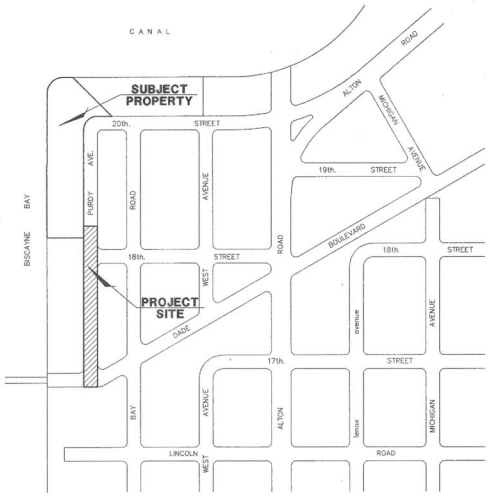


LOCATION SKETCH

SECT. 34, TWP. 53s., RNG. 42e.
SCALE: 1"=300'

N

LEGAL DESCRIPTION:

LOTS 10 AND 11, OF BLOCK 15, OF "ISLAND VIEW SUBDIVISION", ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 6 AT PAGE 115 OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA.

AND

LOTS 27 THRU 40, INCLUSIVE, OF BLOCK 15-A, OF "ISLAND VIEW ADDITION", ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 9 AT PAGE 144 OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA.

ALL OF THE ABOVE BEING LOCATED IN THE CITY OF MIAMI BEACH, FLORIDA.

LESS:

A PORTION OF BLOCK 15-A, OF "ISLAND VIEW ADDITION", ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 9 AT PAGE 144 OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA, LOCATED IN THE CITY OF MIAMI BEACH, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEAST CORNER OF LOT 27 OF SAID BLOCK 15-A, THENCE RUN WEST, ALONG THE SOUTH LINE OF LOTS 27 THRU 33, OF SAID BLOCK 15-A, FOR A DISTANCE OF 458.95 FEET TO A POINT; THENCE RUN N 45°00'00" W, ACROSS LOTS 33, 34 AND 35, OF SAID BLOCK 15-A, FOR A DISTANCE OF 282.84 FEET TO THE POINT OF INTERSECTION WITH THE NORTH LINE OF SAID LOT 35; THENCE RUN EAST, ALONG THE NORTH LINE OF SAID BLOCK 15-A, FOR A DISTANCE OF 659.95 FEET TO THE NORTHEAST CORNER OF LOT 27, OF SAID BLOCK 15-A; THENCE RUN SOUTH, ALONG THE EAST LINE OF SAID LOT 27, FOR A DISTANCE OF 200.00 FEET TO THE POINT OF BEGINNING; AND LESS:

LOTS 10 AND 11, OF BLOCK 15, OF "ISLAND VIEW SUBDIVISION", ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 6, AT PAGE 115 OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA; AND THE SOUTH 22.50 FEET OF LOT 40, OF BLOCK 15-A, OF "ISLAND VIEW ADDITION", ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 9 AT PAGE 144 OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA, ALL BEING IN SECTION 34, TOWNSHIP 53 SOUTH, RANGE 42 EAST OF DADE COUNTY, FLORIDA AND BEING SITUATED IN THE CITY OF MIAMI BEACH, FLORIDA.

ENGINEER'S NOTE:

1. THE WATER AND/OR SEWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE PUBLISHED AND CURRENT STANDARDS OF THE CITY OF MIAMI BEACH UTILITY DEPARTMENT AND UNDER THE INSPECTION OF THEIR PERSONNEL.
2. THE APPROXIMATE LOCATION OF ALL UTILITIES SHOWN HEREON WERE DETERMINED FROM "AS-BUILT" PLANS AND\OR FIELD LOCATION AND MUST BE VERIFIED.
3. CONTRACTOR TO VERIFY LOCATION, ELEVATION, MATERIAL AND CONDITION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. AFTER OBTAINING LOCATION FROM U.N.C.L.E. AND OTHER UTILITY COMPANIES, AND PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL UNCOVER ALL KNOWN UNDER-GROUND UTILITIES IN THE PATH OF THE WORK, WHETHER OR NOT THE UTILITIES ARE SHOWN ON THE PLANS, AND SHALL TAKE VERTICAL AND HORIZONTAL MEASUREMENTS OF THE LOCATIONS OF THESE UTILITIES, AND IF ANY CONFLICTS ARE APPARENT, REPORT THE MEASUREMENTS TO THE ENGINEER-OF-RECORD.
4. CONTRACTOR TO CONTACT ENGINEER-OF-RECORD IF EXISTING UTILITIES ARE NOT AS SHOWN ON THE PLANS.
5. ALL LANDSCAPING AND IRRIGATION DISTURBED SHALL BE REPLACED WITH LIKE KIND.
6. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE " TRENCH SAFETY ACT", AND ALL REQUIREMENTS OF O.S.H.A.
7. ALL VALVES ARE TO BE TIED TO TEES (UNLESS OTHERWISE NOTED).
8. ELEVATIONS REFER TO N.G.V.D. NATIONAL GEODETIC VERTICAL DATUM OF 1929.
9. STATIONS REFER TO CENTERLINE C/L OF PURDY AVENUE.

