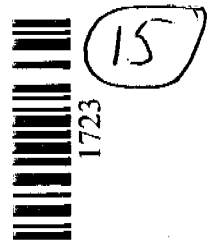

Oversized Drawings

1723

CONSTRUCTION PLANS
FOR
GREATER PINES
PHASE 1

76 RESIDENTIAL LOTS
BY
THE GREATER CONSTRUCTION CORP.
&
LAKE HILLS UTILITIES, INC.

I. GRADING, STORM DRAINAGE AND PAVING

For identification of contractual agreements, this set of drawings is dated September 15, 1992. Any revisions thereafter will be noted and dated on the affected drawing(s).

Materials and construction methods for roadway and storm drainage construction shall be in accordance with the Florida Department of Transportation Specifications for Road and Bridge Construction, 1991, or latest edition.

A. Sidewalks to be constructed by others, are not part of this contract.

B. All pipes noted on the plans as RCP shall be reinforced concrete pipe class III with rubber gasket joints.

C. All curb radii at intersections shall be 35' to edge of pavement unless otherwise shown.

D. The concrete for curbs shall be Department of Transportation Class "I" concrete, and have a compressive strength of 2,500 PSI (minimum). All curbs shall have contraction joints not to exceed 10'-0" on center.

In addition to clearing and grubbing for the streets, the Contractor shall provide clearing and grubbing as required for the installation of utilities and drainage facilities. All materials excavated shall remain the property of the owner and shall be stockpiled at onsite locations specified by the owner. Materials shall be stockpiled separately to useable (nonorganic) fill stockpiles and organic (muck) stockpiles if muck is encountered.

The location of all existing utilities shown on the Plans have been determined from the best information available and are given for the convenience of the Contractor. The Engineer assumes no responsibility for their accuracy. Prior to the start of any construction activity, it shall be the Contractor's responsibility to notify the various utilities and to make the necessary arrangements for any relocations of these utilities with the owner of the utility. The Contractor shall exercise caution when crossing an underground utility, whether shown on the plans or located by the utility company. All utilities that interfere with the proposed construction shall be relocated by the respective utility company and the Contractor shall cooperate with them during relocation operations. Any delay or inconvenience caused to the Contractor by the relocation of various utilities shall be incidental to the contract, and no extra compensation will be allowed.

Soils investigations for the site were provided by Sims & Associates. The Contractor is to obtain a copy of that soils report for review prior to construction; and the construction is to conform with the recommendations in that report.

The standard roadway crown shown on the Typical Section will not necessarily be applicable for use in computing the staking gutter elevations in intersections or parking areas, or the sections of gutter approaching or leaving intersections or parking areas. All gutters and paving surfaces in intersections and adjacent sections shall be graded to drain positively in the direction shown by the flow arrows in the Plans and to provide a smoothly transitioned driving surface for vehicles with no sharp breaks in grade, or no unusually steep or reverse cross slopes. Approaches to intersections and entrance and exit gutter grades to intersections will have to be staked in the field at different grades than the centerline grades shown on the plans. In these areas, it may also become advisable to make minor local field adjustment in the centerline grades to accomplish the purposes outlined. In addition, the standard crown will have to be changed in order to drain positively in the area of intersections. It is the Contractor's responsibility to accomplish the above and the Engineer shall be consulted so that he may make any and all required interpretations of the plans or give supplementary instructions to accomplish the intent of the plans.

All storm drain structures are referenced to Florida Department of Transportation index numbers and specifications. The Contractor is to obtain a copy of Florida Department of Transportation Roadway and Traffic Design Standards, January 1990 or latest edition. The Contractor is to abide by and construct according to the specifications called out in this manual. Any variations from this must be approved by the Engineer prior to construction.

All pavement markings are to be in accordance with Lake County requirements and shall be thermoplastic.

TRENCHING

Compacted backfill for all pipe shall be to 98% maximum density as determined by AASHTO-180 under roadways. Compaction of backfill shall be to 95% maximum density as determined by AASHTO T-180 at all other locations. The Contractor shall recognize and abide by al OSHA Excavation Safety Standards, including the Florida Trench Safety Act (90-96, Laws of Florida). Any material or material cost to comply with these laws shall be incidental to the contract.

FILL AND COMPACTION

Any areas onsite requiring fill shall be filled with clean free draining granular material. Fill shall be placed and compacted in 12" maximum thickness lifts. Fill under roadways shall be compacted to 98% Maximum Density per AASHTO T-180. All other backfill areas shall be compacted to 95% Maximum Density per AASHTO T-180. Stabilized sub-base for roadways shall be compacted to 98% Maximum Density per AASHTO T-180. Contractor is to coordinate with Greater Construction to satisfy F.H.A. compaction and testing result requirements on all building lots. Refer to Contract Documents for additional information.

II. WATER SYSTEM

Curb stops shall be of the locking wing type. See Utility Sheet for sizes and construction details.

All pipe, valves, and fittings for 2" and larger pipe shall be of the nominal diameter as shown on the plans, and shall meet the materials specification shown below, and be in accordance with the details shown on the Utility Sheets. Fittings shall be M.J. (C.I. or D.I.).

WATER MATERIALS STANDARD SPECIFICATIONS (Not all materials listed below are applicable for use on this contract.)

Ductile Iron Pipe shall conform to ANSI/AWWA C150/A21.50-81, latest edition for piping barrel. All ductile iron pipe shall have a standard thickness of cement mortar lining as specified in ANSI/AWWA C104/A21.4-80. The pipe joints shall be of the push-on rubber gasket type conforming to ANSI/AWWA C111/A21.11-90, latest edition. Ductile Iron Pipe shall be Class 50.

Polyvinyl Chloride Plastic Pipe (PVC) shall conform to ANSI/AWWA C900-89 made from Class 12454-A or B material providing a hydrostatic design basis (HDB) of 4000 PSI. The pipe shall be C-900 (DR-18) with markings on each section showing conformance to the above specifications. Joints shall be elastomeric gaskets conforming to ASTM F477. All PVC pipe shall bear the NSF logo for potable water.

Galvanized steel pipe and fittings shall be Schedule 80 conforming to ASTM designation A120, with iron pipe threads.

Polyethylene tubing for water services shall have a recommended water pressure rating of 200 PSI at 73.4°F. It shall have a copper tube outside diameter per ASTM D2737 and be manufactured from virgin resin meeting ASTM D1248. It shall have a standard dimension ratio of 9 (SDR9) and a plastic pipe institute rating of PE 3408. Packed joint fittings shall be used.

The water main shall be installed as noted on plans. Where applicable, a lateral separation of at least 10' shall be maintained between water and sewer lines. When water and sewer lines cross with less than an 18" vertical separation, the PVC sewer line shall be encased in concrete or ductile iron pipe used in lieu of PVC pipe for a distance of 10' either side of the crossing.

Minimum cover over water system pipe shall be 36" to finish grade from top of pipe. See Plan Profile Sheet for required depth of pipe.

DISINFECTION AND TESTING

All pipe shall be disinfected in accordance with AWWA Standard C651-86. Cast iron pipe shall be installed and tested (leakage and pressure) in accordance with AWWA Standard C600.

Allowable leakage for ductile iron pressure mains will be in accordance with AWWA C600.

Allowable leakage for PVC pressure mains will be in accordance with AWWA-M23.

PVC pipe shall be installed according to manufacture's recommendations and tested in accordance with AWWA M23 as a minimum.

The Contractor shall provide at his own expense all necessary test pumping equipment, water, water meters, pressure gauges, and other equipment, material and facilities required for all hydrostatic and leakage testing. Contractor shall contact the Engineer, Lake Hills Utilities, Inc. and Lake County in written form, forty-eight (48) nours in advance of proposed testing.

The water system shall be tested for leakage at 150 PSI for two (2) hours, with allowable leakage in accordance with above standards.

PIPE IDENTIFICATION

Blue magnetic indicator tape shall be buried in the water main trench above the water main.

FIRE HYDRANTS

Shall conform to the latest edition of AWWA C502-80 and shall be furnished complete with wrench and other appurtenances. Manufacturer's certification of compliance with AWWA C502 and tests listed therein will be required. All hydrants shall be of breakable type, with the breakable section located slightly above the finish ground line. Hydrants shall agree in hose thread size with those now in use in the present water system, if applicable. Hydrants must have oil reservoir or other satisfactory device above the water line to afford lubrication to all working parts of the hydrant each time the hydrant is operated. Hydrants shall be of the "O"-ring construction type. All hydrants must be provided with bronze nozzles, with caps and chains. Hydrants shall have a 6" mechanical joint base shoe, two 2-1/2" hose nozzles, and one pumper nozzle. The mail valve shall have a 5-1/4" valve opening. Tie rods shall be used to connect hydrants to valves and valves to main lines. The hydrant shall have a positive operating drain valve located so as to drain all water from the stand pipe when the main valve is closed. Hydrants are to be installed with suitable bury or extensions so that the finish ground line is at the point indicated by the manufacturer on the barrel so that nozzles are at a suitable height for attachment of hoses. The direction of opening of the main valve shall conform to that of existing hydrants in the system if applicable. Otherwise, they shall be opened by turning the operating nut counterclockwise. Hydrants shall be American Darling 6" B84B. Hydrants shall be painted to Lake County Standards.

1. Blue pavement reflectors shall be placed in the centerline of the driving lane directly in front of the fire hydrant.
2. Fire hydrants in residential subdivisions shall deliver 600 GPM at a 20 PSI residual and contractor shall provide a postconstruction fire flow test witnessed and approved by the Engineer, Lake County and the utility company.
3. There shall be no trees, shrubs, etc. planted around the fire hydrant or in areas designated as fire lanes.

GATE VALVES

A. Valves 4" through 12" shall be resilient seated gate valves conforming to ANSI/AWWA C509 with a 2" square operating nut.

B. Valves 14" and larger shall be rubber seated butterfly valves with 2" square operator nut and offset gear operators. Valves shall conform to ANSI/AWWA C504.

C. Valve boxes shall be adjustable cast iron with a minimum inside diameter of 5". Boxes shall be suited for applicable surface loadings. Boxes installed outside of paved areas shall have 18" diameter concrete collar with #4 bar.

D. Valves smaller than three (3) inches in size: Gate valves shall be bronze body, rising stem, solid wedge valves capable of being repacked under pressure when valve is fully open.

E. Valves shall open in a counterclockwise direction unless they are to be installed in an existing water system in which case they shall open in the direction of operation of existing valves.

MECHANICAL JOINT FITTINGS

Shall conform to ANSI/AWWA A21/C111 for fittings from 3" to 48", 350 PSI pressure rating.

THRUST BLOCKS

All plugs, caps, tees, bends, fire hydrants, valves, etc., shall be provided with thrust blocks. For thrust block construction details, refer to the Utility Sheets.

MISCELLANEOUS APPURTENANCES

All house services shall include the following: Curb stops, unions as required, corporation stops. The house service shall be complete to the curb stop as shown on Plan, and shall be of the type required for compatibility with the service lines specified, and shall be as manufactured by the Mueller Corporation or Hayes or Ford.

