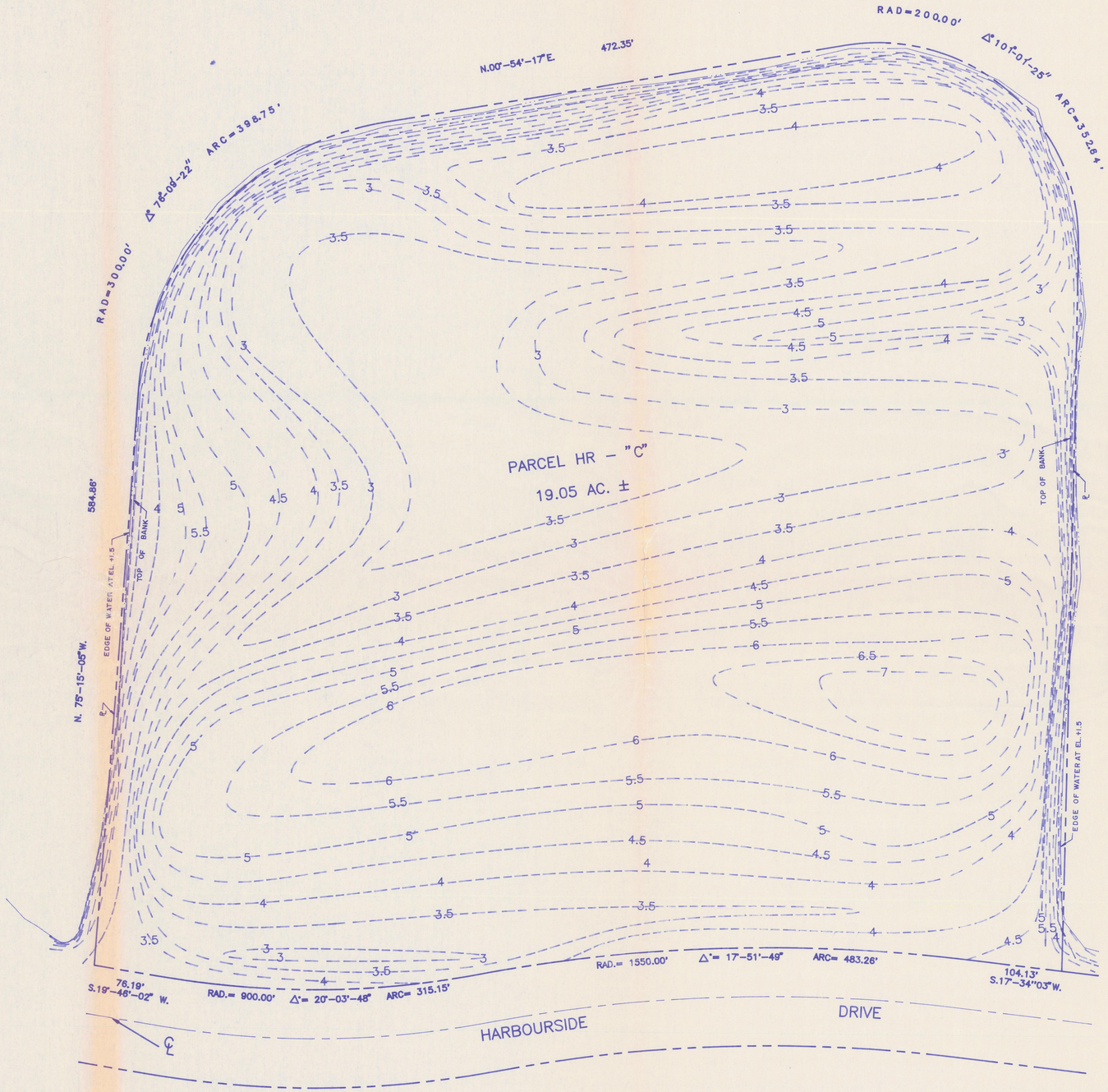
DATE	6-3-89
SCALE	1"=400'
DESIGN	
DRAWN	R.A.B.
CHECK	
APPROVED	

ARVIDA CORPORATION
BAY ISLES
LONGBOAT KEY
PHONE 388-2178

MASTER LOCATION PLAN

DWRG. NO.
ARVD - 0430

2



NOTE: EDGE OF WATER ELEV. & TOP OF BANK LOCATION WERE NOTED FROM A SURVEY DATED NOV. 1987.

INTERNAL TOPOGRAPHIC DATA WAS NOTED FROM A SURVEY DATED OCT. 1967.

CLIENT/TITLE:
PROJECT NO:
SHEET NO:
DATE:
SCALE:
REV. DATE:

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
78 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240
813/371-6362 • Fax 813/378-3215

REVISED	BY	DATE	DESCRIPTION
REVISED	BY	DATE	DESCRIPTION

DATE	5-23-89
SCALE	1"=60'
DESIGN	—
DRAWN	R.W.C.
CHECKED	
APPROVED	

SEAL APPROVED BY

CLIENT/TITLE
SABAL COVE
ARVIDA / JMB PARTNERS
TOPOGRAPHIC MAP

PROJECT NO ARVD-0430
SHEET NO. 3

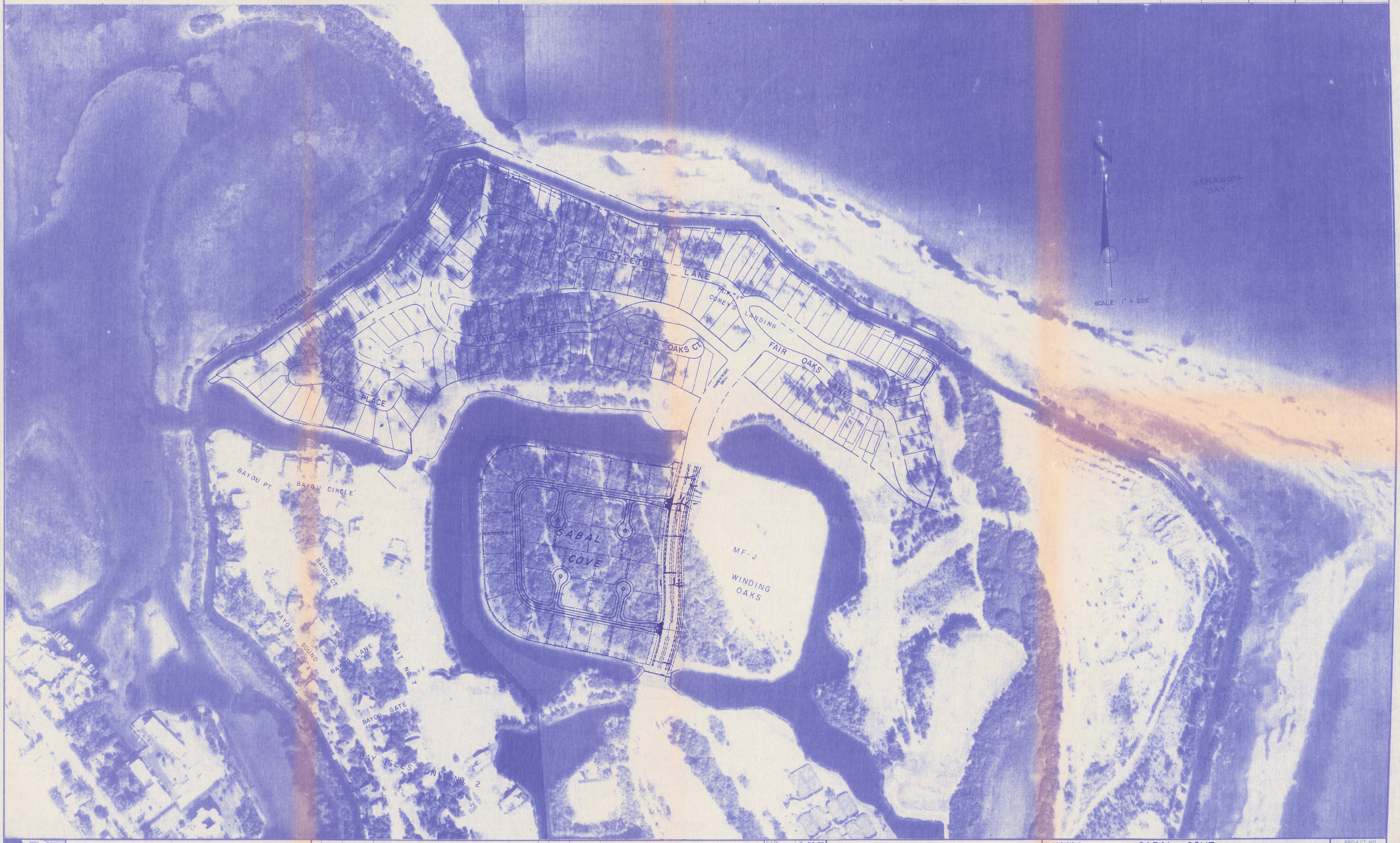
0 200 400 600 800

SCALE 1"=200'

PREPARED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION
FOR THE SARASOTA CO. TRANSPORTATION DEPT.

SARASOTA COUNTY
FLORIDA

		SECTION	TWP.	RANGE	SHEET NO.	MAP
SCALE	1" = 200'	6	36 S	17 E		2 3
PHOTO DATE	JAN. 1986					
PHOTO NO.	PD-3443					



REV. DATE
DATE
SCALE
CLIENT/TITLE
PROJECT NO.
SHEET NO.