ENGINEER'S CERTIFICATION REQUIREMENTS:

1. THE WATER AND/OR SEWER LAYOUTS, PIPE COVER AND/OR INVERT ELEVATIONS AND DETERMINATION OF EASEMENT GEOMETRY SHALL BE PERFORMED BY A STATE OF FLORIDA LICENSED LAND SURVEYOR AT THE TIME OF INSTALLATION.
2. THE ENGINEER-OF-RECORD SHALL BE NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE BEFORE INSTALLATION, TESTING AND BACKFILLING OF ANY LINES.
3. THE ENGINEER-OF-RECORD SHALL BE PROVIDED WITH COPIES OF ALL PRESSURE TEST RESULTS, EXFILTRATION TEST RESULTS, BACTERIOLOGICAL TEST DATA AND DENSITY REPORTS AS THEY ARE ISSUED BY THE CORRESPONDING TESTING LABS.
4. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER-OF-RECORD FOR REVIEW PRIOR TO THE PURCHASE OR INSTALLATION OF ANY SYSTEM COMPONENTS.
5. CONTRACTOR SHALL PROVIDE THE ENGINEER-OF-RECORD WITH A SET OF FINAL "AS-BUILT" DRAWINGS, SIGNED AND SEALED BY A STATE OF FLORIDA LICENSED LAND SURVEYOR, FOR ENGINEER'S REVIEW AND FILE.
6. CERTIFICATION OF COMPLETION IN ACCORDANCE WITH PLANS AND SPECIFICATIONS WILL "NOT" BE ISSUED BY THE ENGINEER-OF-RECORD TO THE APPROPRIATE PERMITTING AGENCIES UNTIL ALL THE REQ'S DESCRIBED HEREIN HAVE BEEN MET.

WATER AND SEWER SEPARATION NOTES:

1. SANITARY SEWERS AND FORCE MAINS SHOULD CROSS UNDER WATER MAINS WHEN EVER POSSIBLE. SANITARY SEWERS AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.

   WHERE SANITARY SEWERS FORCE MAINS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) OR AWWA C-900 P.V.C. PRESSURE PIPE AT THE CROSSING. SUFFICIENT LENGTHS MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6" INCHES MUST BE MAINTAINED AT ALL CROSSINGS.

   ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANCE FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

   WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.
2. A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER & WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.

   IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OF FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

   WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF D.I.P. AND THE SANITARY SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF D.I.P. OR AWWA C-900 P.V.C. PRESSURE PIPE WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
3. ALL DIP SHALL BE CLASS 50 OR HIGHER. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN.
4. WHEN USING TYPE PSM-SDR-35 PVC, A 20 FOOT LENGTH OF DUCTILE IRON PIPE MAY BE USED AS A CASING PIPE IN LIEU OF THE ABOVE. SEAL BOTH ENDS WITH GROUT.

DERM NOTES ON WATER-SEWER INSTALLATION

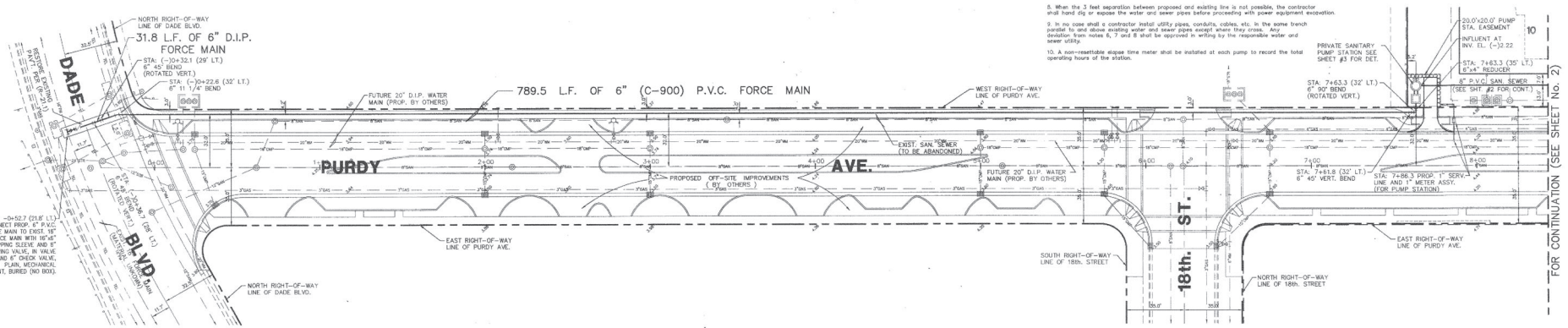
1. Horizontal distance of 10 ft. shall be maintained between water and sewer mains. When the 10 feet horizontal distance criteria cannot be met due to an existing underground facility conflict, the sewer shall be constructed of ductile iron pipe with mechanical joints.
2. A vertical distance of at least 18 inches shall be maintained between any water and sewer mains. The sewer shall be a ductile iron single 20 feet length centered on the crossing if the minimum vertical distance is less than 18 inches or the sewer is installed above the water main (regardless of separation).
3. In highly congested areas, where either water or sewer facilities are existing and the separation requirements cannot be met, special consideration may be given subject to a complete evaluation of existing and proposed conditions.
4. The maximum allowable exfiltration rate of gravity sanitary sewers constructed in a public wellfield protection area shall be fifty (50) gallons per inch pipe diameter per mile per day for residential land use and twenty (20) gallons per inch pipe diameter per mile per day for non-residential land use.
5. Force main sewers constructed in a public wellfield protection area shall be either ductile iron or reinforced concrete pressure sewer pipe. The ductile iron pipe exfiltration rate shall not be greater than the allowable leakage rate specified in American Water Works Association Standard (AWWAS) C600-82 at a test pressure of 100 pounds per square inch.

