

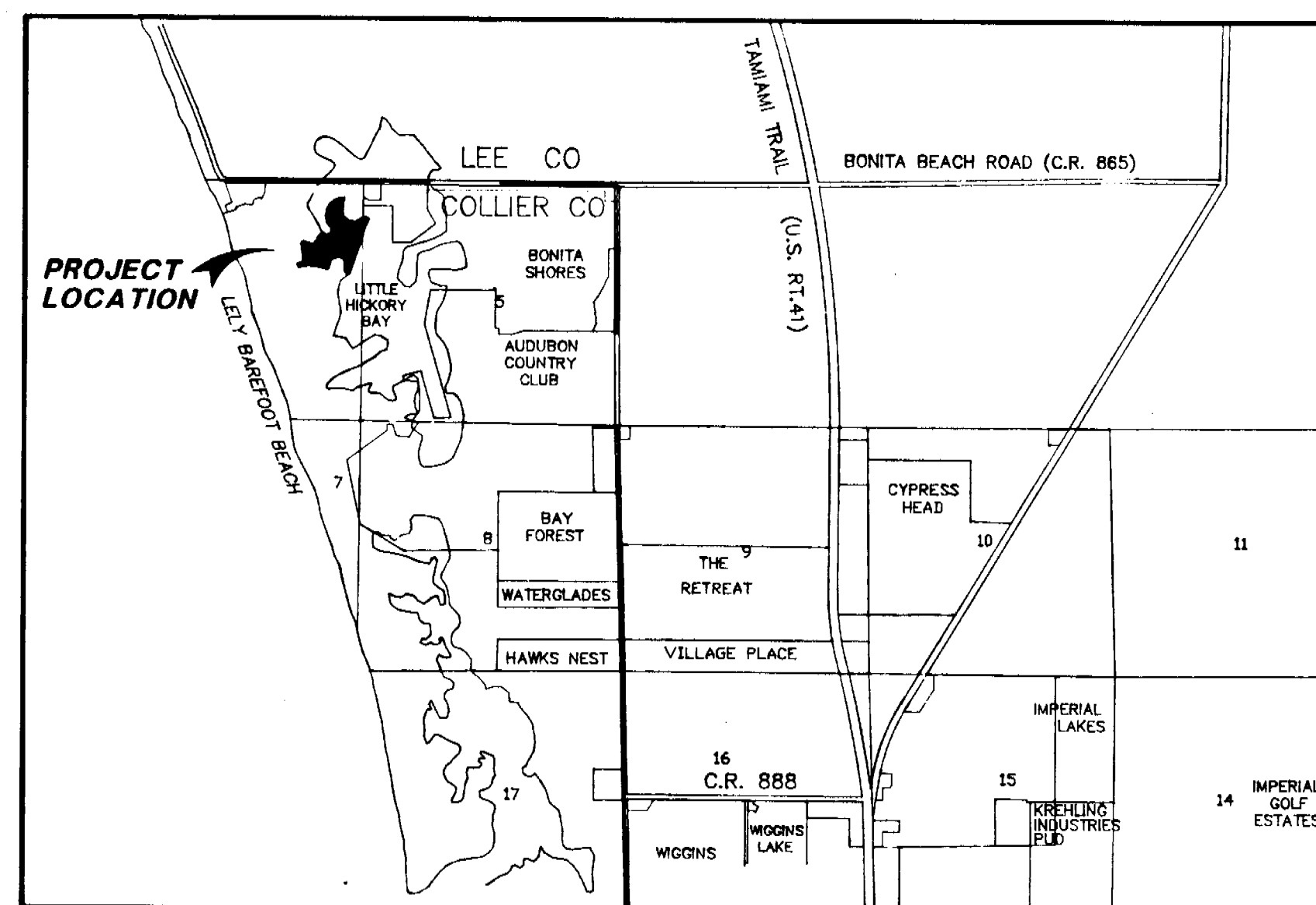
SOUTHPORT ON THE BAY

PREPARED FOR
SOUTHPORT VENTURE ASSOCIATES

Unit I

LEGEND

GV	GATE VALVE
PVC	POLYVINYL CHLORIDE PIPE
HW	HEADWALL
MH	MANHOLE
CB	CATCH BASIN
REDUCER	REDUCER
LS	LIFT STATION
FH	FIRE HYDRANT ASSEMBLY
RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE
INV.	INVERT
A.R.V.	AIR RELEASE VALVE
C.O.	CLEAN OUT
BACTERIAL SAMPLE STATION	BACTERIAL SAMPLE STATION



LOCATION MAP

INDEX

- 1 COVER SHEET
- 2 MASTER SITE PLAN

PHASE I

- 3 WATER AND SEWER PLAN
- 4 PAVING, GRADING AND DRAINAGE PLAN
- 5 PLAN AND PROFILE STA. 0+00 TO STA. 11+42
- 6 PLAN AND PROFILE STA. 0+00 TO STA. 11+00
- 7 PLAN AND PROFILE STA. 11+00 TO STA. 21+50

PHASE II

- 8 WATER AND SEWER PLAN
- 9 PAVING, GRADING AND DRAINAGE PLAN
- 10 PLAN AND PROFILE STA. 11+42 TO STA. 25+92
- 11 PLAN AND PROFILE STA. 0+00 TO STA. 7+86 AND STA. 0+00/STA. 3+25
- 12 STANDARD WATER DETAILS
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- 14 STANDARD PAVING, GRADING AND DRAINAGE DETAILS
- 15 LIFT STATION DETAIL SHEET
- 16 UNIT ONE PLAT
- 17 CURVE DATA

REVISIONS

NO.	DATE	DESCRIPTION	APPR.
1	10-27-88	REVISED DWGS. PER C.C. ENG. & UTIL. DEPT.	JMc
2	11-10-88	REVISED DWGS. PER C.C. UTIL. DEPT.	JMc
3	12-15-88	REVISED TOP OF LAKE BANK #3	JMc
4	1-9-89	REVISIONS AS NOTED	JMc
5	1-19-89	CORRECT INVERTS JB. #2, HDWL. 7 & 15	JMc
6	7-21-89	AS BUILT SEWERS	JAD
7	10-17-89	AS BUILT ROAD ELEVATIONS, REF. E201	JAD
8	11-10-89	REVISE PUMPS/AS-BUILT PUMP RATE	JAD

RECORD DRAWINGS
FOR WATER TRANSMISSION/
DISTRIBUTION FACILITIES,
SANITARY SEWER AND
DRAINAGE FACILITIES

PROJECT No. 87.194
FILE No. 87.194
SHEET 1 OF 17

COASTAL ENGINEERING
CONSULTANTS, INC.
DEC 15 1989

NOTE:
1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC.,
GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

COASTAL ENGINEERING CONSULTANTS, INC.

COASTAL & CIVIL ENGINEERS * PLANNERS * SURVEYORS * GEOLOGISTS

3106 S. HORSESHOE DRIVE
NAPLES, FLORIDA 33942
JUNE 1988

Record Print

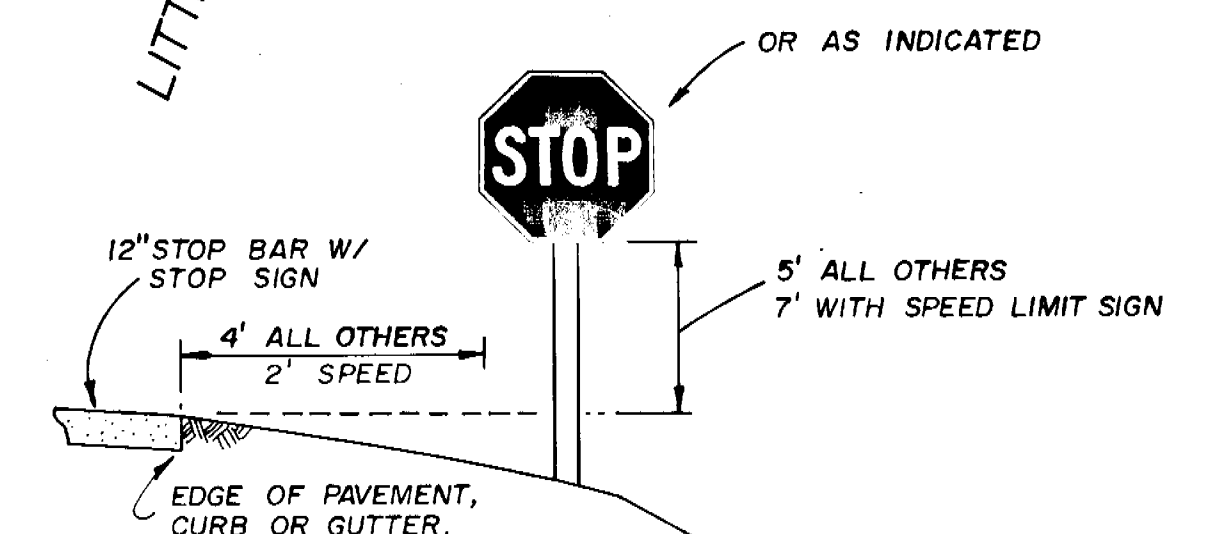
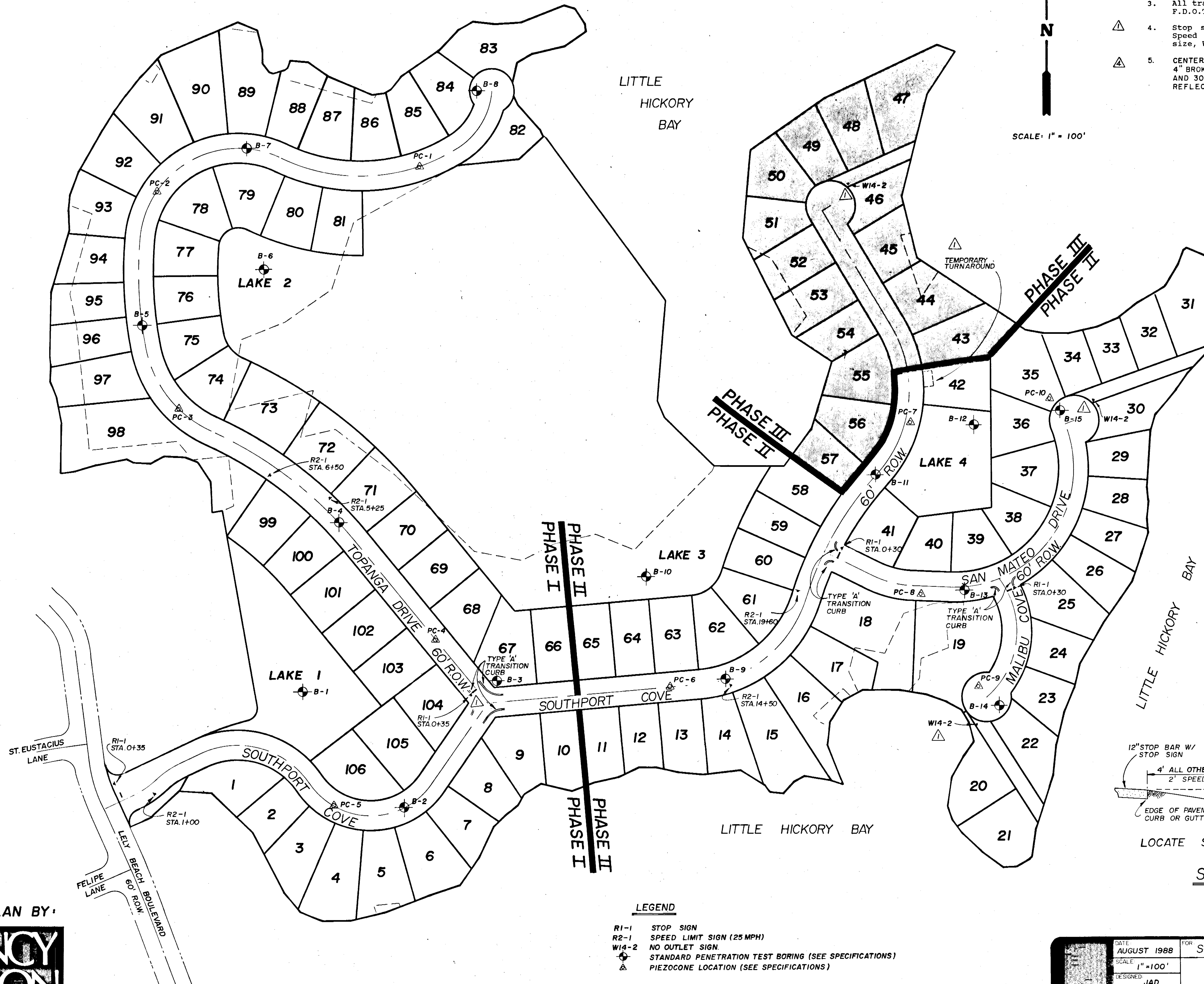
Date

NOTES:

- All stop bars shall be 24" wide and extend from the center line of the road to the edge of pavement.
- All traffic paint will conform to F.D.O.T. Spec. 971-12. All striping shall be thermoplastic.
- All traffic signs shall be installed according to the latest F.D.O.T. Manual on Uniform Traffic Control Devices.
- Stop signs shall be F.D.O.T. #R1-1, 24" x 24" in size. Speed limit signs shall be F.D.O.T. #R2-1, 24" x 30" in size, W14-2, 24" x 24".
- CENTER LINE STRIPING ALL PAVEMENT WITHIN THE 60' R/W AS FOLLOWS:
4" BROKEN YELLOW LINE, CENTER LINE OF ROADWAY, 10 FOOT SEGMENTS AND 30 FOOT GAPS WITH BI-DIRECTIONAL RAISED PAVEMENT MARKERS, REFLECTORIZED ON 40 FOOT CENTERS.

N

SCALE: 1" = 100'



LOCATE STOP SIGN ADJACENT TO THE STOP BAR

STOP SIGN DETAIL

N.T.S.

Record Print DEC 15 1989

LEGEND

- R1-1 STOP SIGN
- R2-1 SPEED LIMIT SIGN (25 MPH)
- W14-2 NO OUTLET SIGN
- STANDARD PENETRATION TEST BORING (SEE SPECIFICATIONS)
- PIEZOCONE LOCATION (SEE SPECIFICATIONS)

RECORD DRAWINGS
FOR WATER TRANSMISSION/
DISTRIBUTION FACILITIES,
SANITARY SEWER AND
DRAINAGE FACILITIES

NOTE:

- UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC., GENERAL CONTRACTOR APAC INC.
- RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

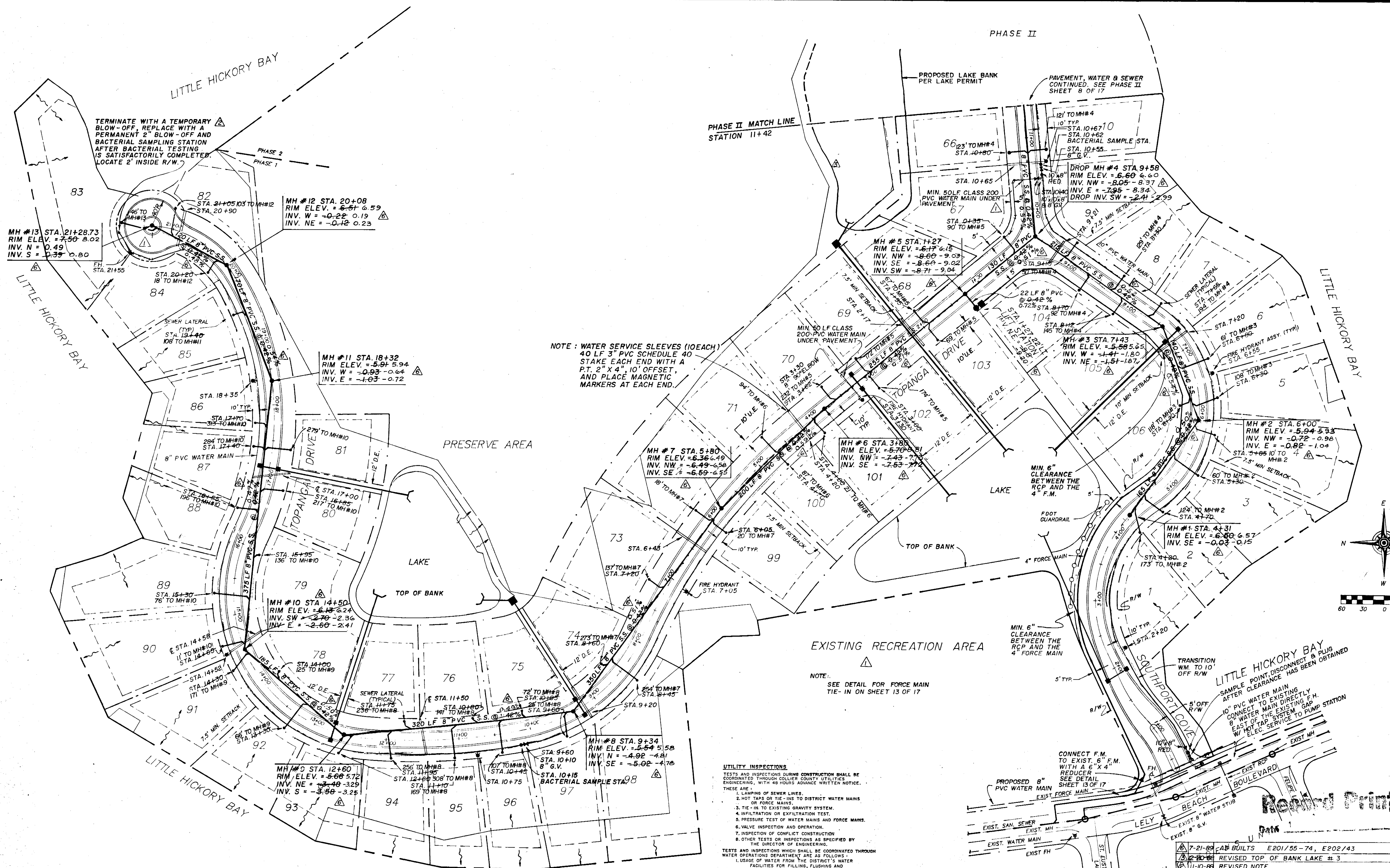
CONCEPT SITE PLAN BY:

QUINCY
JOHNSON
ASSOCIATES

DATE: AUGUST 1988	FOR: SOUTHPORT VENTURE ASSOCIATES
SCALE: 1" = 100'	
DESIGNED: JAD	
DRAWN: ACAD/RP	
CHECKED: JMC	
F.B. PG.	
PROJECT NO: 87.194	REFERENCE: 2 OF 17
FILE NO: 87.194	

MASTER SITE PLAN

COASTAL ENGINEERING CONSULTANTS, INC.
COASTAL & CIVIL ENGINEERS · PLANNERS · SURVEYORS · GEOLOGISTS · NAPLES, FLA.



NOTE: 1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC., GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

NOTE: The fire protection facilities shown on these plans were designed to function in accordance with local and federal standards. However, the design engineer does not warrant that the utility supplying water can provide adequate volume and pressure to meet the applicable local and national standards.

NOTE: Horizontal and vertical deflection of the water main shall not exceed the pipe manufacturer's specifications. Elbows shall be used where deflections may exceed the pipe manufacturer's specifications.

NOTE: Known existing utilities are shown in approximate locations. The contractor is responsible for coordinating the preconstruction utility locations with the respective utilities.

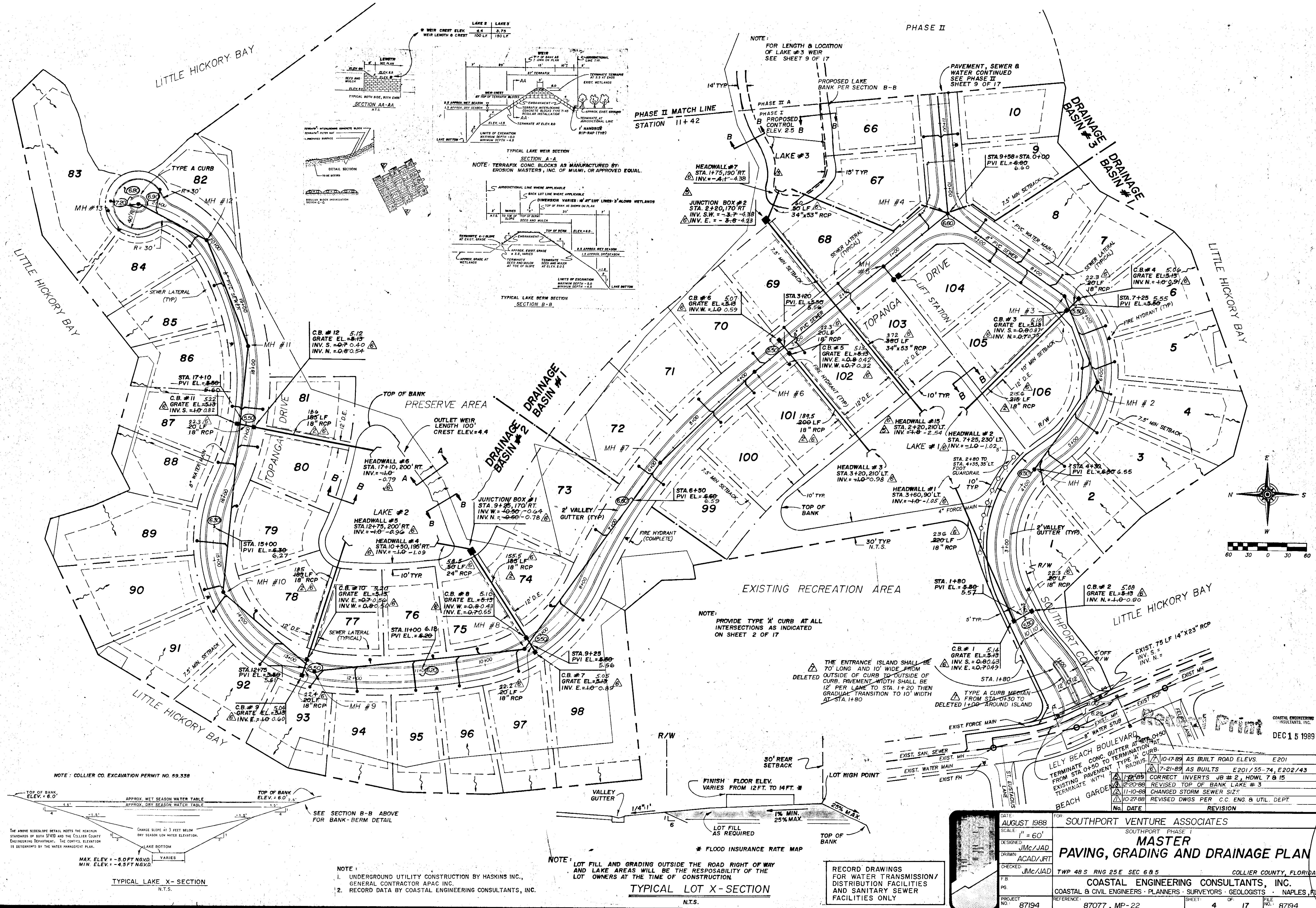
RECORD DRAWINGS FOR WATER TRANSMISSION/DISTRIBUTION FACILITIES AND SANITARY SEWER FACILITIES ONLY

NOTE: WATER SERVICE SLEEVES (10 EACH)
40 LF 3" PVC SCHEDULE 40
STAKE EACH END WITH A
P.T. 2" X 4", 10' OFFSET,
AND PLACE MAGNETIC
MARKERS AT EACH END.