The water utility that will operate the systems after construction is Lake Hills Utilities, Inc. The Contractor will be expected to meet all requirements of the utility company including advance notification to the utility company, Engineer and Lake County so that they can witness all required tests of the water systems.

The Contractor shall cut "W" in the top curb of each water service and a "V" at all valve locations. Cut W's and V's shall be highlighted with blue paint.

Contractor is to obtain a copy and abide by Specifications set in "Lake Hills Water Distribution System Construction Specifications and Guidelines."

The Contractor shall notify utility of his intent to commence work. In no event will the Contractor in any way connect to, extend or in any way modify utility facilities without the express permission of utility.

III. AS-BUILT DRAWINGS (Water, Sewer, Storm & Grading)

The Contractor shall provide vertical and horizontal "As-Built" information relative to all constructed utilities and structures.

All As-Built data shall be provided by a Florida licensed surveyor who will be held responsible for the accuracy of "As-Built" or record drawing information.

"As-Built" data shall be submitted to the Engineer no less than (2) weeks prior to final inspection. Engineer will then prepare record drawings; Contractor's registered surveyor will sign and seal record drawings as to accuracy and extent of surveyed information.

As-Built information shall include, but not be limited to, the following:

1. Final lot grade at lot center and elevation at back of curb and elevation at all lot corners.
2. Location, depth of cover and encasement (if applicable) for all valves, fittings, mains, fire hydrants, and services.
3. Location and flow lines of all storm pipes and structures and any grate, rim or inlet weir elevations.
4. Bottom and top of bank elevations and locations on all storm ponds.
5. Locations and inverts of all gravity sewer lines, manholes, and service laterals and rim elevation of all manholes.
6. Location, depth of cover and encasement (if applicable) for all forcemain, fittings, and valves.
7. Location, vertical elevations, sizes and installed equipment for lift station and valve pit.
8. Horizontal and vertical data for any construction which deviates from the approved engineering plans.

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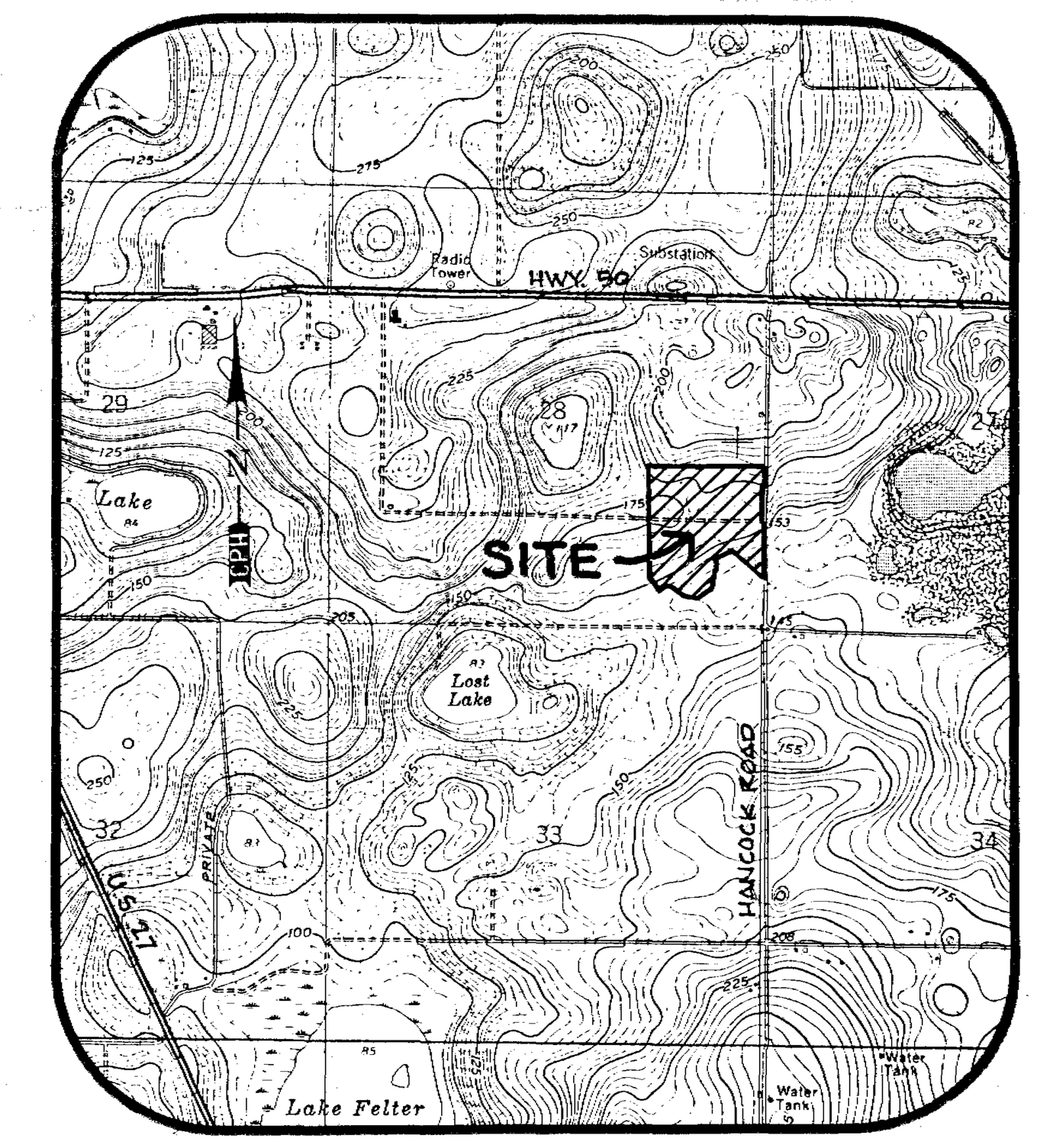


VICINITY MAP
1" = 2,000'

OWNER:
GREATER CONSTRUCTION
P.O. BOX 3873
LONGWOOD, FL. 32791
(407) 869-0300

ENGINEER:
CONKLIN, PORTER, & HOLMES ENGINEERS, INC.
500 W. FULTON STREET
SANFORD, FL. 32771

PLANNER:
GLATTING, LOPEZ, KERCHER, ANGLIN
33 EAST PINE STREET
ORLANDO, FL. 32801
(407) 843-6552

SURVEYOR:
BEN BLACKBURN
13718 EAST ST. HWY. 50
P.O. BOX 1022
CLERMONT, FL. 32711
(904) 394-4417

UTILITIES

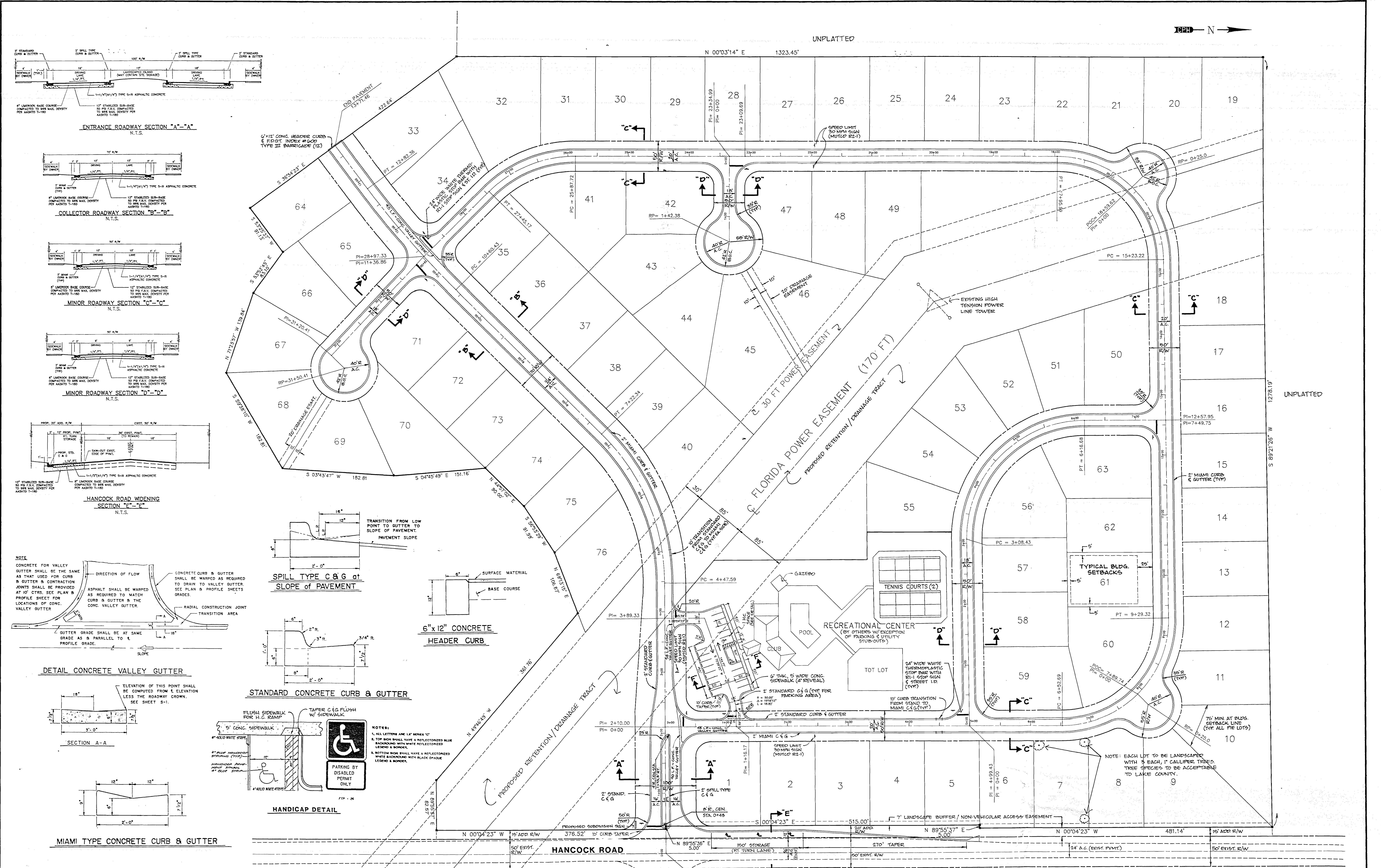
ELECTRIC:	SUMTER ELECTRIC COOPERATIVE INC. 850 NORTH HOWEY ROAD GROVELAND, FLOIDA 34736
GAS:	LAKE APOPKA NATURAL GAS DIST. P.O. BOX 77125 WINTER GARDEN, FL 34777-125
TELEPHONE:	UNITED TELEPHONE SYSTEM P.O. BOX 490048 LEESBURG, FL. 32749-0048
WATER & SEWER:	LAKE HILLS UTILITIES 1105 KENSINGTON PARK DR. ALTAMONTE SPRINGS, FLORIDA 32714