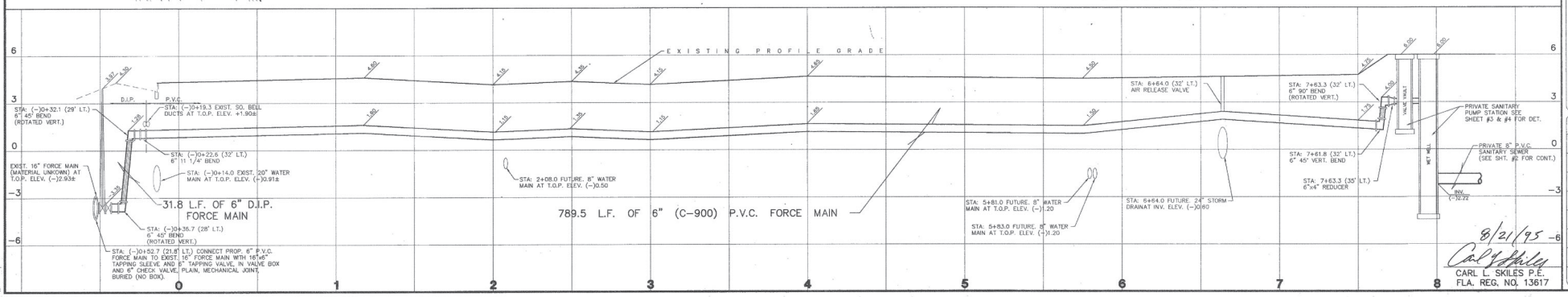
   The reinforced concrete pressure sanitary sewer force main exfiltration rate shall not be greater than one-half (1/2) the allowable leakage rate specified in AWWAS C600-82 at a test pressure of 100 pounds per square inch.
6. The contractor shall verify nature, depth, character of existing underground utilities prior to start of construction.
7. All other public or private utility facilities shall be constructed at least 3 feet from any water and sewer main as measured from the outside bell of the water and sewer pipe to the outside of the utility pipe.
8. When the 3 feet separation between proposed and existing line is not possible, the contractor shall hand dig or expose the water and sewer pipes before proceeding with power equipment excavation.
9. In no case shall a contractor install utility pipes, conduits, cables, etc. in the same trench parallel to and above existing water and sewer pipes except where they cross. Any deviation from notes 6, 7 and 8 shall be approved in writing by the responsible water and sewer utility.
10. A non-resettable elapse time meter shall be installed at each pump to record the total operating hours of the station.

LEGEND:

CATCH BASIN		TELE./ELEC. PULL BOX	
UTILITY MANHOLES		WOOD POWER POLE	
FIRE HYDRANT		POWER POLE w/LUMINAIRE	
WATER VALVE		CONC. POWER POLE	
WATER METER		TRAFFIC SIGN	
CURB AND GUTTER		CONC. WHEEL STOP	
EXIST. IMPROVEMENTS		EXIST. GROUND ELEVATION	
CONCRETE WALKWAYS		NEW ASPHALT PAVEMENT	

48 HOURS BEFORE DIGGING
CALL UNCLE
TOLL FREE
1-800-432-4770
UNDERGROUND UTILITIES NOTIFICATION CENTER OF FLORIDA





8/21/95
Carl L. Skiles
CARL L. SKILES P.E.
FLA. REG. NO. 13617

No.	Date	Description
1	7/10/95	REVISED PER ROAD IMPROVEMENTS

FORTIN, LEAVY, SKILES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
100 Northeast 168th Street / North Miami Beach, Florida 33162
Dade 653-4493 / Broward 463-7180

SUNSET HARBOUR PLACE
~~WATER AND~~ SEWER PLANS
CITY OF MIAMI BEACH, DADE COUNTY, FLORIDA.

Date	SEPT. 7, 1994
Scale	1"=30'
Check By	CLS
Job. No.	9345
Ref. Dwg.	940679/795
Field Book	475/38
Cad. No.	WS9345-1 (98)
Dwg. No.	894-025
Sheet	1 of 4

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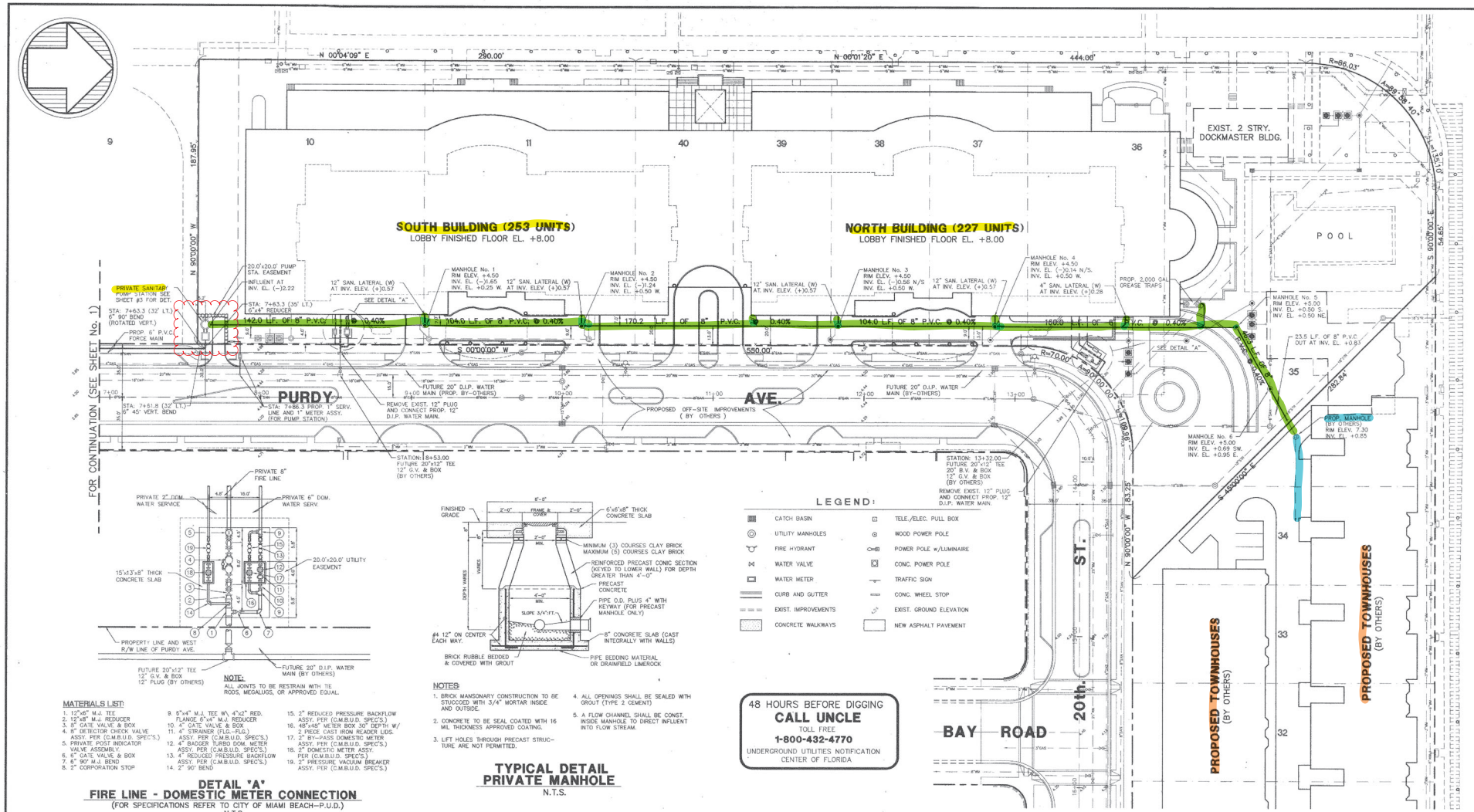