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
78 SARASOTA CENTER BLVD., SARASOTA, FLORIDA 34240
813/371-6362 • Fax 813/378-3215

REVISED BY	DATE	DESCRIPTION

REVISED BY	DATE	DESCRIPTION

DATE	2-24-89
SCALE	1"=200'
DESIGN	—
DRAWN	STAFF
CHECKED	
APPROVED	

SEAL

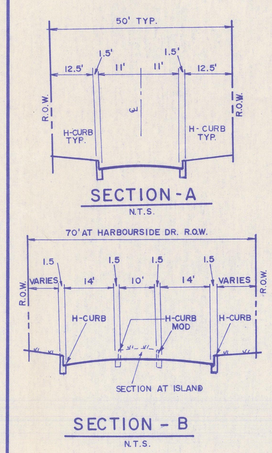
APPROVED BY

CLIENT/TITLE
SABAL COVE
ARVIDA/JMB PARTNERS
AERIAL PLAN

PROJECT NO.
ARVD-0430
SHEET NO.
4

STR. NO.	TYPE	RIM EL.	INV IN	INV OUT	FROM - TO	LENGTH	SIZE AND TYPE	GRADE
MH 1	MANHOLE	5.1	-3.20	-3.30				
					MH 1 To MH 2	161 LF	8" PVC	0.40%
MH 2	MANHOLE	4.9	-2.46	-2.56				
					MH 2 To MH 3	330 LF	8" PVC	0.40%
MH 3	MANHOLE	4.8	-1.04	-1.14				
					MH 3 To MH 4	143 LF	8" PVC	0.40%
MH 4	MANHOLE	5.2	-0.37	-0.47				
					MH 4 To MH 5	76 LF	8" PVC	0.40%
MH 5	MANHOLE	5.4	-0.03	-0.07				
					MH 5 To MH 6	167 LF	8" PVC	0.40%
MH 6	MANHOLE	5.0		-0.70				
MH 2	MANHOLE	4.9	-2.46	-2.56				
					MH 2 To MH 7	165 LF	8" PVC	0.40%
MH 7	MANHOLE	5.4		-1.80				
					MH 3 To MH 8	165 LF	8" PVC	0.40%
MH 3	MANHOLE	4.8	-1.04	-1.14				
MH 8	MANHOLE	5.3		-0.38				

STR. NO.	TYPE	RIM EL.	INV IN	INV OUT	FROM - TO	LENGTH	SIZE AND TYPE	GRADE
MH 9	MANHOLE	5.5	-2.15	-2.20				
					MH 9 To MH 10	140 LF	8" PVC	0.40%
MH 10	MANHOLE	5.4	-1.54	-1.59				
					MH10 To MH 11	80 LF	8" PVC	0.40%
MH 11	MANHOLE	5.3	-1.17	-1.22				
					MH11 To MH 12	216 LF	8" PVC	0.40%
MH 12	MANHOLE	4.8	-0.26	-0.31				
					MH12 To MH 13	312 LF	8" PVC	0.40%
MH 13	MANHOLE	4.4	1.04	0.99				
					MH13 To MH 14	125 LF	8" DIP	0.40%
MH 14	MANHOLE	5.1	1.59	1.54				
					MH14 To MH 15	120 LF	8" DIP	0.40%
MH 15	MANHOLE	5.5		2.1				
MH 12	MANHOLE	4.8	-0.26	-0.31				
					MH12 To MH 16	165 LF	8" PVC	0.40%
MH 16	MANHOLE	5.3		0.42				
MH 13	MANHOLE	4.8	1.04	0.99				
					MH13 To MH17	165 LF	8" PVC	0.40%
MH 17	MANHOLE	5.3		1.70				

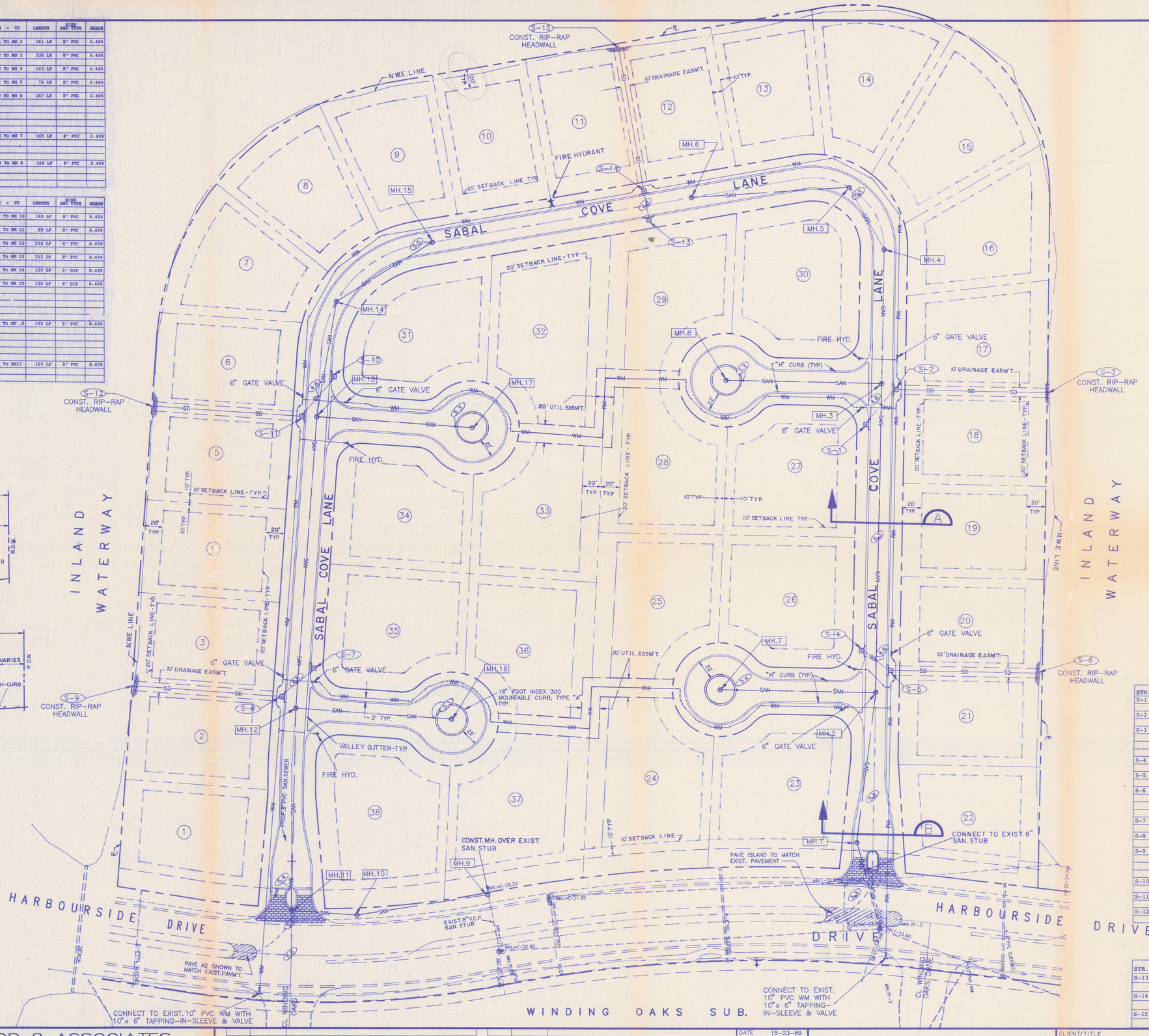


SECTION - A

N.T.S.

SECTION - B

N.T.S.



SETBACK TABLE

Front: 20' from Right-of-Way

Rear: 20' from Property Line

Side: 20' minimum between buildings
10' minimum on one side of lot line

GRAPHIC SCALE

0 40 80 160

(IN FEET)

LEGEND

PROP. SANITARY MH	SAN S SAN
PROP. SANITARY SEWER	SAN SAN SAN
EXIST. SANITARY SEWER	San San San
PROP. FORCEMAIN	FM FM FM
EXIST. FORCEMAIN	Fm Fm Fm
PROP. STORM DRAIN	SD SD SD
PROP. CURB INLET	SD SD SD
EXIST. STORM DRAIN	SD SD SD
PROP. WATERMAIN w/ HYD.	WM WM WM
PROP. FIREMAIN w/ SIAMEZE CONNECTION	FIRE FIRE FIRE
EXIST. WATERMAIN	Wm Wm Wm
BURIED ELECTRIC	OE OE OE
OVERHEAD ELECTRIC	OE OE OE
BURIED TELEPHONE	OT OT OT
OVERHEAD TELEPHONE	OT OT OT
GASMAIN	GM GM GM
BURIED TV CABLE	GTV GTV GTV

GENERAL DATA:

1. NAME: Sabal Cove
2. OWNER: Arvida/JMB Partners, 595 Bay Isles Road, Longboat Key, Florida 34228, (813) 383-9551
3. LAND PLANNER: David Johnston & Associates, Inc., 2055 Wood Street, Suite 206, Sarasota, Florida 34237, (813) 366-3159
4. ENGINEER: Bishop & Associates, 78 Sarasota Center Boulevard, Sarasota, Florida 34240, (813) 371-6362
5. SEWAGE COLLECTION SYSTEM: Town of Longboat Key, Manatee County Utility Systems
6. WATER DISTRIBUTION: Town of Longboat Key, Manatee County Utility Systems
7. DRAINAGE SYSTEM: Surface run-off to various inlets. Underground pipes to retention pond within the golf course.
8. All construction in accordance with applicable provisions of The Town of Longboat Key Tree Ordinance.
9. Zoning: P.D. (Parcel HR-C) 330 dwelling units approved in Bay Isles P.U.D. Land Intensity Schedule.
10. Proposed: 38 units on 19.05± acre parcel (829,818± S.F.) at 1.99 dwelling units per acre, previously approved for 17.4 dwelling units per acre (330 dwelling units on 19.05 acres).

STR. NO.	TYPE	RIM EL.	INV IN	INV OUT	FROM - TO	LENGTH	SIZE AND TYPE	GRADE
S-1	CURB INLET	4.75		1.10				
					S-1 To S-2	50 LF	15" RCP	0.25%
S-2	CUBE INLET	4.75	0.98	0.98				
					S-2 To S-3	160 LF	18" RCP	0.61%
S-3	ENDWALL		0.00					
S-4	CURB INLET	4.75		1.10				
					S-4 To S-5	37 LF	15" RCP	0.25%
S-5	CURB INLET	4.75	1.01	1.01				
					S-5 To S-6	156 LF	18" RCP	0.65%
S-6	ENDWALL		0.00					
S-7	CURB INLET	4.75		1.90				
					S-7 To S-8	45 LF	15" RCP	0.25%
S-8	CURB INLET	4.75	1.79	1.00				
					S-8 To S-9	158 LF	18" RCP	0.63%
S-9	ENDWALL		0.00					
S-10	CURB INLET	4.75		2.05				
					S-10 To S-11	54 LF	15" RCP	0.12%
S-11	CURB INLET	4.75	1.99	1.00				
					S-11 To S-12	159 LF	18" RCP	0.63%
S-12	ENDWALL		0.00					

STR. NO.	TYPE	RIM EL.	INV IN	INV OUT	FROM - TO	LENGTH	SIZE AND TYPE	GRADE
S-13	CURB INLET	4.75		1.10				
					S-13 To S-14	31 LF	15" RCP	0.35%
S-14	CURB INLET	4.75	0.99	0.99				
					S-14 To S-15	155 LF	18" RCP	0.64%
S-15	ENDWALL		0.00					

REV. DATE:

DATE:

SCALE:

CLIENT/TITLE:

PROJECT NO:

SHEET NO:

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
78 SARASOTA CENTER BLVD., SARASOTA, FLORIDA 34240
813/371-6362 • Fax 813/378-3215