UTILITY INSPECTIONS
TESTS AND INSPECTIONS DURING CONSTRUCTION SHALL BE COORDINATED THROUGH COLLIER COUNTY UTILITIES ENGINEERING, WITH 48 HOURS ADVANCE WRITTEN NOTICE. THESE ARE:
1. LAMPING OF SEWER LINES
2. HOT TAPS OR TIE-INS TO DISTRICT WATER MAINS OR FORCE MAINS
3. TIE-INS TO EXISTING GRAVITY SYSTEM
4. INFILTRATION OR EXFILTRATION TEST
5. PRESSURE TEST OF WATER MAINS AND FORCE MAINS
6. VALVE INSPECTION AND OPERATION
7. INSPECTION OF CONFLICT CONSTRUCTION
8. OTHER TESTS OR INSPECTIONS AS SPECIFIED BY THE DIRECTOR OF ENGINEERING
TESTS AND INSPECTIONS WHICH SHALL BE COORDINATED THROUGH WATER OPERATIONS DEPARTMENT ARE AS FOLLOWS:
1. USAGE OF WATER FROM THE DISTRICT'S WATER FACILITIES FOR FILLING, FLUSHING AND TESTING PURPOSES. PRIOR APPROVAL OF TIME AND METHOD OF USAGE IS MANDATORY.
2. FLUSHING, USING APPROPRIATE METHODS AND MATERIALS FOR ALL WATER MAINS
3. BACTERIOLOGICAL SAMPLING OF WATER MAINS

NOTE: SEE DETAIL FOR FORCE MAIN TIE-IN ON SHEET 13 OF 17

DATE AUGUST 1988		FOR SOUTHPORT VENTURE ASSOCIATES	
SCALE 1" = 60'		SOUTHPORT PHASE I	
DESIGNED JMC/JAD		MASTER WATER AND SEWER PLAN	
DRAWN ACAD/JRT		COASTAL ENGINEERING CONSULTANTS, INC.	
CHECKED JMC/JAD		COASTAL & CIVIL ENGINEERS - PLANNERS - SURVEYORS - GEOLOGISTS - NAPLES, FLA.	
PROJECT NO. 87194		REFERENCE 87077, MP-22	
SHEET 3		OF 17	
FILE NO. 87194		DATE 8/21/88	
REVISION 1		DATE 8/21/88	
REVISION 2		DATE 9/10/88	
REVISION 3		DATE 10/27/88	
REVISION 4		DATE 11/10/88	
REVISION 5		DATE 12/15/88	



DATE	AUGUST 1988	FOR	SOUTHPORT VENTURE ASSOCIATES
SCALE	1" = 60'	DESIGNED	JMC/JAD
		DRAWN	ACAD/JRT
		CHECKED	JMC/JAD
F.B.			
PROJECT NO.	87194	REFERENCE	87077, MP-22
		SHEET	4 OF 17
		FILE NO.	87194

REVISION	DATE	DESCRIPTION
1	7-21-89	AS BUILT ROAD ELEV. E201
2	7-21-89	AS BUILT E201/55-74, E202/43
3	12-20-88	CORRECT INVERTS JB #2, HDWL 7 & 15
4	11-10-88	REVISED TOP OF BANK LAKE #3
5	10-27-88	CHANGED STORM SEWER SIZE
6		REVISED DWGS PER C.C. ENG. & UTIL. DEPT.

REVISION	DATE	DESCRIPTION
1	10-17-89	AS BUILT ROAD ELEV. E201
2	7-21-89	AS BUILT E201/55-74, E202/43
3	12-20-88	CORRECT INVERTS JB #2, HDWL 7 & 15
4	11-10-88	REVISED TOP OF BANK LAKE #3
5	10-27-88	CHANGED STORM SEWER SIZE
6		REVISED DWGS PER C.C. ENG. & UTIL. DEPT.

NOTE: LOT FILL AND GRADING OUTSIDE THE ROAD RIGHT OF WAY AND LAKE AREAS WILL BE THE RESPONSIBILITY OF THE LOT OWNERS AT THE TIME OF CONSTRUCTION.

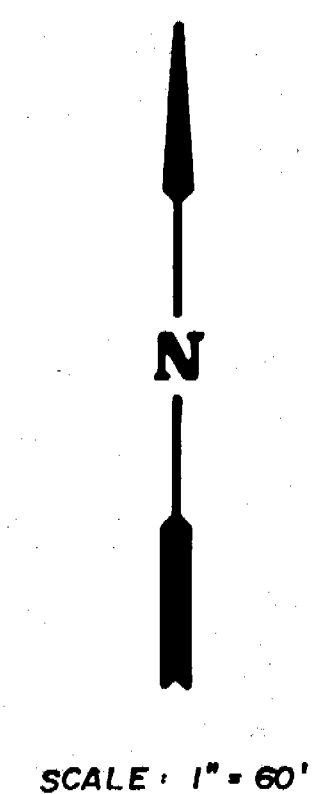
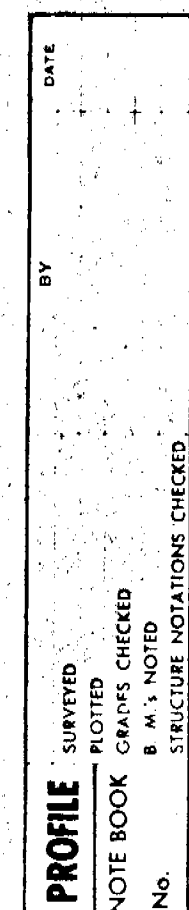
TYPICAL LOT X-SECTION

N.T.S.

NOTE: 1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC., GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

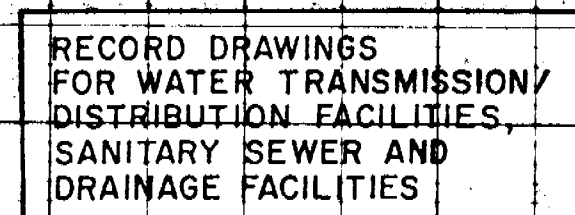
RECORD DRAWINGS FOR WATER TRANSMISSION/DISTRIBUTION FACILITIES AND SANITARY SEWER FACILITIES ONLY

COASTAL ENGINEERING CONSULTANTS, INC.
DECEMBER 15 1988



NOTE: FOR HORIZONTAL AS-BUILT SEWER LATERAL
LOCATION SEE SHEET 3 OF 17

NOTE: Horizontal and vertical deflection of the water main shall not exceed the pipe manufacturer's specifications. Elbows shall be used where deflections may exceed the pipe manufacturer's specifications.

[illegible]

COASTAL ENGINEERING⁻²
CONSULTANTS, INC.

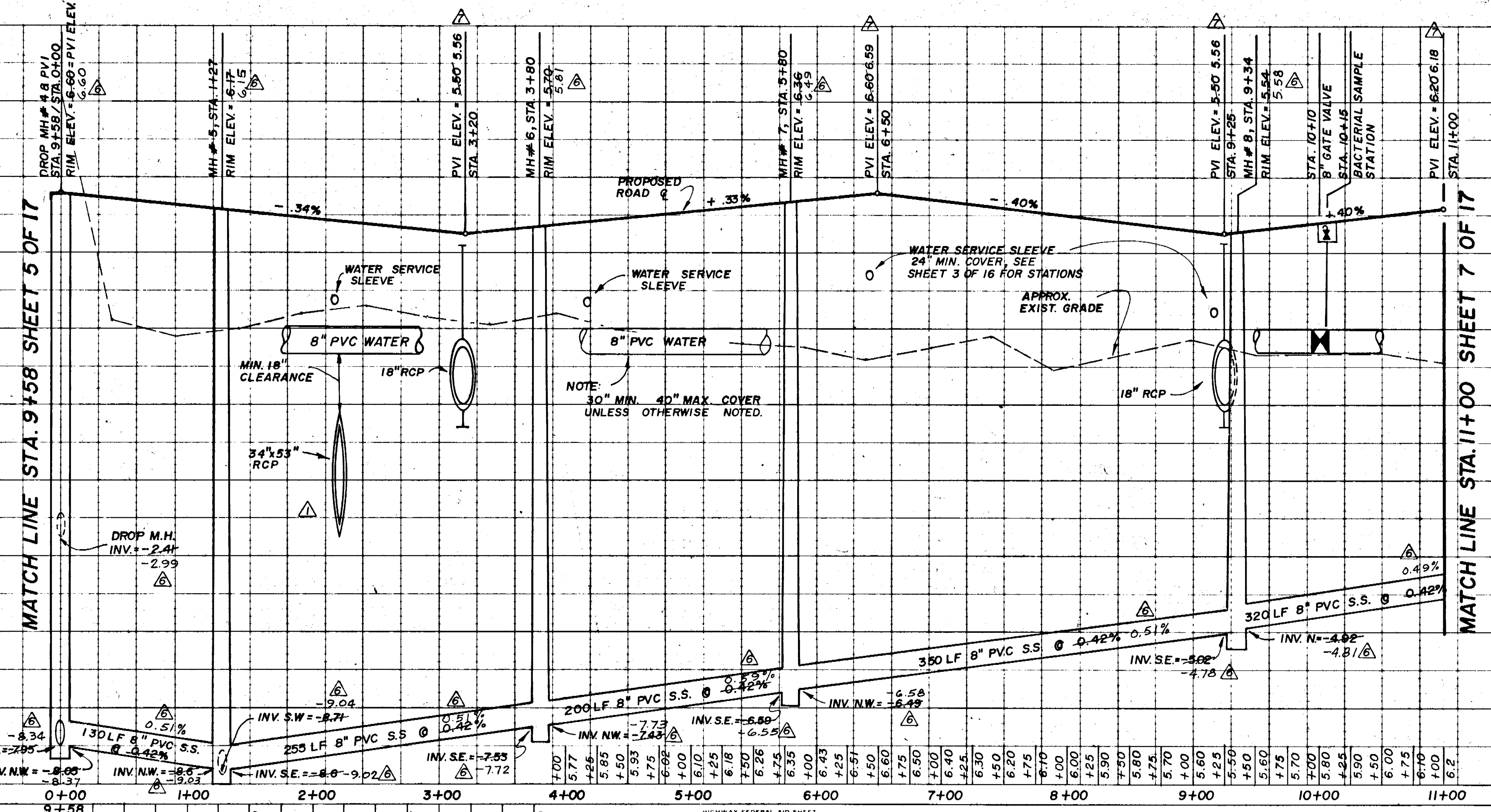
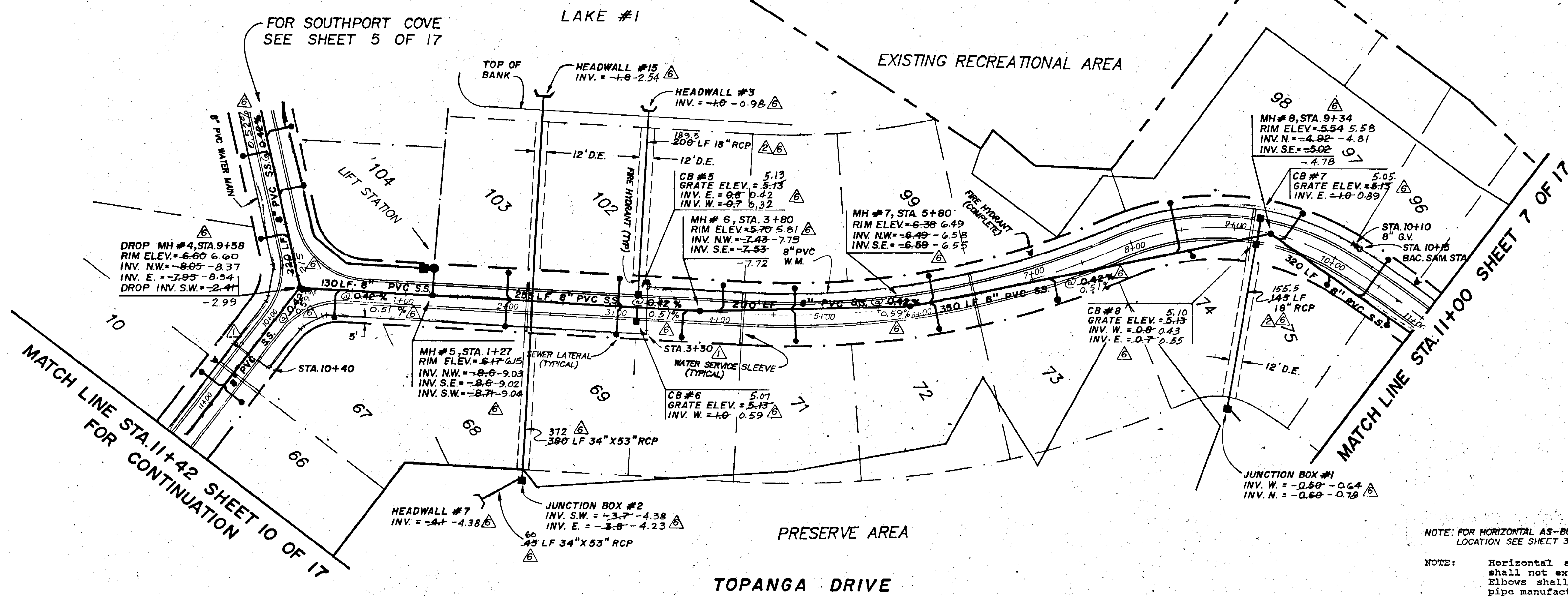
DEC 15 1989

7/10/88	AS-BUILTS ROAD ELEV		
7-21-89	AS BUILTS	E 201/55-74	E 202/43
11-10-88	CHANGED STORM SEWER SIZE		
10-27-88	REVISED DWGS. PER C.C. ENG. & UTIL. DEPT.		
No.	DATE	REVISION	

TITLE				WATER & SEWER PROFILE				PHASE I			
DATE: AUG 1988		LOCATION:		STA. 0+00 TO STA. 11+42 - SOUTHPORT COW							
DRAWN: RP		HORIZONTAL SCALE:		1" = 60'				F.B.			
CHECKED: JMc/JAD		VERTICAL SCALE:		1" = 2'				P.G.			
COASTAL ENGINEERING CONSULTANTS, INC.											
COASTAL & CIVIL ENGINEERS - PLANNERS - SURVEYORS - GEOLOGISTS - NAPLES, FL											
PROJECT No.		87.194		SHEET		5		OF		17	
FILE No.		87.194		FILE No.		87.194		FILE No.		87.194	

PLAN
DATE
BY
REVISION
NOTE BOOK
ALIGNMENT CHECKED
BY
DATE

PROFILE
DATE
BY
REVISION
NOTE BOOK
GRADES CHECKED
BY
DATE

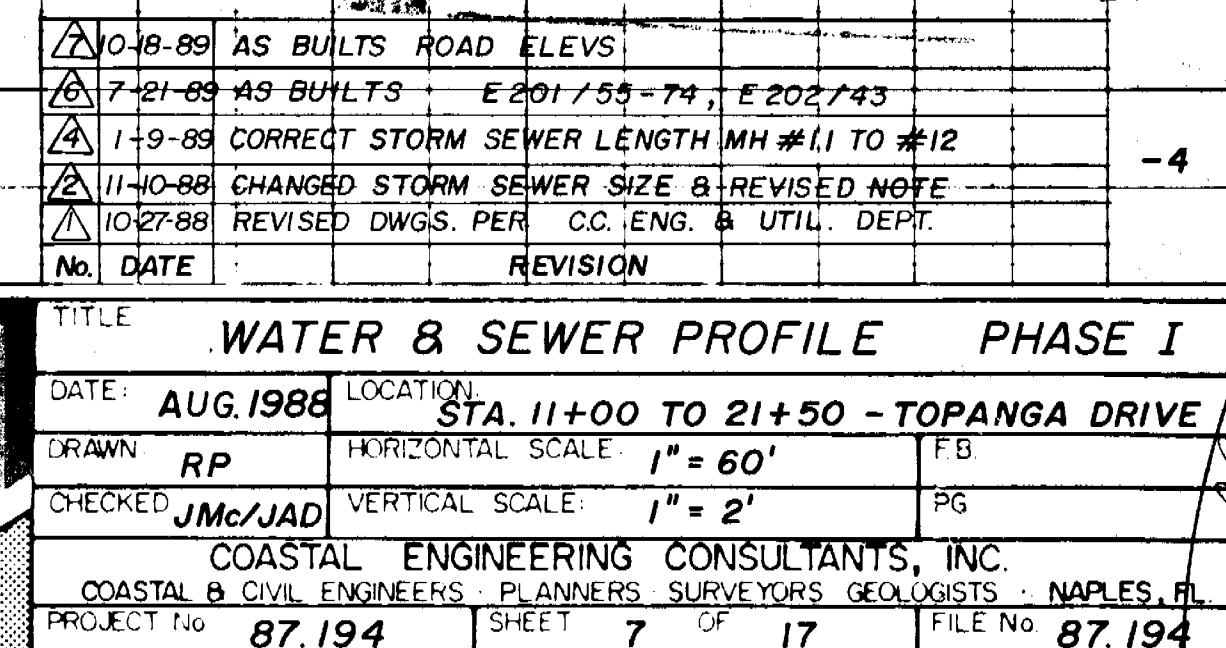


RECORD DRAWINGS
FOR WATER TRANSMISSION/
DISTRIBUTION FACILITIES,
SANITARY SEWER AND
DRAINAGE FACILITIES

Record Print

DATA			
10-8-89	AS BUILT	ROAD ELEV.	
7-21-88	AS BUILT	E201/55-74, E202/43	
11-10-88	CHANGED	STORM SEWER SIZE	
10-27-88	REVISED	DWGS PER C.C. ENG. & UTIL. DEPT.	
No.	DATE	REVISION	

PROFILE SURVEYED _____ BY _____ DATE _____
 PLOTTED _____
 NOTE BOOK GRAPHS CHECKED _____
 No. B M NOTED _____



RECORD DRAWINGS
FOR WATER TRANSMISSION/
DISTRIBUTION FACILITIES,
SANITARY SEWER AND
DRAINAGE FACILITIES

SEE GRADES ON THE
DRAINAGE PLAN FOR
THE CUL-DE-SAC

SEE PAVING & DRAINAGE DETAIL
SHEET 14 FOR SECTION C-C

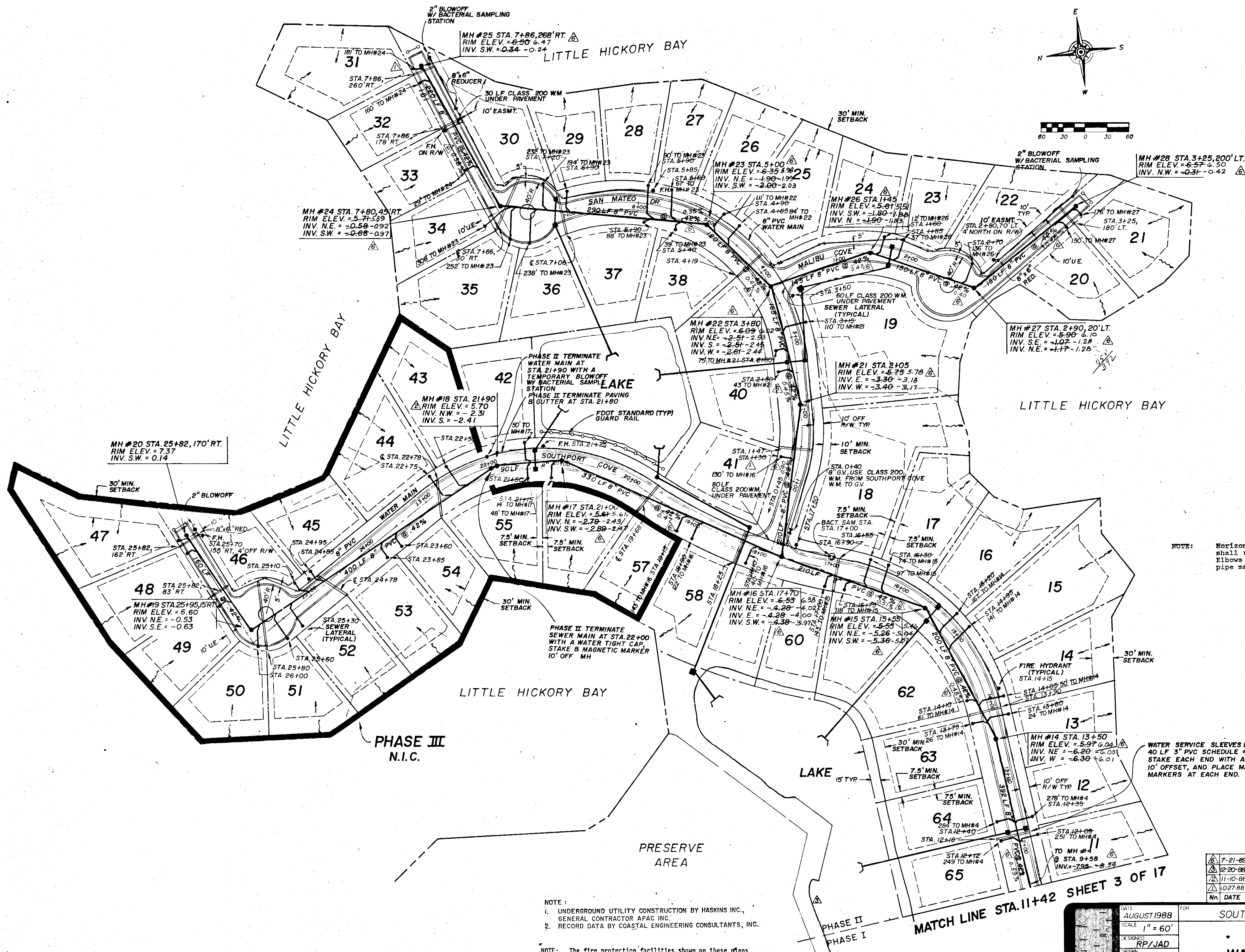
NOTE: FOR HORIZONTAL AS-BUILT SEWER LATERAL
LOCATION SEE SHEET 3 OF 17

NOTE: Horizontal and vertical deflection of the water main shall not exceed the pipe manufacturer's specifications. Elbows shall be used where deflections may exceed the pipe manufacturer's specifications.

PRESERVE AREA

TOPANGA DRIVE

PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE



- UTILITY INSPECTIONS.**
- TESTS AND INSPECTIONS DURING CONSTRUCTION SHALL BE COORDINATED THROUGH COLLIER COUNTY UTILITIES ENGINEERING, WITH 48 HOURS ADVANCE WRITTEN NOTICE. THESE ARE:
1. LAMPING OF SEWER LINES.
 2. HOT TAPS OR TIE-INS TO DISTRICT WATER MAINS OR FORCE MAINS.
 3. TIE-INS TO EXISTING GRAVITY SYSTEM.
 4. INFILTRATION OR EXFILTRATION TEST.
 5. PRESSURE TEST OF WATER MAINS AND FORCE MAINS.
 6. VALVE INSPECTION AND OPERATION.
 7. INSPECTION OF CONFLICT CONSTRUCTION.
 8. OTHER TESTS OR INSPECTIONS AS SPECIFIED BY THE DIRECTOR OF ENGINEERING.
- TESTS AND INSPECTIONS WHICH SHALL BE COORDINATED THROUGH WATER OPERATIONS DEPARTMENT ARE AS FOLLOWS:
1. USAGE OF WATER FROM THE DISTRICT'S WATER FACILITIES FOR FILLING, FLUSHING AND TESTING PURPOSES. PRIOR APPROVAL OF TIME AND METHOD OF USAGE IS MANDATORY.
 2. FLUSHING, USING APPROPRIATE METHODS AND MATERIALS FOR ALL WATER MAINS.
 3. BACTERIOLOGICAL SAMPLING OF WATER MAINS.

NOTE: Horizontal and vertical deflection of the water main shall not exceed the pipe manufacturer's specifications. Elbows shall be used where deflections may exceed the pipe manufacturer's specifications.

WATER SERVICE SLEEVES (17 EACH) APPROX.
40 LF 3" PVC SCHEDULE 40
STAKE EACH END WITH A PT. 2"x4",
10' OFFSET, AND PLACE MAGNETIC
MARKERS AT EACH END.