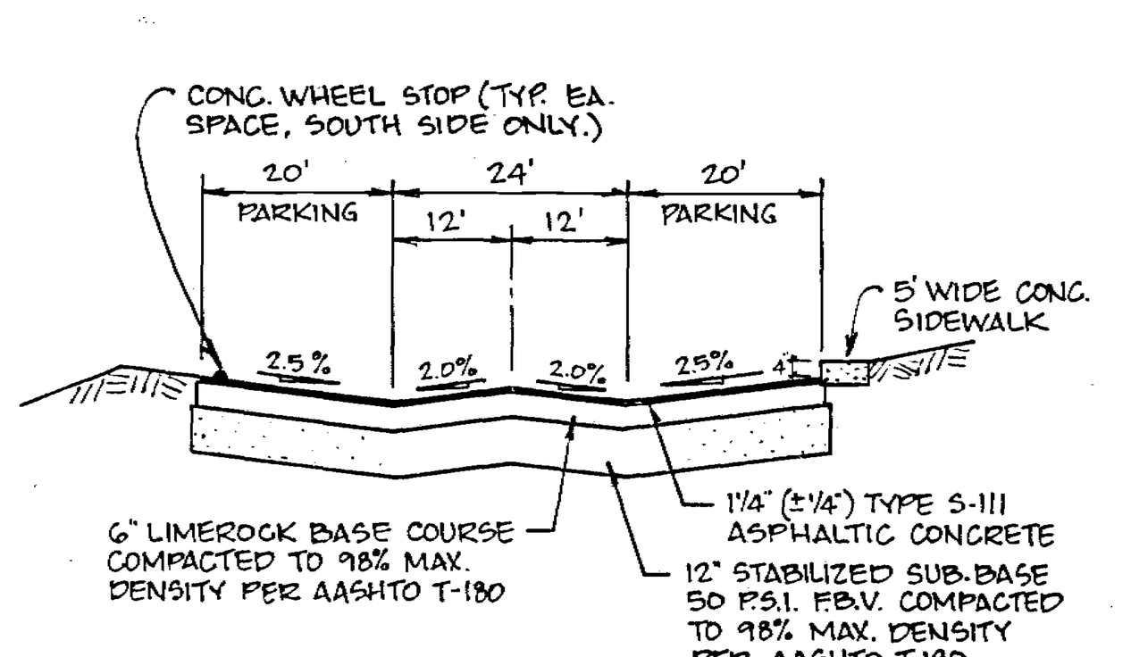
INDEX OF SHEETS

GREATER PINES PHASE 1

Conklin Porter and Holmes
cph ENGINEERS, INC.
POST OFFICE BOX 2808
500 W. FULTON STREET
SANFORD, FLORIDA 32771-2808
TEL 407 322-6841 TEL 407 831-5717

REVISIONS TO PLANS	DATE: AUG. 1992	SHEET NO.
	JOB NO. G6765.01	1 OF 7
	FILE: GPP1-CVR	

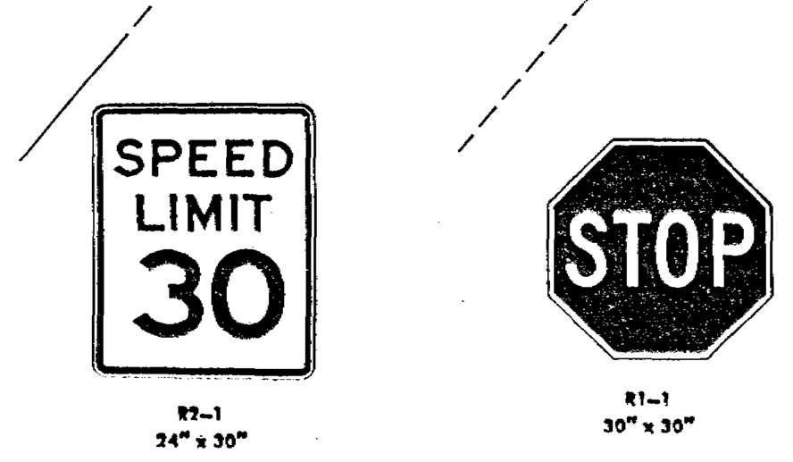




SECTION "F"-"F"
N.T.S.

NOTES:

1. REFER TO THE PLAT (BY BEN BLACKBURN, PLS, 904/394-4417) FOR ALL BOUNDARY CONTROL, PROPERTY LINE, ROADWAY CENTERLINE AND LOT GEOMETRY DATA. PLAT DATA SHALL GOVERN OVER DATA SHOWN ON THIS PLAN.
2. ALL PAVEMENT RADII ARE TO THE EDGE OF PAVEMENT UNLESS INDICATED OTHERWISE.
3. ALL TRAFFIC SIGNAGE SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" AND LAKE COUNTY STANDARDS. ALL TRAFFIC CONTROL AND STREET SIGNS SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PRIOR TO INSPECTION BY OWNER, ENGINEER AND COUNTY, AND BEFORE FINAL ACCEPTANCE BY LAKE COUNTY.
4. ALL ROADWAY MATERIALS AND CONSTRUCTION METHODS SHALL MEET THE REQUIREMENTS OF THE FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", 1991 OR LATEST EDITION. NO RECYCLED ASPHALT IS TO BE USED.
5. SIDEWALKS ARE TO BE CONSTRUCTED WITH OUTER EDGE ON RIGHT-OF-WAY LINE, EXCEPT THAT SIDEWALK ALIGNMENT MAY VARY TO AVOID INLETS, FIRE HYDRANTS, AND OTHER CONFLICTS, BUT MAINTAIN MAXIMUM POSSIBLE DISTANCE FROM CURB LINE TO SIDEWALK EASEMENT.



NOTE: SEE SHEET 7 OF 7 FOR DRAINAGE IMPROVEMENTS FOR HANCOCK ROAD.

RECREATIONAL PARKING REQUIREMENTS

CLUBHOUSE PARKING - 14 SPACES
TENNIS COURTS (2) - 4 SPACES
PARKING REQUIRED - 18 SPACES
PARKING PROVIDED - 20 SPACES
HANDICAP PARKING - 1 SPACE

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Conklin Porter and Holmes ENGINEERS, INC.
cph
POST OFFICE BOX 2808
500 W. FULTON STREET
SANFORD, FLORIDA 32771
TEL 407 322-6841 TEL 407 831-5717

DATE	TO	FOR
PROJECT CONTROL		

ACTIVITY	NAME	DATE
DESIGNED BY:	JBM/JCB	8/92
DRAWN BY:	DEF	8/92
CHECKED BY:	JCB	8/92
APPROVED BY:	J.C.BRANCH	8/92
REGISTRATION NO.	34791	