REVISED BY	DATE	DESCRIPTION	REVISED BY	DATE	DESCRIPTION

DATE	5-23-89
SCALE	1=50'
DESIGN	S.R.
DRAWN	R.W.C.
CHECKED	
APPROVED	

SEAL

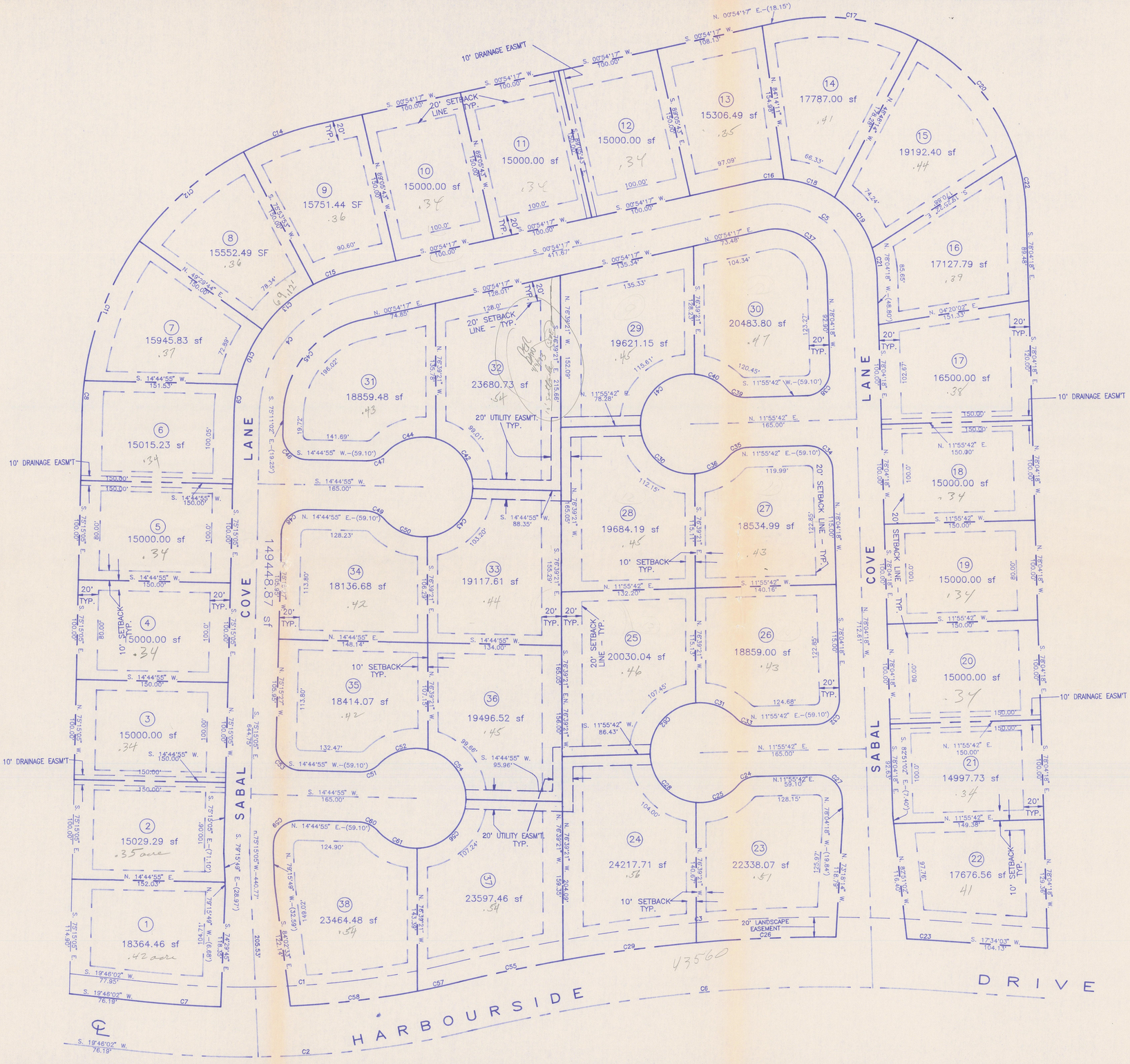
APPROVED BY

CLIENT/TITLE

SABAL COVE
ARVIDA / JMB PARTNERS
GENERAL PLAN — PAVING, DRAINAGE, & UTILITIES

PROJECT NO ARVD-0430

SHEET NO. 5



SETBACK TABLE

Front:	20' from Right-of-Way
Rear:	20' from Property Line
Side:	20' minimum between buildings 10' minimum on one side of lot line

SABAL COVE

PARCEL HR-"C" BAY ISLES, LONGBOAT KEY

0' 50' 100'

SCALE: 1" = 50'

CURVE NUMBER	CURVE DELTA	CURVE RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	20°03'48"	880.00'	308.15'	306.58'	N. 09°44'08" E.
C2	20°03'48"	950.00'	332.66'	330.97'	N. 09°44'08" E.
C3	17°51'49"	1570.00'	489.49'	487.51'	S. 08°38'08" W.
C4	76°09'22"	125.00'	166.15'	154.18'	S. 37°10'24" E.
C5	101°01'25"	75.00'	132.24'	115.76'	N. 51°25'00" E.
C6	17°51'49"	1500.00'	467.67'	465.78'	S. 08°38'08" W.
C7	04°47'00"	900.00'	75.14'	75.11'	N. 17°22'32" E.
C8	05°44'15"	300.00'	30.05'	30.08'	S. 72°22'39" E.
C9	11°33'14"	150.00'	30.25'	30.20'	S. 69°28'28" E.
C10	23°11'35"	150.00'	60.72'	60.31'	S. 52°06'04" E.
C11	28°59'57"	300.00'	151.84'	150.22'	S. 55°00'15" E.
C12	26°24'11"	300.00'	138.24'	137.02'	S. 27°18'12" E.
C13	26°24'10"	150.00'	69.12'	68.51'	S. 27°18'12" E.
C14	15°00'24"	300.00'	78.57'	78.35'	S. 06°35'55" E.
C15	15°00'24"	150.00'	39.28'	39.18'	S. 06°35'55" E.
C16	17°06'06"	100.00'	29.85'	29.74'	S. 09°27'20" W.
C17	40°08'14"	200.00'	140.11'	137.26'	S. 20°58'24" W.
C18	30°53'15"	100.00'	53.93'	53.28'	S. 33°27'18" W.
C19	36°42'35"	100.00'	64.07'	62.98'	N. 67°15'31" E.
C20	44°31'52"	200.00'	155.44'	151.56'	N. 63°18'27" E.
C21	16°18'54"	100.00'	28.47'	28.38'	S. 86°13'45" E.
C22	16°21'20"	200.00'	57.09'	56.90'	S. 86°14'58" E.
C23	01°20'17"	1550.00'	36.20'	36.20'	S. 16°53'54" W.
C24	51°02'48"	25.00'	22.27'	21.54'	S. 10°49'39" E.
C25	54°27'54"	50.00'	47.53'	45.76'	S. 09°01'47" E.
C26	05°08'34"	1550.00'	139.13'	139.08'	S. 11°03'35" W.
C27	90°00'00"	25.00'	39.27'	35.36'	S. 56°55'42" W.
C28	83°43'35"	50.00'	73.07'	66.74'	S. 60°03'55" W.
C29	04°55'37"	1550.00'	133.28'	133.24'	S. 09°01'30" W.
C30	93°04'48"	50.00'	81.23'	72.59'	N. 55°23'18" E.
C31	51°37'54"	50.00'	45.06'	43.55'	S. 34°18'08" W.
C32	90°00'00"	25.00'	39.27'	35.36'	S. 33°04'18" E.
C33	48°11'23"	25.00'	21.03'	20.41'	S. 36°01'24" W.
C34	90°00'00"	25.00'	39.27'	35.36'	N. 56°55'42" E.
C35	48°11'23"	25.00'	21.03'	20.41'	S. 12°09'59" E.
C36	45°06'35"	50.00'	39.37'	38.36'	S. 13°42'23" E.
C37	101°01'25"	50.00'	88.16'	77.18'	N. 51°25'00" E.
C38	90°00'00"	25.00'	39.27'	35.36'	S. 33°04'18" E.
C39	48°11'23"	25.00'	21.03'	20.41'	S. 36°01'24" W.
C40	42°16'41"	50.00'	36.89'	36.06'	N. 38°58'44" E.
C41	95°54'41"	50.00'	83.70'	74.26'	S. 30°06'57" E.
C42	76°48'20"	50.00'	67.03'	62.12'	N. 67°09'37" E.
C43	82°48'50"	50.00'	72.27'	66.14'	S. 33°01'49" E.
C44	62°11'54"	50.00'	54.28'	51.65'	S. 02°20'30" E.
C45	76°09'22"	100.00'	132.92'	123.35'	S. 37°10'24" E.
C46	90°00'00"	25.00'	39.27'	35.36'	N. 59°44'55" E.
C47	48°11'23"	25.00'	21.03'	20.41'	S. 09°20'46" E.
C48	90°00'00"	25.00'	39.27'	35.36'	S. 30°15'05" E.
C49	48°11'23"	25.00'	21.03'	20.41'	N. 38°50'37" E.
C50	54°33'42"	50.00'	47.61'	45.84'	N. 35°39'27" E.
C51	48°11'23"	25.00'	21.03'	20.41'	N. 09°20'46" W.
C52	60°36'53"	50.00'	52.90'	50.46'	S. 03°08'01" E.
C53	90°00'00"	25.00'	39.27'	35.36'	N. 59°44'55" E.
C54	77°34'30"	50.00'	67.70'	62.64'	N. 65°57'40" E.
C55	03°51'27"	1550.00'	104.36'	104.34'	S. 01°37'58" W.
C56	87°26'43"	50.00'	76.31'	69.12'	S. 31°31'43" E.
C57	02°47'05"	900.00'	43.74'	43.74'	N. 01°05'46" E.
C58	08°02'03"	900.00'	126.20'	126.10'	N. 06°30'20" E.
C59	90°00'00"	25.00'	39.27'	35.36'	N. 30°15'05" W.
C60	48°11'23"	25.00'	21.03'	20.41'	N. 38°50'37" E.
C61	50°44'40"	50.00'	44.28'	42.85'	N. 37°33'58" E.
C62	86°33'29"	50.00'	75.54'	68.56'	S. 34°47'33" E.