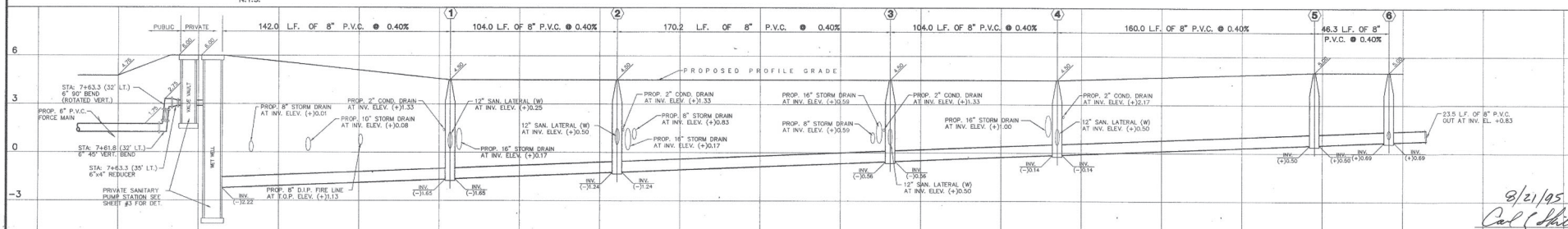
NOTE:
ALL JOINTS TO BE RESTRAIN WITH TIE RODS, MEGALUGS, OR APPROVED EQUAL.

MATERIALS LIST:
1. 12"x6" M.J. TEE
2. 12"x8" M.J. REDUCER
3. 8" GATE VALVE & BOX
4. 8" DETECTOR CHECK VALVE ASSY. PER (C.M.B.U.D. SPEC'S.)
5. PRIVATE POST INDICATOR VALVE ASSEMBLY.
6. 6" GATE VALVE & BOX
7. 6" 90° M.J. BEND
8. 2" CORPORATION STOP
9. 6"x4" M.J. TEE W\ 4"x2" RED. FLANGE 6"x4" M.J. REDUCER
10. 4" GATE VALVE & BOX
11. 4" STRAINER (FLG.-FLG.)
12. 4" BADGER TURBO DOM. METER ASSY. PER (C.M.B.U.D. SPEC'S.)
13. 4" REDUCED PRESSURE BACKFLOW ASSY. PER (C.M.B.U.D. SPEC'S.)
14. 2" 90° BEND
15. 2" REDUCED PRESSURE BACKFLOW ASSY. PER (C.M.B.U.D. SPEC'S.)
16. 48"x48" METER BOX 30" DEPTH W/ 2 PIECE CAST IRON READER LIDS.
17. 2" BY-PASS DOMESTIC METER ASSY. PER (C.M.B.U.D. SPEC'S.)
18. 2" DOMESTIC METER ASSY. PER (C.M.B.U.D. SPEC'S.)
19. 2" PRESSURE VACUUM BREAKER ASSY. PER (C.M.B.U.D. SPEC'S.)

DETAIL "A"
FIRE LINE - DOMESTIC METER CONNECTION
(FOR SPECIFICATIONS REFER TO CITY OF MIAMI BEACH—P.U.D.)
N.T.S.

NOTES:
1. BRICK MANSONARY CONSTRUCTION TO BE STUCCOED WITH 3/4" MORTAR INSIDE AND OUTSIDE.
2. CONCRETE TO BE SEAL COATED WITH 16 MIL THICKNESS APPROVED COATING.
3. LIFT HOLES THROUGH PRECAST STRUCTURE ARE NOT PERMITTED.
4. ALL OPENINGS SHALL BE SEALED WITH GROUT (TYPE 2 CEMENT)
5. A FLOW CHANNEL SHALL BE CONST. INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.

TYPICAL DETAIL
PRIVATE MANHOLE
N.T.S.



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CONSULTING ENGINEERS & LAND SURVEYORS
180 Northeast 168th Street / North Miami Beach, Florida 33162
Suite 400-4180 / Broward 463-7180

SUNSET HARBOUR PLACE
~~WATER AND~~ SEWER PLANS
CITY OF MIAMI BEACH, DADE COUNTY, FLORIDA.

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Ref. Dwg.	940679/795
Field Book	475/38
Cad. No.	WS9345-2 (98)
Dwg. No.	894-025
Sheet	2 of 4