NO.	DATE	REVISION	APPROVED

SITE DIMENSION AND TRAFFIC CONTROL PLAN

GREATER PINES PHASE 1

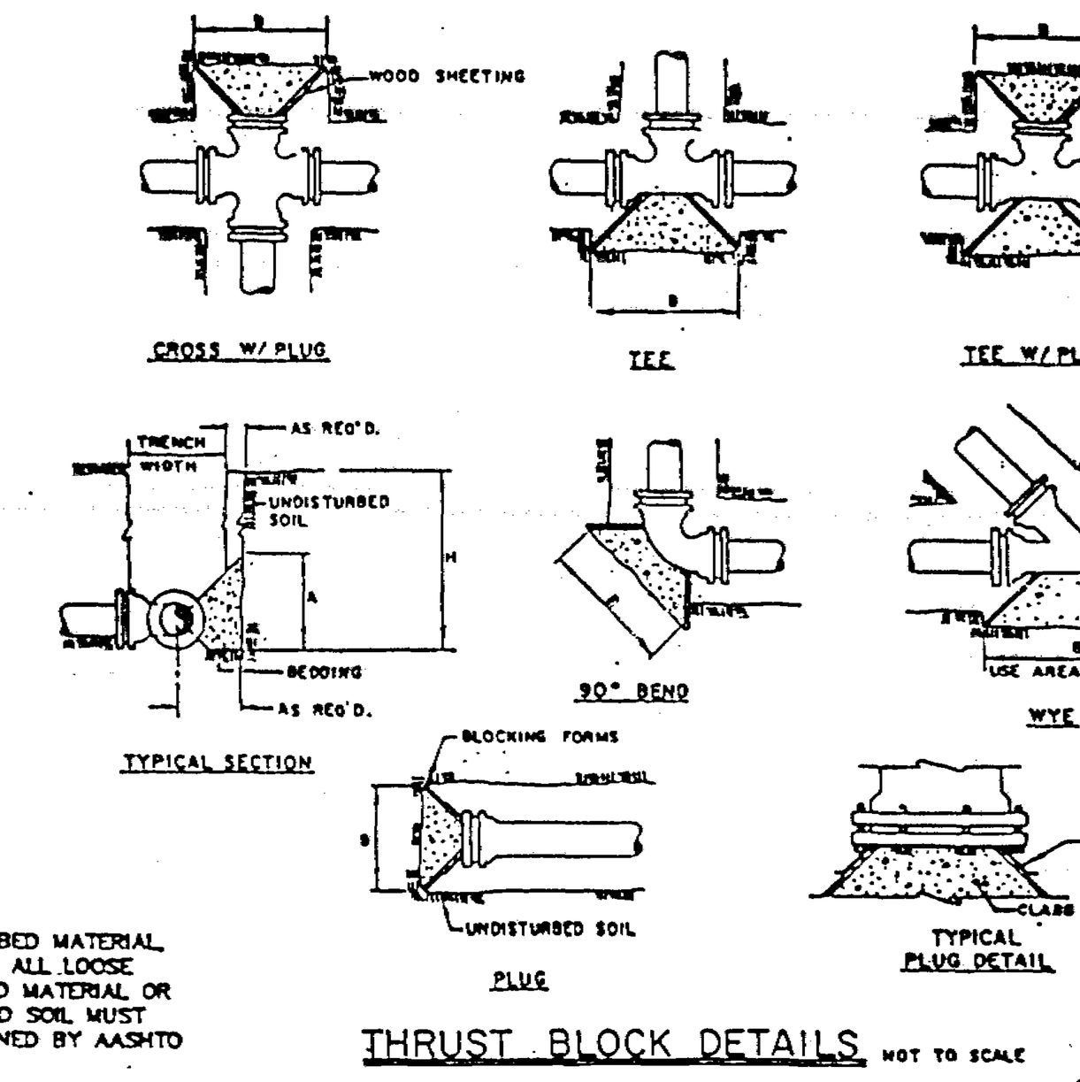
LAKE COUNTY, FLORIDA

SCALE: 1"=50'
DATE: AUG. 1992
JOB NO. G6765.01
FILE: GPBASE3

SHEET NO. 2 OF 7

OCT 02 1992

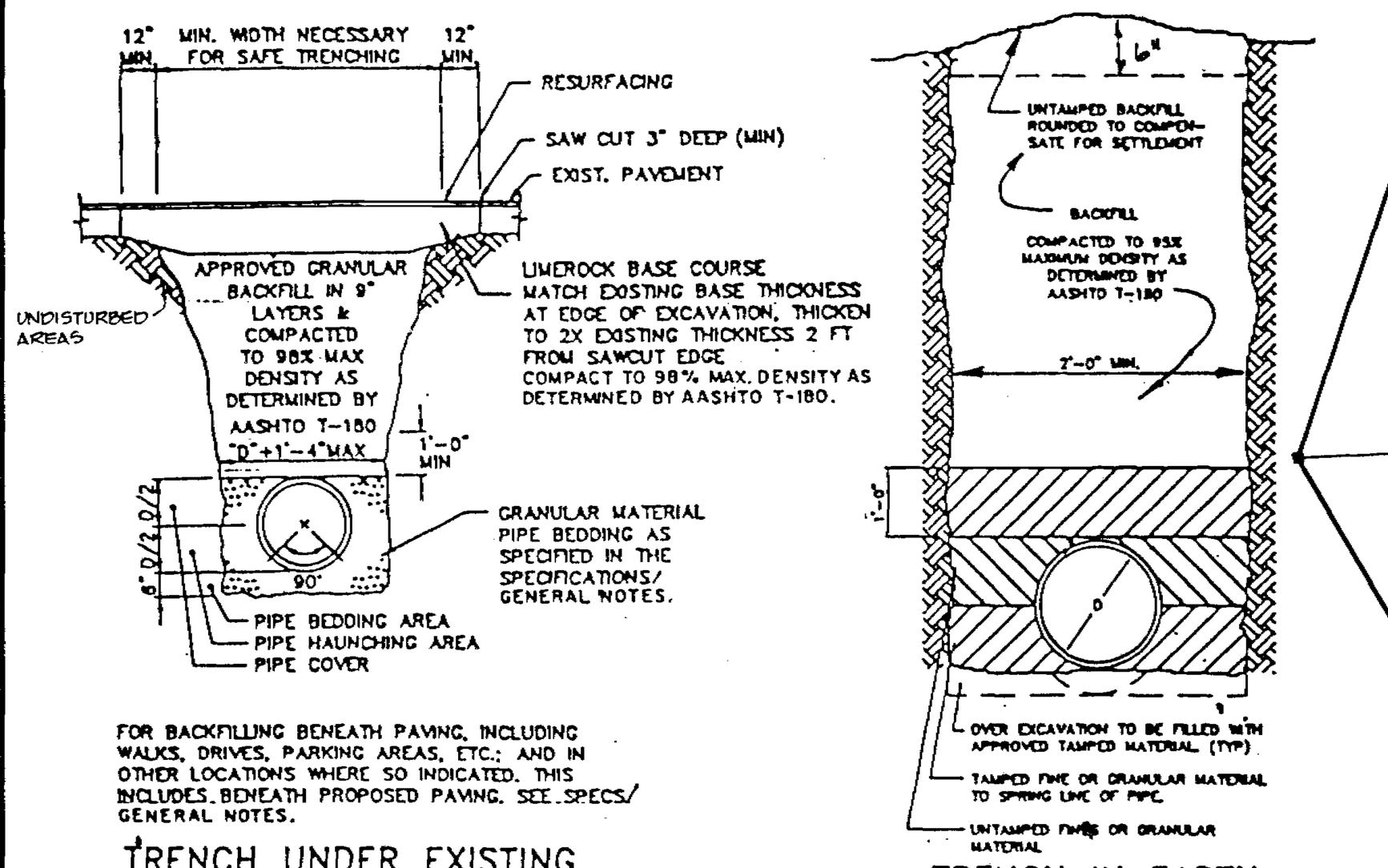
THRUST BLOCK AREAS IN SQ.FT. (A x B)				
PIPE SIZE (INCH)	90° BEND, TEES, PLUGS	45° BEND	22.5° BEND	11.25° BEND
4	1.6	0.9	0.4	0.2
6	3.6	1.9	1.0	0.5
8	6.4	3.5	1.8	0.9
10	10.0	5.4	2.8	1.4
12	14.4	7.8	4.0	2.0
14	19.6	10.6	5.4	2.7
16	25.6	13.8	7.1	3.5
18	32.4	17.5	8.9	4.5
24	57.6	31.2	15.9	8.0
30	90.0	48.7	24.8	12.5
36	129.9	70.1	35.7	18.0
42	176.3	95.4	48.7	24.4
48	230.3	124.6	63.5	31.9
54	291.5	157.8	80.4	40.4



THRUST BLOCK DETAILS NOT TO SCALE

THRUST BLOCK NOTES:

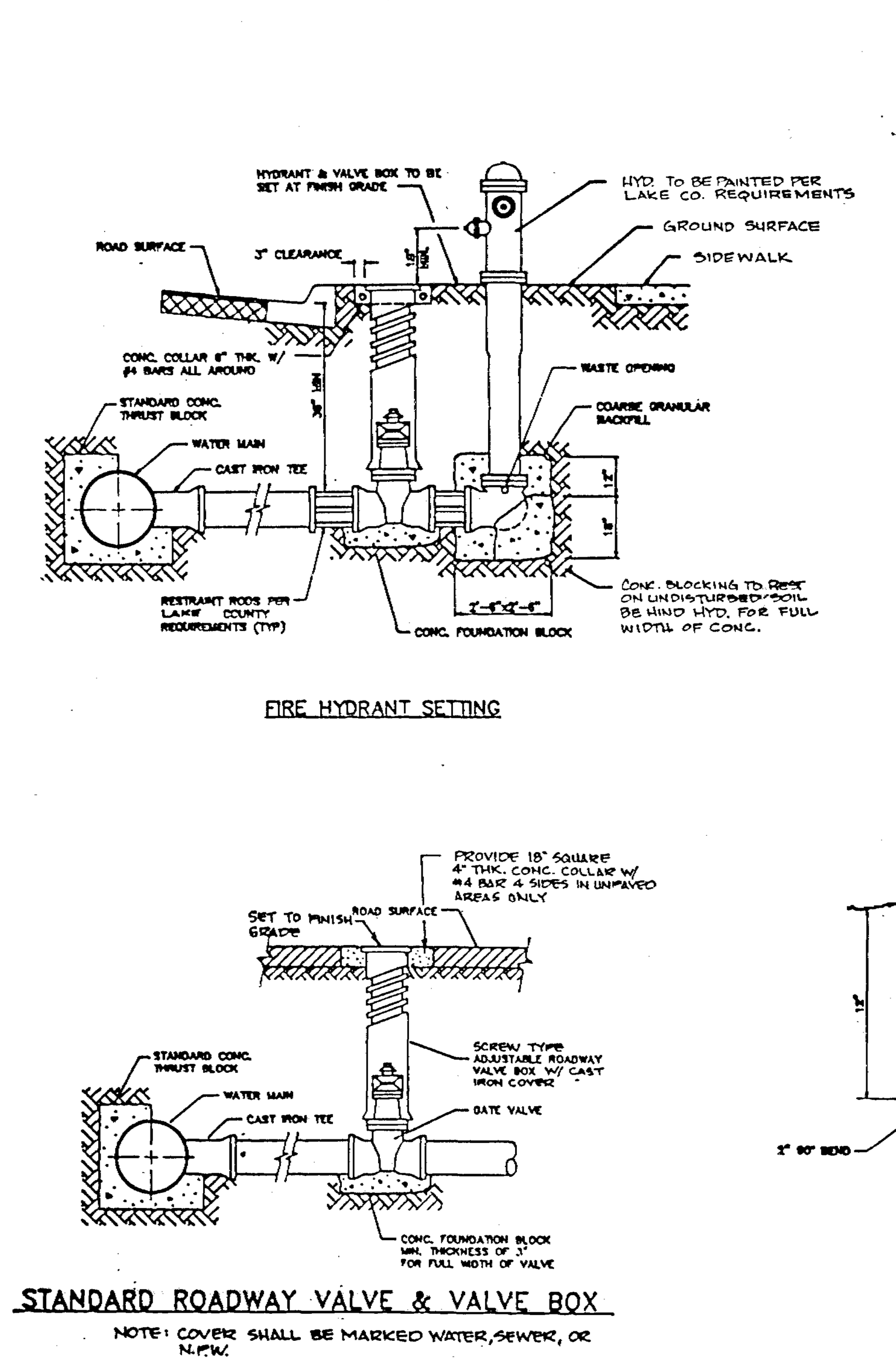
1. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE ALL LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL OR THE FILL BETWEEN BEARING SURFACE AND UNDISTURBED SOIL MUST BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
2. ON TEES AND BENDS, EXTEND THRUST BLOCK FULL LENGTH, PUT WOOD BLOCKING IN FRONT OF PLUG BEFORE POURING CONCRETE THRUST BLOCK.
3. SIDE OF BLOCKS SHALL BE FORMED. WOOD FORMS SHALL BE PRESSURE TREATED WITH PRESERVATIVE.
4. BACKFILL SHALL CONSIST ENTIRELY OF CLEAN SAND AND ROCK FRAGMENTS. ANY MUCK ENCOUNTERED SHALL BE REPLACED WITH ACCEPTABLE BACKFILL.
5. BLOCK HEIGHT "A" SHALL BE EQUAL TO OR LESS THAN ONE-HALF OF THE TOTAL DEPTH OF BURY, "H", BUT NOT LESS THAN THE PIPE DIAMETER.
6. THRUST BLOCK AREAS BASED ON A SOIL BEARING STRENGTH OF 2000 PSF AND A DESIGN TEST PRESSURE OF 100 PSI. FOR FORCE MAIN AND 150 PSI. FOR WATER MAIN.
7. BLOCKS FOR ALL BENDS SHALL BE SIMILAR TO BLOCKS FOR 90° BENDS.
8. RISE AND SPREAD OF BLOCKS NOT TO EXCEED 45° ANGLE.
9. ALL PLUGS AND FITTINGS SHALL BE PROTECTED FROM CONCRETE WITH 3 MIL. POLYETHYLENE.