REV. DATE:

CLIENT/TITLE:

PROJECT NO:

SHEET NO:

DATE:

SCALE:

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
78 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240
813/371-6362 • Fax 813/378-3215

REVISED BY	DATE	DESCRIPTION

REVISED BY	DATE	DESCRIPTION

DATE	8-3-89
SCALE	1"=50'
DESIGN	---
DRAWN	R.W.C.
CHECKED	
APPROVED	

SEAL

APPROVED BY

CLIENT/TITLE

SABAL COVE
ARVIDA / JMB PARTNERS
PRELIMINARY PLAT

PROJECT NO.
ARVD-0430

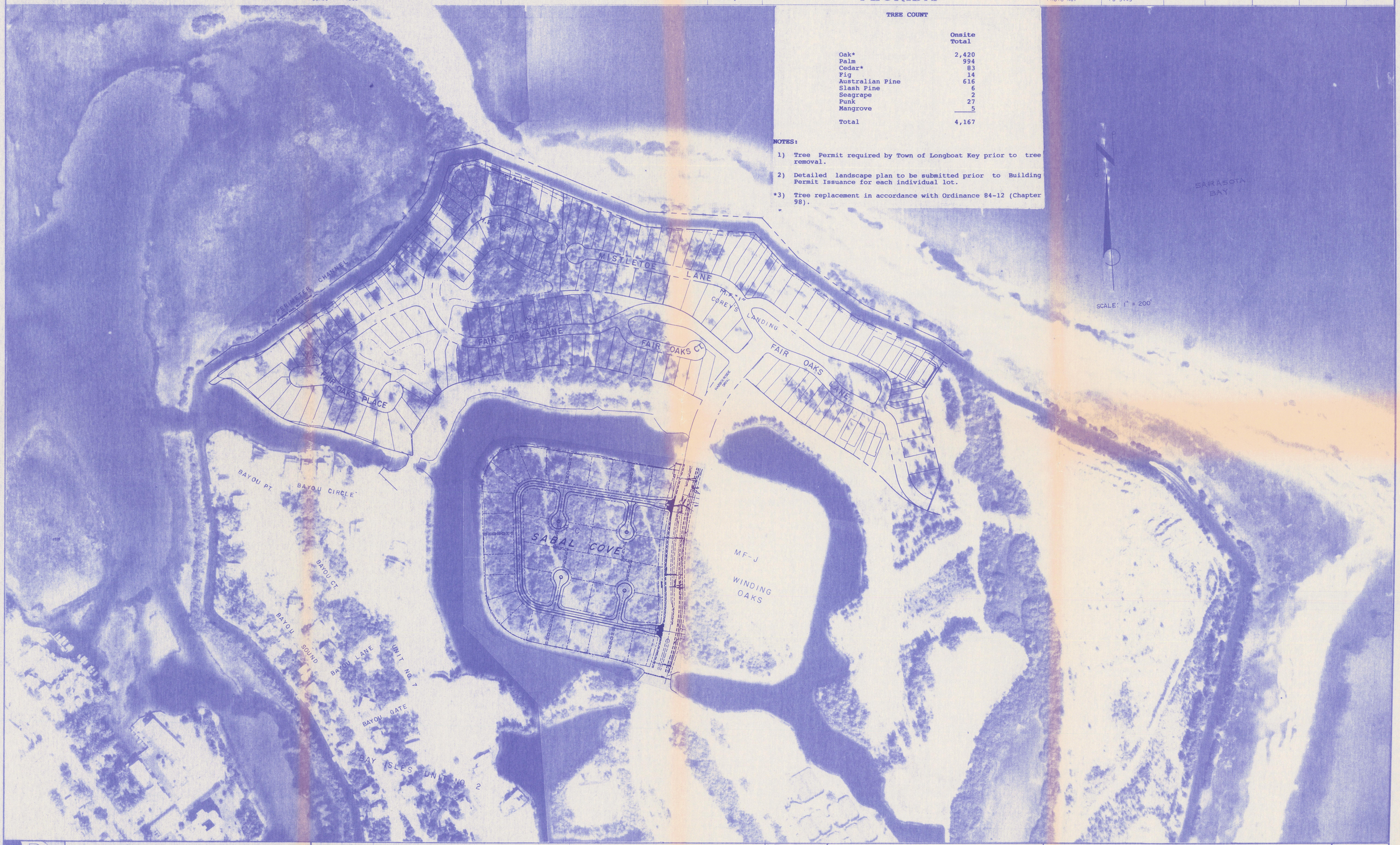
SHEET NO.
6

0 200 400 600 800
SCALE 1"=200'

PREPARED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION
FOR THE SARASOTA CO. TRANSPORTATION DEPT.

SARASOTA COUNTY FLORIDA

SCALE	1" = 200'	SECTION	TWP.	RANGE	SHEET NO.	MAP
PHOTO DATE	JAN. 1986	6	36 S	17 E		2
PHOTO NO.	PD-3443					3



TREE COUNT

	Onsite Total
Oak*	2,420
Palm	994
Cedar*	83
Fig	14
Australian Pine	616
Slash Pine	6
Seagrape	2
Punk	27
Mangrove	5
Total	4,167

NOTES:

1) Tree Permit required by Town of Longboat Key prior to tree removal.

2) Detailed landscape plan to be submitted prior to Building Permit Issuance for each individual lot.

*3) Tree replacement in accordance with Ordinance 84-12 (Chapter 98).

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
78 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240
813/371-6362 • Fax 813/378-3215

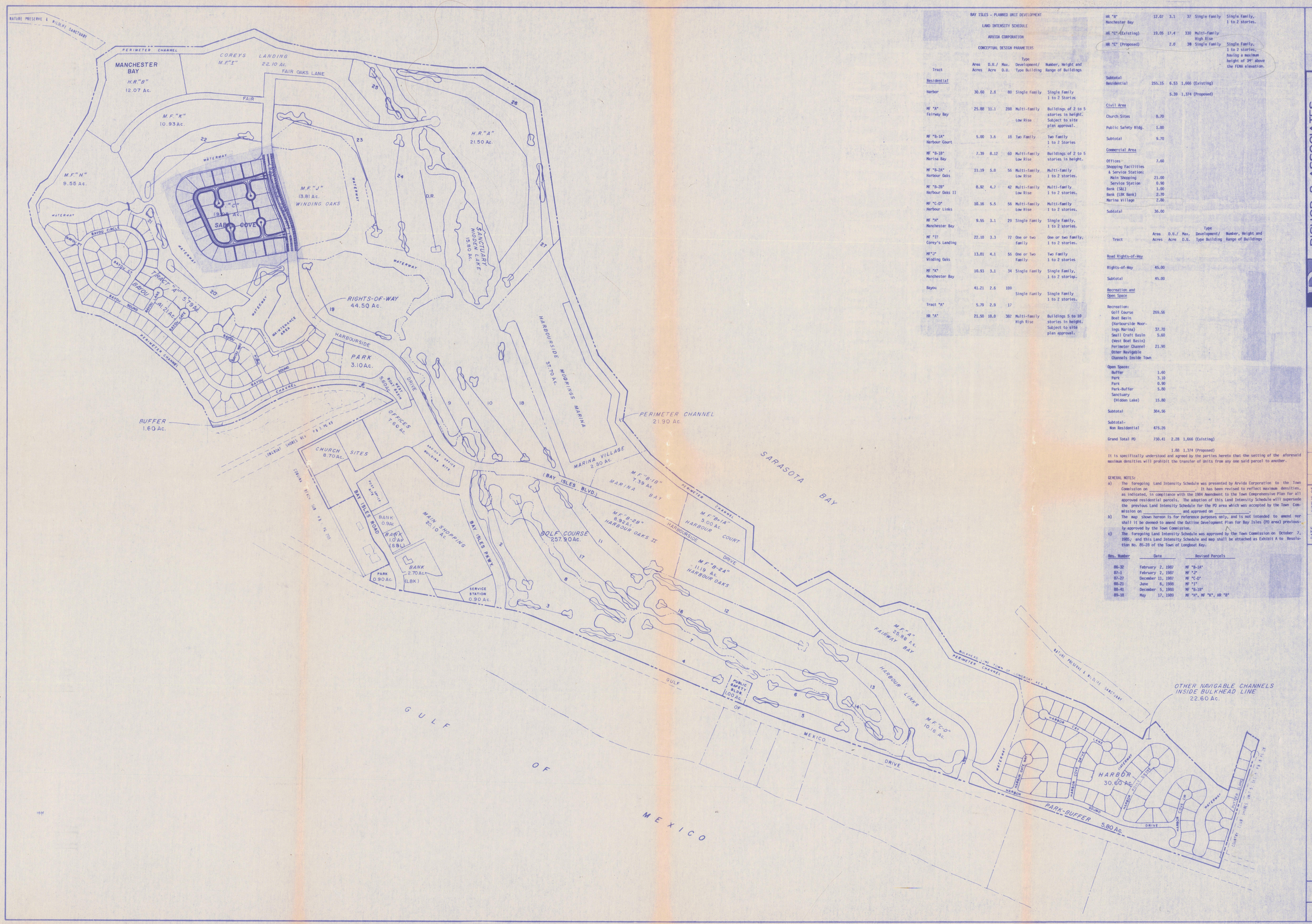
REVISED	BY	DATE	DESCRIPTION	REVISED	BY	DATE	DESCRIPTION

DATE	2-24-89
SCALE	1"=200'
DESIGN	—
DRAWN	STAFF
CHECKED	
APPROVED	

SEAL APPROVED BY

CLIENT/TITLE
SABAL COVE
ARVIDA/JMB PARTNERS
TREE PRESERVATION & LOCATION PLAN

PROJECT NO. ARVD-0430
SHEET NO. 7



BAY ISLES - PLANNED UNIT DEVELOPMENT

LAND INTENSITY SCHEDULE

ARVIDA CORPORATION

CONCEPTUAL DESIGN PARAMETERS

Tract	Area Acres	D.U./ Acre	Max. D.U.	Type Development/ Type Building	Number, Height and Range of Buildings
Residential					
Harbor	30.60	2.6	80	Single Family	Single Family 1 to 2 Stories
MF "A" Fairway Bay	25.88	11.1	288	Multi-family Low Rise	Buildings of 2 to 5 stories in height. Subject to site plan approval.
MF "B-1A" Harbour Court	5.00	3.6	18	Two Family	Two Family 1 to 2 Stories
MF "B-1B" Marina Bay	7.39	8.12	60	Multi-family Low Rise	Buildings of 2 to 5 stories in height.
MF "B-2A" Harbour Oaks	11.19	5.0	56	Multi-family Low Rise	Multi-family 1 to 2 stories.
MF "B-2B" Harbour Oaks II	8.92	4.7	42	Multi-family Low Rise	Multi-family 1 to 2 stories.
MF "C-D" Harbour Links	10.16	5.5	56	Multi-family Low Rise	Multi-family 1 to 2 stories.
MF "H" Manchester Bay	9.55	3.1	29	Single Family	Single Family, 1 to 2 stories.
MF "I" Corey's Landing	22.10	3.3	72	One or two family	One or two family, 1 to 2 stories.
MF"J" Winding Oaks	13.81	4.1	56	One or Two Family	Two Family 1 to 2 stories
MF "K" Manchester Bay	10.93	3.1	34	Single Family	Single Family, 1 to 2 stories.
Bayou	41.21	2.6	109	Single Family	Single Family 1 to 2 stories.
Tract "A"	5.79	2.9	17		
HR "A"	21.50	18.0	382	Multi-family High Rise	Buildings 5 to 10 stories in height. Subject to site plan approval.
HR "B" Manchester Bay	12.07	3.1	37	Single Family	Single Family, 1 to 2 stories.
HR "C" (Existing)	19.05	17.4	330	Multi-family High Rise	
HR "C" (Proposed)		2.0	38	Single Family	Single Family, 1 to 2 stories, having a maximum height of 34' above the FEMA elevation.
Subtotal Residential	255.15	6.53	1,666 (Existing)		
		5.39	1,374 (Proposed)		
Civil Area					
Church Sites	8.70				
Public Safety Bldg.	1.00				
Subtotal	9.70				
Commercial Area					
Offices	7.60				
Shopping Facilities & Service Station:					
Main Shopping	21.00				
Service Station	0.90				
Bank (SBL)	1.00				
Bank (LBK Bank)	2.70				
Marina Village	2.80				
Subtotal	36.00				