Record Print

COASTAL ENGINEERING
CONSULTANTS, INC.

DEC 15 1989

No.	DATE	REVISION
1	7-21-88	AS BUILT E 201/55-74, E 202/43
2	12-20-88	REVISED TOP OF BANK LAKE # 3
3	11-10-88	CHANGED RIM EL. OF MH #18
4	10-27-88	REVISED DWGS PER CC. ENG. & UTIL. DEPT.

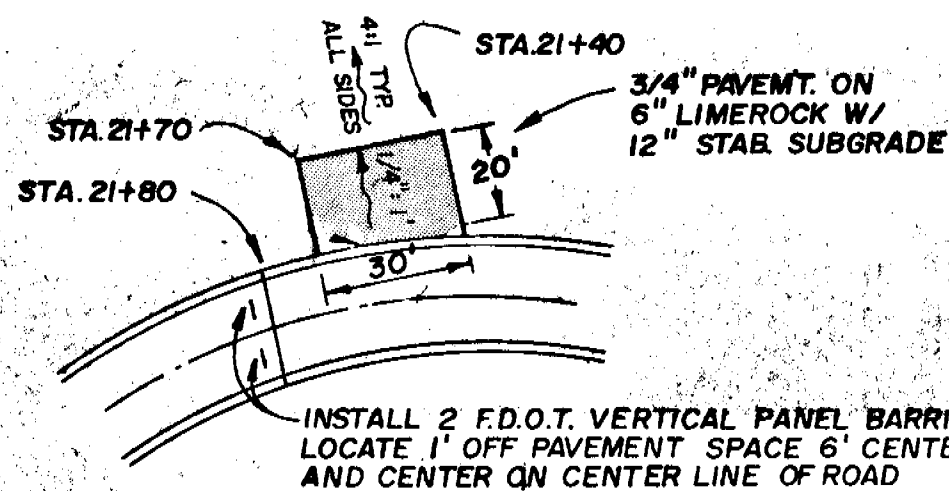
MATCH LINE STA. 11+42 SHEET 3 OF 17

- NOTE:**
1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC., GENERAL CONTRACTOR APAC INC.
 2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

NOTE: The fire protection facilities shown on these plans were designed to function in accordance with local and federal standards. However, the design engineer does not warrant that the utility supplying water can provide adequate volume and pressure to meet the applicable local and national standards.

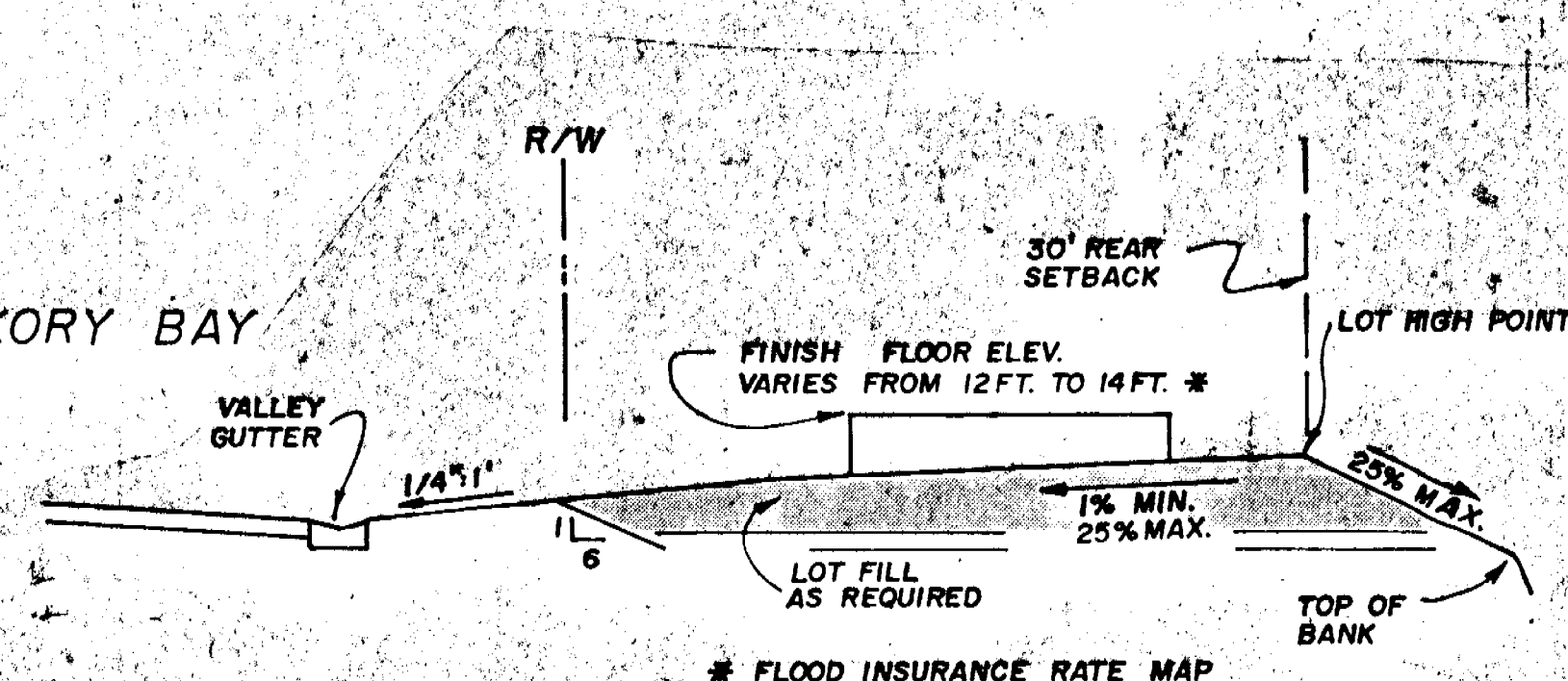
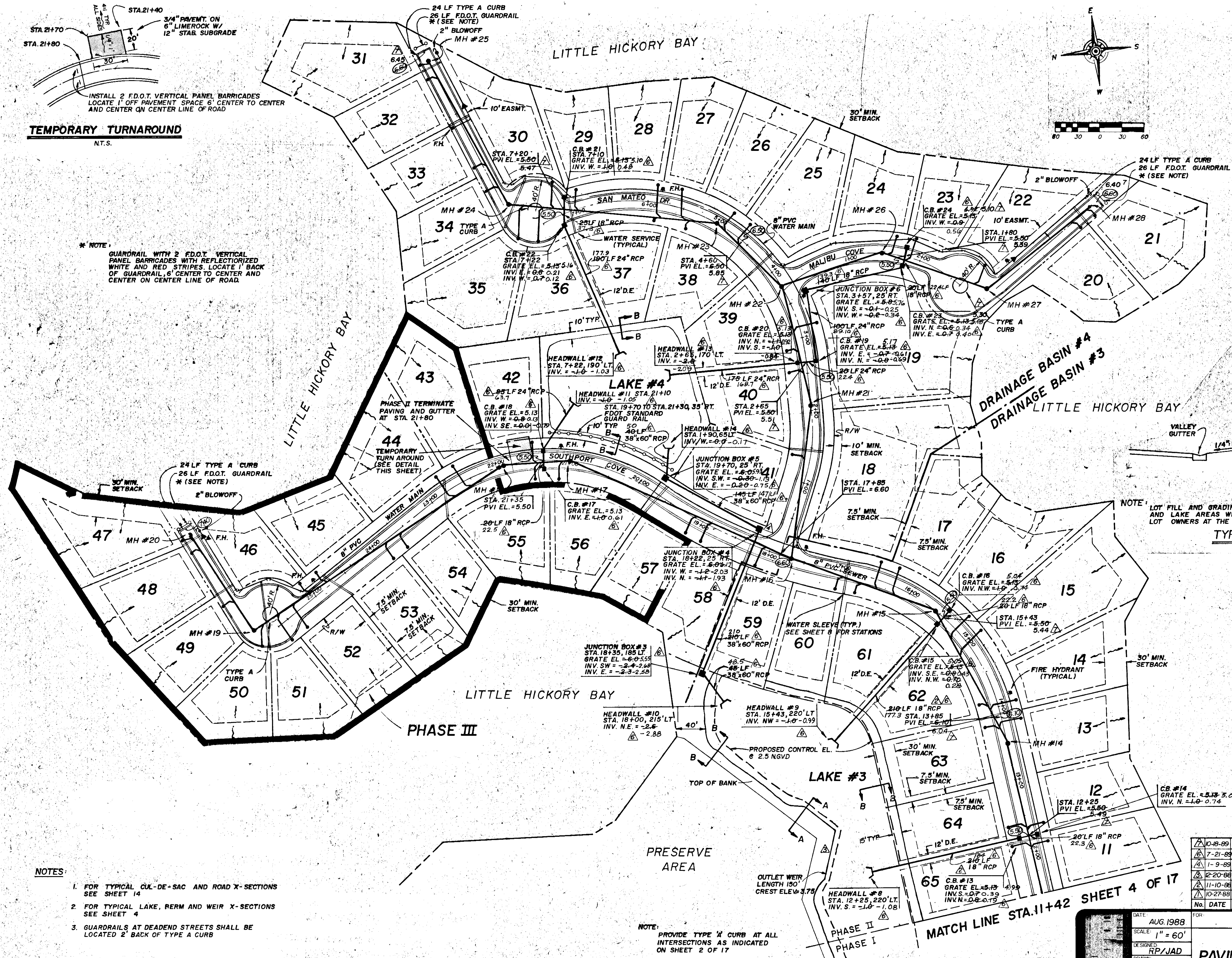
RECORD DRAWINGS
FOR WATER TRANSMISSION/
DISTRIBUTION FACILITIES,
SANITARY SEWER AND
DRAINAGE FACILITIES

DATE	AUGUST 1988	FOR	SOUTHPORT VENTURE ASSOCIATES
SCALE	1" = 60'		SOUTHPORT PHASE II
DESIGNED	RP/JAD		MASTER
DRAWN	RP		WATER AND SEWER PLAN
CHECKED	JMc	TWP 48 S RNG 25 E SEC 6 & 5	COLLIER COUNTY, FLORIDA
PG			COASTAL ENGINEERING CONSULTANTS, INC.
PROJECT	87.194	REFERENCE	87.077, MP 22
SHEET	8	OF	17
FILE		NO.	87.194



TEMPORARY TURNAROUND
N.T.S.

* NOTE:
GUARDRAIL WITH 2 F.D.O.T. VERTICAL PANEL BARRICADES WITH REFLECTORIZED WHITE AND RED STRIPES LOCATE 1' BACK OF GUARDRAIL, 6' CENTER TO CENTER AND CENTER ON CENTER LINE OF ROAD.



NOTE: LOT FILL AND GRADING OUTSIDE THE ROAD RIGHT OF WAY AND LAKE AREAS WILL BE THE RESPONSIBILITY OF THE LOT OWNERS AT THE TIME OF CONSTRUCTION.
TYPICAL LOT X-SECTION
N.T.S.

- NOTES:**
1. FOR TYPICAL CUL-DE-SAC AND ROAD X-SECTIONS SEE SHEET 14
 2. FOR TYPICAL LAKE, BERM AND WEIR X-SECTIONS SEE SHEET 4
 3. GUARDRAILS AT DEADEND STREETS SHALL BE LOCATED 2' BACK OF TYPE A CURB

* NOTE:
1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC.
GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

NOTE: PROVIDE TYPE A CURB AT ALL INTERSECTIONS AS INDICATED ON SHEET 2 OF 17

RECORD-DRAWINGS FOR WATER TRANSMISSION/DISTRIBUTION FACILITIES, SANITARY SEWER AND DRAINAGE FACILITIES

DATE	AUG. 1988
SCALE	1" = 60'
DESIGNED	RP/JAD
DRAWN	RP
CHECKED	JMc
P.B.	
PROJECT NO.	87.194

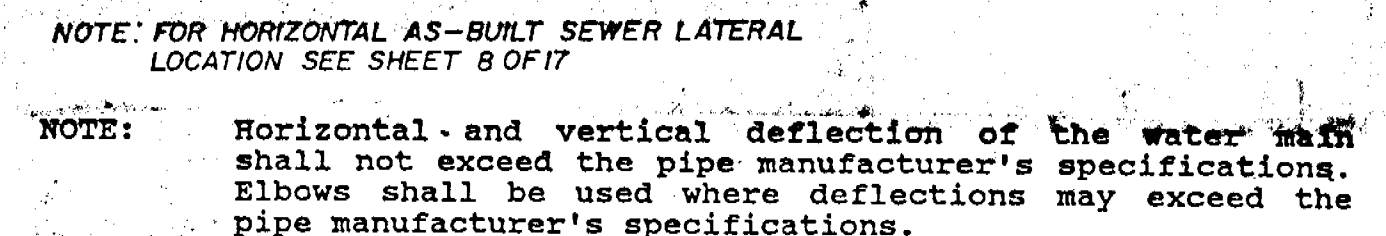
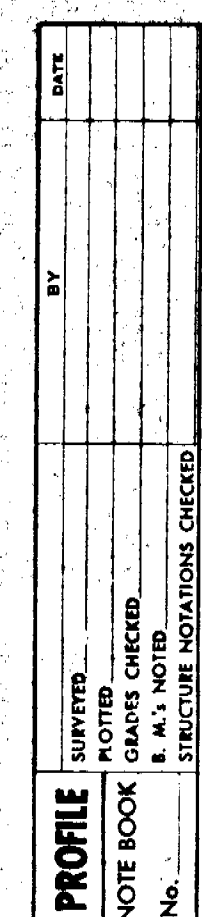
NO.	DATE	REVISION
10-18-89	AS BUILT ROAD ELEVATIONS	DEC 15 1989
7-21-89	AS BUILT E 201/55-74, E 202/43	
1-9-88	DELETED VALLEY GUTTER AT INTERSECTION	
12-20-88	REVISED TOP OF BANK LAKE #3	
11-10-88	CHANGED STORM SEWER SIZE	
10-27-88	REVISED DWGS PER C.C. ENG. & UTIL. DEPT.	

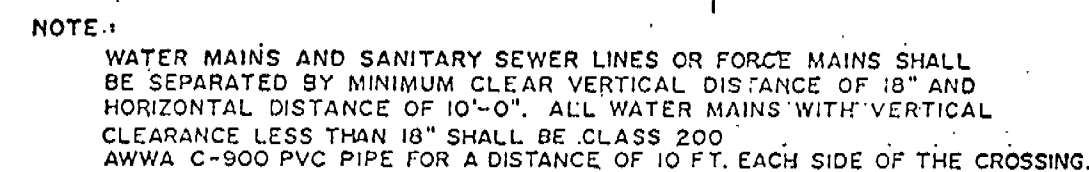
DATE	AUG. 1988
FOR	SOUTHPORT VENTURE ASSOCIATES
SCALE	1" = 60'
DESIGNED	RP/JAD
DRAWN	RP
CHECKED	JMc
P.B.	
PROJECT NO.	87.194

DATE	AUG. 1988
FOR	SOUTHPORT VENTURE ASSOCIATES
SCALE	1" = 60'
DESIGNED	RP/JAD
DRAWN	RP
CHECKED	JMc
P.B.	
PROJECT NO.	87.194

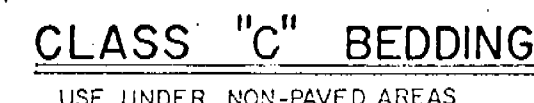
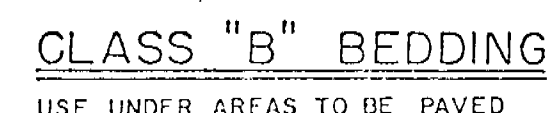
Record Print

DATE: AUG. 1988
SCALE: 1" = 60'
DESIGNED: RP/JAD
DRAWN: RP
CHECKED: JMc
P.B.:
PROJECT NO.: 87.194
REFERENCE: 87.077, MP 22
SHEET: 9 OF 17
FILE NO.: 87.194





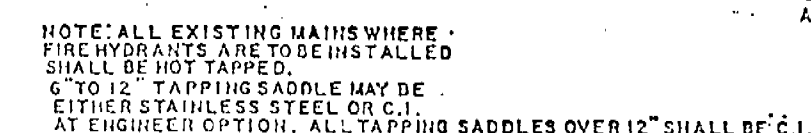
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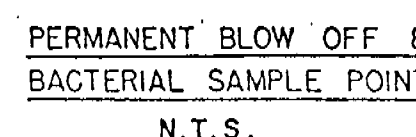
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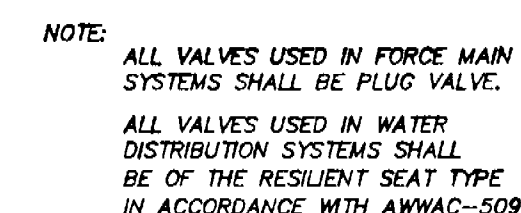
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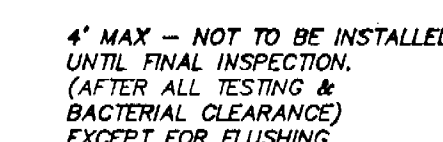
NTS



NTS



TYPICAL VALVE SETTING



- NOTE: 1. ALL NEW PIPING TO BE PROPERLY RESTRAINED TO PERMANENT BLOW OFF.
2. FINAL CONNECTION TO BE WITNESSED BY COLLIER COUNTY UTILITIES DIVISION.
3. INSTALL JUMPER TAP ON NEW SYSTEM FOR TEMPORARY METER DOWNSTREAM OF BLIND FLANGE FOR CONSTRUCTION WATER AFTER SYSTEM HAS BEEN SATISFACTORILY CLEARED.
4. 6" TO 12" TAPPING SADDLE MAY BE EITHER STAINLESS STEEL OR C.I. AT ENGINEER OPTION. ALL TAPPING SADDLES OVER 12" SHALL BE C.I.

NTS

Record Print

**COASTAL ENGINEERING
CONSULTANTS, INC.**

DEC 15 1989

8	FOR:	SOUTHPORT VENTURE ASSOCIATES
---	------	------------------------------

SOUTHPORT ON THE BAY

8 S RNG 25 E SEC 5 & 6 COLLIER COUNTY, FLORIDA

COASTAL ENGINEERING CONSULTANTS, INC.

MECHANICAL ENGINEERS · ELECTRICAL ENGINEERS · PLANNERS · SURVEYORS · GEOLOGISTS · NAPLES, FL

SHEET: 12	OF: 17	FILE NO.: 87 194
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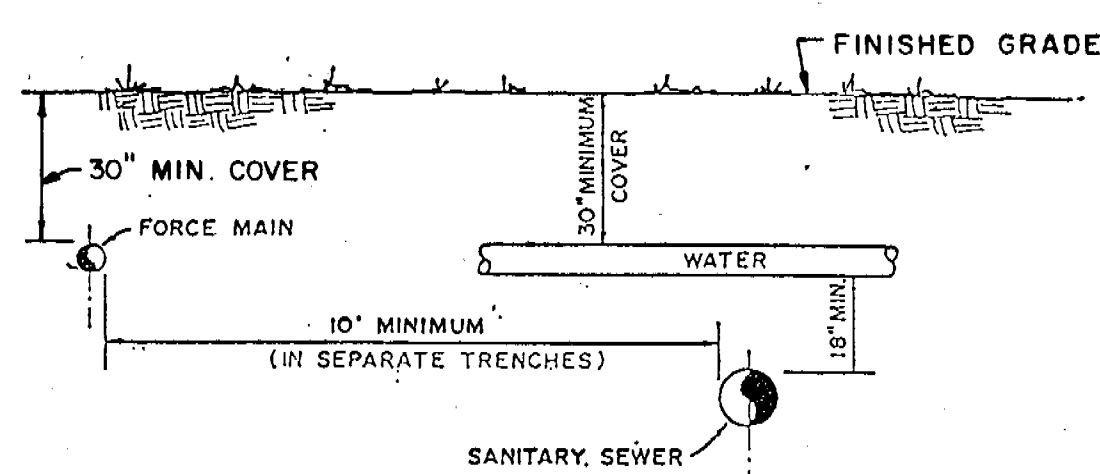
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RECORD DRAWINGS
FOR WATER TRANSMISSION/
DISTRIBUTION FACILITIES,
SANITARY SEWER AND
DRAINAGE FACILITIES

NOTE: The fire protection facilities shown on these plans were designed to function in accordance with local and federal standards. However, the design engineer does not warrant that the utility supplying water can provide adequate volume and pressure to meet the applicable local and national standards.

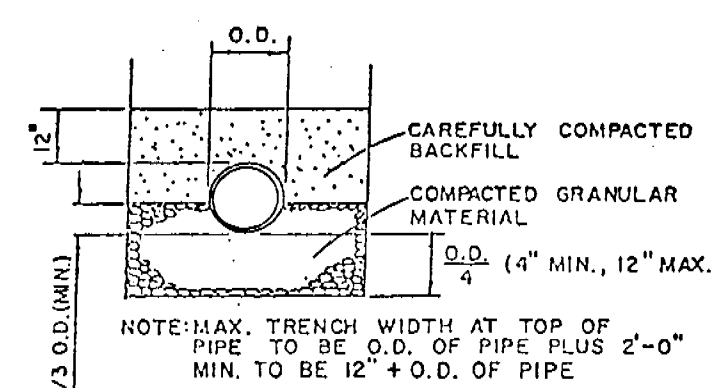
NOTE :

1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC.,
GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

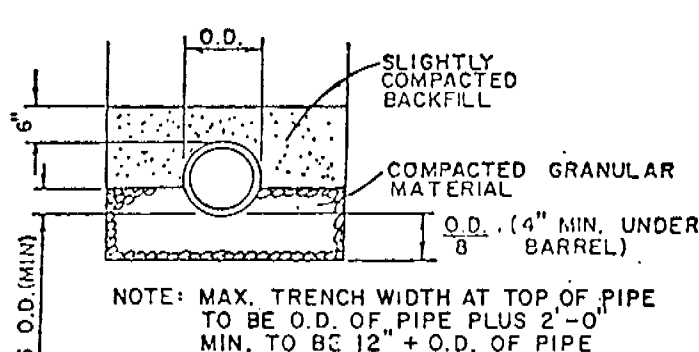


NOTE: WATER MAINS AND SANITARY SEWER LINES OR FORCE MAINS SHALL BE SEPARATED BY MINIMUM CLEAR VERTICAL DISTANCE OF 18" AND HORIZONTAL DISTANCE OF 10'-0". ALL WATER MAINS WITH VERTICAL CLEARANCE LESS THAN 18" SHALL BE CLASS 200 AWWA C-900 PVC PIPE FOR A DISTANCE OF 10 FT. EACH SIDE OF THE CROSSING.

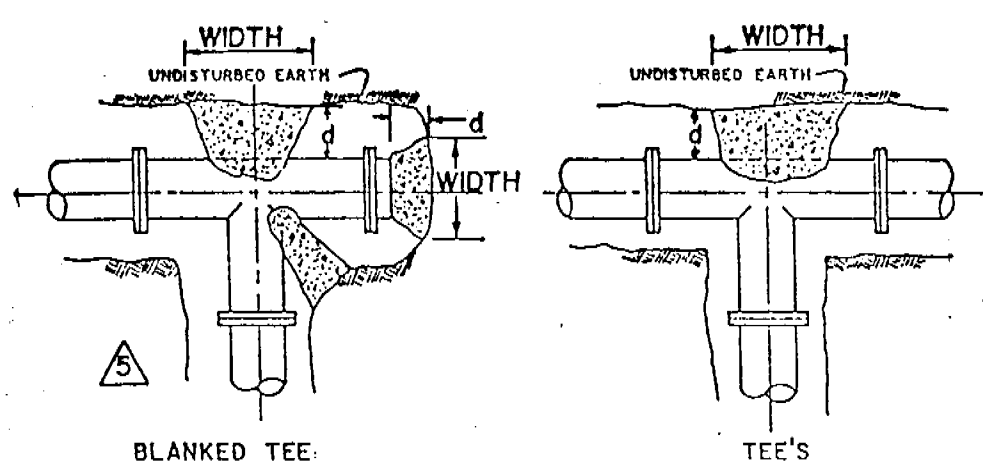
WATER & SEWER SEPARATION DETAIL
N.T.S.