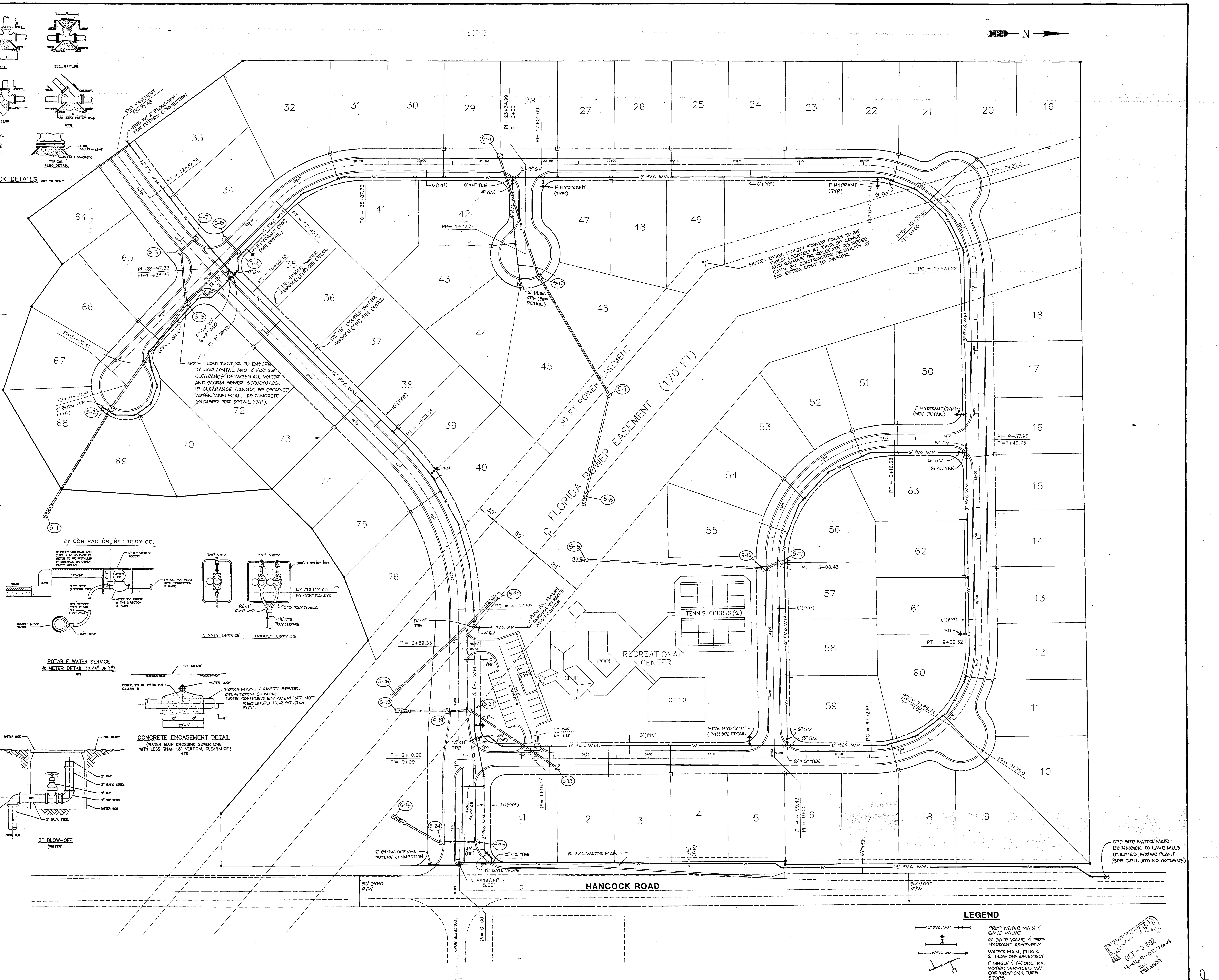


TRENCH UNDER EXISTING DRIVEWAYS AND STREETS

TRENCH IN EARTH UNPAVED AREAS

NOTE
1. TRENCHES SHALL BE AS NARROW AS POSSIBLE TO ALLOW FOR SAFE AND PROPER WATER MAIN INSTALLATION. TRENCH SIDES SHALL BE VERTICAL TO A POINT 1'-0" ABOVE THE TOP OF THE PIPE. ABOVE THE POINT SLOPED SIDES MAY BE USED IF CONDITIONS PERMIT, BUT SHOULD BE KEPT AS NEARLY VERTICAL AS POSSIBLE.
2. FOR TRENCH IN CINDER FILLS, GARBAGE DUMPS, SALT MARSHES, MUCK SOILS OR PLACES WHERE HARMFUL CORROSIVE CONDITIONS EXIST, PIPE SHALL BE PROTECTED WITH AT LEAST 10" OF SAND OR LIMESTONE SCREENINGS ON ALL SIDES AND TAMPED BY HAND IN 6" LAYERS. SEE SPECS/REQ.NTS. NO ADDITIONAL COMPENSATION FOR CORROSION PROTECTION OF A PIPE WILL BE ALLOWED.
3. ALL TRENCH SAFETY ACT (90-96, LAWS OF FLORIDA) REQUIREMENTS ARE TO BE STRICTLY ADHERED TO BY THE CONTRACTOR AND HIS PROPOSAL FOR WORK SHALL ACKNOWLEDGE HIS REQUIREMENT TO ADHERE TO ALL REQUIREMENTS.





LEGEND

- PROP. WATER MAIN & GATE VALVE
- 6" GATE VALVE & FIRE HYDRANT ASSEMBLY
- WATER MAIN, PLUG & 2" BLOW-OFF ASSEMBLY
- 1" SINGLE & 1½" DBL. P.E. WATER SERVICES W/ CORPORATION & CURB STOPS

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ACTIVITY	NAME	DATE
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APPROVED BY:	J.C.BRANCH	8/92
REGISTRATION NO.	34791	