Tract	Area Acres	D.U./ Acre	Max. D.U.	Type Development/ Type Building	Number, Height and Range of Buildings
Road Rights-of-Way					
Rights-of-Way	45.00				
Subtotal	45.00				
Recreation and Open Space					
Recreation:					
Golf Course	269.56				
Boat Basin (Harbourside Moorings Marina)	37.70				
Small Craft Basin (West Boat Basin)	5.60				
Perimeter Channel	21.90				
Other Navigable Channels Inside Town					
Open Spaces:					
Buffer	1.60				
Park	3.10				
Park	0.90				
Park-Buffer	5.80				
Sanctuary (Hidden Lake)	15.80				
Subtotal	364.56				
Subtotal-Non Residential	475.26				
Grand Total PD	730.41	2.28	1,666 (Existing)		
		1.88	1,374 (Proposed)		

It is specifically understood and agreed by the parties hereto that the setting of the aforesaid maximum densities will prohibit the transfer of units from any one said parcel to another.

GENERAL NOTES:

a) The foregoing Land Intensity Schedule was presented by Arvida Corporation to the Town Commission on _____. It has been revised to reflect maximum densities, as indicated, in compliance with the 1984 Amendment to the Town Comprehensive Plan for all approved residential parcels. The adoption of this Land Intensity Schedule will supersede the previous Land Intensity Schedule for the PD area which was accepted by the Town Commission on _____ and approved on _____.

b) The map shown hereon is for reference purposes only, and is not intended to amend nor shall it be deemed to amend the Outline Development Plan for Bay Isles (PD area) previously approved by the Town Commission.

c) The foregoing Land Intensity Schedule was approved by the Town Commission on October 7, 1985; and this Land Intensity Schedule and map shall be attached as Exhibit A to Resolution No. 85-28 of the Town of Longboat Key.

Res. Number	Date	Revised Parcels
86-32	February 2, 1987	MF "B-1A"
87-1	February 2, 1987	MF "J"
87-27	December 11, 1987	MF "C-D"
88-21	June 6, 1988	MF "I"
88-41	December 5, 1988	MF "B-1B"
89-18	May 17, 1989	MF "H", MF "K", HR "B"

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REVISED	DATE	BY
GENERAL UPDATE	1-9-89	RWC
GENERAL UPDATE	7-6-88	RWC
GENERAL UPDATE	4-7-87	R.N.C.
DESCRIPTION	DATE	BY

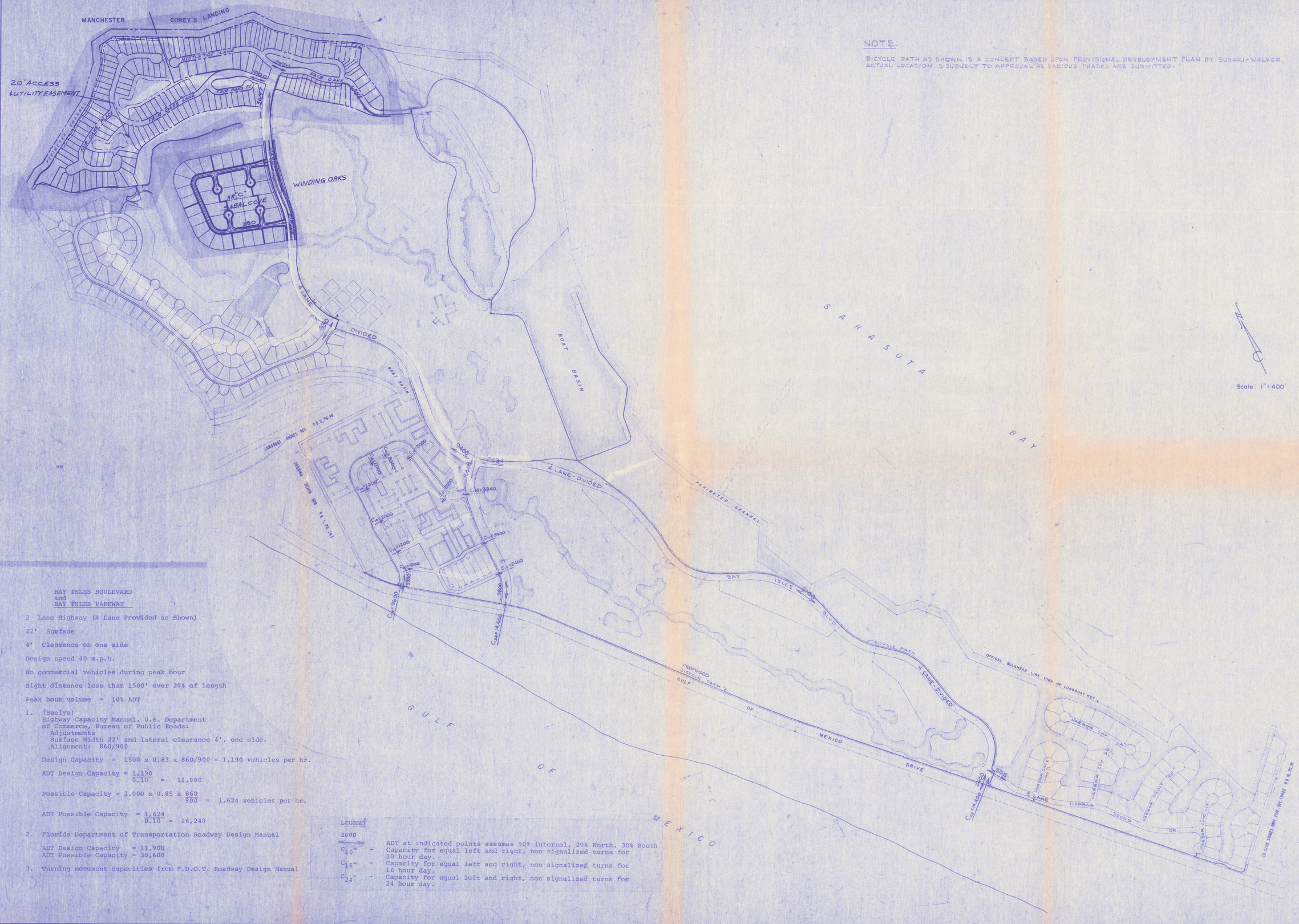
DATE JUNE 13, 85 | SCALE 1"=400' | DESIGN | DRAWN R.A.B. | CHECK F.W. | APPROVED | APPROVED BY

ARVIDA CORPORATION
BAY ISLES
LONGBOAT KEY FLORIDA

LAND INTENSITY SCHEDULE

DWRG NO. ARVD-0430

SHEET NO. 8


MANCHESTER
COREY'S LANDING
MISTLETOE LANE
FAIR OAKS LANE
FAIR OAKS CT.
20' ACCESS & UTILITY EASEMENT
PERIMETER DRIVE
WINDING OAKS
"R1C" 1 BAL COVE
280
1000
DIVIDED
BOAT BASIN
LONGBOAT SHORES KEY P.B.3, PG.49
CHADSEY BEACH SUB P.B.1, PG.162
2400
2234
4 LANE-DIVIDED
PERIMETER CHANNEL
BAY ISLES BLVD.
BICYCLE PATH
4 LANE-DIVIDED
OFFICAL BULKHEAD LINE TOWN OF LONGBOAT KEY
PROPOSED BICYCLE PATH
GULF OF MEXICO
DRIVE
HARBOR CAY
HARBOR POINTE DR.
HARBOR GATE CIR.
HARBOR GATE WAY
HARBOR SOUND
2 LANE
CO. CLUB SHORES UNIT TWO, KEY THREE P.B.4, PG.29
SARASOTA BAY
GULF OF MEXICO
C10=2000
C16=3840
C24=3600
C24=4400
C24=2400
C24=1200
C24=1200
C24=1200
C24=2400
C24=2400
C24=4400
C24=2400
C24=2400
C24=2

PLAT AREA (BAY ISLES UNIT NO 6)



LEGEND

- FIRE HYDRANT
- VALVE
- 6" D.I. PIPE, UNLESS NOTED

scale: 1" = 400'

REVISED	DATE	BY
11-8-85	REV. FAIRWAY BAY III W/M, PER PLAN	RWC
12-5-83	FINE OAKS LANE 6"D.I. WATER MAIN ADDED	WMP
2-5-82	FINE OAKS LANE ADDED	JLC
4-12-82	ADDED HARBOURSIDE CLUBHOUSE AREA	M.L.
5-31-82	ADDED HARBOUR OAKS II	M.L.
2-8-82	BAY ISLES PKWY. 10" P.V.C. CHG. TO 12" P.V.C.	M.L.
1-18-82	REV. DECEMBER W/M	M.L.
6-6-83	GENERAL UPDATE TO SHOW ALL CONSTRUCTED	S.K.
12-15-83	ADDED W/M ON HARBOUR COURT PER PLAN	RWC
6-29-84	Added Harbour Oaks, Harbour Oaks II, Harbour Court, Harbour Links, Fairway Bay, Harbour Side Tennis & Harbour Side Clubhouse Site	L.A.