CLASS "B" BEDDING
USE UNDER AREAS TO BE PAVED



CLASS "C" BEDDING
USE UNDER NON-PAVED AREAS
TRENCH AND BEDDING DETAILS
N.T.S.

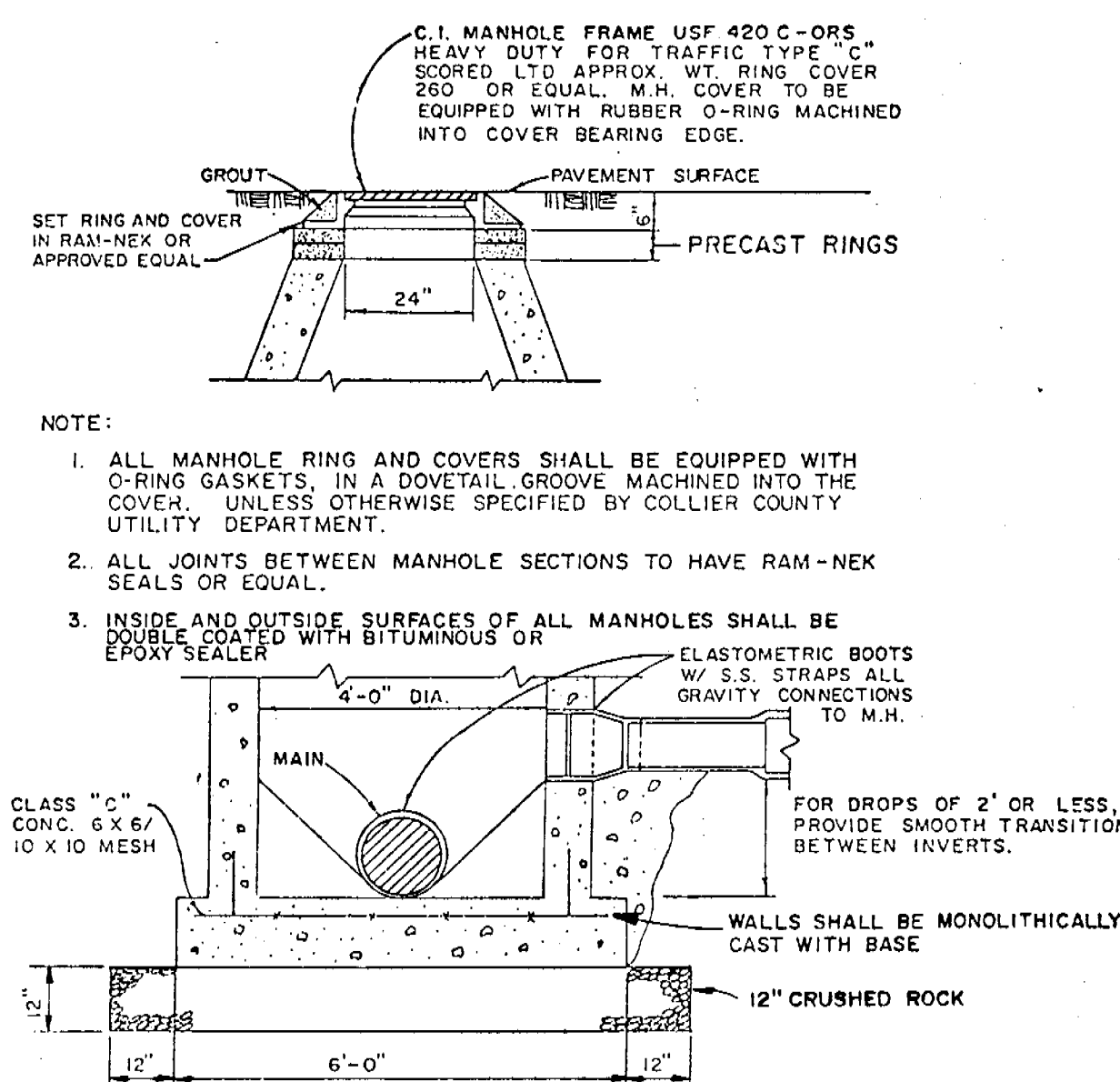


THRUST BLOCK SCHEDULE

PIPE SIZE	90° BEND	45° BEND	TEE OR DEAD END	MIN. DEPTH, IN INCHES
4" or less	1.5	1.0	1.5	12
6"	2.0	1.5	2.0	18
8"	2.5	2.0	2.5	24
12"	3.0	2.5	3.0	30

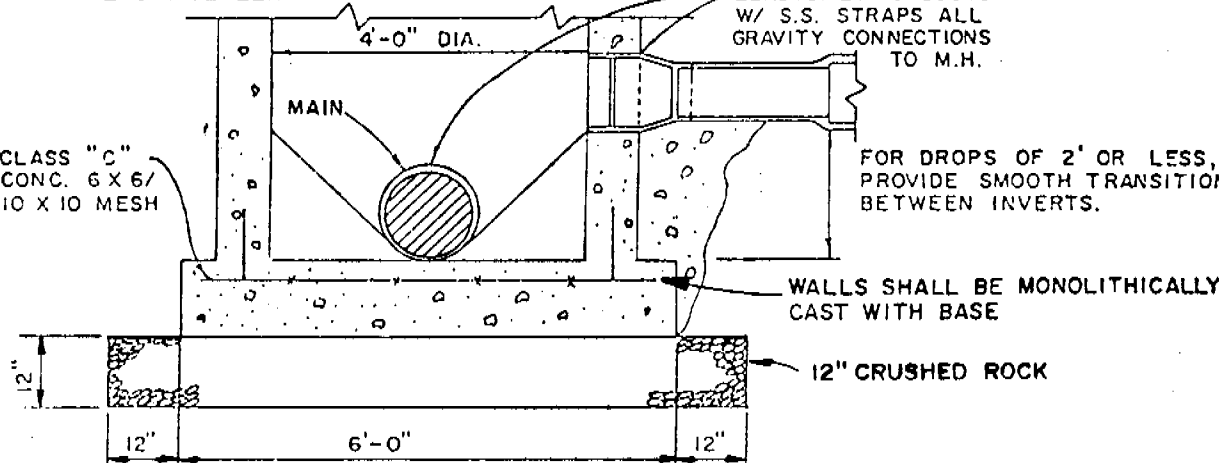
NOTE: 1. Based on a thrust block bearing against undisturbed soil having a bearing value of 3,000 lbs./sq. ft. and a line pressure of 150 lbs./sq. inch.
2. The bearing area of the thrust block against the wall shall be square in shape, with the width equal to the square root of the minimum bearing area listed above.
3. The length of the bearing area along the pipe shall in no case be less than two-thirds of the width as determined above.

THRUST BLOCK DETAILS
N.T.S.

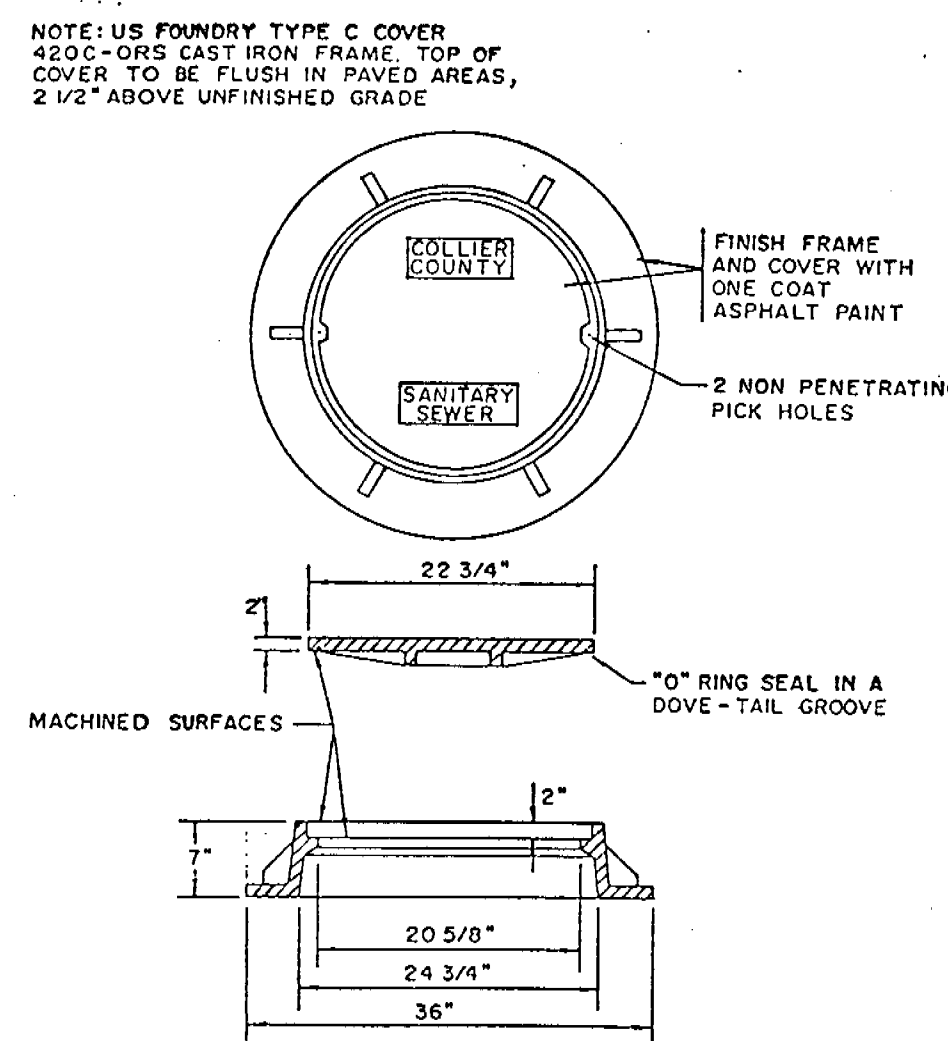


NOTE:

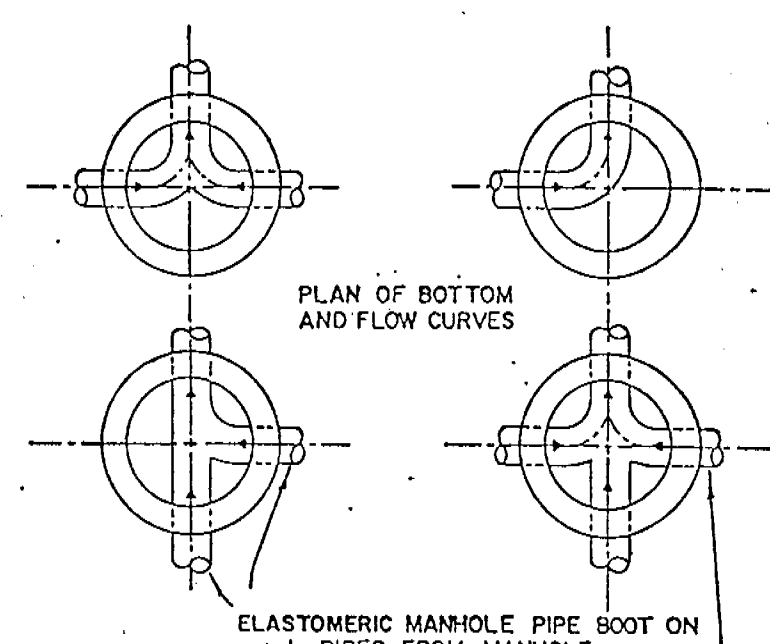
1. ALL MANHOLE RING AND COVERS SHALL BE EQUIPPED WITH O-RING GASKETS, IN A DOVETAIL GROOVE MACHINED INTO THE COVER, UNLESS OTHERWISE SPECIFIED BY COLLIER COUNTY UTILITY DEPARTMENT.
2. ALL JOINTS BETWEEN MANHOLE SECTIONS TO HAVE RAM-NEK SEALS OR EQUAL.
3. INSIDE AND OUTSIDE SURFACES OF ALL MANHOLES SHALL BE DOUBLE COATED WITH BITUMINOUS OR EPOXY SEALER.



STANDARD MANHOLE & COVER DETAIL
FOR ALL MANHOLES LOCATED IN STREET
N.T.S.



STANDARD MANHOLE COVER DETAIL
N.T.S.

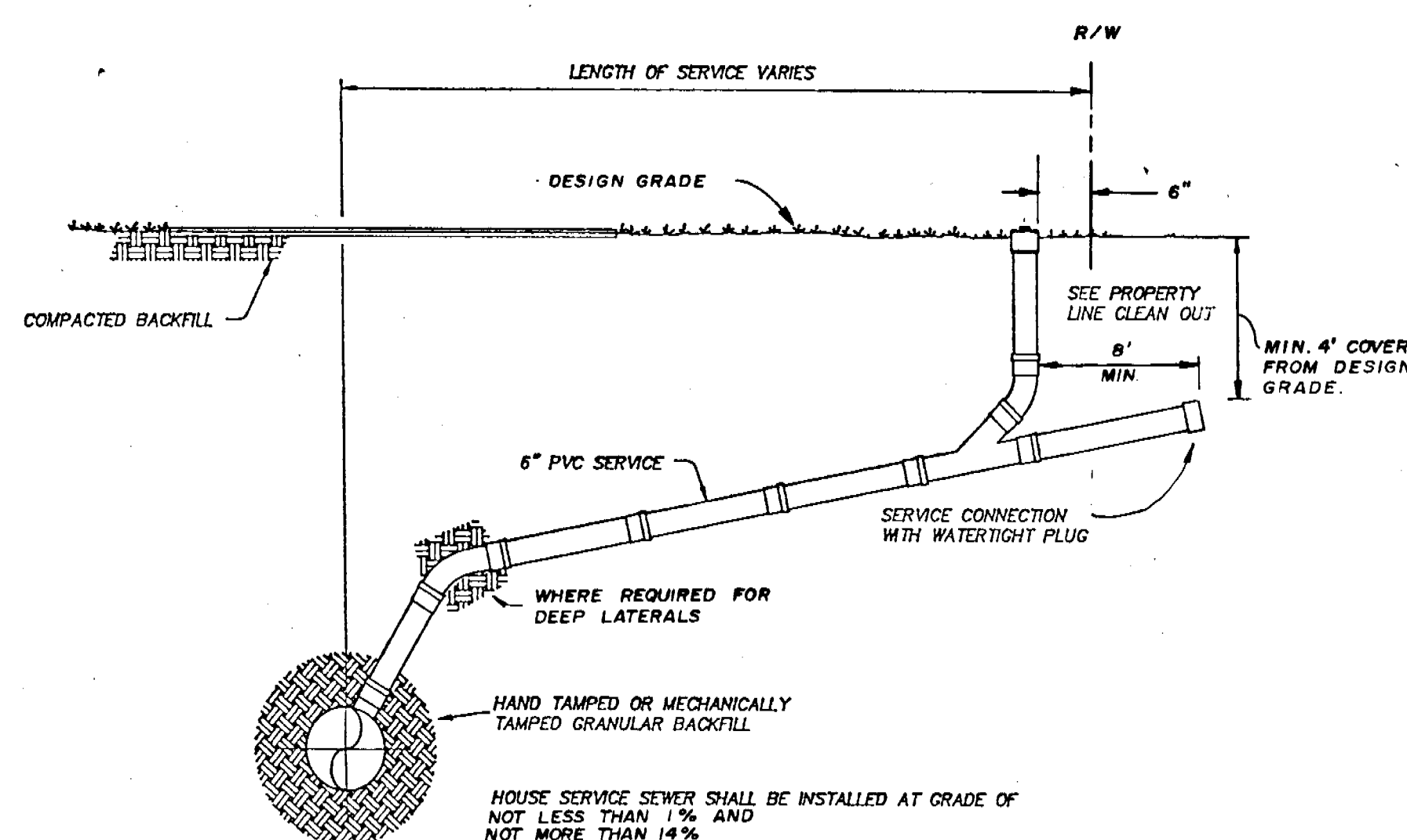


NOTES:

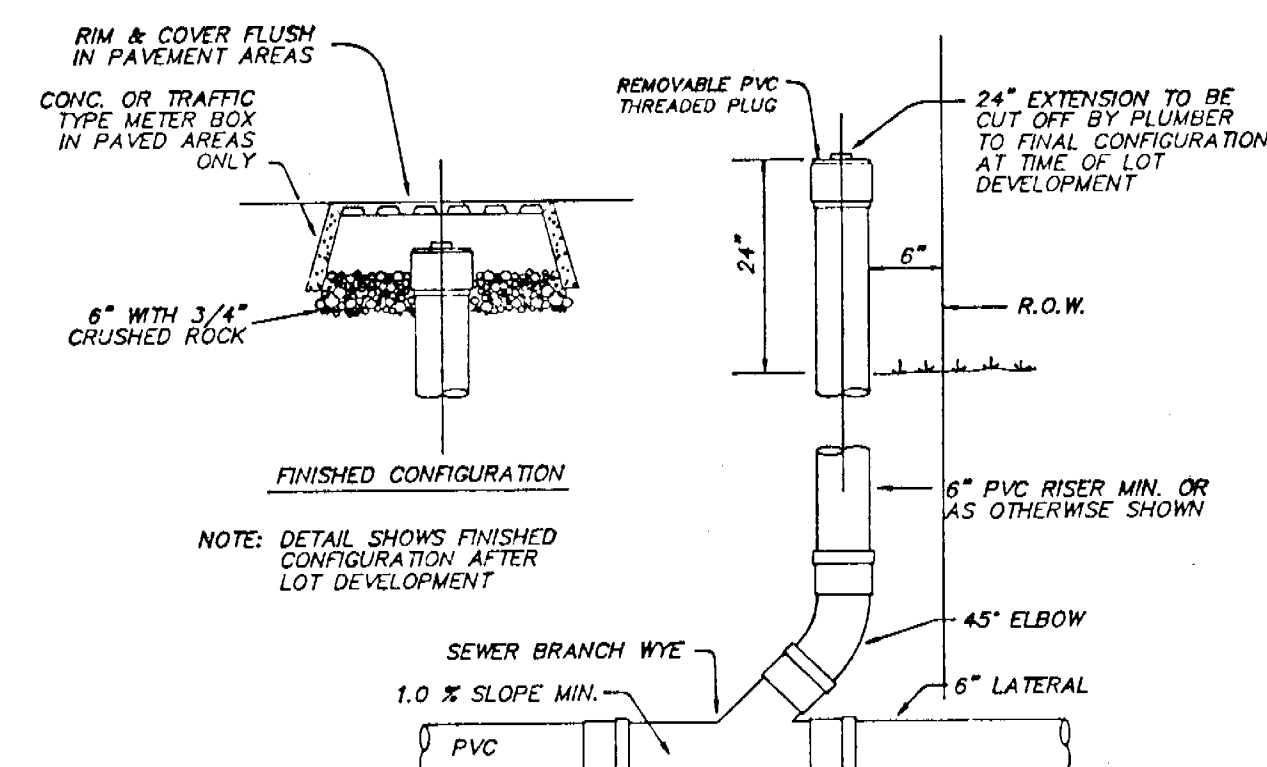
1. PROVIDE SPILLWAY FOR SMOOTH FLOW BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS.
2. SLOPE MANHOLE SHELVE WITH 1/2" MIN. TO 1" MAX. DROP FROM MANHOLE WALL TO CHANNEL.

MANHOLE FLOW CHANNELS
N.T.S.

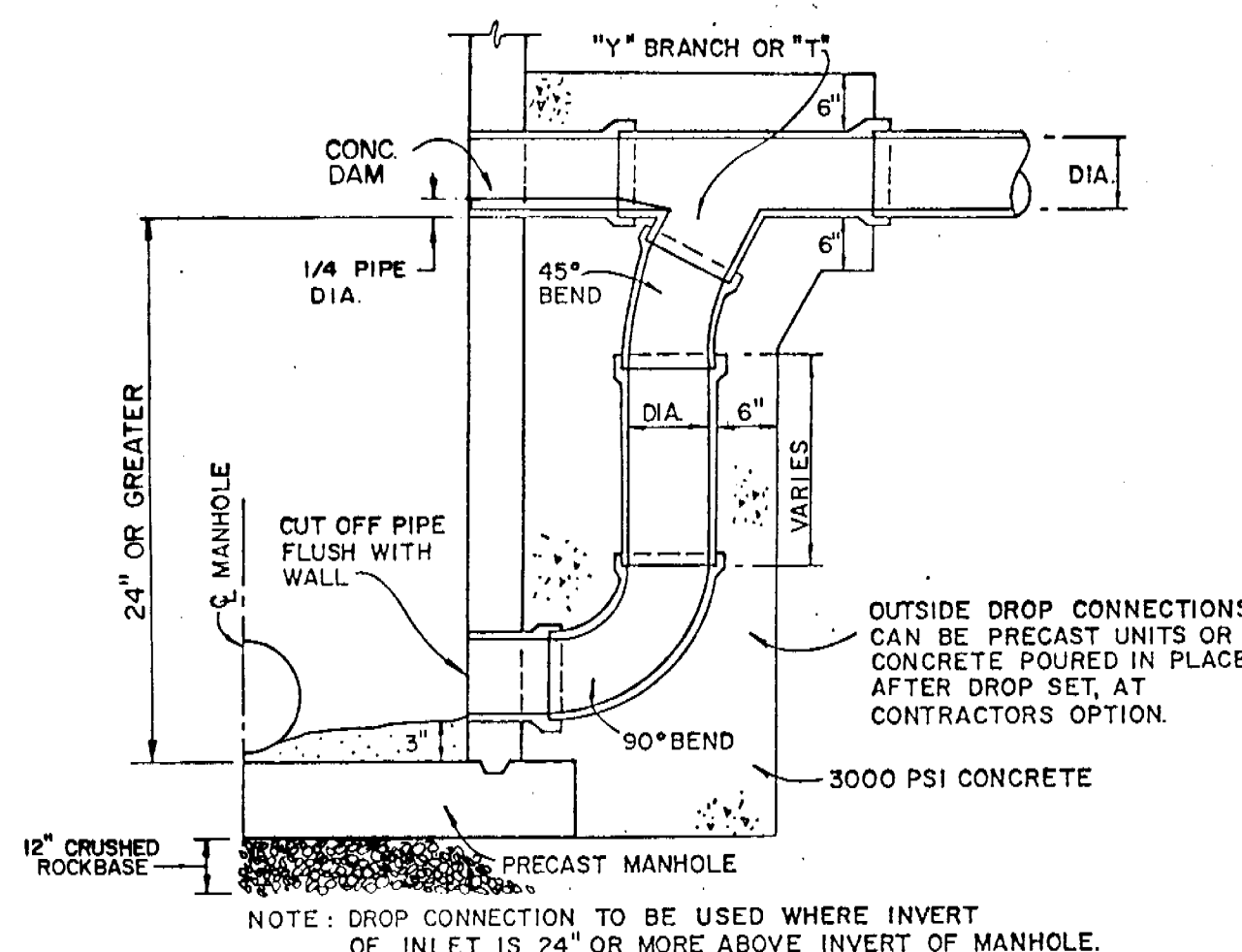
NOTE:
1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC., GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.