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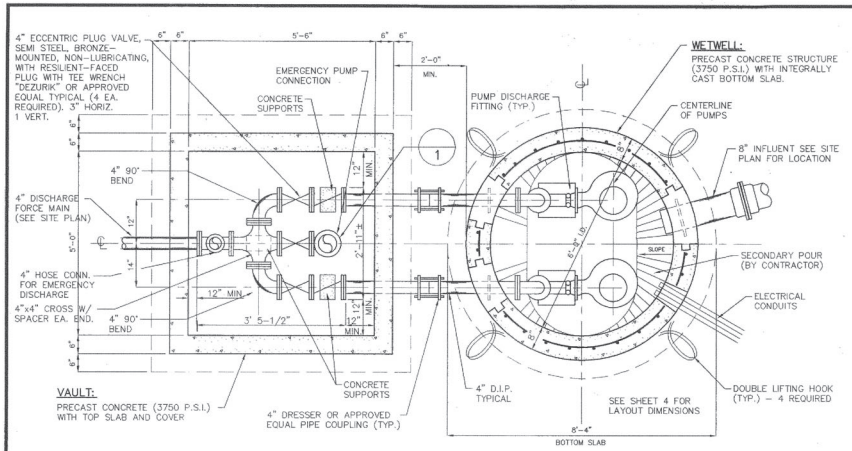
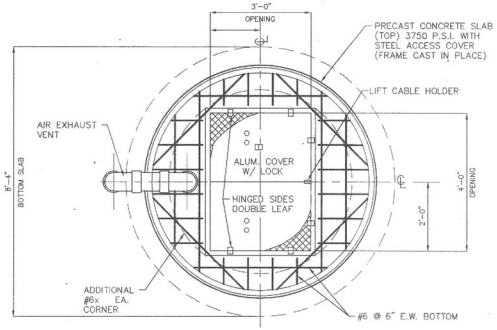
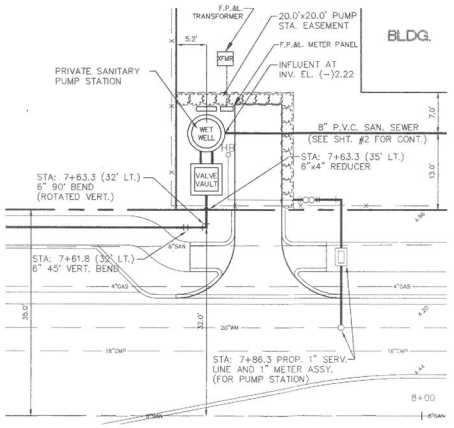


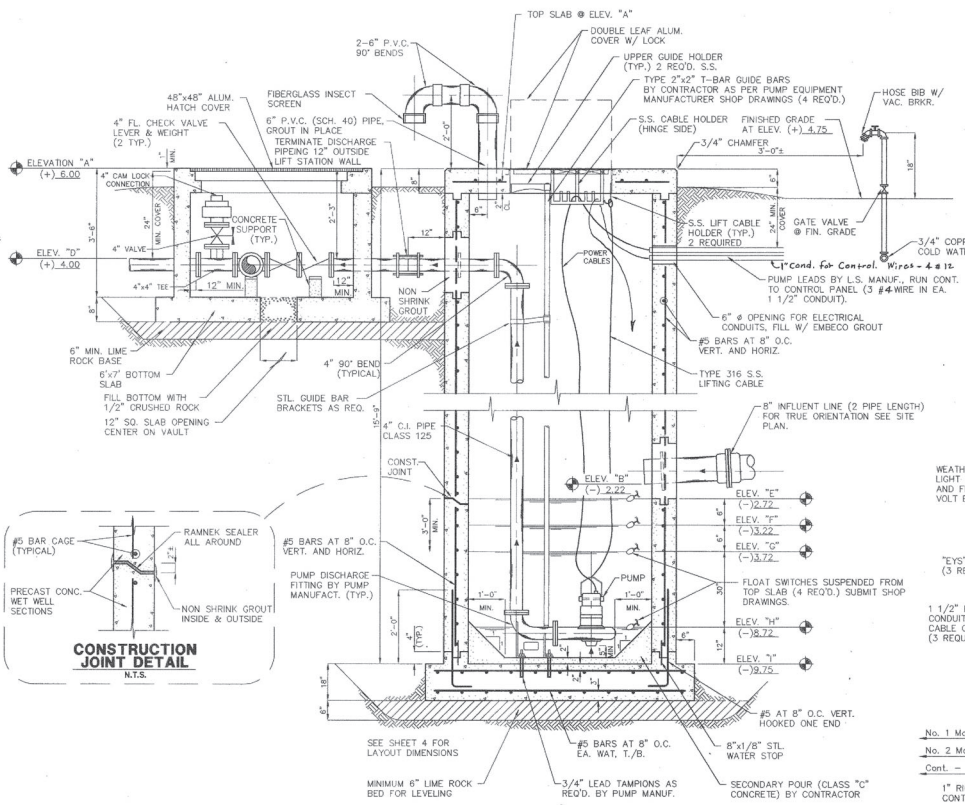
PLAN
N.T.S.



TOP VIEW
N.T.S.

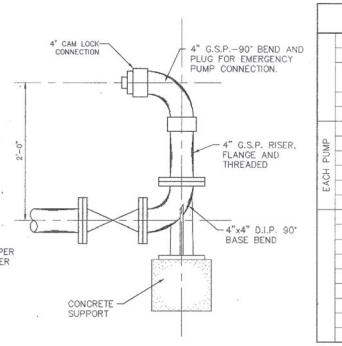


SITE PLAN
SCALE: 1"=10'



SECTIONAL ELEVATION
N.T.S.

CONSTRUCTION JOINT DETAIL
N.T.S.

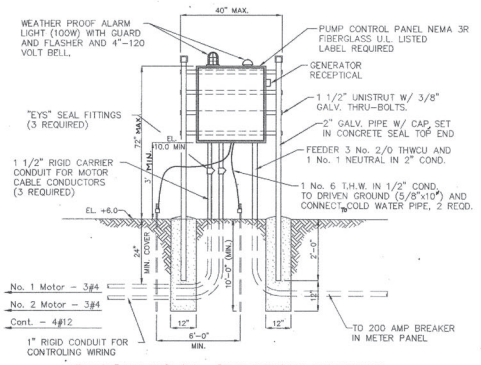


EMERGENCY PUMP CONNECTION DETAIL (1)
N.T.S.