NO.	DATE	REVISION	APPROVED

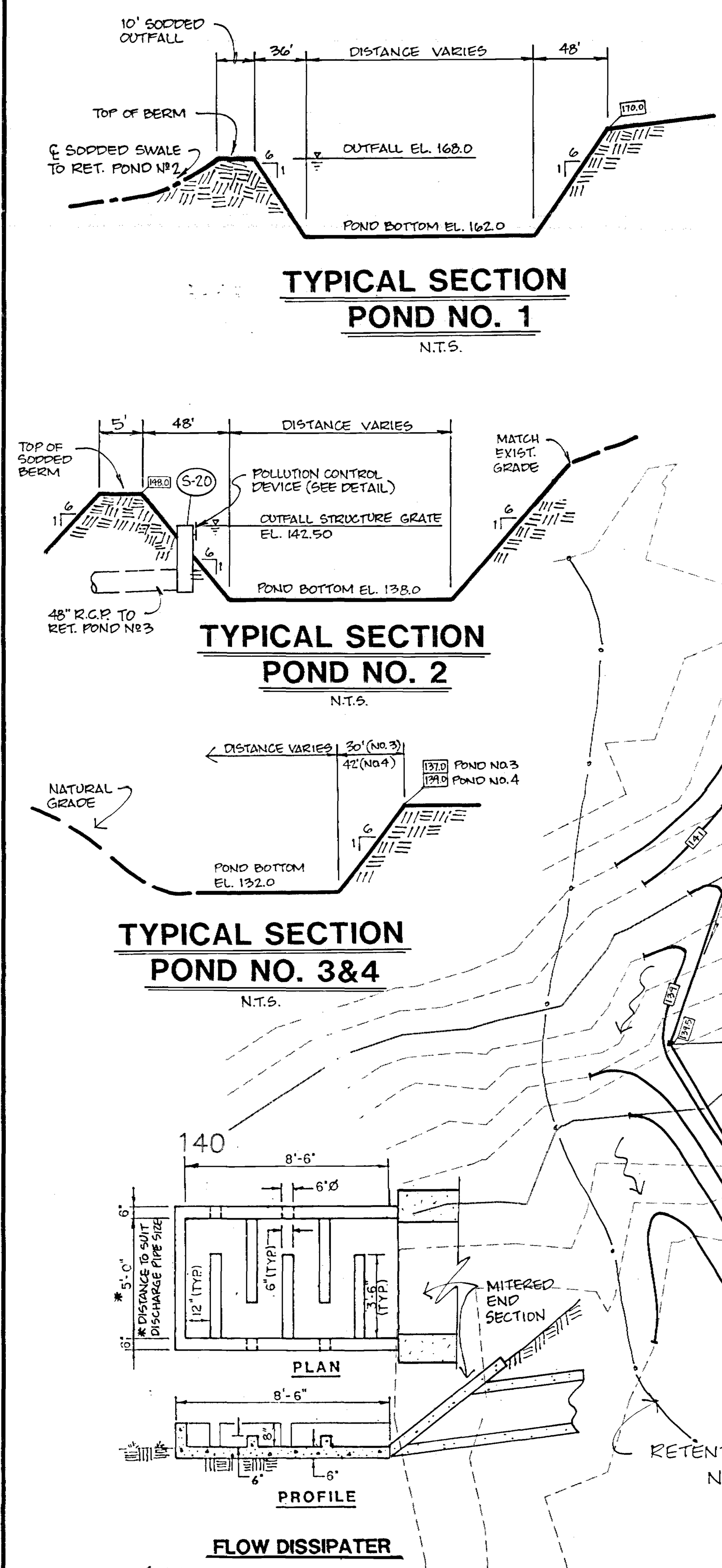
WATER DISTRIBUTION SYSTEM

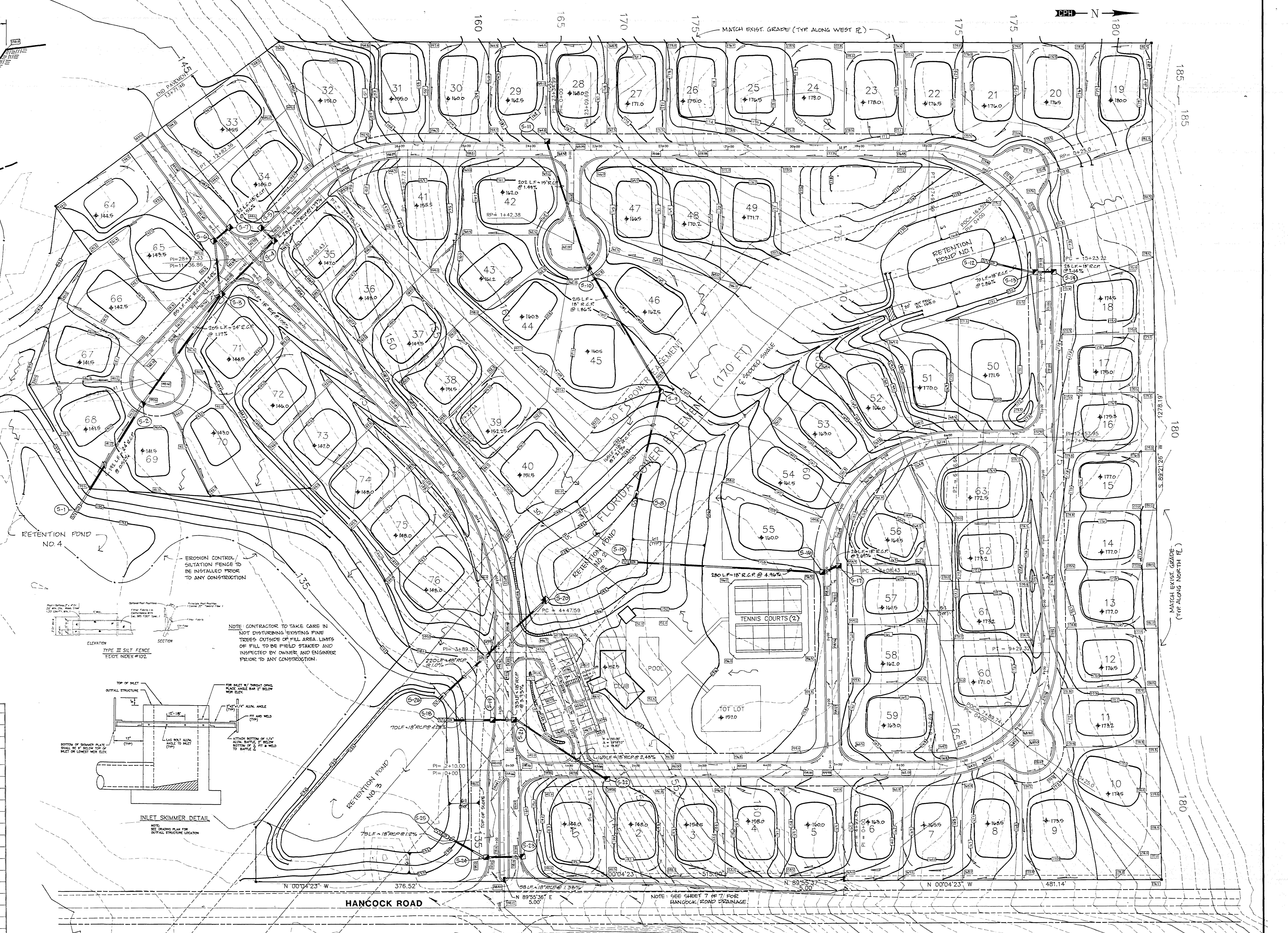
GREATER PINES PHASE 1

LAKE COUNTY, FLORIDA

SCALE: 1"=50'
DATE: AUG. 1992
JOB NO. G6765.01
FILE: GPBASE3

OCT 02 1992





STORM STRUCTURE SCHEDULE					
STRUCTURE I.D.	DESCRIPTION	LOCATION	F.D.O.T. INDEX NO.	FLOW LINE	OTHER
S-1	MITERED END W/FLOW DISS.	RET. POND NO. 4	272	132.00	24" RCP
S-2	P-2, 4' DIA.	SEE PLAN	200 & 210	N. 133.10 S. 133.00	EOP-139.50
S-3	J-1, 6' DIA.	STA 29+62, 14.5' LT.	200 & 210	N. 136.00 S. 135.50 NW. 136.00	EOP-141.6
S-4	P-1, 4' DIA.	STA 28+45, 15.5' LT.	200 & 210	W. 138.00 S. 137.90	EOP-143.75
S-5	P-1, 4' DIA.	STA 28+45, 15.5' RT.	200 & 210	E. 138.50	EOP-143.75
S-6	P-2, 4' DIA.	STA 11+86, 17.5 LT.	200 & 210	N. 138.00 SE. 137.90	EOP-142.20
S-7	P-2, 4' DIA.	STA 1+86, 17.5 RT.	200 & 210	S. 138.50	EOP-142.20
S-8	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	138.00	18" RCP
S-9	P, 4' DIA. W/ TYPE 8 PRECAST TOP	LOT 45	200 & 201	W. 150.00 E. 149.90	RIM-157.5
S-10	P-2, 4' DIA.	SEE PLAN	200 & 210	W. 155.00 E. 154.00	EOP-161.0
S-11	P-1, 4' DIA.	STA 23+76, 15.5' RT.	200 & 210	E. 158.00	EOP-163.60
S-12	MITERED END W/FLOW DISS.	RET. POND NO. 1	272	164.00	18" RCP
S-13	P-2, 4' DIA.	STA 15+09, 15.5' LT.	200 & 210	N. 166.40 S. 166.00	EOP-170.50
S-14	P-2, 4' DIA.	STA 15+09, 15.5' RT.	200 & 210	S. 167.00	EOP-170.50
S-15	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	138.00	18" RCP
S-16	P-2, 4' DIA.	STA 3+00, 14.5' LT.	200 & 210	N. 152.00 S. 151.90	EOP-157.80
S-17	P-2, 4' DIA.	STA 3+08, 14.5' RT.	200 & 210	S. 154.00	EOP 157.80
S-18	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	132.00	18" RCP
S-19	J-1, 6' DIA.	STA 3+14, 18.5' LT.	200 & 210	N. 135.20 S. 135.00 NW. 135.20	EOP 141.20
S-20	TYPE H INLET W/POLL CONTROL	RET. POND NO. 2	232	SE. 134.20	STL. RETICULINE GRATE
S-21	P-2, 4' DIA.	STA 3+14, 18.5' RT.	200 & 210	N. 136.90 S. 136.50	EOP-141.20
S-22	P-1, 4' DIA.	STA 2+43, 15.5' LT.	200 & 210	SW. 141.00	EOP-145.14
S-23	P-1, 4' DIA.	STA 0+77, 28' RT.	200 & 210	S. 133.80	EOP-137.83
S-24	P-1, 4' DIA.	STA 0+77, 28' LT.	200 & 210	N. 133.00 S. 132.90	EOP-137.83
S-25	MITERED END W/FLOW DISS.	RET. NO.3	272	132.00	18" RCP
S-26	MITERED END W/FLOW DISS.	RET. POND NO. 3	272	SE. 132.00	48" RCP

NOTE;

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6. FINISH GRADE FOR HOUSE PADS SHALL BE GRADED 12" BELOW THE FINISHED FLOOR ELEVATION AS INDICATED.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEV.
- PROPOSED MITERED END SECT. & FLOW DISSIPATOR
- PROP. STORM SYSTEM W/ INLET
- 170.0 PROP. FIN. FLOOR ELEV.

RECEIVED OCT - 5 1992 4-069-0276A ORLANDO

Conklin Porter and Holmes ENGINEERS, INC.
POST OFFICE BOX 2808
500 W. FULTON STREET
SANFORD, FLORIDA 32771
TEL 407 322-6841 TEL 407 831-5717

DATE	TO	FOR
PROJECT CONTROL		

ACTIVITY	NAME	DATE
DESIGNED BY:	JBM/JCB	8/92
DRAWN BY:	DEF	8/92
CHECKED BY:	JCB	8/92
APPROVED BY:	J.C.BRANCH	8/92
REGISTRATION NO.	34791	

NO.	DATE	REVISION	APPROVED

GRADING PLAN

GREATER PINES PHASE 1

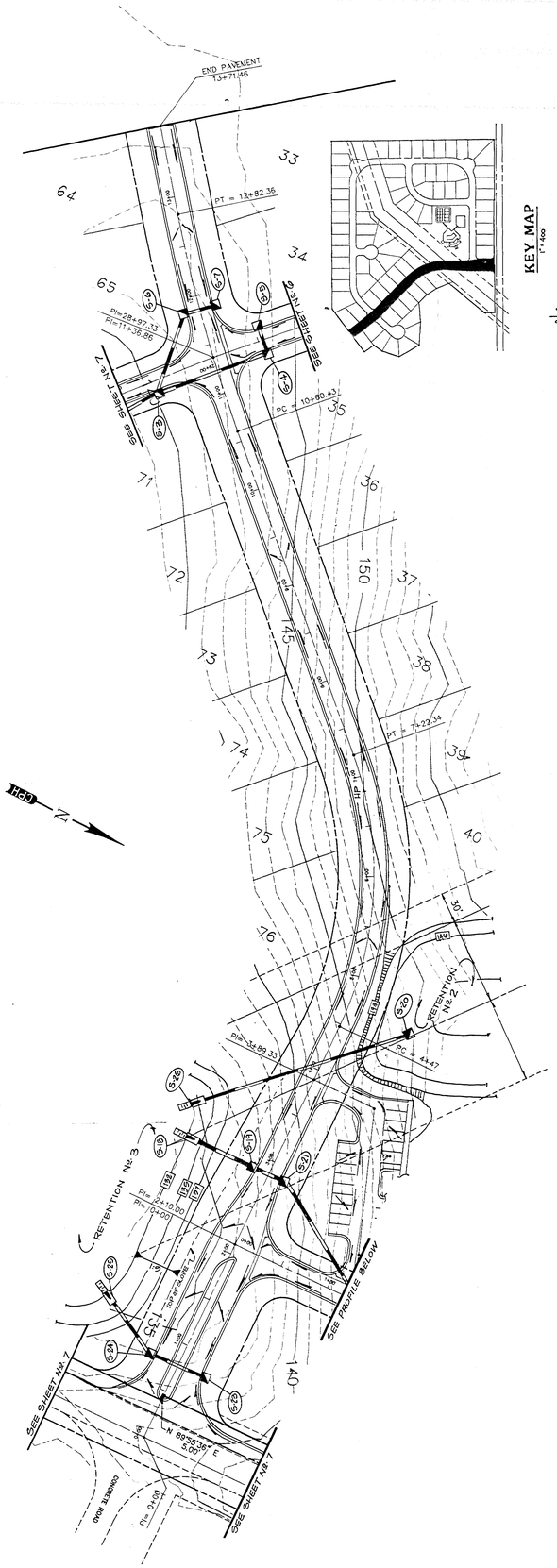
LAKE COUNTY, FLORIDA

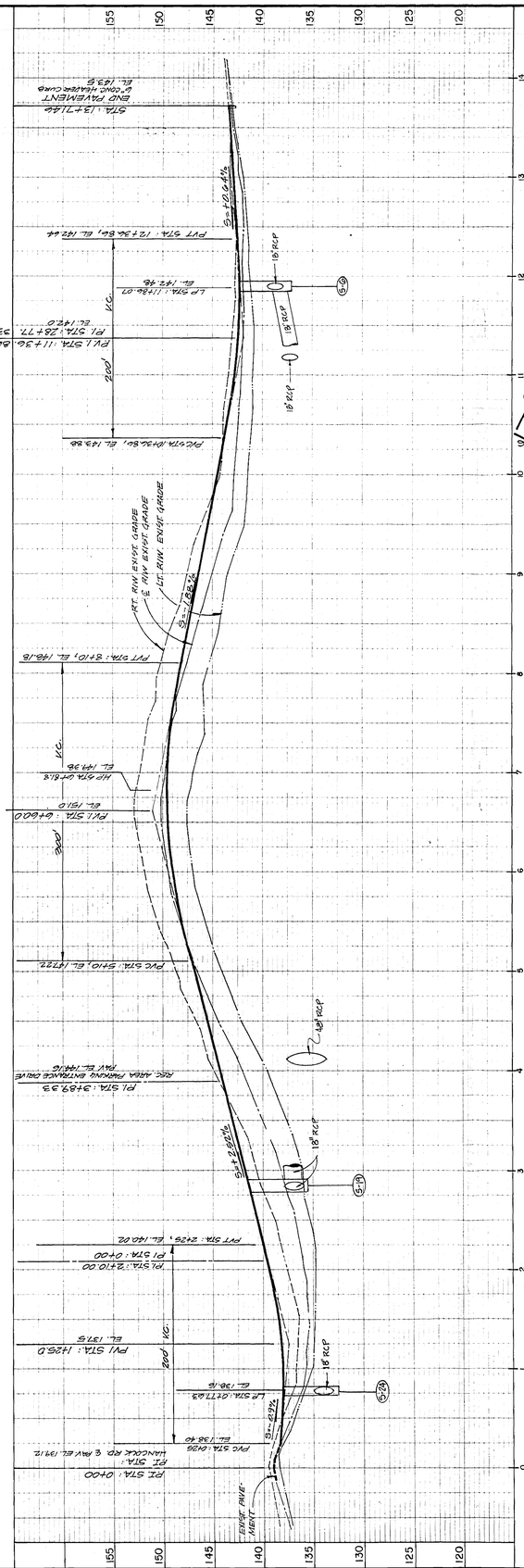
SCALE: 1"=50'
DATE: AUG. 1992
JOB NO. G6765.01
FILE: GPBASE3