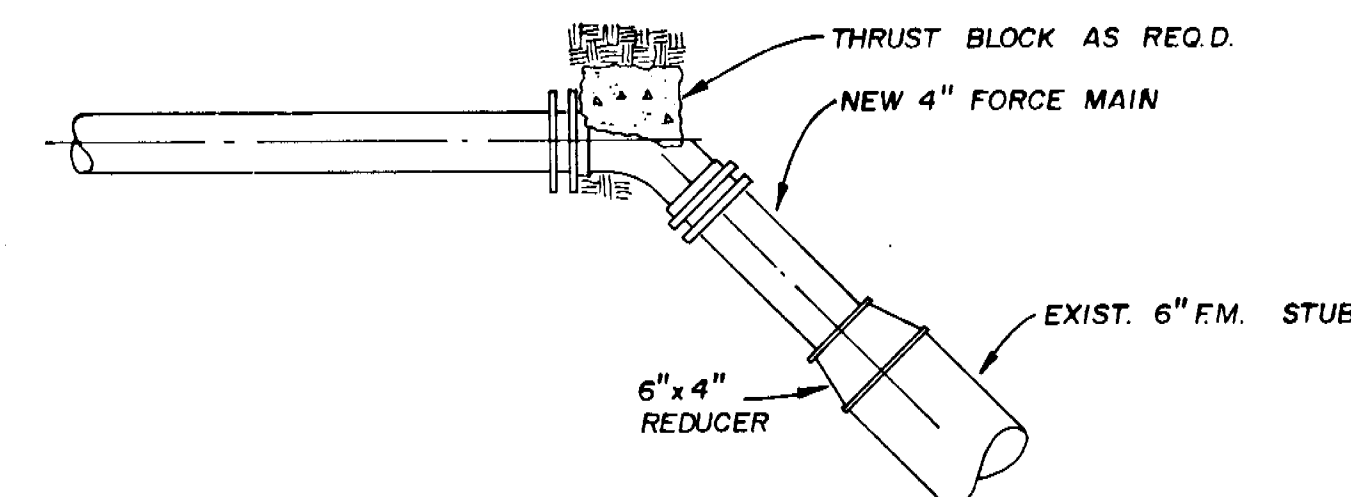
STANDARD LATERAL
N.T.S.



LATERAL CLEAN OUT
N.T.S.

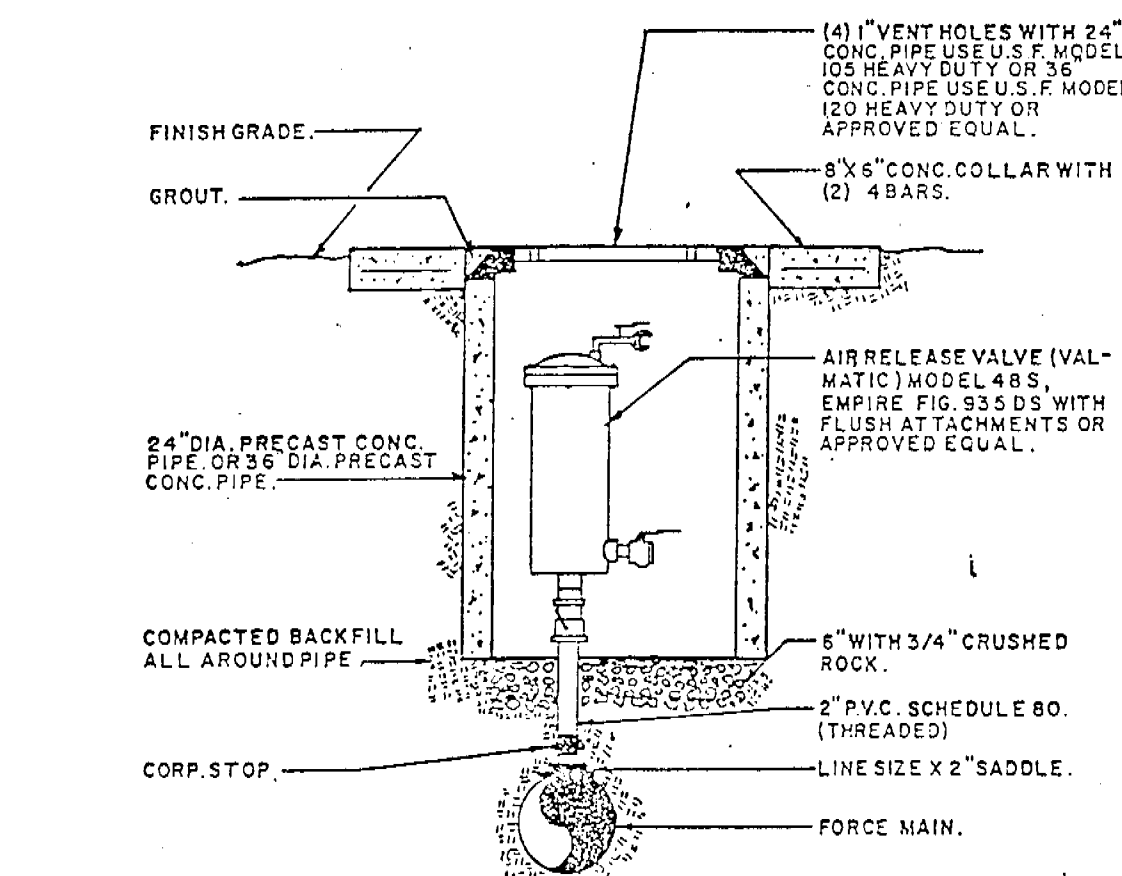


DROP MANHOLE
N.T.S.



FORCE MAIN CONNECTION DETAIL
N.T.S.

NOTE: Horizontal and vertical deflection of the force main shall not exceed the pipe manufacturer's specifications. Elbows shall be used where deflections may exceed the pipe manufacturer's specifications.



SANITARY AIR RELEASE VALVE DETAIL
N.T.S.

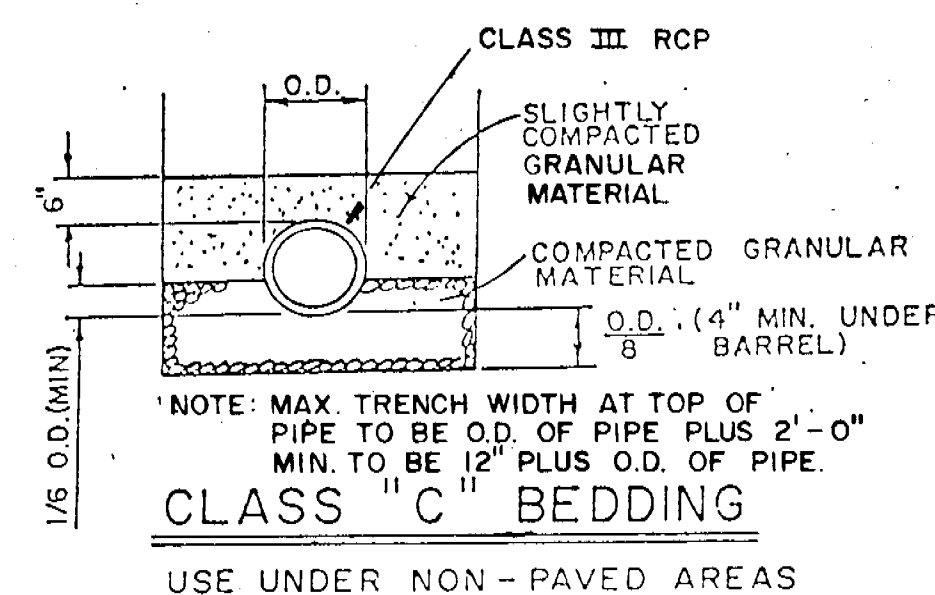
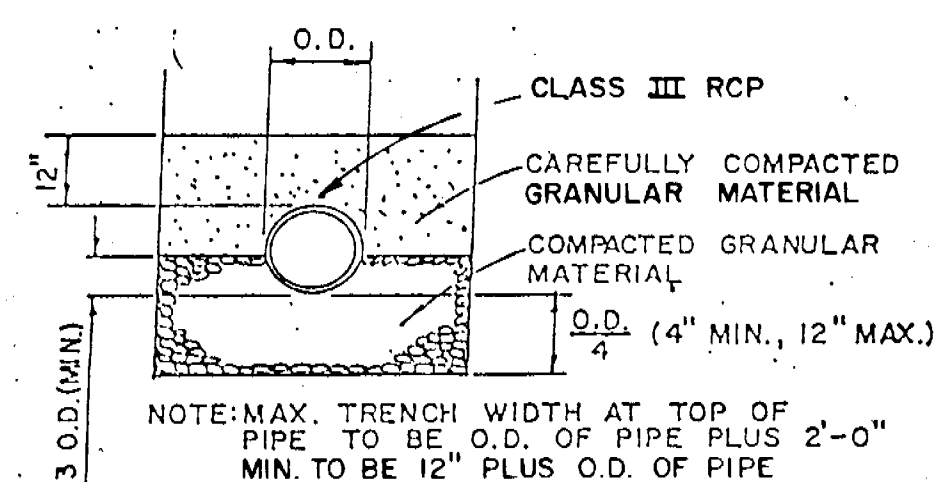
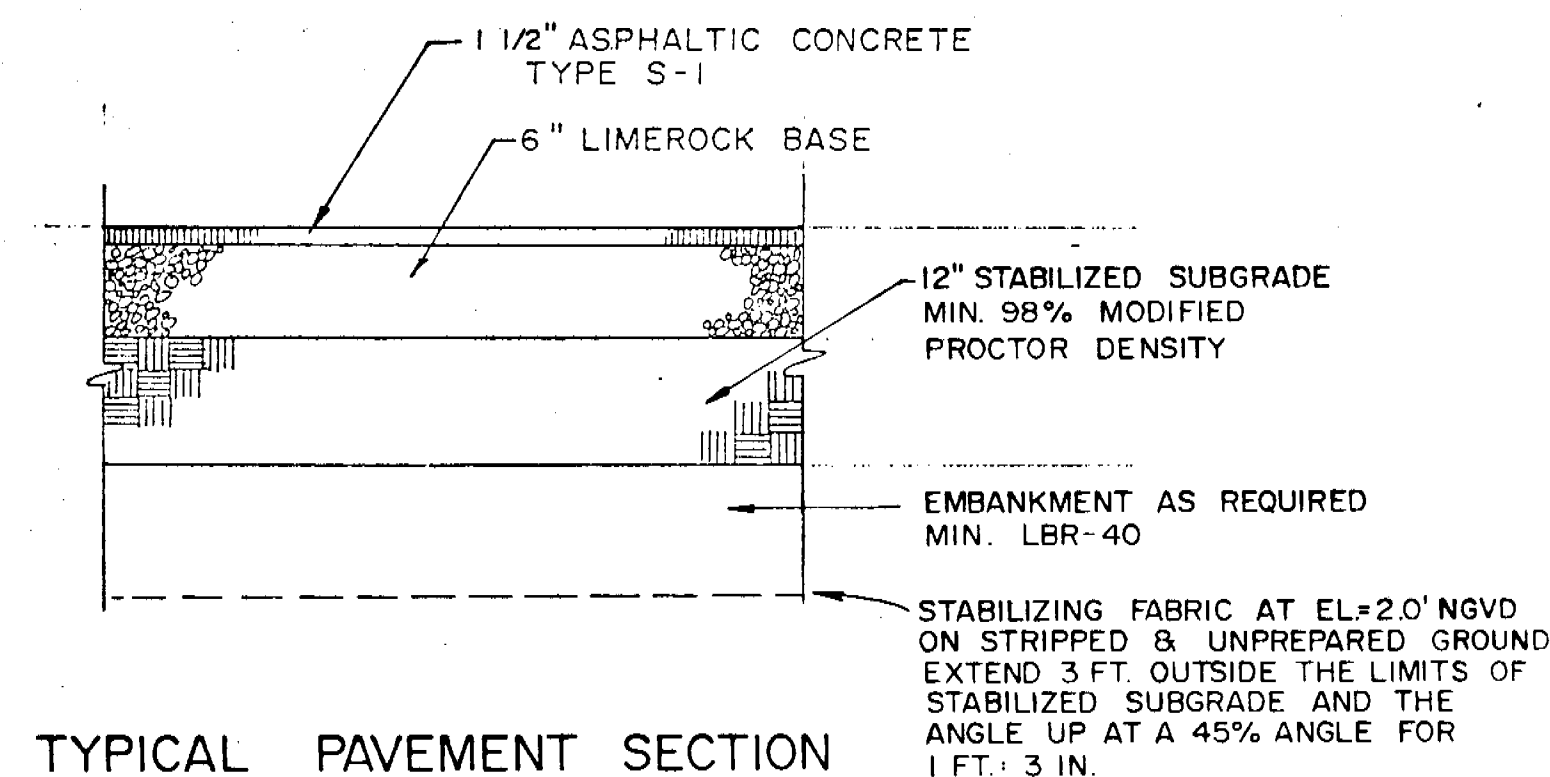
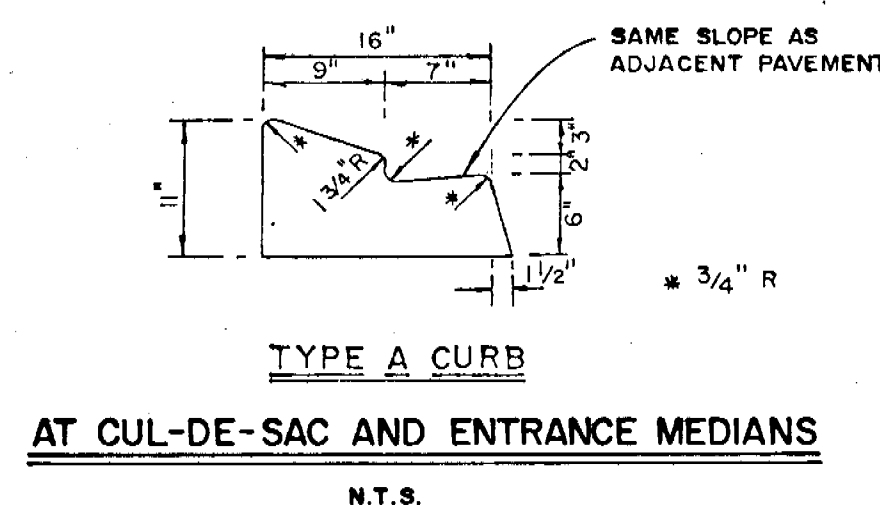
Record Print

COASTAL ENGINEERING CONSULTANTS, INC.
DEC 15 1989

DATE	REVISION	REVISION
11-10-88	CHANGED AIR RELEASE VALVE DETAIL	
10-27-88	REVISED DWGS. PER C.C. ENG. & UTIL. DEPT.	

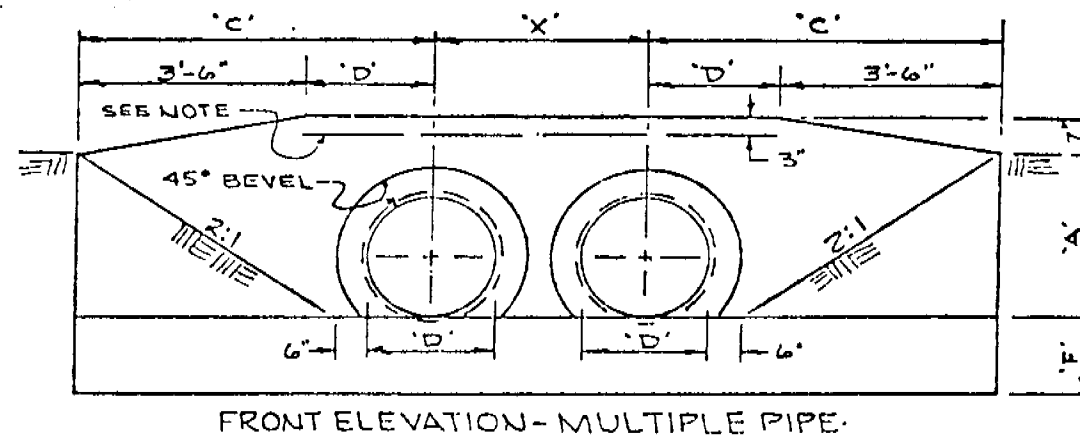
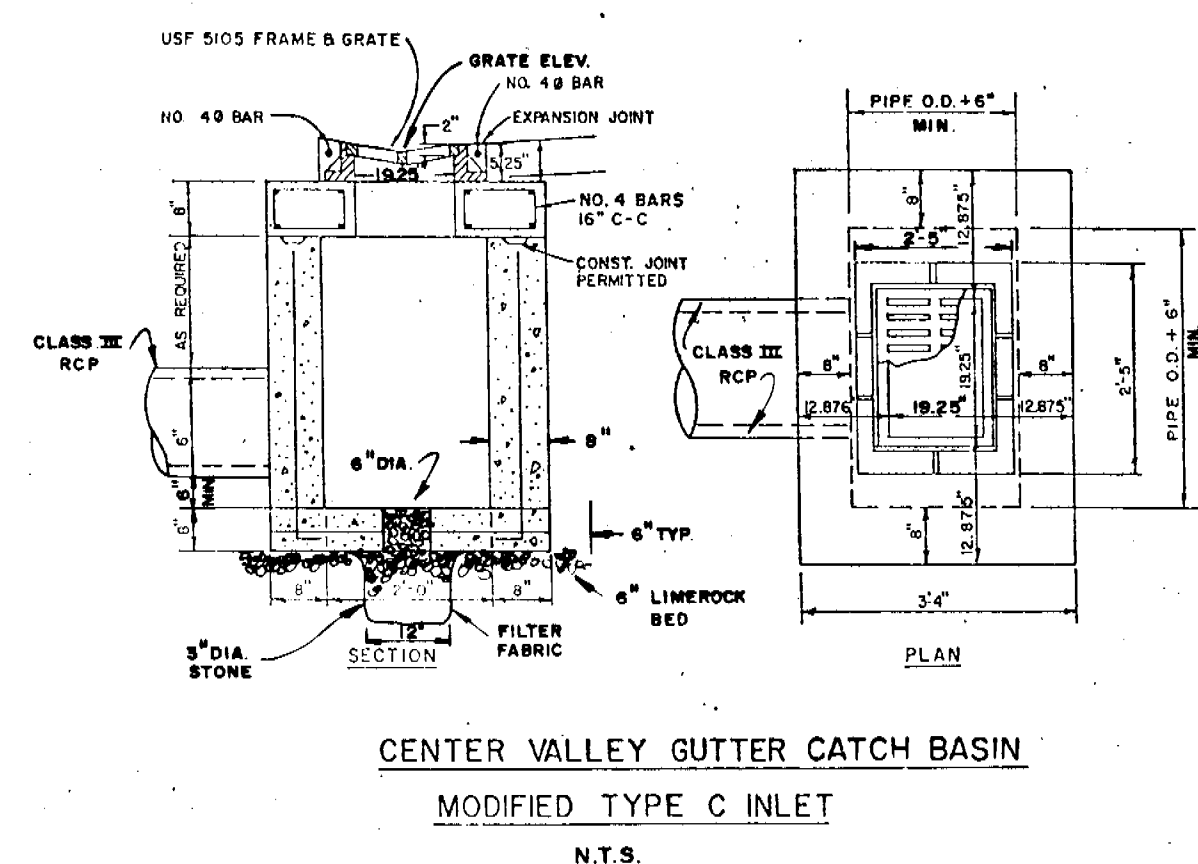
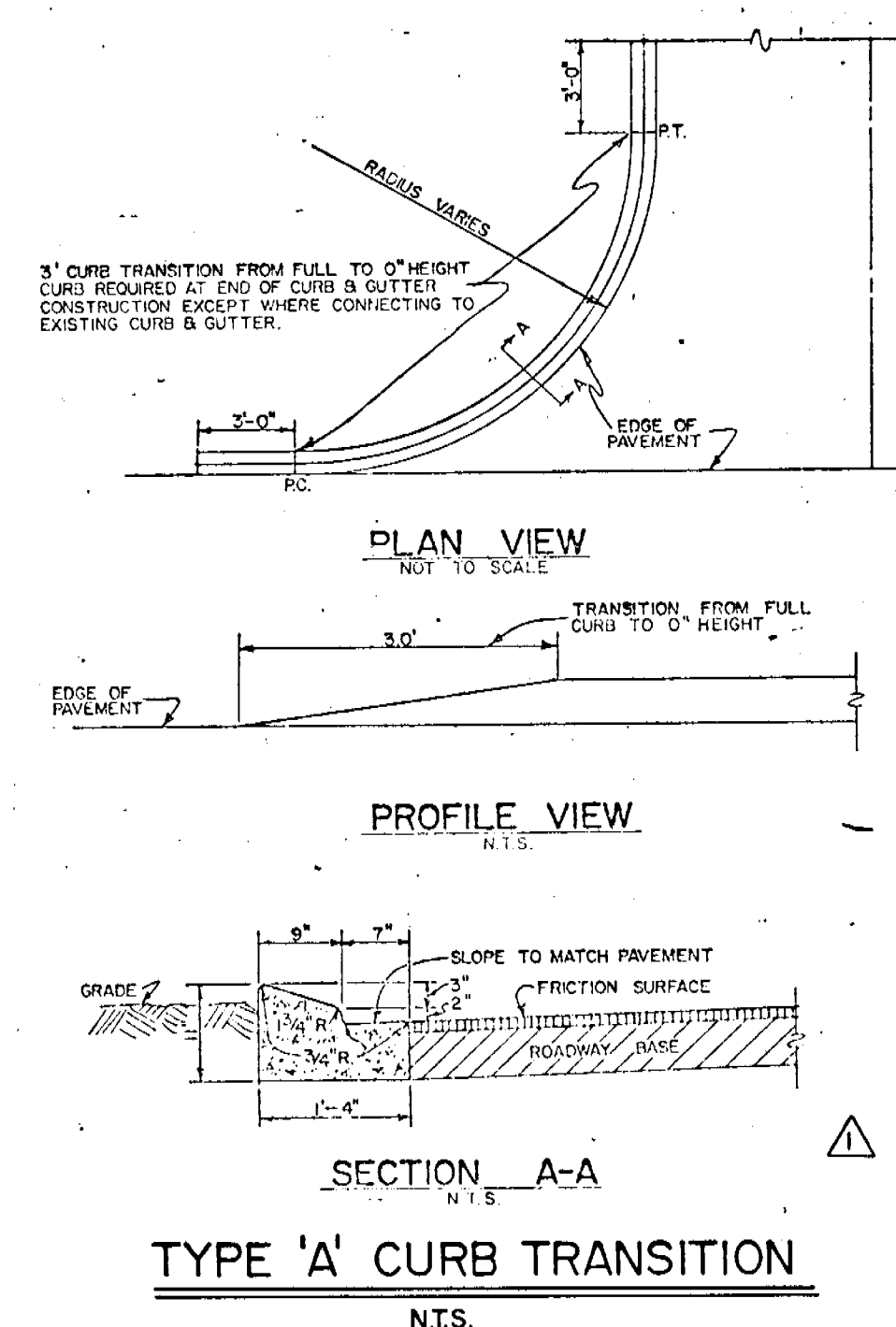
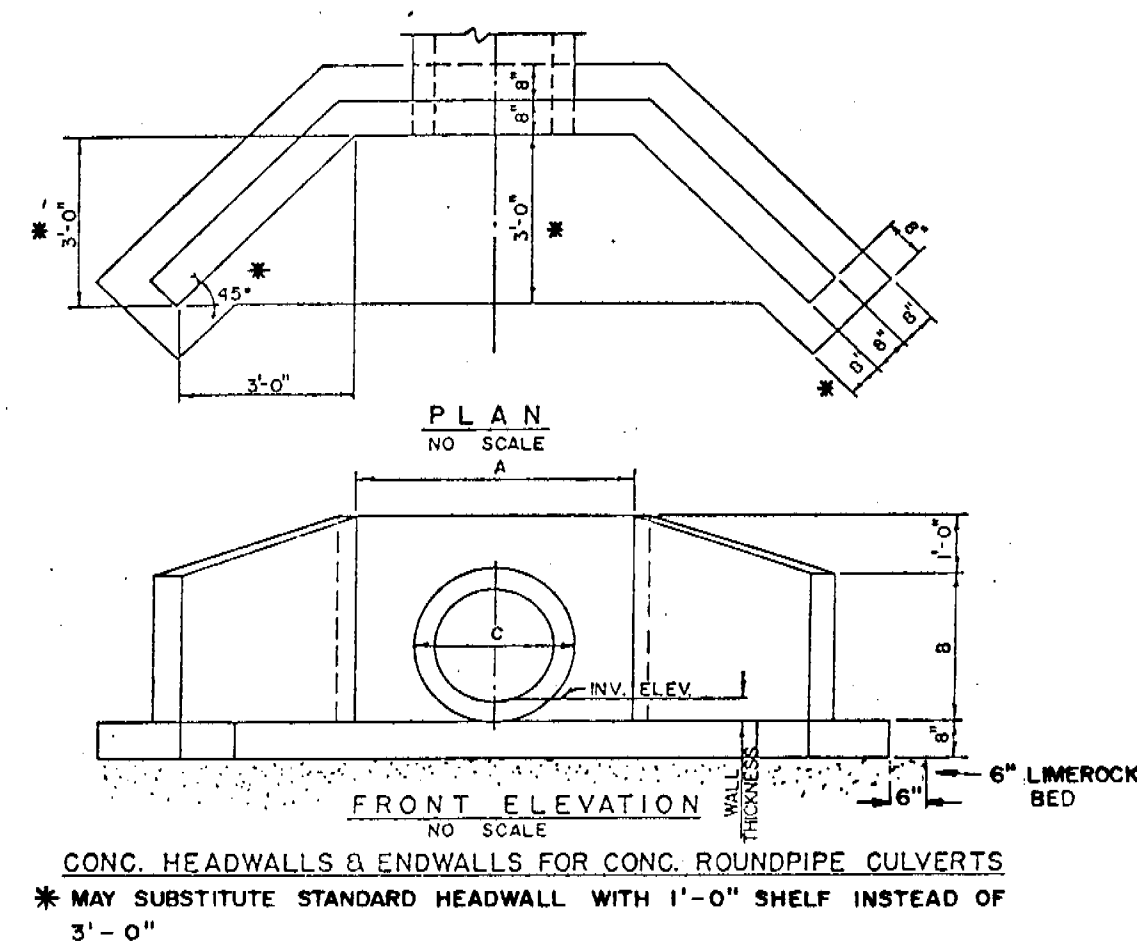
DATE: AUG. 1988
SCALE: N.T.S.
DESIGNED: J.Mc./J.A.D.
DRAWN: H.G.
CHECKED: J.Mc./J.A.D.
PROJECT NO.: 87.194
SHEET: 13 OF 17
FILE NO.: 87.194

SOUTHPORT VENTURE ASSOCIATES
SOUTHPORT ON THE BAY
STANDARD SEWER DETAILS
COLLIER COUNTY
COLLIER COUNTY, FLORIDA
COASTAL ENGINEERING CONSULTANTS, INC.
COASTAL & CIVIL ENGINEERS - PLANNERS - SURVEYORS - GEOLOGISTS - NAPLES, FLA.