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
75 SARASOTA CENTER BLVD.
SARASOTA, FLORIDA 34240
PHONE 955-3378

ARVIDA CORPORATION
BAY ISLES
LONGBOAT KEY
WATER SUPPLY MASTER

DATE	7/15/75
SCALE	1"=400'
DESIGN	G.L.B.
DRAWN	G.L.B.
CHECK	
APPROVED	

PROJECT NO.
ARVD-0430
SHEET NO.
AP-2

PLAT AREA (BAY ISLES UNIT No. 6)



LEGEND

- 8" V.C. PIPE & M.H., UNLESS NOTED
- (+5) APPROX. GRADE
- -1.2 PIPE INVERT

LIFT STATION DATA

STATION	UNITS	FLOW (GPM) AVERAGE	FLOW (GPM) DESIGN
L.S. "4F"	423	70	300
"5F"	250 + COM.	84	336
"6F"	126 + CLUB	46	184
"7F"	1760	275	688
"8F"	333	52	208

Scale: 1" = 400'

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REV.	DESCRIPTION	DATE	BY
1	REV. FAIRWAY BASIN SEW. PER PLAN	11-8-85	WLM
2	FAIR OAKS LINE SIZE REVISED, SAN. & REVD GRADES PER PLAN & PROFILE	12-5-85	WLM
3	ADDED PROPOSED DRIVE	2-5-86	MLC
4	MISC. HARBOURSIDE CLUBHOUSE AREA	4-11-86	MLC
5	REVISE LIFT STATION DATA	2-3-88	RWC
6	REVISE CENTER LINE CONFIGURATION	1-18-89	RWC
7	GENERAL UPDATE TO SHOW CONSTRUCTED	6-16-89	S.R.
8	REV. HARBOUR CT. SITE PER PLAN	12-13-93	RWC
9	ADDED "C" SERIES MANHOLES	6-20-94	LTG

DATE 8/31/15
SCALE 1"=400'
DESIGN G.L.B.
DRAWN G.L.B.
CHECK
APPROVED

ARVIDA CORPORATION
BAY ISLES
SANITARY SEWERAGE MASTER
LONGBOAT KEY PHONE 388-2178

PROJECT NO.
ARVD-0430
SHEET NO.
AP-3

PLAT AREA
(BAY ISLES UNIT #6)

PLAT AREA (BAY ISLES UNIT No. 6)

H.R.-A Area East of Mud Lake	A	x	C	=	AC
H.R.-A portion	15.8		0.6		9.5
Golf Course portion	4.2		0.15		0.6
Pond	1.6		1.0		1.6
TOTAL	21.6		0.54		11.7

For Weirs #1, #2, #3, (Sum of Areas)	A	x	C	=	AC
South Single Fam.	26		0.4		10.4
Seaplace Condo. (x-ing)	40		0.6		24.
Commercial Area	61.3		0.65		39.8
Boat Basin Comm. +	10.7		0.6		6.4
So. 80' Rd RW	11		0.75		8.2
M.F. Area Port. (A,B,C,D,E,F)	51.9		0.6		31.1
So. Golf Course	123.5		0.15		18.5
So. Golf Course Ponds	19.4*		1.0		19.4
Club Hse. + Parking	10.8		0.75		8.1
Part of 100' R.W.	6.5		0.75		4.9
Tennis Area	5.9		0.7		4.1
M.F. Area Port. G, L + Townhouse	39.9		0.6		23.9
M.F. Area Port. H,I,K. + HR-B	48.9		0.6		29.3
H.R.-C	20.0		0.6		12.0
M.F.-J	15.5		0.6		9.3
No. Golf Course	65.7		0.15		9.9
No. Golf Course Ponds	29.3*		1.0		29.3
TOTAL	586.3		0.49		288.6

*Ponds = 48.7 ac

Scale: 1" = 400'

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NO.	REVISED PER "C" SERIES COVE	BY
6-6-89		
1-15-87	ADDED DRAINAGE @ VERANO, SEAGATE RESERVE	RWC
12-13-85	ADDED DRAINAGE ON HARBOURCOURT-SEAPLACE	RWC
11-8-84	ADD REVISIONS TO GOLF PLAT & SEACLA CLUBS	RWC
10-19-84	REVISED DRAINAGE BASIN #1	RWC
8-15-84	Add Island Harbour Units II	RWC
8-29-84	Add Harbour Links Golf & Racquet Club	RWC

DATE	2-25-86
SCALE	1"=400'
DESIGN	RWC
DRAWN	JC
CHECK	RWC
APPROVED	

ARVIDA CORPORATION
BAY ISLES
STREET & DRAINAGE MASTER
LONGBOAT KEY PHONE 383-2778

PROJECT NO.
ARVD-0430
SHEET NO.
AP-4

PLAT BOOK , PAGE

SHEET 1 OF 4 SHEETS

TO Be Recorded

SABAL COVE

A SUBDIVISION

A REPLAT OF PARCEL HR-C , BAY ISLES UNIT NO. 8 , A SUBDIVISION AS RECORDED IN PLAT BOOK 29 , PAGES 21 THRU 21B , PUBLIC RECORDS OF SARASOTA COUNTY , FLORIDA .

TOWN OF LONGBOAT KEY
COUNTY OF SARASOTA STATE OF FLORIDA
SECTION 5 - TWP. 36 S. - RGE. 17 E.

DESCRIPTION

PARCEL HR-C, BAY ISLES UNIT NO. 8, A SUBDIVISION, AS RECORDED IN PLAT BOOK 29, PAGES 21 THROUGH 21 B, PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA AND LYING IN SECTION 5, TOWNSHIP 36 SOUTH, RANGE 17, EAST.

SUBJECT TO:

ANY AND ALL EASEMENTS AND RIGHTS-OF-WAY OF RECORD.

LOCATION MAP

NOTICE : THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

EASEMENT DESCRIPTIONS

UTILITY EASEMENT

ARVIDA/JMB PARTNERS DOES HEREBY GRANT UTILITY EASEMENTS TO THE TOWN OF LONGBOAT KEY AND TO AUTHORIZED UTILITY COMPANIES TO INSTALL AND MAINTAIN POWER, GAS, TELEPHONE, TELEVISION, WATER AND WASTEWATER LINES UNDER TRACT "A" (SABAL COVE LANE, SABAL COVE CIRCLE, SABAL COVE DRIVE, SABAL COVE PLACE AND SABAL COVE WAY) AS SHOWN ON THIS PLAT AND UNDER ANY OTHER AREA DEPICTED ON THIS PLAT AS UTILITY EASEMENT.

INGRESS AND EGRESS OVER LIMITED PRIVATE ROAD

ARVIDA/JMB PARTNERS DOES HEREBY GRANT TO EACH PROPERTY OWNER IN SABAL COVE SUBDIVISION THE NON-EXCLUSIVE AND PERPETUAL RIGHT OF INGRESS AND EGRESS OVER AND ACROSS TRACT "A" (SABAL COVE LANE, SABAL COVE CIRCLE, SABAL COVE DRIVE, SABAL COVE PLACE AND SABAL COVE WAY) LYING WITHIN THE BOUNDARIES OF THIS PLAT. THIS RIGHT OF INGRESS AND EGRESS SHALL BE APPURTENANT TO AND SHALL PASS WITH TITLE TO ALL PROPERTIES IN THIS PLAT AS THE SAME MAY BE CONVEYED FROM TIME TO TIME WITHOUT NECESSITY OF REFERRING TO THIS GRANT. ARVIDA/JMB PARTNERS GRANTS TO EACH PROPERTY OWNER IN THIS SUBDIVISION THE NON-EXCLUSIVE AND PERPETUAL RIGHT OF INGRESS AND EGRESS OVER AND ACROSS THAT PART OF HARBOURSIDE DRIVE (FORMERLY BAY ISLES BLVD.) REFLECTED ON THE PLAT OF BAY ISLES UNIT NO. 1 AS RECORDED IN PLAT BOOK 23, PAGE 35, PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA; ALSO OVER AND ACROSS THAT PART OF HARBOURSIDE DRIVE (FORMERLY BAY ISLES BLVD.) REFLECTED ON THE PLAT OF BAY ISLES UNIT NO. 3 AS RECORDED IN PLAT BOOK 28, PAGE 39, PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA; ALSO OVER AND ACROSS THAT PART OF HARBOURSIDE DRIVE REFLECTED ON THE PLAT OF BAY ISLES UNIT NO. 5, AS RECORDED IN PLAT BOOK 29, PAGE 9, PUBLIC RECORD OF SARASOTA COUNTY, FLORIDA; ALSO OVER AND ACROSS THAT PART OF HARBOURSIDE DRIVE (FORMERLY BAY ISLES PARKWAY) AND THAT PART OF BAY ISLES PARKWAY REFLECTED ON THE PLAT OF BAY ISLES UNIT NO. 2, AS RECORDED IN PLAT BOOK 24, PAGE 5, PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA; ALSO OVER AND ACROSS THAT PART OF HARBOURSIDE DRIVE REFLECTED ON THE PLAT OF BAY ISLES UNIT NO. 8, AS RECORDED IN PLAT BOOK 29, PAGE 21, PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA.

F.P.& L. COMPANY UTILITY EASEMENT

ARVIDA/JMB PARTNERS DOES HEREBY GRANT TO FLORIDA POWER AND LIGHT COMPANY A NON-EXCLUSIVE EASEMENT FOR THE INSTALLATION, MAINTENANCE, AND REPAIR OF UTILITY LINES UNDER F.P.& L. COMPANY EASEMENT AS SHOWN ON THIS PLAT.

DRAINAGE EASEMENT

ARVIDA/JMB PARTNERS DOES HEREBY GRANT TO BAY ISLES ASSOCIATION, INC., A NON-EXCLUSIVE EASEMENT FOR DRAINAGE PURPOSES UNDER EACH AREA DEPICTED ON THIS PLAT AS A DRAINAGE EASEMENT.

STORM DRAIN EASEMENT

ARVIDA/JMB PARTNERS DOES HEREBY GRANT TO SABAL COVE HOMEOWNERS ASSOCIATION, INC., A NON-EXCLUSIVE EASEMENT FOR STORM DRAINAGE PURPOSES UNDER EACH AREA DEPICTED ON THIS PLAT AS A STORM DRAINAGE EASEMENT.

LANDSCAPE EASEMENT

ARVIDA/JMB PARTNERS DOES HEREBY GRANT TO SABAL COVE HOMEOWNERS ASSOCIATION, INC., A NON-EXCLUSIVE EASEMENT FOR LANDSCAPING PURPOSES UNDER EACH AREA DEPICTED ON THIS PLAT AS A LANDSCAPE EASEMENT.

CERTIFICATE OF APPROVAL

STATE OF FLORIDA
S.S.
COUNTY OF SARASOTA

This plat conforms to the preliminary plat approval provisions made by the Town of Longboat Key Town Commission this 4TH day of December, A.D., 19[illegible].