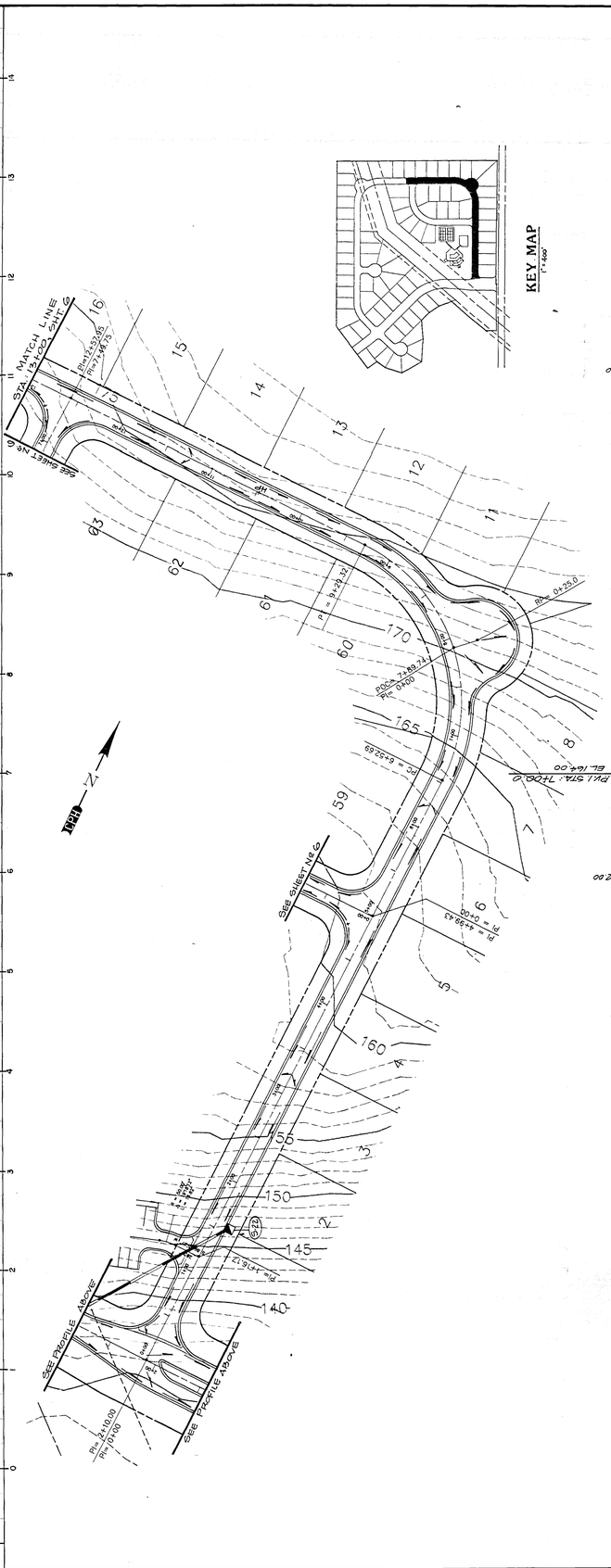
SHEET NO. 4 OF 7

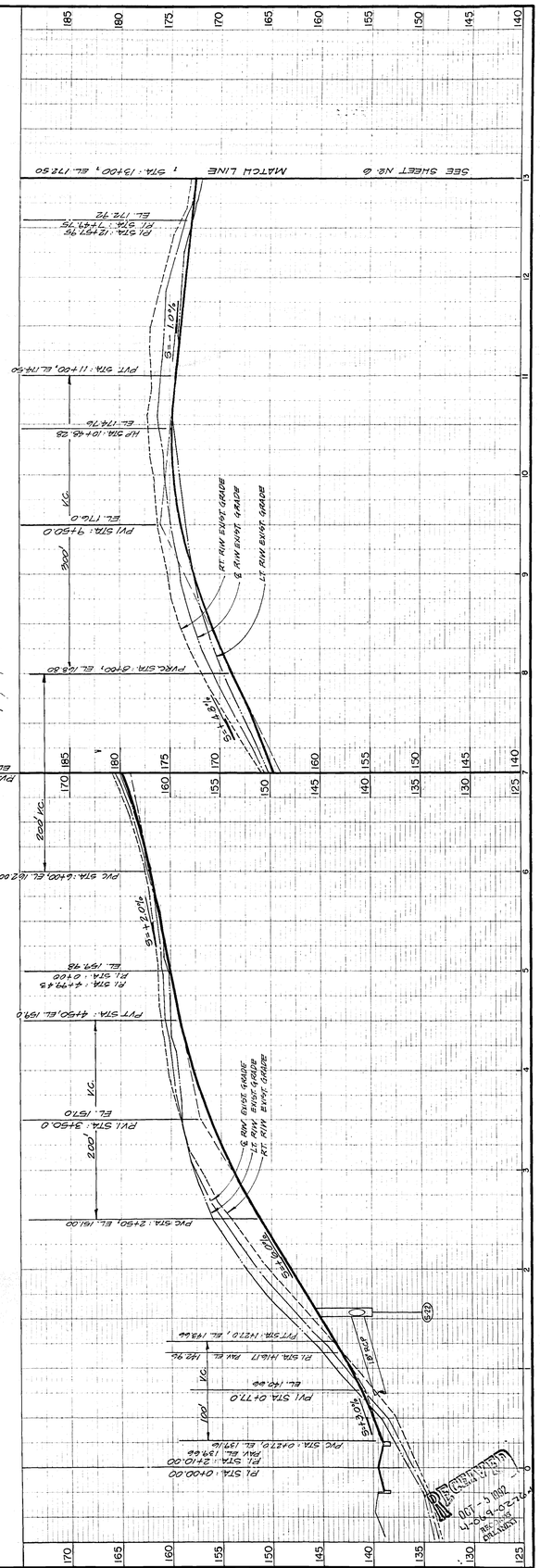
10/2/92

OCT 0 2 1992









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REGISTRATION NO.	34791	

NO.	DATE	REVISION	APPROVED

PLAN AND PROFILES

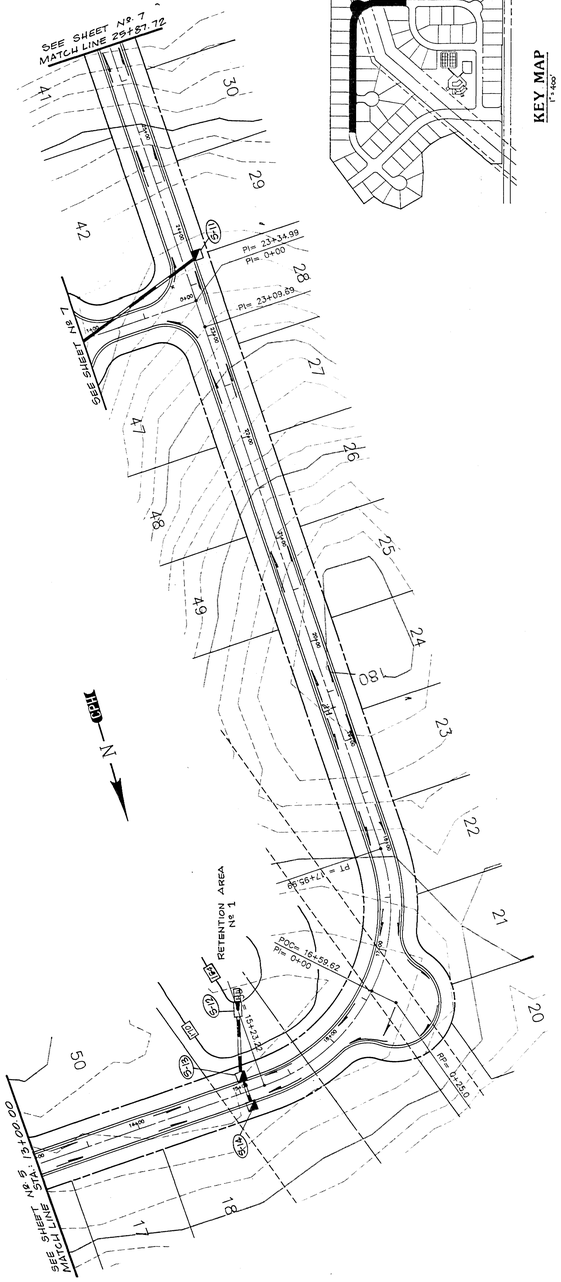
GREATER PINES PHASE 1

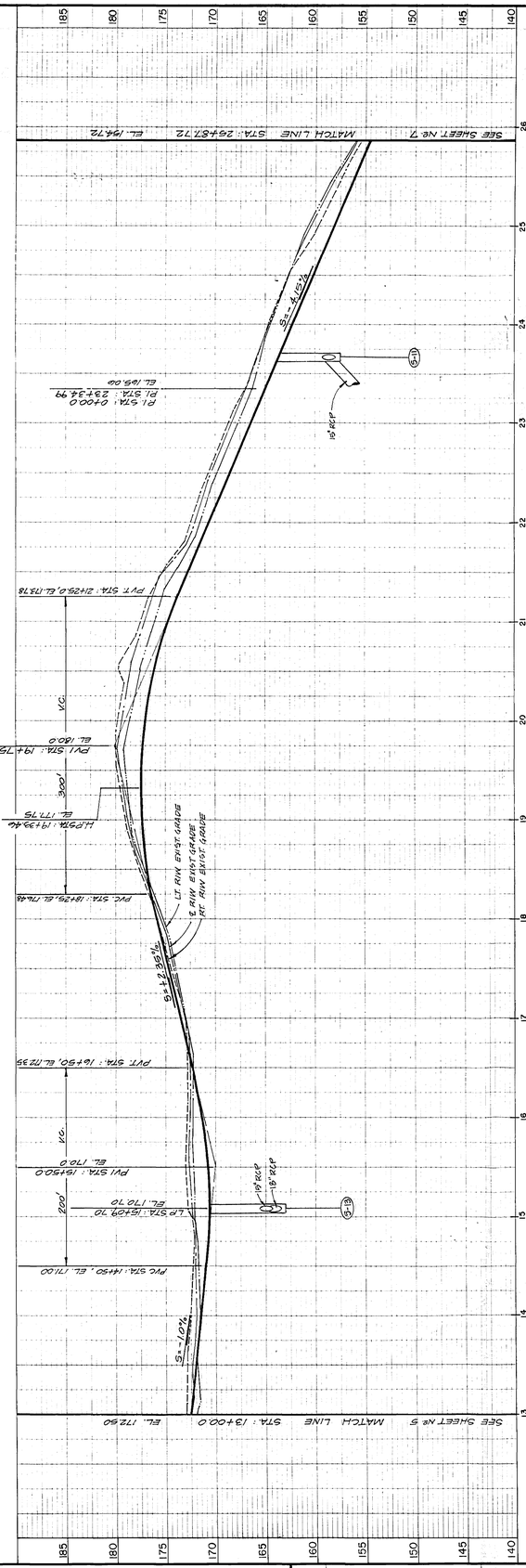
LAKE COUNTY, FLORIDA

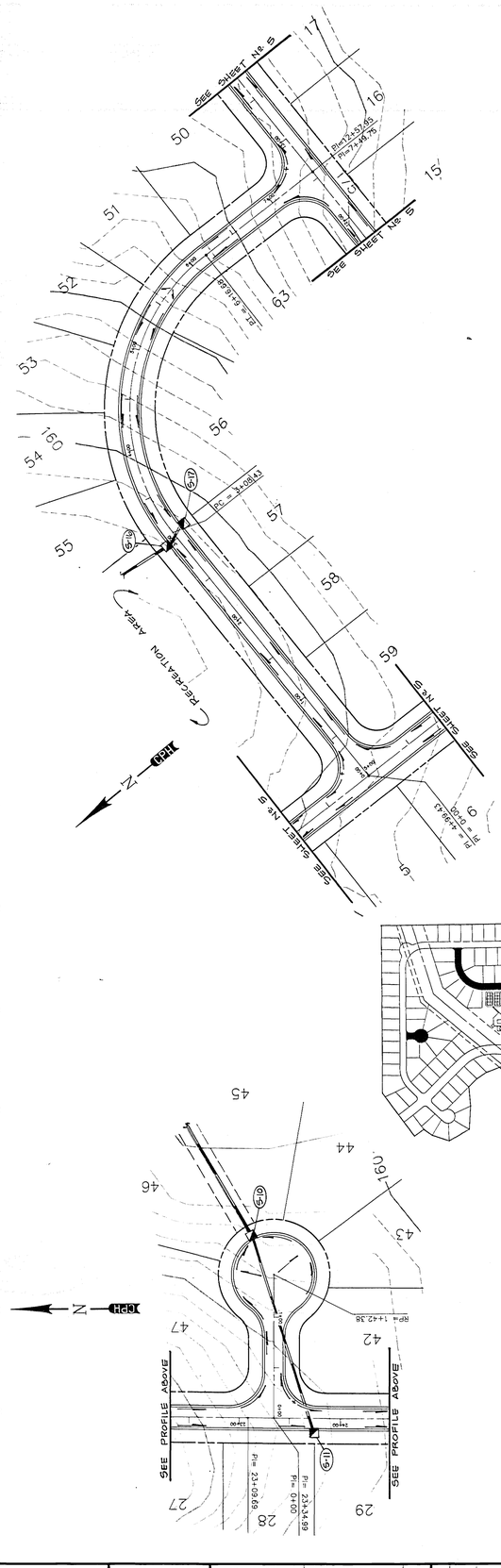
SCALE: 1"=50'
DATE: AUG. 1992
JOB NO. G6765.01
FILE: GPBASE3

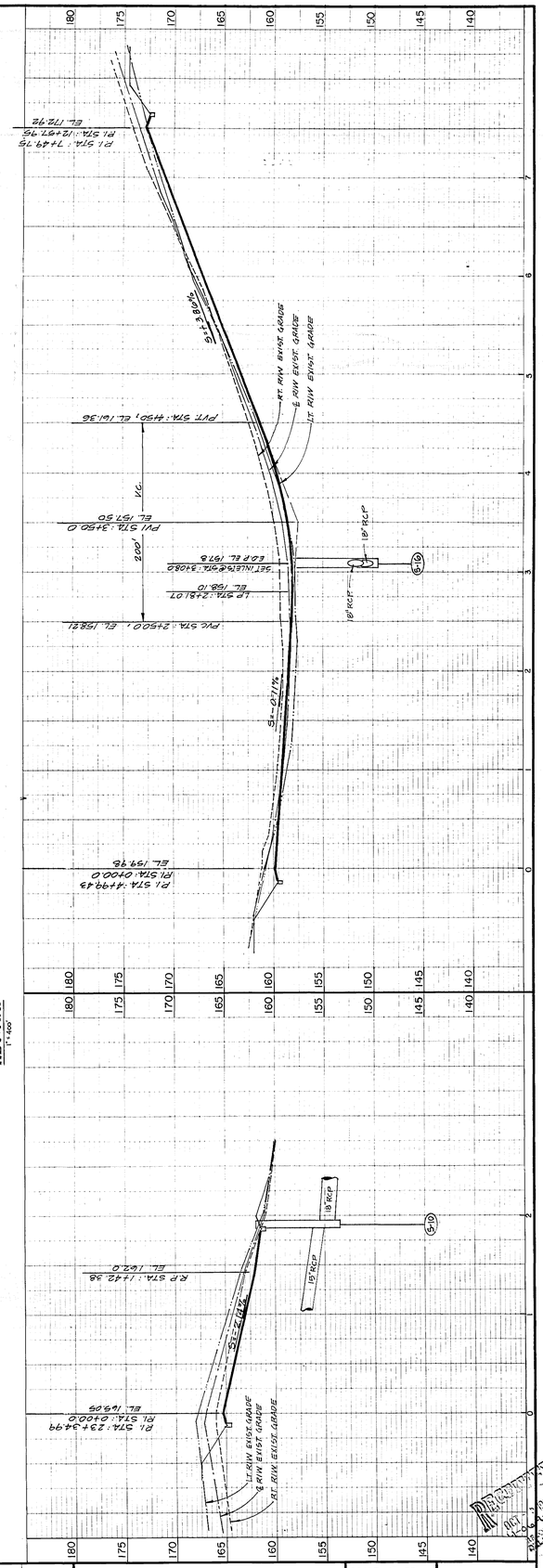
SHEET NO. 5 OF 7

OCT 02 1992









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cph
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REGISTRATION NO.	34791	