TRENCH AND BEDDING DETAILS

WINGWALL	SCHEDULE		
PIPE DIA.	A	B	C
15"	4'-0"	1'-8"	1'-11"
18"	4'-3"	2'-0"	2'-2"
24"	4'-9"	2'-6"	2'-9"
30"	5'-3"	3'-4"	3'-5"
36"	6'-0"	4'-0"	3'-11"
42"	6'-6"	4'-7"	4'-7"
48"	7'-0"	5'-2"	5'-2"



SEE NOTE

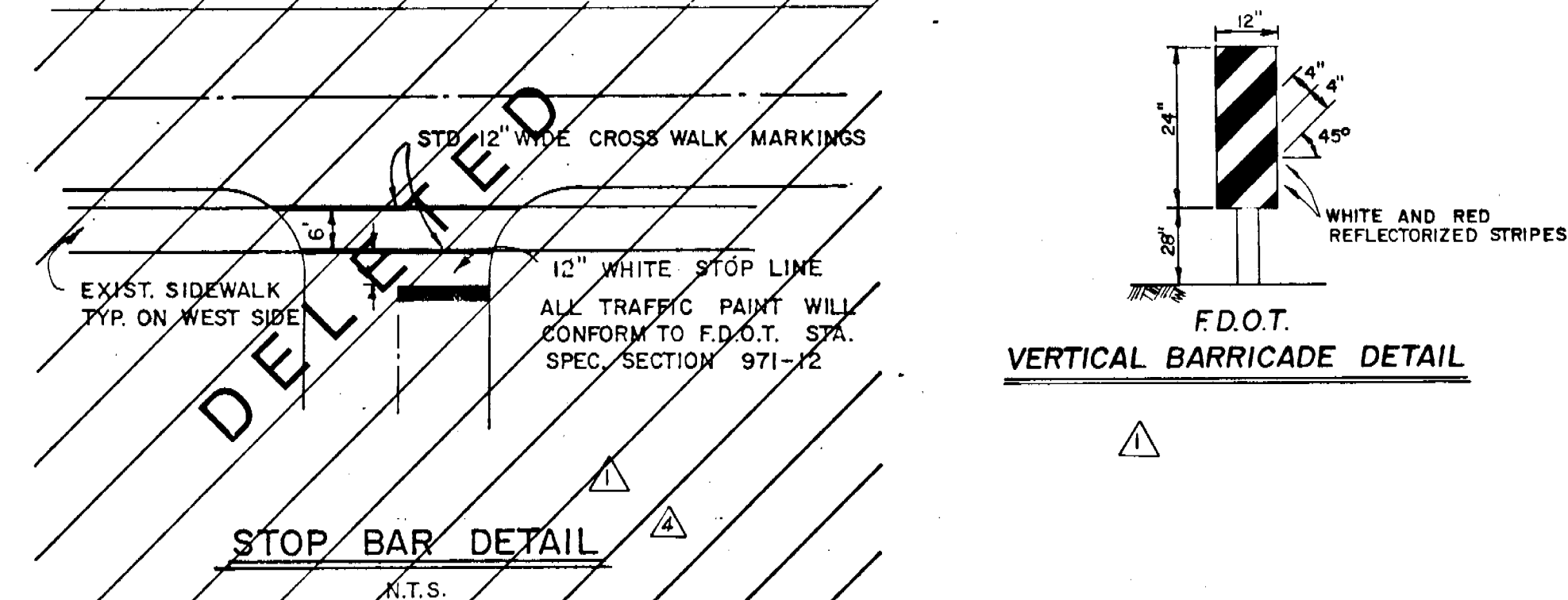
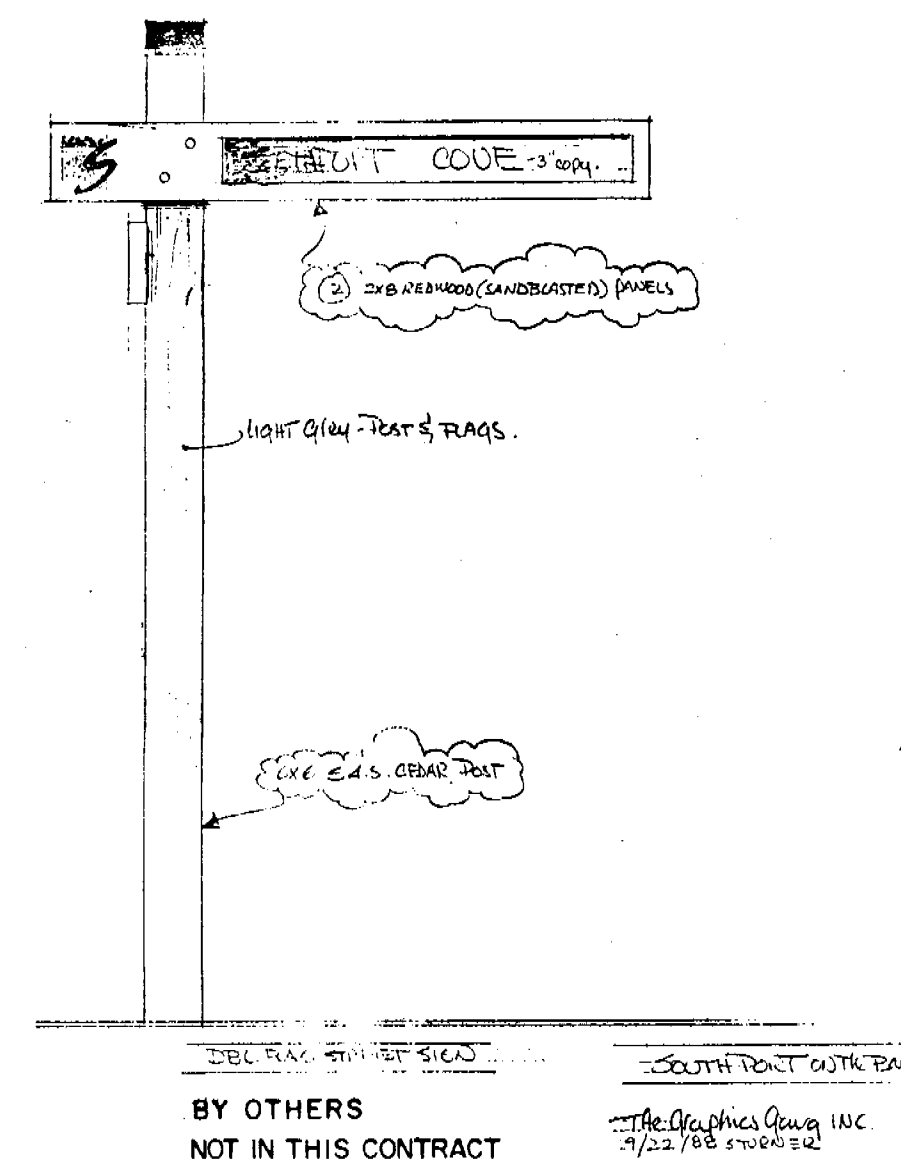
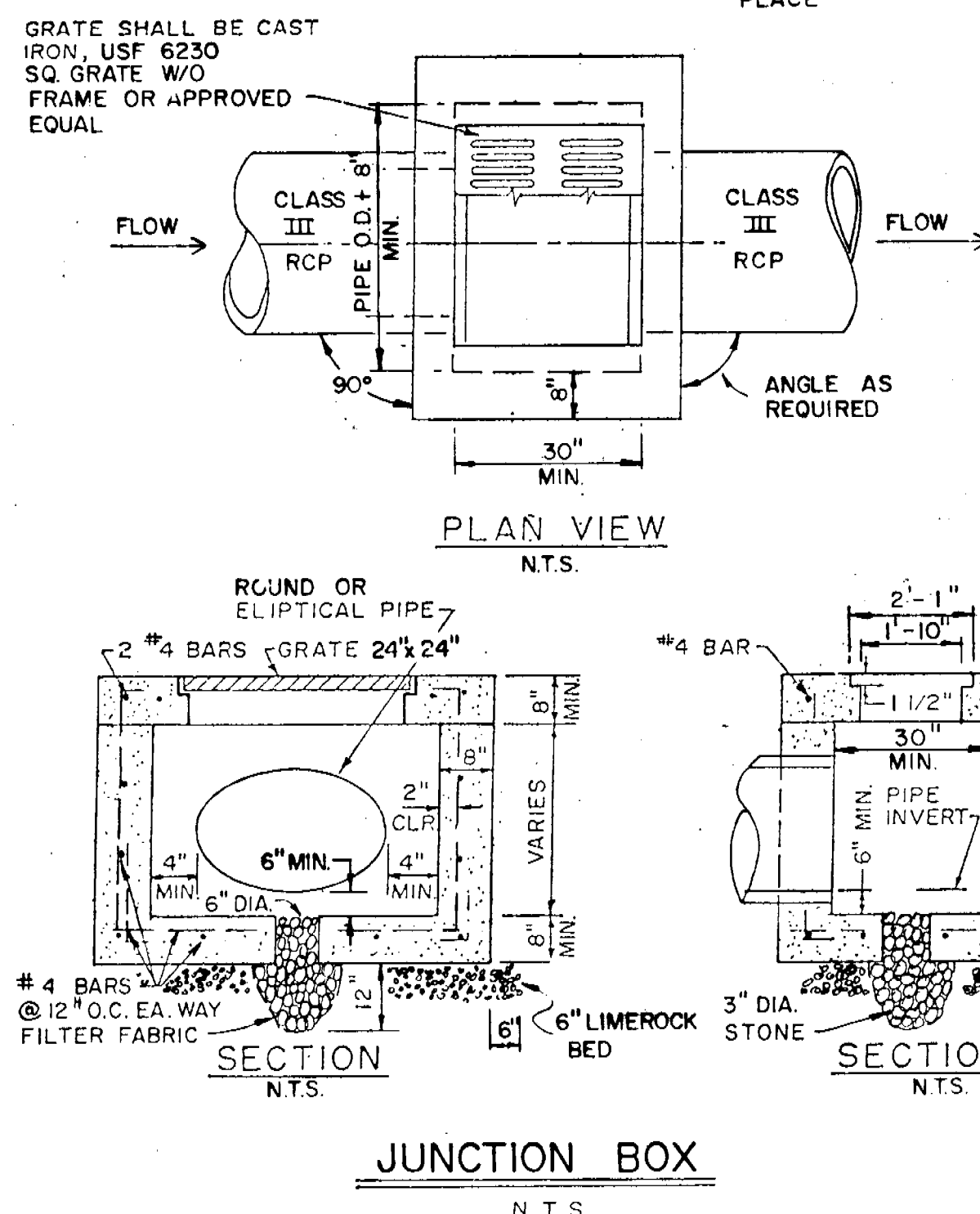
TYPICAL SIDE ELEVATION

TABLE OF DIMENSIONS
FOR
CONCRETE (GRAVITY) ENDWALLS

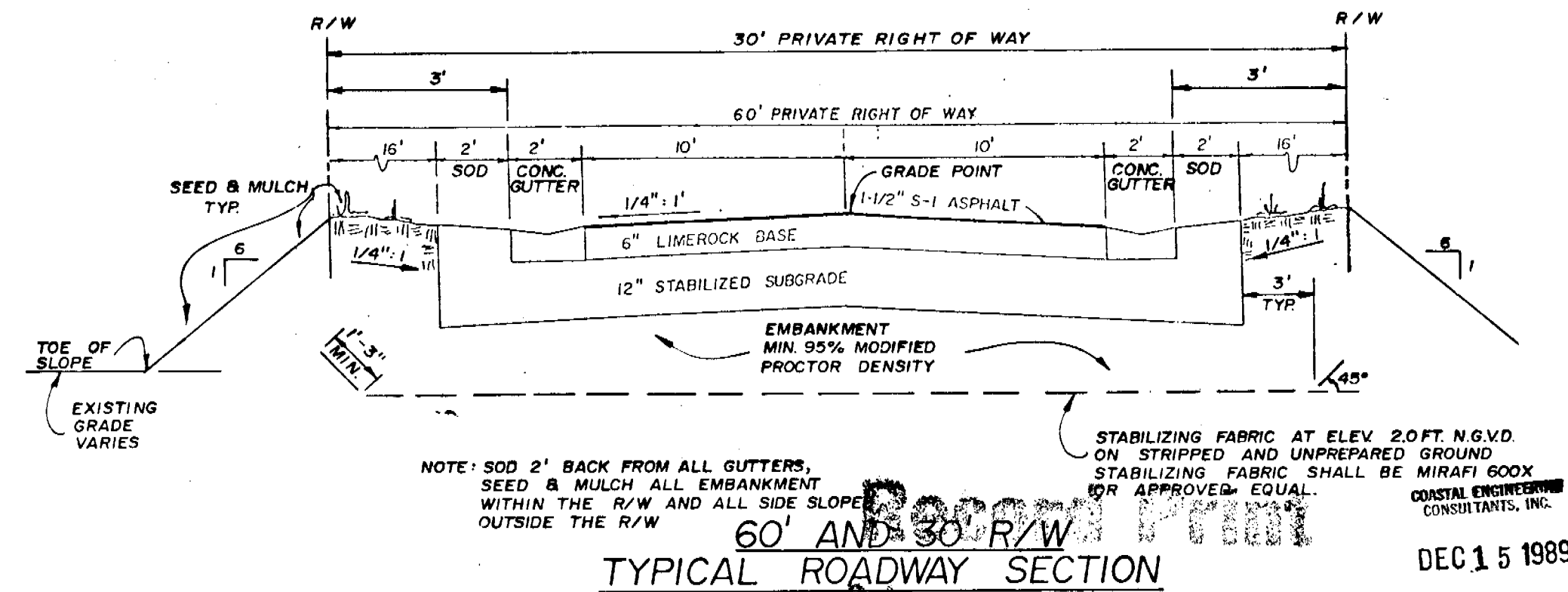
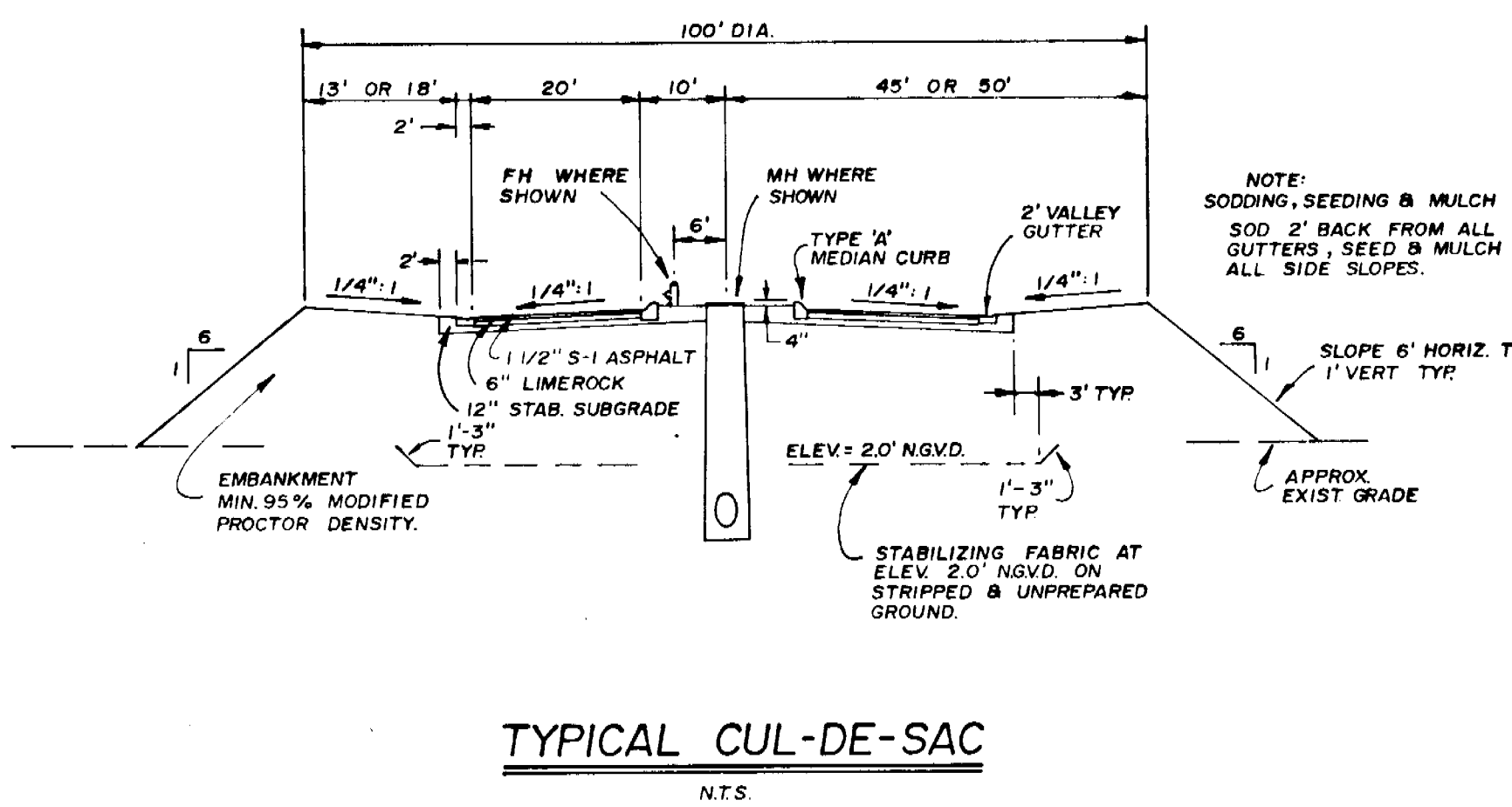
ELLIPTICAL PIPE-REINFORCED CONCRETE																														
TYPE	"D"	"A"	"C"	"X"	"E"	"B"	PIPE	"D"	"A"	"C"	"X"	"E"	"B"	PIPE	"D"	"A"	"C"	"X"	"E"	"B"	PIPE	"D"	"A"	"C"	"X"	"E"	"B"			
24" x 14"	1'-8"	4'-10"	3'-5"	1'-10"	1'-2"	1'-2"	3'-5"	4'-5"	3'-1"	8'-7"	6'-0"	2'-2"	1'-6"	1'-5"	5'-8"	3'-1"	8'-7"	6'-0"	2'-2"	1'-6"	1'-5"	5'-8"	3'-1"	8'-7"	6'-0"	2'-2"	1'-6"	1'-5"		
30" x 19"	2'-3"	6'-5"	4'-2"	1'-11"	1'-3"	1'-3"	6'-5"	4'-3"	1'-10"	8'-10"	7'-11"	2'-4"	1'-8"	1'-5"	7'-4"	4'-3"	1'-10"	8'-10"	7'-11"	2'-4"	1'-8"	1'-5"	7'-4"	4'-3"	1'-10"	8'-10"	7'-11"	2'-4"	1'-8"	1'-5"
36" x 24"	2'-8"	7'-5"	5'-2"	2'-0"	1'-4"	1'-4"	7'-5"	4'-6"	1'-5"	9'-9"	9'-9"	2'-5"	2'-0"	2'-2"	8'-0"	4'-6"	1'-5"	9'-9"	9'-9"	2'-5"	2'-0"	2'-2"	8'-0"	4'-6"	1'-5"	9'-9"	9'-9"	2'-5"	2'-0"	2'-2"

NOTE: 1. REINFORCING FOR WALL AND FOOTING IS NO. 4 BARS AT 12" O.C. EACH WAY AND TWO ADDITIONAL NO. 4 BARS IN ONE LAYER ABOVE OPENING.
2. FOR SINGLE PIPE HEADWALL DELETE DIMENSION "X".