Town Manager, Town of Longboat Key

Approved by the Longboat Key Town Commission this 4th day of December, A.D., 19[illegible]

Patricia Arends — Town Clerk
A. Hoyt Wimberly — Mayor
Town Attorney

Accepted for files and recorded this _____ day of_____, A.D., 19__, in Plat Book _____, Page _____.

Clerk of the Circuit Court
Sarasota County, Florida

SURVEYOR'S CERTIFICATE

I, the undersigned registered land surveyor, hereby certify that this plat was made under my responsible direction and supervision and is a true representation of the lands described and shown, to the best of my knowledge and belief; and that permanent reference monuments have been placed as required by the town code of the Town of Longboat Key, the Sarasota County Subdivison Regulations, and all required statutes of the State of Florida thereunto appertaining .

Alex S. Esber
Alex S. Esber
Registered Land Surveyor #4349
State of Florida

Date of Plat Nov. 3, 1989

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
78 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240
813/371-4383 • Fax 813/378-3818

PLAT BOOK , PAGE

SHEET 2 OF 4 SHEETS

SABAL COVE

A SUBDIVISION

A REPLAT OF PARCEL HR-C , BAY ISLES UNIT NO. 8 , A SUBDIVISION , AS RECORDED IN PLAT BOOK 29 , PAGES 21 THRU 21B , PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA .

TOWN OF LONGBOAT KEY
COUNTY OF SARASOTA STATE OF FLORIDA
SECTION 5 – TWP. 36 S. – RGE. 17 E.

CERTIFICATE OF OWNERSHIP AND DEDICATION

STATE OF FLORIDA
S.S.
COUNTY OF SARASOTA

ARVIDA/JMB PARTNERS, A FLORIDA GENERAL PARTNERSHIP, BY ARVIDA/JMB MANAGERS, INC., AN ILLINOIS CORPORATION AS GENERAL PARTNER, CERTIFIES OWNERSHIP BY SAID GENERAL PARTNERSHIP OF A PORTION OF SABAL COVE, AS SHOWN AND DESCRIBED HEREON, AND DOES HEREBY DEDICATE AND SET APART ALL OF THE FRONT, REAR AND SIDE LOT LINE UTILITY EASEMENT, CANALS, AND OTHER EASEMENTS SHOWN ON THIS PLAT OF SABAL COVE, FOR SAID USES AND PURPOSES TO THE TOWN OF LONGBOAT KEY FOREVER .

IN WITNESS WHEREOF , THE UNDERSIGNED GENERAL PARTNERSHIP HAS CAUSED THESE PRESENTS TO BE EXECUTED BY ITS GENERAL PARTNER THIS 3rd DAY OF NOVEMBER, A.D., 1989.

ARVIDA/JMB PARTNERS,
A FLORIDA GENERAL PARTNERSHIP

BY: ARVIDA/JMB MANAGERS, INC.
AN ILLINOIS CORPORATION, AS
GENERAL PARTNER

ATTEST:

Elizabeth A. Coleman
ELIZABETH A. COLEMAN , ASST.SECY

BY: Robert U. Wilhelm
ROBERT U. WILHELM, V-PRES.

STATE OF FLORIDA
S.S.
COUNTY OF SARASOTA

BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, APPEARED ROBERT U. WILHELM, VICE-PRESIDENT, AND ELIZABETH A. COLEMAN, ASSISTANT SECRETARY OF ARVIDA/JMB MANAGERS, AN ILLINOIS CORPORATION, THE GENERAL PARTNER OF AND IN BEHALF OF ARVIDA/JMB PARTNERS, A FLORIDA GENERAL PARTNERSHIP, TO ME KNOWN TO BE THE INDIVIDUALS DESCRIBED IN AND WHO EXECUTED THE FOREGOING CERTIFICATE OF DEDICATION, AND THEY EACH ACKNOWLEDGED BEFORE ME THAT THEY EXECUTED THE SAME, AS OFFICERS OF SUCH GENERAL PARTNER, FOR AND IN BEHALF OF SAID GENERAL PARTNERSHIP.

WITNESS MY HAND AND OFFICIAL SEAL AT SARASOTA COUNTY, FLORIDA, THIS 3rd DAY OF November, A.D., 1989.

Betty H. Martin
NOTARY PUBLIC
STATE OF FLORIDA AT LARGE

MY COMMISSION EXPIRES: 11/2/91

EASEMENT DESCRIPTION

ARVIDA/JMB PARTNERS DOES HEREBY GRANT UTILITY EASEMENTS TO THE TOWN OF LONGBOAT KEY AND UTILITY EASEMENTS TO AUTHORIZED UTILITY COMPANIES TO INSTALL AND MAINTAIN POWER, GAS, TELEPHONE, TELEVISION, WATER AND WASTEWATER LINES WITHIN THE EASEMENT AREAS DESCRIBED BELOW, TO WIT:

AN EASEMENT AREA FIVE (5) FEET IN WIDTH ALONG AND ADJACENT TO EACH SIDE LOT LINE FOR SURFACE AND FOR UNDERGROUND UTILITIES, ALSO AN EASEMENT AREA FIVE (5) FEET IN WIDTH ALONG AND ADJACENT TO EACH SIDE LOT LINE AND THE FRONT LOT LINE OF EACH LOT FOR UNDERGROUND UTILITY LINES, WHICH EASEMENT ALONG THE SIDE LOT LINE SHALL BE LIMITED TO ONE SIDE OF ANY ONE LOT, PROVIDED, HOWEVER, THAT WHERE MORE THAN ONE LOT IS INTENDED AS A BUILDING SITE, THEN THE FIVE (5) FOOT AREA ALONG AND ADJACENT TO THE SIDE BOUNDARIES OF THE LOTS INVOLVED AS A BUILDING SITE SHALL BE SUBJECT TO SAID EASEMENTS AS IF SUCH BUILDING SITE WAS ONE LOT. ONCE THE LOCATION OF SUCH EASEMENT AREA IS FIXED BY ACTUAL USE , THE LOCATION THEREOF SHALL NOT THEREAFTER BE MODIFIED EXCEPT BY RESOLUTION OF THE TOWN COMMISION.

BISHOP & ASSOCIATES
Consulting Engineers • Surveyors
78 SARASOTA CENTER BLVD. SARASOTA, FLORIDA 34240
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PLAT BOOK , PAGE

SHEET 3 OF 4 SHEETS

SABAL COVE

A SUBDIVISION

A REPLAT OF PARCEL HR-C , BAY ISLES UNIT NO. 8 , A SUBDIVISION , AS RECORDED IN PLAT BOOK 29 , PAGES 21 THRU 21B , PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA .

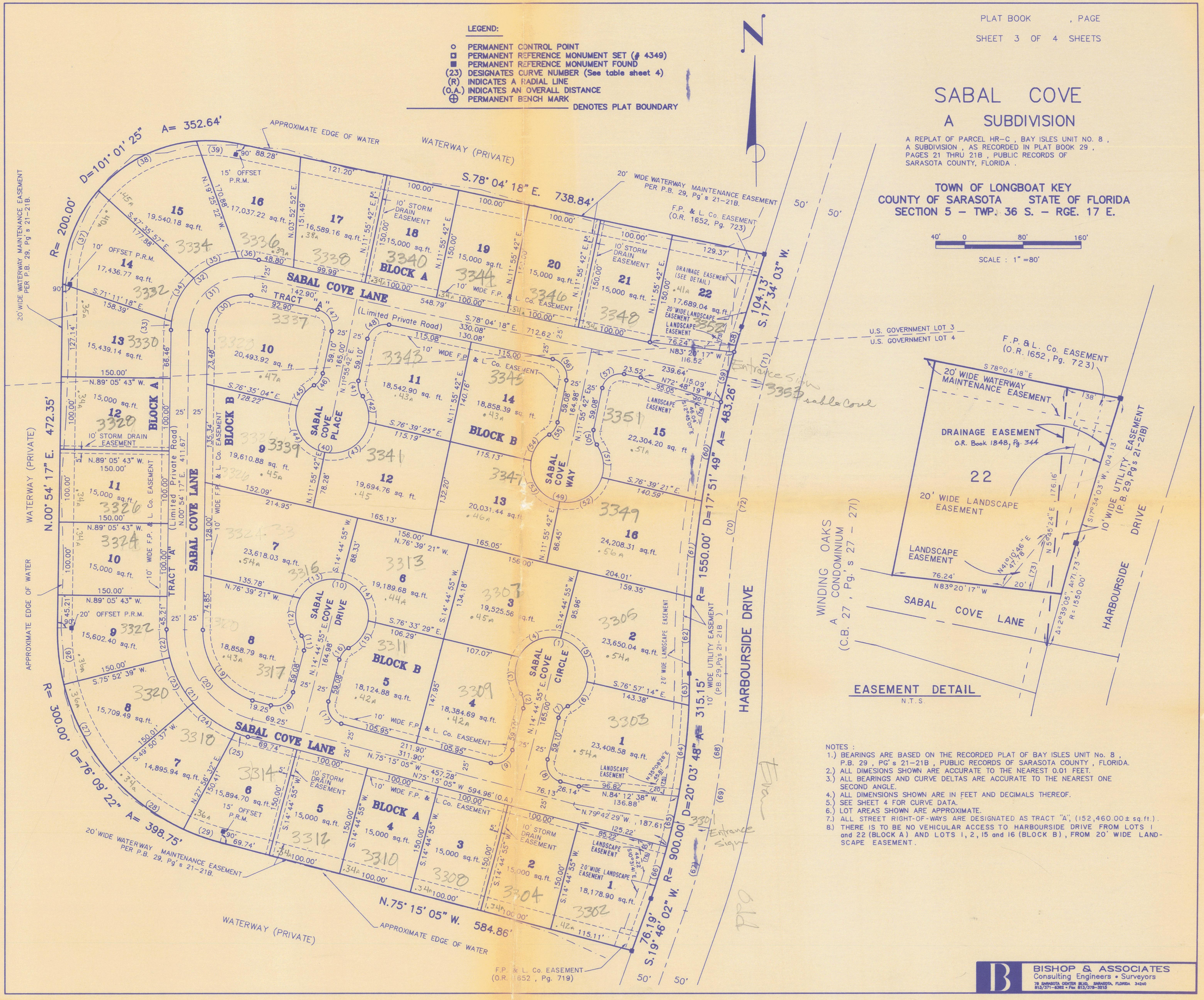
TOWN OF LONGBOAT KEY
COUNTY OF SARASOTA STATE OF FLORIDA
SECTION 5 – TWP. 36 S. – RGE. 17 E.

40' 0 80' 160'

SCALE : 1" =80'

LEGEND:

- PERMANENT CONTROL POINT
- PERMANENT REFERENCE MONUMENT SET (# 4349)
- PERMANENT REFERENCE MONUMENT FOUND
- (23) DESIGNATES CURVE NUMBER (See table sheet 4)
- (R) INDICATES A RADIAL LINE
- (O.A.) INDICATES AN OVERALL DISTANCE
- PERMANENT BENCH MARK
- DENOTES PLAT BOUNDARY



EASEMENT DETAIL

N.T.S.