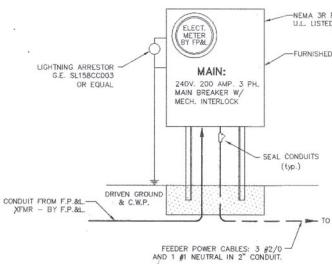
PUMPING STATION DATA:			
	PUMPING STATION	NUMBER	ONE
	NUMBER OF PUMPS	NUMBER	TWO
EACH PUMP	DAVIS - EMU SUBMERSIBLE SEWAGE PUMPS	MOTOR	FK-202-4/27
	MODEL:	NUMBER	FA-102
	IMPELLER:	NUMBER	#306
	PUMPING CAPACITY	G.P.M.	375
	TOTAL DYNAMIC HD.	FEET	137'
	MOTOR HORSEPOWER	HP.	25
	MOTOR SPEED	R.P.M.	1,720
	PHASE	ø	3
	VOLTAGE	V	240
	TOP SLAB	ELEV. "A"	6.00
	INVERT, ... "INFLUENT	ELEV. "B"	(-)2.22
	--	--	--
	TOP DISCHARGE F.M.	ELEV. "D"	4.00
	ALARM SIGNAL ON	ELEV. "E"	(-)2.72
	LAG PUMP ON	ELEV. "F"	(-)3.22
	LEAD PUMP ON	ELEV. "G"	(-)3.72
	BOTH PUMPS OFF	ELEV. "H"	(-)8.72
	BOTTOM SLAB	ELEV. "I"	(-)9.75

GENERAL NOTES

1. ALL CONCRETE SHALL HAVE TYPE 2 CEMENT AND DEVELOP 4,000 P.S.I. AT 28 DAYS.
2. FABRICATION AND ERECTION OF REINFORCING BARS SHALL CONFORM TO THE A.C.I. CODE.
3. CHAMFER EXPOSED CONCRETE EDGES 3/4"
4. SEE SHOP & ELECTRICAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS.
5. ALL ANCHOR BOLTS, NUTS, WASHERS, ETC., LOCATED WITHIN WET WELL SHALL BE STAINLESS STEEL, UNLESS NOTED OTHERWISE.
6. EQUIPMENT ITEMS AS NOTED SHALL BE SUPPLIED BY THE PUMP EQUIPMENT MANUFACTURER.
7. ELEVATIONS INDICATED SHALL REFER TO THE DATUM USED TO CONSTRUCT THE GRAVITY SEWER SYSTEM - N.G.V.D.
8. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS AGAINST FLOATATION OF WET WELL UNTIL ALL OF THE BACKFILL IS IN PLACE.
9. ANCHOR PUMP DISCHARGE FITTINGS TO WET WELL FLOOR WITH 3/4" LEAD TAMPIONS AS REQUIRED. SET PUMPS TO ASSURE ACCURATE ALIGNMENT OF GUIDE BARS.
10. ALL CONSTRUCTION SHALL COMPLY WITH THE SOUTH FLORIDA BUILDING CODE.
11. SUBMIT SHOP DRAWINGS TO ENGINEER PRIOR TO ORDERING ANY MATERIALS OR EQUIPMENT.
12. CONTRACTOR TO PROVIDE A COMPLETE AND OPERATING STA., INCLUDING ALL INCIDENTAL ACCESSORIES NORMALLY PROVIDED FOR THIS TYPE OF STATION, AND A COMPLETE SET OF "AS BUILT" DRAWINGS AND MAINTENANCE AND OPERATION MANUAL.
13. SEE SHEET 4 FOR DIMENSIONS & ELECTRICAL DATA.
14. ALL SERVICE EQUIPMENT SHALL BE SERVICE RATED.



ELECTRICAL SERVICE DETAIL
N.T.S.



ELECTRICAL METER PANEL
N.T.S.

8/21/95
Carl L. Skiles
CARL L. SKILES P.E.
FLA. REG. NO. 13617

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FORTIN, LEAVY, SKILES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
180 Northeast 168th. Street / North Miami Beach, Florida. 33162
Dade: 653-4490 / Broward 463-7180

SUNSET HARBOUR PLACE
~~WATER AND~~ SEWER PLANS
CITY OF MIAMI BEACH, DADE COUNTY, FLORIDA.

Date	SEPT. 7, 1994
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Field Book	475/38
Cad. No.	WS9345-3 (98)
Dwg. No.	894-025
Sheet	3 of 4

"TYPICAL SPECIFICATIONS FOR DAVIS-EMU SUBMERSIBLE SEWAGE PUMP STATIONS"

.4" Model Pumps
With FK Motors

PUMPS:
Furnish and install Two Davis-EMU Model FA102-306, 4" inch discharge connection, totally submersible sewage pump(s). 25 H.P., 1720 RPM, 230 volts, 3 phase, 60 hertz motor(s), capable of delivering 325 GPM against 134' TDH.

PUMP CONSTRUCTION:
The pump(s) shall be designed to pump sewage, storm water, heavy sludge and other fibrous materials without injurious damage during operation. The design shall be such that the lifting cover, stator housing and volute casing are of grey iron construction, with all nuts, bolts, washers and other fastening devices coming into contact with the sewage constructed of stainless steel. The impeller shall be of hard alloy grey iron construction and provided with stainless steel wear ring.

The pump motor shall be of Class F insulation, NEMA B design, watertight and positively oil cooled, filled with a transformer oil, quality BP Energol JSO or Shell Diala D or DX. The pump motor shall be guaranteed to run in a totally, partially or non-submerged condition continuously for a period of 24 hours without injurious damages. Water cooled pumps shall not be considered equal.

The pump shall be provided with a tandem double mechanical seal running in an oil bath. The seals shall be of lapped tungsten carbide and welded to stainless steel retainers and held in contact by separate springs. Conventional double mechanical seals with a spring assembly between the rotating faces, requiring constant differential pressure to effect sealing and subject to penetration and opening by pumping forces shall not be considered equal to the tandem seal specified and required.

The pump shaft shall be of stainless steel and supported by a double row inboard bearing for axial thrust and a single row outboard bearing for radial thrust. The impeller shall be connected to a short sturdy shaft in order to minimize shaft deflection. The shaft shall not extend more than 2½ times its diameter below the nearest support bearing.

The pump cable shall be 33 feet of the "SO" type and in compliance with industry standards for loads, resistance against sewage and of stranded construction. The cable shall enter the pump through a heavy duty entry assembly which shall be provided with an internal grommet assembly to protect against leakage once secured and must have a strain relief assembly as part of standard construction. The power cable shall connect to a terminal board which separates the incoming service from the pump motor, where, if leakage occurs, the terminal board shall short out and not cause damage to the motor.