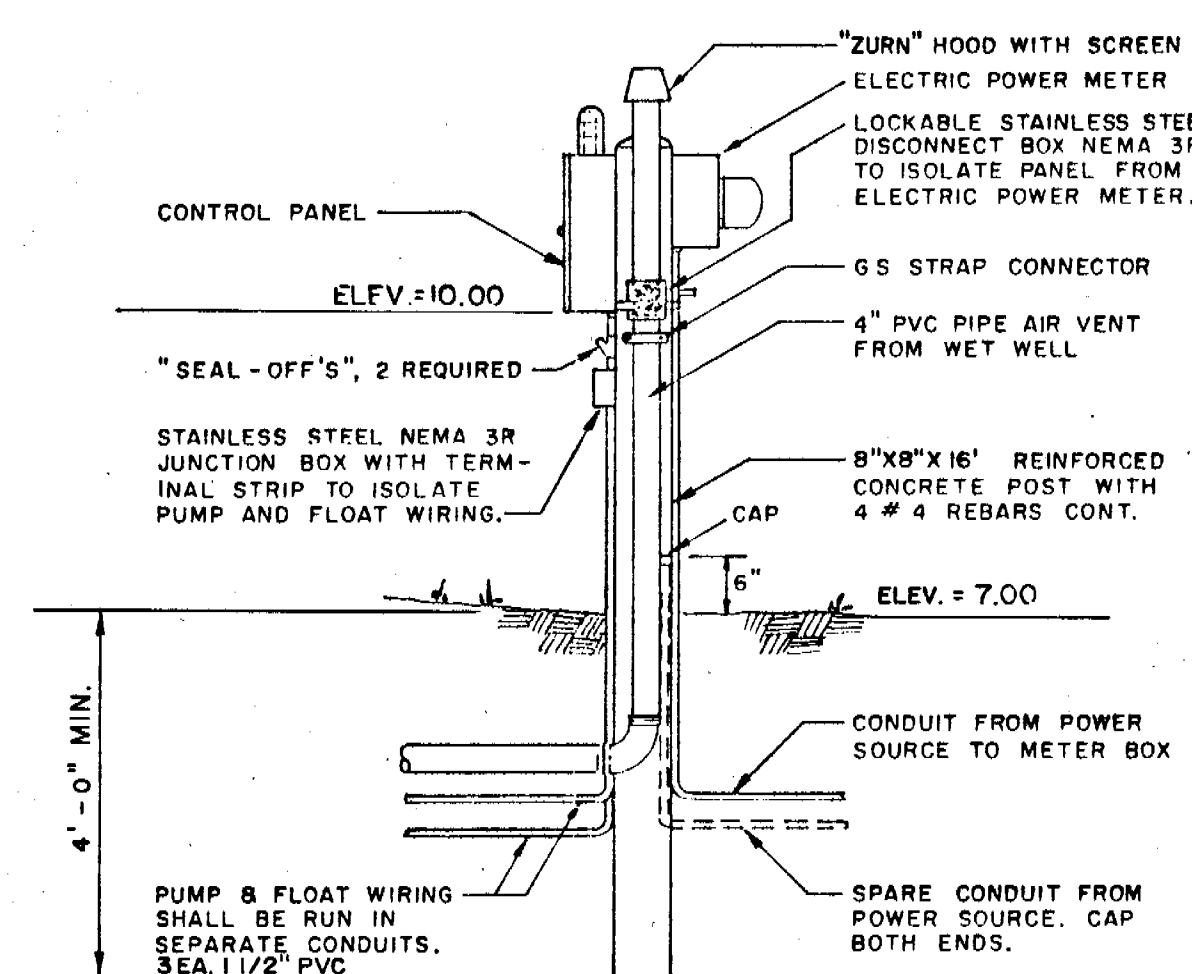
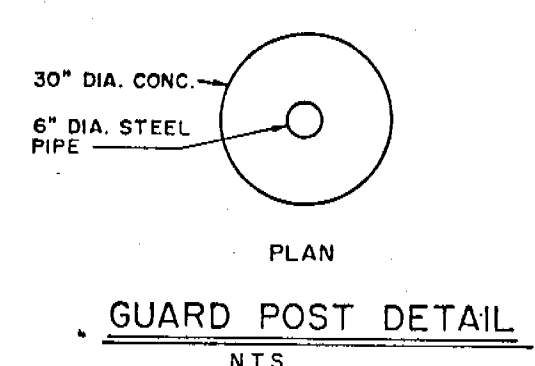
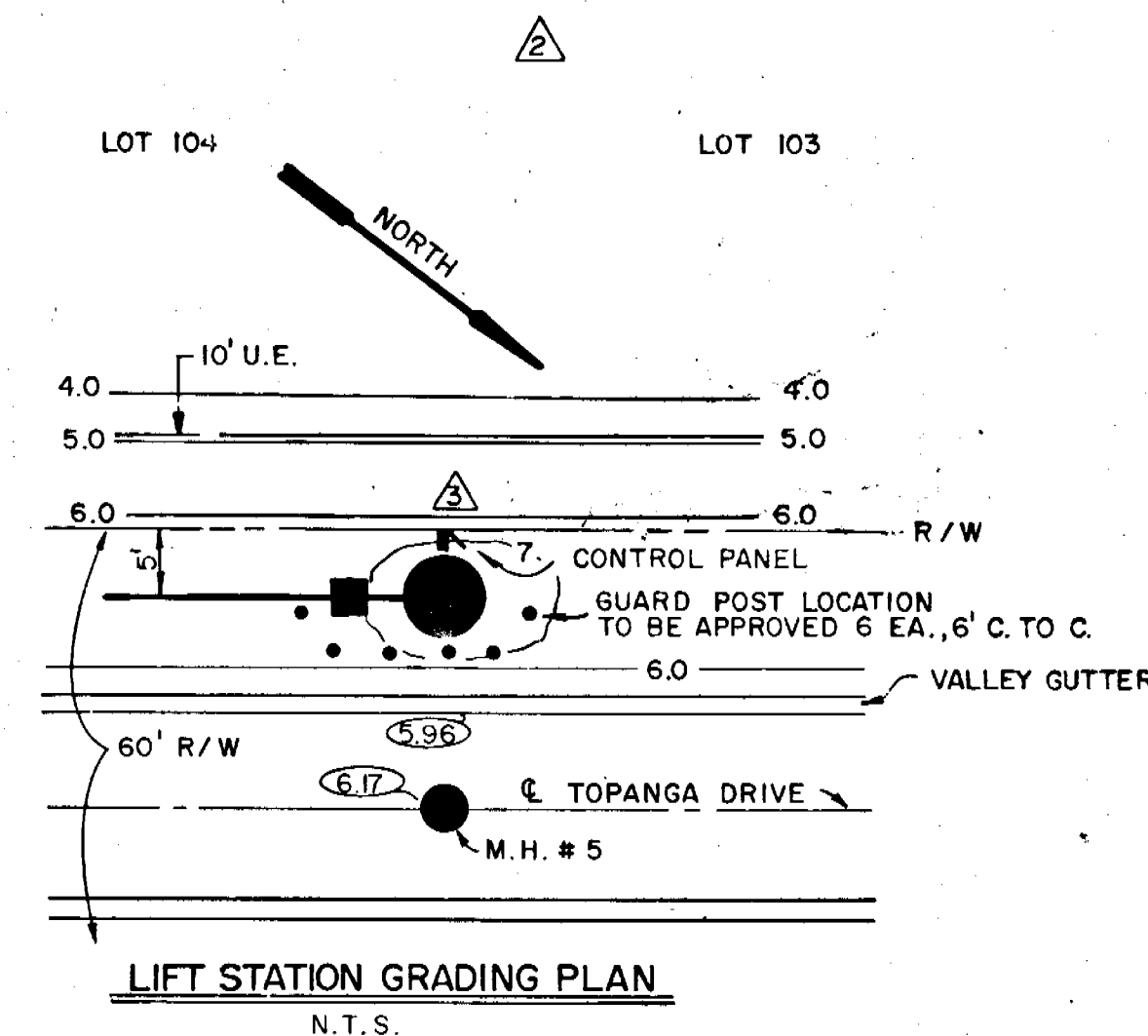
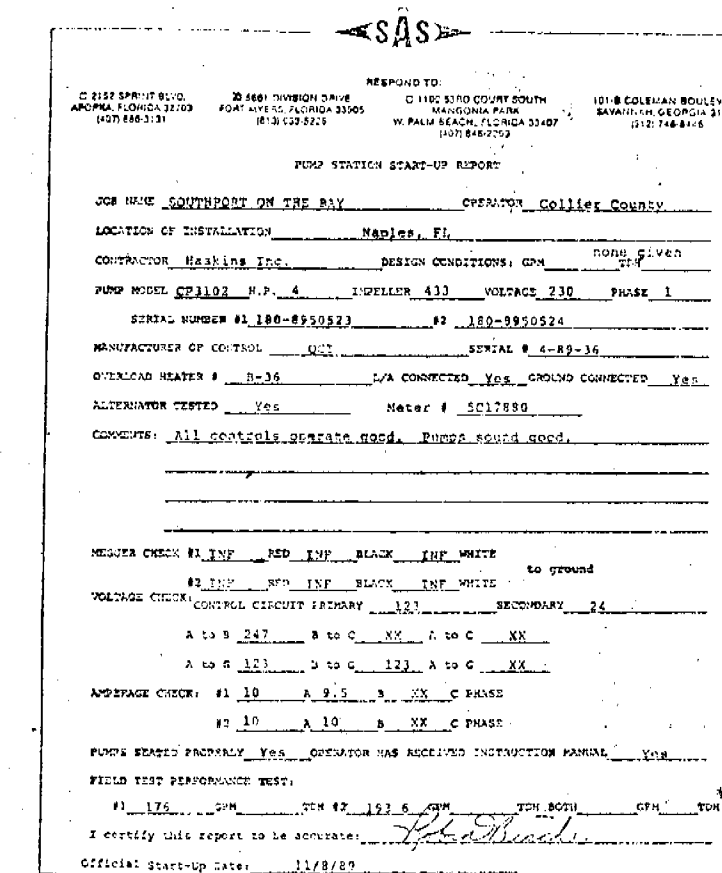
NOTE:
1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC., GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.



FDOT GUARD RAIL DETAIL



DATE	AUG. 1988	FOR	SOUTHPORT VENTURE ASSOCIATES
SCALE	N.T.S.	DESIGNED	JMc/JAD
DRAWN	JFS	CHECKED	JMc/JAD
PROJECT NO.	87.194	REFERENCE	TWP 48 S RING 25 E SEC 6 & 5
SHEET	14	OF	17
NO.	87.194	DATE	DEC 15 1989



NOTE :

1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC.,
GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

RECORD DRAWINGS
FOR WATER TRANSMISSION/
DISTRIBUTION FACILITIES,
SANITARY SEWER AND
DRAINAGE FACILITIES

PUMP STATION SPECIFICATIONS

1. Lift station control panel shall be positioned as shown.
2. The Control Panel shall be a NEMA-3R 304 stainless steel, 22 1/2" Model 125 or approved equal. It shall have a NEMA type 3R enclosure with dead front inner door. The Control Panel shall be mounted on a 4" x 4" x 1/2" steel plate. It is necessary to operate the specified two electric submersible pumps to alternate the leading and lagging of the pumps to operate all other station equipment. In addition to the standard equipment, the Control Panel shall be equipped with an emergency light and an alarm bell. A 1/2" slotted time meter for each pump, lightning arrestor, main circuit breaker, and emergency circuit breaker and generator receptacle.
3. Lift station control panels shall be adequately protected from vehicular access by a system of concrete filled pipe. Pipe size shall be 6" minimum diameter, with an embedment 3 feet above grade and extending 3 feet above grade. Pipe shall be completely embedded in concrete which extends out at least 12" from the pipe line.
4. The arrangement of pipe guards shall be specified by the Collier County Utility Department.
5. Control panel support posts shall be concrete.
6. Control panel tie-bars shall be galvanized unistrut, cut evenly to the width of the panel box. All hardware shall be stainless steel.
7. Sewage pump guide rails shall be stainless steel.
8. Check valves in lift station valve vaults shall be of the swing type, weighted design as manufactured by Kennedy, weight and lever type. Ball-type check valves are not acceptable.
9. Separate air conduits, with seal lock fitting, shall be provided between lift station and vault for pump wiring and float wiring.
10. The Engineering Department must have an inspector present for the following construction activities:
 - a. Hot taps, including tapping lead pressure steel, to service force main.
 - b. Force main pressure inspection.
 - c. Infiltration system inspection.
 - d. Infiltration testing.
 - e. Lift station start-up.
 - f. Pumping of station.
11. All hardware and guide bars within the pumping station shall be stainless steel.
 - 1 way plug valve by Housatonic.
 - 2 way plug valve by Bernco.

GENERAL NOTES

1. Provide a minimum cover of 30" over force main.
2. Minor switching height adjustments will be required for open end cycle and the required flow are reached.
3. The Contractor shall be responsible for providing the location of the electric service from the transformer to the pump control panel for inclusion on the record drawings (including burial depth). Size computation for service shall be included.
4. Emergency pumpout connection 3" quick coupling unit shall be connected to 90' minimum by a bronze threaded adapter cap to Andrews Part No. 105F, and 2-handle bronze including cap equal to Andrews Part No. 300DC or approved equal.
5. Installation of cover pump anchor bolts, guide rails, etc. must be in accordance with the manufacturer's recommended methods and specifications.
6. All elevations are based on M.G.V. Datum.
7. Pump station complete includes valve, vault access frame and door, and all other included construction, materials and electric service.
8. Contractor shall verify all dimensions and clearances for construction and maintenance, and shall verify with the respective manufacturer, the installation and orientation of all equipment and parts.
9. Copper electrical service required.
10. The Contractor shall provide a spare capped power conduit from the transformer to the central panel. Conduits to be PVC, stubbed out and capped and tagged at each end.
11. This lift station manhole with the lift station at Sta. 53+38 on Lely Beach Boulevard. The common P.M. is a 6" Dia. approximately 125 L.F. long.
12. Location of the control panel shall be as shown on the lift station grading plan.

Record Print

COASTAL ENGINEERING
CONSULTANTS INC.

DEC 15 1989

NOTICE: This drawing is the property of the City of Dallas. It is to be used for the project and location shown only. It is not to be used for any other purpose without the written consent of the City of Dallas.		DEC 15 1989
11-10-89	REVISE PUMPS/AS-BUILT PUMP RATE	
7-21-89	AS BUILT SEWERS	E 201/57
11-16-88	RELOC. CONTROL PANEL PER UTIL. DEPT.	
11-8-88	CHANGED PUMP	
10-27-88	REVISED DWGS PER C.C. ENG. DEPT.	
No. DATE	REVISION	

DATE AUG 1988 FOR SOUTHPORT VENTURE ASSOCIATES

SOUTHPORT ON THE BAY

LIFT STATION DETAILS

COLLIER COUNTY

COASTAL ENGINEERING CONSULTANTS, INC.
COASTAL & CIVIL ENGINEERS · PLANNERS · SURVEYORS · GEOLOGISTS · NAPLES, FL

COASTAL & CIVIL ENGINEERS · PLANNERS · SURVEYORS · GEOLOGISTS · NAPLES,	REFERENCE:	SHEET: 15	OF: 17	FILE NO.: 87.194
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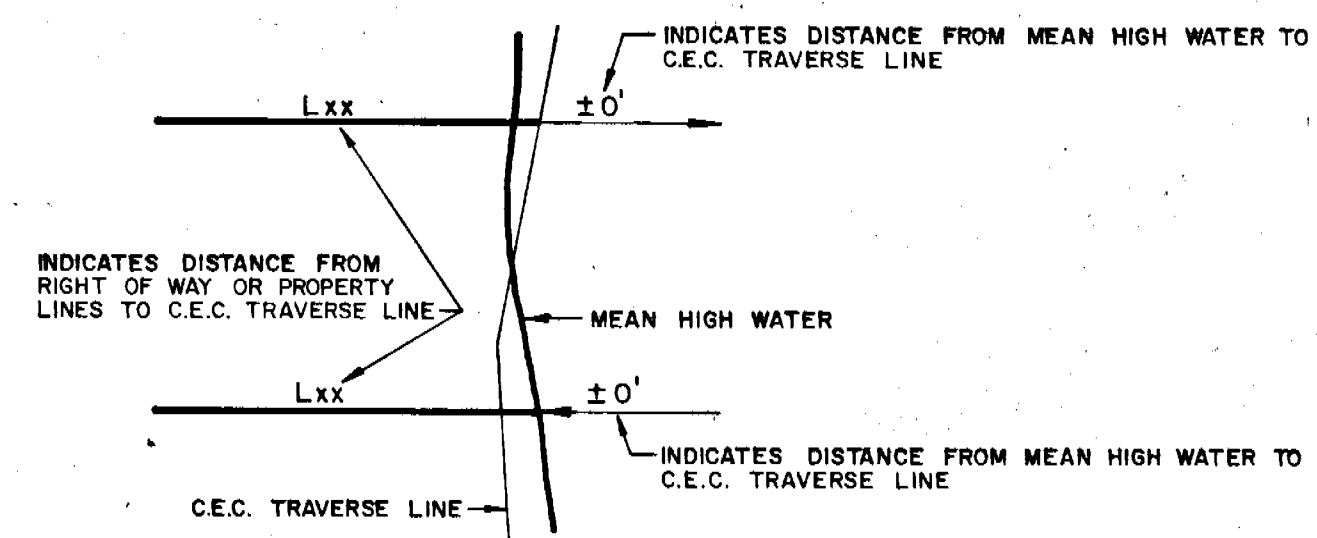
10-15-00

SOUTHPORT ON THE BAY, UNIT ONE

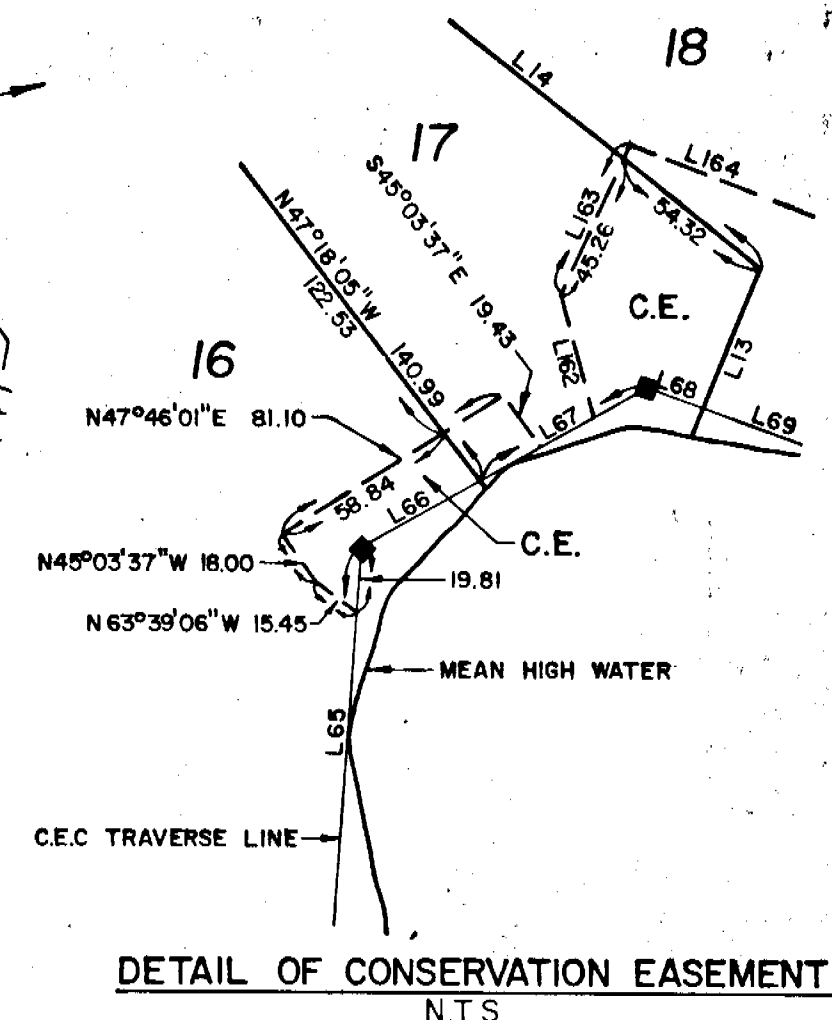
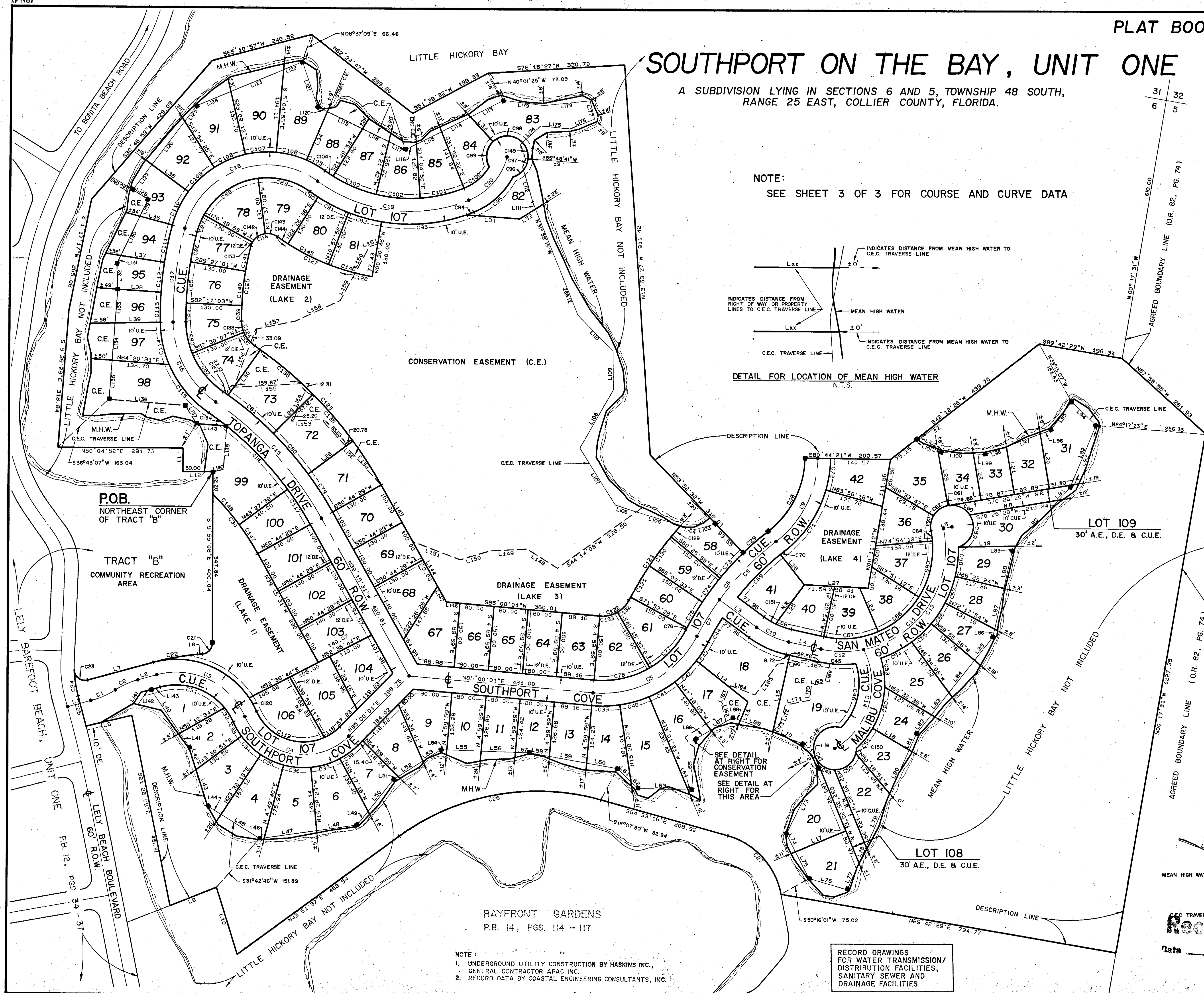
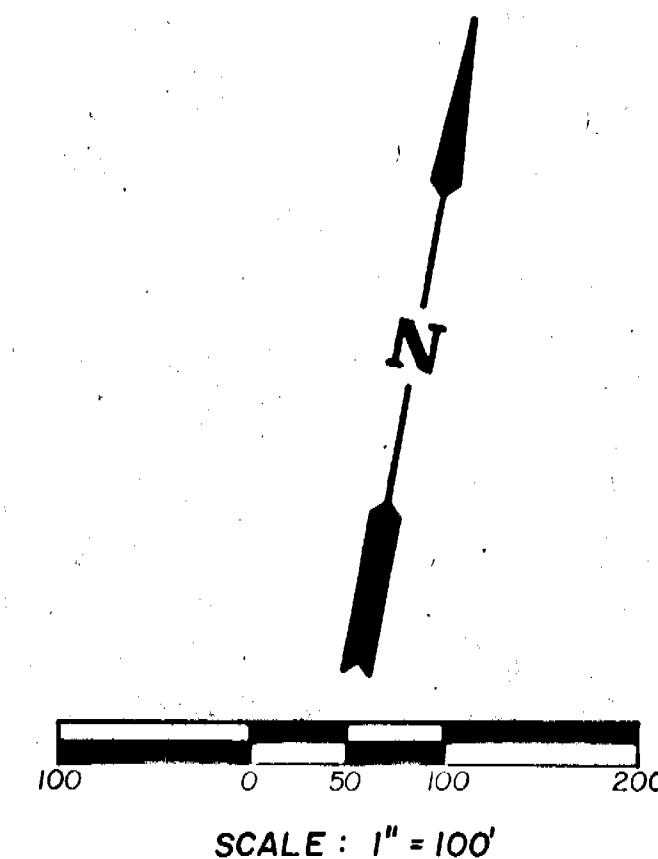
A SUBDIVISION LYING IN SECTIONS 6 AND 5, TOWNSHIP 48 SOUTH,
RANGE 25 EAST, COLLIER COUNTY, FLORIDA.