NOTES :

1.) BEARINGS ARE BASED ON THE RECORDED PLAT OF BAY ISLES UNIT No. 8 , P.B. 29 , PG's 21–21B , PUBLIC RECORDS OF SARASOTA COUNTY , FLORIDA.
2.) ALL DIMESIONS SHOWN ARE ACCURATE TO THE NEAREST 0.01 FEET.
3.) ALL BEARINGS AND CURVE DELTAS ARE ACCURATE TO THE NEAREST ONE SECOND ANGLE.
4.) ALL DIMENSIONS SHOWN ARE IN FEET AND DECIMALS THEREOF.
5.) SEE SHEET 4 FOR CURVE DATA.
6.) LOT AREAS SHOWN ARE APPROXIMATE.
7.) ALL STREET RIGHT-OF-WAYS ARE DESIGNATED AS TRACT "A", (152,460.00± sq.ft.).
8.) THERE IS TO BE NO VEHICULAR ACCESS TO HARBOURSIDE DRIVE FROM LOTS 1 and 22 (BLOCK A) AND LOTS 1, 2, 15 and 16 (BLOCK B), FROM 20' WIDE LANDSCAPE EASEMENT.

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PLAT BOOK , PAGE

SHEET 4 OF 4 SHEETS

SABAL COVE

A SUBDIVISION

A REPLAT OF PARCEL HR-C , BAY ISLES UNIT NO. 8 ,
A SUBDIVISION , AS RECORDED IN PLAT BOOK 29 ,
PAGES 21 THRU 21B , PUBLIC RECORDS OF
SARASOTA COUNTY, FLORIDA .

TOWN OF LONGBOAT KEY
COUNTY OF SARASOTA STATE OF FLORIDA
SECTION 5 – TWP. 36 S. – RGE. 17 E.

CURVE TABLE

NO.	RADIUS	DELTA	ARC	TANGENT	CHORD	CHORD BEARING
1	50.00'	276° 22' 46"	241.19'	-44.72'	66.67'	S.75° 15' 05" E.
2	25.00'	48° 11' 23"	21.03'	11.18'	20.41'	S.09° 20' 46" E.
3	50.00'	60° 11' 18"	52.52'	28.98'	50.14'	N.03° 20' 49" W.
4	50.00'	78° 00' 05"	68.07'	40.49'	62.93'	N.65° 44' 53" E.
5	50.00'	88° 17' 51"	77.05'	48.54'	69.65'	S.31° 06' 09" E.
6	50.00'	49° 53' 32"	43.54'	23.26'	42.18'	S.37° 59' 32" W.
7	25.00'	48° 11' 23"	21.03'	11.18'	20.41'	N.38° 50' 37" E.
8	25.00'	90° 00' 00"	39.27'	25.00'	35.36'	N.30° 15' 05" W.
9	25.00'	90° 00' 00"	39.27'	25.00'	35.36'	S.59° 44' 55" W.
10	50.00'	276° 22' 46"	241.19'	-44.72'	66.67'	S.75° 15' 05" E.
11	25.00'	48° 11' 23"	21.03'	11.18'	20.41'	S.09° 20' 46" E.
12	50.00'	62° 11' 54"	54.28'	30.16'	51.65'	N.02° 20' 31" W.
13	50.00'	75° 59' 29"	66.31'	39.06'	61.56'	N.66° 45' 11" E.
14	50.00'	83° 37' 32"	72.98'	44.73'	66.67'	S.33° 26' 19" E.
15	50.00'	54° 33' 51"	47.62'	25.79'	45.84'	S.35° 39' 22" W.
16	25.00'	48° 11' 23"	21.03'	11.18'	20.41'	N.38° 50' 37" E.
17	25.00'	90° 00' 00"	39.27'	25.00'	35.36'	N.30° 15' 05" W.
18	25.00'	90° 00' 00"	39.27'	25.00'	35.36'	S.59° 44' 55" W.
19	100.00'	76° 09' 22"	132.92'	78.35'	123.35'	N.37° 10' 24" W.
20	125.00'	76° 09' 22"	166.15'	97.94'	154.18'	N.37° 10' 24" W.
21	150.00'	76° 09' 22"	199.38'	117.52'	185.02'	N.37° 10' 24" W.
22	150.00'	14° 56' 55"	39.14'	19.68'	39.02'	N.06° 34' 11" W.
23	150.00'	26° 59' 12"	70.65'	35.99'	70.00'	N.27° 32' 16" W.
24	150.00'	26° 59' 12"	70.65'	35.99'	70.00'	N.54° 31' 27" W.
25	150.00'	7° 14' 02"	18.94'	9.48'	18.93'	N.71° 37' 59" W.
26	300.00'	14° 59' 17"	78.48'	39.46'	78.25'	N.06° 35' 21" W.
27	300.00'	26° 30' 37"	138.81'	70.67'	137.57'	N.27° 20' 18" W.
28	300.00'	24° 26' 24"	127.97'	64.97'	127.00'	N.52° 48' 50" W.
29	300.00'	10° 13' 04"	53.50'	26.82'	53.43'	N.70° 08' 31" W.
30	50.00'	101° 01' 25"	88.16'	60.68'	77.18'	N.51° 25' 00" E.
31	75.00'	101° 01' 25"	132.24'	91.02'	115.76'	N.51° 25' 00" E.
32	100.00'	101° 01' 25"	176.32'	121.36'	154.35'	N.51° 25' 00" E.
33	100.00'	6° 52' 47"	12.01'	6.01'	12.00'	N.04° 20' 40" E.
34	100.00'	38° 54' 55"	67.92'	35.33'	66.62'	N.27° 14' 31" E.
35	100.00'	38° 54' 51"	67.92'	35.33'	66.62'	N.66° 09' 24" E.
36	100.00'	16° 18' 54"	28.47'	14.33'	28.38'	S.86° 13' 45" E.
37	200.00'	40° 06' 49"	140.02'	73.02'	137.18'	N.20° 57' 42" E.
38	200.00'	44° 33' 16"	155.52'	81.93'	151.64'	N.63° 17' 44" E.
39	200.00'	16° 21' 20"	57.09'	28.74'	56.90'	S.86° 14' 58" E.
40	50.00'	276° 22' 46"	241.19'	-44.72'	66.67'	N.78° 04' 18" W.
41	25.00'	48° 11' 23"	21.03'	11.18'	20.41'	N.12° 09' 59" W.
42	*50.00'*	*45° 06' 35"*	*39.37'*	*20.77'*	*38.36'*	*S.13° 42' 23" E.*
43	*50.00'*	*93° 04' 48"*	*81.23'*	*52.76'*	*72.59'*	*S.55° 23' 18" W.*
44	*50.00'*	*95° 43' 42"*	*83.54'*	*55.27'*	*74.16'*	*N.30° 12' 27" W.*
45	*50.00'*	*42° 27' 41"*	*37.05'*	*19.42'*	*36.21'*	*N.38° 53' 15" E.*
46	25.00'	48° 11' 23"	21.03'	11.18'	20.41'	S.36° 01' 24" W.
47	25.00'	90° 00' 00"	39.27'	25.00'	35.36'	S.33° 04' 18" E.
48	25.00'	90° 00' 00"	39.27'	25.00'	35.36'	N.56° 55' 42" E.
49	50.00'	276° 22' 46"	241.19'	-44.72'	66.67'	N.78° 04' 18" W.
50	25.00'	48° 11' 23"	21.03'	11.18'	20.41'	N.12° 09' 59" W.
51	*50.00'*	*54° 29' 09"*	*47.55'*	*25.74'*	*45.78'*	*S.09° 01' 06" E.*
52	*50.00'*	*83° 42' 14"*	*73.05'*	*44.79'*	*66.72'*	*S.80° 04' 35" W.*
53	*50.00'*	*86° 32' 27"*	*75.52'*	*47.07'*	*68.54'*	*N.34° 48' 04" W.*
54	*50.00'*	*51° 38' 56"*	*45.07'*	*24.20'*	*43.56'*	*N.34° 17' 37" E.*
55	25.00'	48° 11' 23"	21.03'	11.18'	20.41'	S.36° 01' 24" W.
56	25.00'	90° 00' 00"	39.27'	25.00'	35.36'	S.33° 04' 18" E.
57	25.00'	90° 00' 00"	39.27'	25.00'	35.36'	N.56° 55' 42" E.
58	1550.00'	01° 19' 26"	35.81'	17.91'	35.81'	S.16° 54' 20" W.
59	1550.00'	02° 38' 16"	71.36'	35.69'	71.36'	S.14° 55' 29" W.
60	*1550.00'*	*05° 07' 03"*	*138.44'*	*69.27'*	*138.39'*	*S.11° 02' 49" W.*
61	*1550.00'*	*04° 55' 37"*	*133.28'*	*66.68'*	*133.24'*	*S.06° 01' 30" W.*
62	1550.00'	03° 51' 27"	104.36'	52.20'	104.34'	S.01° 37' 58" W.
63	900.00'	02° 47' 04"	43.74'	21.87'	43.73'	S.01° 05' 46" W.
64	900.00'	08° 00' 39"	125.83'	63.02'	125.73'	S.06° 29' 38" W.
65	900.00'	04° 32' 39"	71.38'	35.71'	71.36'	S.12° 46' 16" W.
66	900.00'	04° 43' 26"	74.20'	37.12'	74.18'	S.17° 24' 19" W.
67	950.00'	07° 07' 37"	118.17'	59.16'	118.09'	N.16° 12' 13" E.
68	950.00'	12° 56' 11"	214.49'	107.70'	214.04'	N.06° 10' 19" E.
69	950.00'	20° 03' 48"	332.66'	168.05'	330.97'	N.09° 44' 08" E.
70	1500.00'	15° 19' 03"	401.01'	201.71'	399.82'	N.07° 21' 45" E.
71	1500.00'	02° 32' 46"	66.66'	33.34'	66.65'	N.16° 17' 40" E.
72	1500.00'	17° 51' 49"	467.67'	235.75'	465.78'	N.08° 38' 08" E.
73	1570.00'	01° 27' 35"	40.00'	20.00'	40.00'	S.16° 51' 01" W.
74	1570.00'	01° 27' 35"	40.00'	20.00'	40.00'	S.12° 55' 18" W.
75	880.00'	02° 36' 16"	40.00'	20.00'	40.00'	S.09° 18' 15" W.
76	880.00'	02° 36' 16"	40.00'	20.00'	40.00'	S.16° 21' 08" W.

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