Each pump shall be supplied with a universal coupling which bolts to the pump discharge flange and shall accept the discharge elbow provided by the pump manufacturer. Seal of the pump at the discharge flange shall be accomplished by a simple downward linear motion of the pump with the entire weight of the pump guided to and pressing against the discharge connection; no part of the pump shall bear directly on the sump floor and no rotary motion of the pump shall be required for sealing. Sealing at the discharge shall be effected by a rubber lip to insure a positive leakproof system and for ease of removal. Metal to metal discharge connections will not be considered equal. The pump shall be guaranteed not to leak at the discharge flange. Other forms of guiding, such as straightening vanes etc., shall not be considered equal.

CONTROLS:
Furnish and install one (1) Davis-EMU automatic pump control center in NEMA 3R enclosure of Fiberglass-Weldment Construction for 230 volts, 3 phase, 60 hertz, four wire power supply. Each pump shall have an individual disconnect switch, magnetic starter with three phase overload protection and manual resets, hand-off-auromatic selector switches, control disconnect and by pass circuitry for the alternator in the event of failure. Also provide a high level alarm. Also furnish 4 liquid level regulators, each provided with 35 feet of electric cable. The motor control center shall be installed in a location as shown on the engineer's drawings.

ACCESS FRAME:
Furnish one (1) Davis-EMU Model T-Bar pump access frame, complete with hinged and hasp-equipped cover, upper guide holders, galvanized lifting chain, and stainless steel cable holder. Frame shall be securely mounted in the slab of the sump as shown on the Engineers drawings.

PUMP GUIDE BARS:
Furnish one (1) T-Bar Guide Rail for each pump to permit raising and lowering the pump. Guide rails shall be of adequate length to extend from the lower guide holder on the pump discharge connection to the upper guide holder mounted on the access frame.

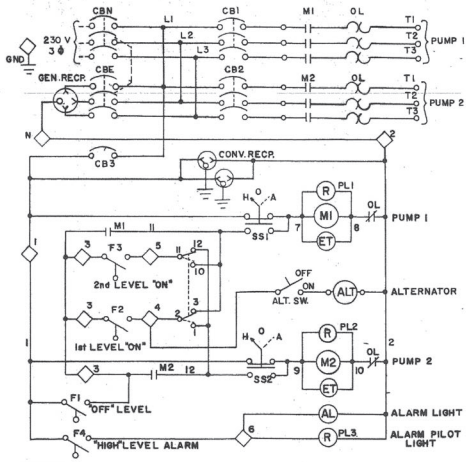
PUMP LIMITED WARRANTY:
The pump manufacturer shall warrant the pumps to be supplied to the owner for a period of five (5) years under normal use. The warranty must include 100% coverage of the manufacturers shop labor and parts for the first year and then 50% coverage through the 5th year. See actual warranty for details.

TESTING
Before placing installation into service the pumps shall be run continuously with the motor not submerged for 30 minutes under full load current with no damage resulting to the pump motor. The pumps shall during this test produce the designed GPM and TDH conditions and shall experience a heat rise of no more than 45°C above ambient temperature.

COMPATIBILITY OF EQUIPMENT:
In order to assure the proper performance and compatibility of interacting components within the intent of the specifications; the pumps, control center, access frame and warranty shall be supplied by the same manufacturer.

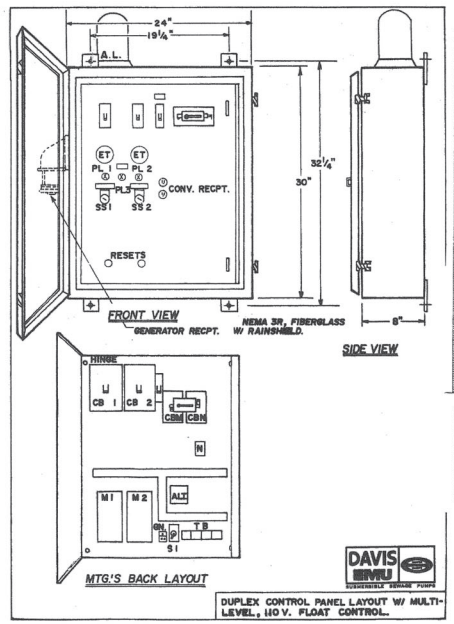
ELECTRICAL DATA

* Motor Type		FK 202
Size		4207
Rated power (kW)		18,5
Max. input (kW)		22,5
Max. input (kVA)		26
Speed (r.p.m.)		1720
Motor efficiency %	1/1	82
	3/4	82
	1/2	81
Power Factor	1/1	0,87
cos phi	3/4	0,85
	1/2	0,79
Locked rotor p.f.		0,55
Rated current (amps.) 400 V		
230 V		67
Locked rotor 400 V		
current (amps.) 230 V		268
Starting torque (Nm)		202
Length (mm)		918
Weight (kg)		155
Max. temp. pumped liq. (°F)		140
Admiss. inst. depth (Ft.)		
Max. starts per hour		
Motor filling (litere)		7
Filling of seal. chamber (lit.)		1,5
Power cable 400 V		
NSSHou(mm2) 230 V		4x25
NEMA CODE		D

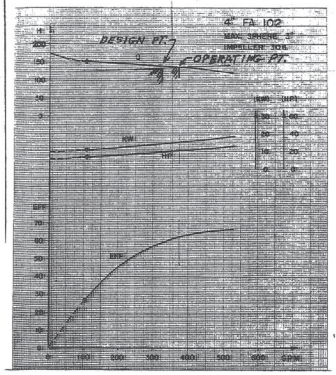


LEGEND:
CBN NORMAL POWER 3P CIRCUIT BRKR.
CB1 & 2 PUMP 3P CIRCUIT BREAKER
CB3 CONTROL IP CIRCUIT BREAKER
M1 & 2 MOTOR STARTER 3Ø
ALT ALTERNATOR 3PDT 110 VOLT
SS1 & 2 SELECTOR SWITCH 3POS. H-O-A
ALT.SW. ALTERNATOR SWITCH SPST
F1-4 FLOAT CONTROL SWITCH
PL1,2,3 PILOT LIGHT 110 VOLT
AL ALARM LIGHT 110 VOLT
ET ELAPSED TIME METER - NON RESETTABLE
GENRECP GENERATOR RECEPTACLE

DAVIS EMU
DUPLEX CONTROL PANEL
110 V. FLOAT CONTROL
SCHEMATIC
2/6/79 C.L.S.