NOTE: THIS SHEET INCLUDED
AS A REFERENCE FOR
R/W CURVE DATA ONLY.

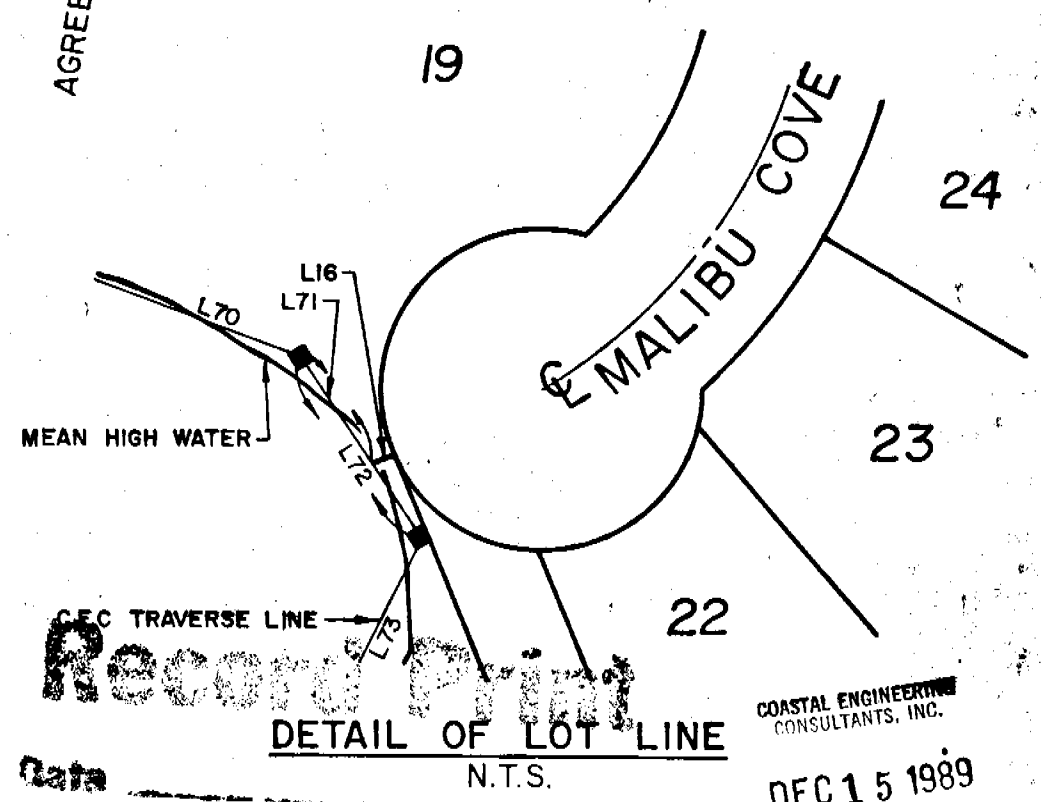
NOTE:
SEE SHEET 3 OF 3 FOR COURSE AND CURVE DATA



DETAIL FOR LOCATION OF MEAN HIGH WATER
N.T.S.



DETAIL OF CONSERVATION EASEMENT
N.T.S.



SHEET 16 OF 17
C.E.C. FILE NO.: 87-194

NOTE:
1. UNDERGROUND UTILITY CONSTRUCTION BY HASKINS INC.,
GENERAL CONTRACTOR APAC INC.
2. RECORD DATA BY COASTAL ENGINEERING CONSULTANTS, INC.

RECORD DRAWINGS
FOR WATER TRANSMISSION/
DISTRIBUTION FACILITIES,
SANITARY SEWER AND
DRAINAGE FACILITIES

SOUTHPORT ON THE BAY, UNIT ONE

A SUBDIVISION LYING IN SECTIONS 6 AND 5, TOWNSHIP 48 SOUTH,
RANGE 25 EAST, COLLIER COUNTY, FLORIDA.

NOTE: THIS SHEET INCLUDED
AS A REFERENCE FOR
R/W CURVE DATA ONLY.

Lxx - COURSE DATA

No.	Direction	Length	No.	Direction	Length
1	N64°58'02"E	55.95	101	N73°25'59"W	57.19
2	N64°40'18"E	46.18	102	N73°25'59"W	56.07
3	S63°50'54"E	108.67	103	S64°44'41"W	51.69
4	S87°39'06"E	77.28	104	N83°31'15"W	33.85
5	N68°26'00"E	20.00	105	N83°31'15"W	108.99
6	S74°34'52"W	11.90	106	N81°55'44"W	51.87
7	S64°40'18"W	158.59	107	N42°02'50"W	156.63
8	N66°37'04"E	110.00	108	N19°58'54"E	156.56
9	N58°25'00"E	116.70	109	N10°37'34"W	90.13
10	S27°18'21"E	163.32	110	N54°17'42"W	118.24
11	S09°55'08"E	55.00	111	N31°58'15"W	17.73
12	N80°04'52"E	70.00	112	N26°13'09"W	76.13
13	N12°23'17"E	46.65	113	S53°05'02"W	86.74
14	N61°50'22"W	155.00	114	S53°05'02"W	75.55
15	N02°50'54"E	184.34	115	S53°05'02"W	85.70
16	N55°50'43"E	7.22	116	S53°05'02"W	28.85
17	N57°24'40"E	127.63	117	N74°20'29"W	43.18
18	N69°36'42"W	99.47	118	N74°20'29"W	68.12
19	S79°02'33"W	136.26	119	N74°20'29"W	91.55
20	S19°33'40"E	129.58	120	N74°20'29"W	25.51
21	S19°33'40"E	113.70	121	N26°34'24"W	111.36
22	S19°33'40"E	130.00	122	S57°08'44"W	47.63
23	S20°33'47"E	130.25	123	S57°08'44"W	133.47
24	S33°18'09"E	111.17	124	S57°08'44"W	87.01
25	S26°09'06"W	113.22	125	S27°00'58"W	45.78
26	S48°26'42"E	90.00	126	S27°00'58"W	126.46
27	N82°47'58"E	150.00	127	S27°00'58"W	74.02
28	S43°24'30"W	130.00	128	S68°56'00"W	41.80
29	S34°52'38"W	130.00	129	S15°39'08"W	144.11
30	S25°18'19"W	130.00	130	S15°39'08"W	101.96
31	N84°14'32"E	124.23	131	S15°39'08"W	21.05
32	N47°47'56"E	44.07	132	S12°22'38"E	59.44
33	S52°55'08"E	76.15	133	S05°39'29"E	78.81
34	S13°08'54"W	122.85	134	S05°39'29"E	87.22
35	S63°35'17"E	106.05	135	S05°39'29"E	91.86
36	S85°10'34"E	78.63	136	N84°12'38"E	178.27
37	N88°39'47"E	103.17	137	S41°30'30"E	49.78
38	N83°49'46"E	101.25	138	N84°12'38"E	70.83
39	N78°59'45"E	105.28	139	S05°47'22"E	101.00
40	S44°04'55"E	122.13	140	S66°23'29"W	24.76
41	S44°04'55"E	38.44	141	N23°54'46"E	31.79
42	S27°41'50"E	90.00	142	N64°40'18"E	23.81
43	S27°41'50"E	90.00	143	N64°40'18"E	22.37
44	S68°08'08"E	35.92	144	N39°15'31"W	160.64
45	S68°08'08"E	106.49	145	N39°15'31"W	151.17
46	N71°53'17"E	10.35	146	S85°00'01"W	31.85
47	N71°53'17"E	123.63	147	N39°15'31"W	42.00
48	N71°53'17"E	95.54	148	N67°55'44"W	84.24
49	N28°36'40"E	40.84	149	S76°51'21"W	86.84
50	N28°36'40"E	95.38	150	S63°00'42"W	72.48
51	N47°34'20"E	12.76	151	N79°07'44"W	118.70
52	N47°34'20"E	67.86	152	N52°39'23"W	205.99
53	N47°34'20"E	49.93	153	S76°58'59"W	71.93
54	N81°49'52"E	13.74	154	N15°24'50"E	98.07
55	N81°49'52"E	80.12	155	S76°42'57"W	176.02
56	N81°49'52"E	80.12	156	N10°30'11"E	144.35
57	N81°49'52"E	32.87	157	N68°17'03"E	94.55
58	N89°54'35"E	47.36	158	N55°06'22"E	115.46
59	N89°54'35"E	88.49	159	N18°19'54"E	72.53
60	N89°54'35"E	73.96	160	N18°19'54"E	70.06
61	S55°28'52"E	43.64	161	N61°34'50"E	20.43
62	S55°28'52"E	21.07	162	N24°56'23"W	39.74
63	N81°29'33"E	118.16	163	N14°39'34"E	49.77
64	N81°29'33"E	8.46	164	S79°18'51"E	61.44
65	N06°00'52"W	119.18	165	N25°43'16"E	89.08
66	N50°28'32"E	42.28	166	N71°49'23"E	63.39
67	N50°28'32"E	59.50	167	N88°15'35"E	61.63
68	S79°55'54"E	18.49	168	S06°09'49"W	45.33
69	S79°55'54"E	80.88	169	S70°41'01"W	31.66
70	S79°55'54"E	75.69	170	S05°24'16"E	35.37
71	S43°48'30"E	40.84	171	S68°37'52"W	59.40
72	S43°48'30"E	68.48	172	S05°05'16"W	40.51
73	S16°29'34"W	171.24	173	S27°16'46"W	30.89
74	S37°01'28"E	46.60	174	N37°07'55"E	56.99
75	S37°01'28"E	69.53	175	N85°42'17"E	68.42
76	S83°59'33"E	93.47	176	N58°25'08"E	62.31
77	N13°55'53"E	67.81	177	N24°52'11"W	44.33
78	N13°55'53"E	41.33	178	S73°43'27"W	108.88
79	N13°55'53"E	135.46	179	S87°11'49"W	94.14
80	N13°55'53"E	111.72			
81	N13°55'53"E	41.52			
82	N28°18'13"E	56.32			
83	N28°18'13"E	56.96			
84	N28°18'13"E	96.43			
85	N28°18'13"E	69.05			
86	N02°35'45"E	19.04			
87	N02°35'45"E	97.58			
88	N02°35'45"E	88.75			
89	N32°15'11"E	15.45			
90	N32°15'11"E	145.33			
91	N32°15'11"E	39.29			
92	N12°38'23"E	150.99			
93	N12°38'23"E	157.69			
94	N56°07'46"W	79.68			
95	S25°46'56"W	81.24			
96	S59°35'28"W	26.98			
97	S59°35'28"W	83.39			
98	S59°35'28"W	52.71			
99	S82°23'06"W	27.70			
100	S82°23'06"W	75.08			

Cxx - CURVE DATA

No.	Delta	Radius	Arc Length	Tangent	Chord	Bearing	No.	Delta	Radius	Arc Length	Tangent	Chord	Bearing
1	18°11'42"	180.00	62.64	28.82	62.33	N56°34'27"E	101	17°47'32"	340.00	105.58	53.22	105.16	S67°01'24"W
2	18°11'42"	180.00	57.16	28.82	56.92	N55°34'27"E	102	17°26'32"	340.00	103.50	52.16	103.10	S64°38'26"W
3	81°05'59"	175.00	247.70	149.73	227.54	S74°46'43"E	103	18°28'11"	340.00	109.60	55.28	109.13	N77°24'13"W
4	110°46'16"	150.00	290.00	217.32	246.90	S89°36'51"E	104	03°47'50"	340.00	22.53	11.27	22.53	N66°16'12"W
5	67°26'21"	250.00	294.26	166.85	277.56	N51°16'51"E	105	12°28'49"	230.00	50.10	25.15	50.00	N70°36'41"W
6	24°53'21"	670.00	291.05	147.86	288.76	N30°00'21"E	106	18°13'49"	230.00	73.18	36.90	72.87	N85°58'00"W
7	08°35'26"	670.00	100.46	50.32	100.36	N21°51'23"E	107	18°04'17"	230.00	72.54	36.58	72.24	S75°52'37"W
8	16°17'55"	670.00	190.59	95.94	189.54	N34°17'04"E	108	19°45'13"	230.00	79.30	40.05	78.90	S56°58'12"W
9	51°42'40"	250.00	225.63	121.45	218.05	N15°35'41"E	109	20°41'52"	230.00	83.09	42.00	82.64	S36°44'39"W
10	23°48'12"	200.00	83.09	42.15	82.49	S75°45'00"E	110	21°34'17"	230.00	86.59	43.82	86.08	S15°36'35"W
11	113°54'54"	240.00	477.17	368.97	402.37	N35°23'27"E	111	06°09'38"	830.00	89.25	44.67	89.20	S01°44'37"W
12	24°06'17"	240.00	100.97	51.24	100.23	N80°17'45"E	112	04°50'01"	830.00	70.02	35.03	70.00	S03°45'13"E
13	89°48'37"	240.00	376.20	239.21	338.85	N23°20'18"E	113	04°50'01"	830.00	70.02	35.03	70.00	S08°35'14"E
14	86°41'13"	175.00	264.77	165.16	240.23	S06°11'48"W	114	22°27'12"	260.00	101.89	51.61	101.24	S22°13'51"E
15	26°26'33"	800.00	369.21	197.95	365.94	N52°28'48"W	115	32°14'38"	260.00	146.32	75.15	144.39	S49°34'45"E
16	54°41'50"	230.00	219.57	118.86	211.33	N38°21'09"W	116	15°16'11"	770.00	205.21	103.22	204.60	S54°10'27"E
17	15°49'40"	800.00	221.00	111.21	220.30	N03°05'24"W	117	07°16'50"	770.00	97.84	48.99	97.78	S42°53'56"E
18	110°48'17"	200.00	386.78	289.94	329.26	N60°13'34"E	118	20°55'23"	120.00	43.82	22.16	43.58	S45°27'42"W
19	57°30'05"	370.00	371.33	202.99	355.94	N86°52'41"E	119	89°50'53"	120.00	188.18	119.68	189.48	N79°09'10"W
20	53°29'15"	150.00	140.03	75.59	135.00	N31°23'01"E	120	10°00'31"	205.00	35.81	17.95	35.76	N39°13'59"W
21	84°30'00"	25.00	36.87	22.71	33.62	S32°19'52"W	121	14°22'20"	850.00	213.22	107.17	212.66	S24°44'50"W
22	50°54'34"	606.75	104.94	52.60	104.81	S69°17'04"E	122	67°26'21"	70.00	82.39	46.72	77.72	S51°16'51"W
23	103°15'24"	25.00	45.05	31.57	39.20	N63°42'15"W	123	26°26'33"	960.00	443.05	225.54	439.13	N52°28'48"W
24	13°14'55"	265.00	61.28	30.78	61.14	S18°42'15"E	124	54°41'50"	70.00	66.83	36.20	64.32	N38°21'09"W
25	01°12'25"	3443.50	72.54	36.27	72.54	S24°39'30"E	125	15°49'40"	640.00	176.80	88.97	176.24	N03°05'24"W
26	51°35'07"	550.00	495.18	265.79	478.63	N69°39'10"E	126	110°48'17"	40.00	77.36	57.99	65.85	N60°13'34"E
27	63°40'28"	175.00	194.48	108.66	184.63	S52°43'02"E	127	21°44'22"	530.00	201.09	101.77	199.89	S75°14'28"E
28	51°42'40"	220.00	198.56	108.62	191.89	S16°35'41"W	128	04°24'07"	530.00	40.72	20.37	40.71	S98°18'42"E
29	06°19'39"	700.00	77.29	38.68	77.29	S39°14'39"W	129	02°21'38"	850.00	35.02	17.51	35.02	S30°45'11"W
30	15°51'51"	630.00	174.44	87.78	173.88	N47°11'27"W	130	05°43'55"	850.00	85.04	42.55	85.00	S26°42'24"W
31	65°55'38"	145.00	166.84	94.03	157.79	S82°21'53"E	131	05°43'55"	850.00	85.04	42.55	85.00	S20°58'29"W
32	15°10'21"	145.00	38.40	19.31	38.29	S41°48'53"E	132	32°10'50"	70.00	39.32	20.19	38.80	S33°39'05"W
33	12°15'25"	180.00	38.51	19.33	38.43	S40°21'26"E	133	35°15'31"	70.00	43.08	22.24	42.40	S67°22'16"W
34	18°58'38"	180.00	62.76	31.70	62.44	S56°28'28"E	134	07°16'50"	960.00	121.99	61.08	121.90	N42°53'56"W
35	18°42'33"	180.00	56.78	29.65	58.52	S75°48'43"E	135	08°35'01"	960.00	143.82	72.05	143.69	N50°49'52"W
36	22°48'04"	180.00	68.23	33.62	63.78	N84°40'38"E	136	09°34'19"	960.00	160.38	80.38	160.19	N59°54'32"W
37	22°48'54"	180.00	71.68	36.32	71.20	N63°07'09"E	137	33°12'11"	70.00	40.57	20.87	40.00	N49°05'59"W
38	16°42'41"	180.00	52.50	26.44	52.31	N43°21'22"E	138	21°29'39"	70.00	26.26	13.29	26.11	N21°45'04"W
39	13°28'01"	280.00	65.81	33.06	65.66	N78°16'01"E	139	03°17'18"	640.00	36.73	18.37	36.72	N09°21'36"W
40	14°33'22"	280.00	71.13	35.76	70.94	N64°15'20"E	140	07°09'59"	640.00	80.05	40.08	80.00	N04°07'58"W
41	14°16'44"	280.00	69.78	35.07	69.60	N49°50'17"E	141	05°22'24"	640.00	80.02	30.03	80.00	N02°08'14"E
42	14°32'17"	280.00	71.05	35.71	70.86	N55°28'46"E	142	53°11'44"	40.00	37.14	20.03	35.82	N45°46'59"E
43	10°25'57"	280.00	51.80	26.97	51.79	N25°11'39"E	143	43°14'52"	40.00	30.19	15.86	29.48	S85°59'43"E
44	05°54'14"	640.00	65.95	33.00	65.92	N20°30'47"E	144	03°11'05"	530.00	29.46	14.73	29.45	S65°57'49"E
45	18°50'09"	270.00	88.76	44.78	88.36	N82°55'50"E	145	11°28'42"	530.00	106.18	53.27	106.00	S73°17'43"E
46	63°50'13"	145.00	161.55	90.32	153.33	S03°11'45"W	146	11°28'42"	530.00	106.18	53.27	106.00	S84°46'25"E
47	285°41'17"	50.00	249.31	-37.89	60.40	S47°02'51"E	147	07°16'50"	630.00	80.05	40.08	80.00	N42°53'56"W
48	129°57'04"	50.00	113.40	107.11	90.61	S30°49'15"E	148	08°35'01"	630.00	94.38	47.28	94.29	N50°49'52"W
49	42°00'13"	50.00	56.61	51.77	53.63	S66°38'15"E	149	48°40'46"	50.00	42.48	22.62	41.21	N68°31'42"W
50	78°05'25"	50.00	68.15	40.55	62.99	N41°56'05"E	150	12°46'52"	50.00	11.15	5.60	11.13	N03°30'04"W
51	17°01'43"	205.00	60.93	30.69	60.70	N28°54'10"E	151	10°32'15"	170.00	31.27	15.68	31.22	N69°07'01"W
52	28°18'05"	205.00	101.26	51.49	100.23	N06°14'16"E	152	01°00'23"	830.00	14.58	7.29	14.58	N65°11'53"W
53	19°05'57"	205.00	68.34	34.69	68.02	N17°27'45"W	153	14°21'41"	40.00	10.03	5.04	10.00	N12°00'17"E
54	17°16'33"	270.00	81.41	41.02	81.10	N52°04'08"E	154	03°53'32"	770.00	52.31	26.16	52.30	S63°45'18"E
55	13°21'48"	270.00	62.97	31.63	62.83	N36°44'58"E							
56	12°21'25"	270.00	58.25	29.25	58.15	N23°01'05"E							
57	14°04'30"	270.00	66.33	33.33	66.16	N10°39'51"E							
58	14°35'03"	270.00	68.73	34.55	68.54	N03°39'56"W							
59	105°21'24"	50.00	91.94	65.58	79.52	N09°34'22"E							
60	63°28'43"	50.00	55.40	30.93	52.61	N74°50'42"W							
61	03°58'44"	50.00	3.47	1.74	3.47	S71°25'35"W							
62	49°00'00"	50.00	42.76	22.79	41.47	S44°56'13"W							
63	42°00'13"	50.00	36.66	19.20	35.84	S00°33'53"E							
64	06°28'12"	210.00	23.71	11.87	23.70	S18°19'54"E							
65	37°14'36"	210.00	136.50	70.76	134.11	S03°31'30"W							
66	34°33'03"	210.00	126.64	65.31	124.73	S39°25'19"W							
67	35°39'03"	210.00	130.67	67.53	128.57	S74°31'22"W							
68	13°15'57"	170.00	39.36	19.77	39.27	N81°01'07"W							
69	12°43'00"	640.00	142.05	71.32	141.75	N35°11'48"E							
70	00°53'43"	640.00	70.43	35.00	5.00	N42°00'10"E							
71	36°25'19"	280.00	177.99	92.12	175.01	N24°14'22"E							
72	15°17'21"	280.00	74.72	37.58	74.50	N01°36'59"W							
73	06°33'06"	700.00	80.04	40.07	80.00	S32°50'55"W							
74	05°43'55"	700.00	70.03	35.04	70.00	S26°42'24"W							
75	05°43'55"	700.00	70.03	35.04	70.00	S20°58'29"W							
76	00°32'51"	700.00	6.69	3.35	6.69	S17°50'06"W							
77	32°10'50"	640.00	123.56	62.46	121.95	S33°39'05"W							
78	35°15'31"	220.00	135.38	69.91	133.26	S67°22'16"W							
79	07°16'50"	830.00	105.47	52.80	105.40	N42°53'56"W							
80	08°35'01"	830.00	124.35	62.29	124.23	N50°49'52"W							
81	09°34'19"	830.00	138.66	69.49	138.50	N59°54'32"W							
82	33°12'11"	200.00	115.90	59.63	114.29	N49°05'59"W							
83	21°29'39"	200.00	75.03	37.96	74.59	N21°45'04"W							
84	03°17'18"	770.00	44.19	22.10	44.18	N09°21'36"W							
85	07°09'59"	770.00	96.31	48.22	96.24	N04°07'58"W							
86	05°22'24"	770.00	72.21	36.13	72.19	N02°08'14"E							
87	14°21'41"	170.00	42.61	21.42	42.50	N12°00'17"E							
88	53°11'44"	170.00	157.83	85.12	152.23	N45°46'59"E							
89	43°14'52"	170.00	128.32	67.39	125.29	S85°59'43"E							
90	03°11'05"	400.00	22.23	11.12	22.23	S65°57'49"E							