DAVIS EMU
DUPLEX CONTROL PANEL LAYOUT W/ MULTI-LEVEL, 110 V. FLOAT CONTROL.

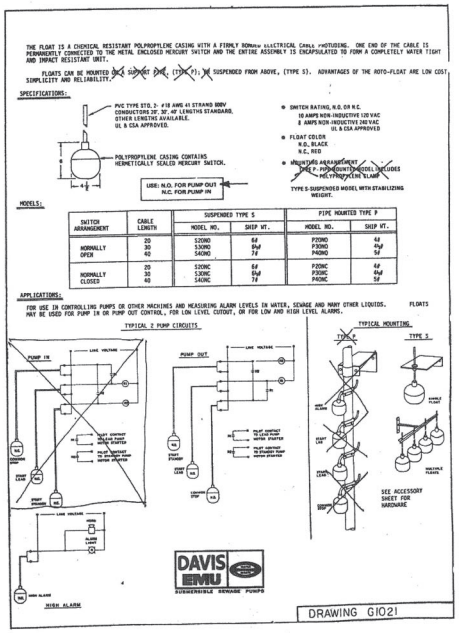


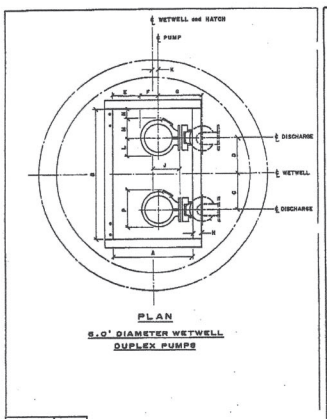
LEGEND		MOTOR	VOLTAGE
Q = Pump Capacity	DAVIS EMU SUBMERSIBLE SEWAGE PUMPS	FK202-4/27	230
H = Total Head in Feet		RATED HP	RATED AMPS
EW = Element Input of Motor		25	67
HP = Horsepower Required at Pump Shaft		FREQUENCY 60 HERTZ	R.P.M. 1720
EFF = Pump Efficiency		SUBJECT TO REVISIONS	NO. 60.16889C
PERFORMANCE CURVES BASED ON CLEAR WATER AT AMBIENT TEMPERATURE			

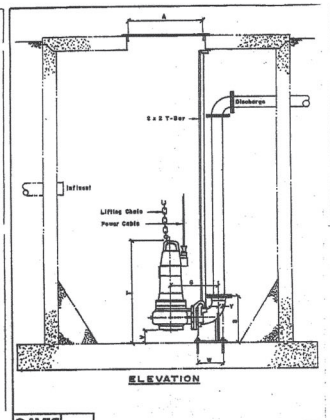
PANEL SCHEDULE

Circuit	Service	Breaker Amps	F.L.A.	Demand Load Amps		
1	Pump No. 1	80	67	125% x 67	=	84
2	Pump No. 2	80	67		=	67
3	Controls	20	15		=	15
4	Duplex Recpt.	20	15		=	15
				TOTAL		181

Feeder = 3 #2/0 THWCU and
1 #1 Neutral
in 2" Conduit







TYPICAL WETPIT INSTALLATION DIMENSIONS
FOR A FA102 PUMP WITH T-BAR GUIDE RAIL SYSTEM
SEE LOCATION DRAWINGS FA-1000-1A, 2A, 3A, 4A

		SIMPLEX	DUPLEX	TRIPLEX
PLAN	*A	30.0	30.0	30.0
	*B	30.0	48.0	24.0
	C	N/A	12.0	30.0
	D	N/A	14.0	N/A
	*E	6 13/16	6 13/16	6 13/16
	*F	8 5/16	8 5/16	8 5/16
	*G	20.0	20.0	20.0
	*H	3.0	3.0	3.0
	*J	10 1/2	10 1/2	10 1/2
	*K	1	1	1
	*L	8 1/2	8 1/2	8 1/2
	*M	10 3/8	10 3/8	10 3/8
	*N	4 53/64	1 53/64	1 53/64
	*P	18 1/2	18 1/2	18 1/2
	R	N/A	N/A	N/A
ELEVATION	S	18 15/16	18 15/16	18 15/16
	T	44 1/2 max	44 1/2 max	44 1/2 max
	V	4 15/16	4 15/16	4 15/16
	W	10 1/2	10 1/2	10 1/2
	Y	2 1/2	2 1/2	2 1/2

*DIMENSIONS BASED ON MINIMUM HATCH SIZE. IF LARGER HATCHES ARE USED THESE DIMENSIONS WILL VARY...
*PUMP SPECIFIC DIMENSIONS WHICH VARY FROM MODEL TO MODEL...
ALL DIMENSIONS GIVEN IN INCHES...

No.	Date	Revision Description

FORTIN, LEAVY, SKILES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
180 Northeast 168th Street / North Miami Beach, Florida 33162
Dade 652-4480 / Broward 467-1585

SUNSET HARBOUR PLACE
~~WATER AND SEWER PLANS~~
CITY OF MIAMI BEACH, DADE COUNTY, FLORIDA.

Date	SEPT. 7, 1994
Scale	1"=30'
Check By	CLS
Job. No.	9345
Ref. Dwg	94087B/79S
Field Book	475/38
Corr. No.	WS9345-1 (98)
Dwg. No.	894-025
Sheet	4 of 4

8/2/95
CARL L. SKILES P.E.
FLA. REG. NO. 13617