NO.	DATE	REVISION	APPROVED

PLAN AND PROFILES

GREATER PINES PHASE 1

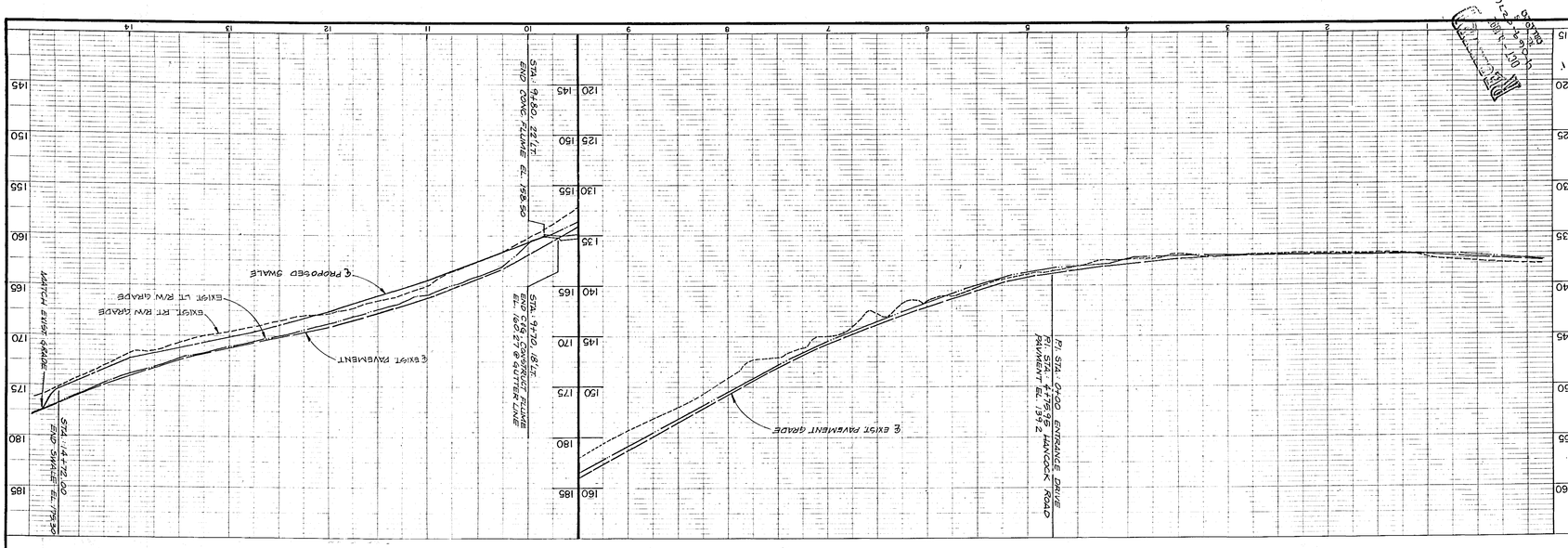
LAKE COUNTY, FLORIDA

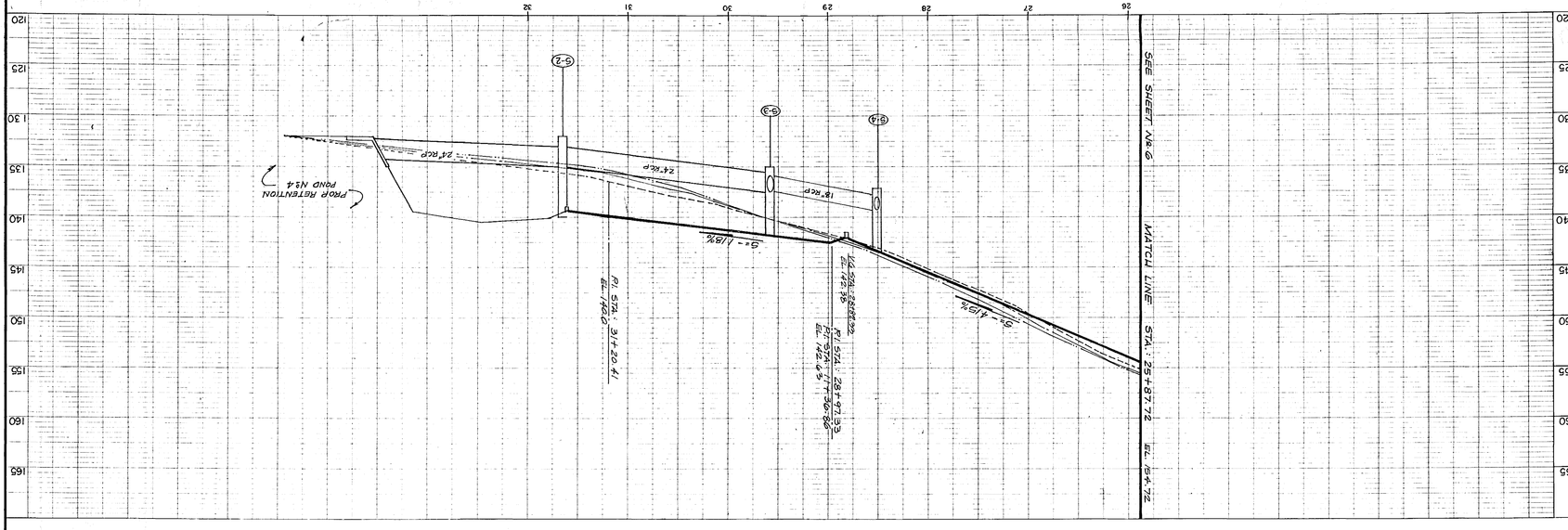
SCALE: 1"=50'
DATE: AUG. 1992
JOB NO. G6765.01
FILE: GPBASE3

SHEET NO. 6 OF 7

10/2/92

OCT 02 1992





SHEET NO.	7 OF 7
SCALE: 1"=50'	
DATE: AUG. 1992	
JOB NO. 96765.01	
FILE: GPBASE3	

PLAN AND PROFILES

GREATER PINES PHASE 1

LAKE COUNTY, FLORIDA

REVISION	NO.	DATE
APPROVED		

ACTIVITY	NAME	DATE
DESIGNED BY:	JBM/JCB	8/92
DRAWN BY:	DEF	8/92
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REGISTRATION NO.	34791	

FOR

TO PROJECT CONTROL

DATE

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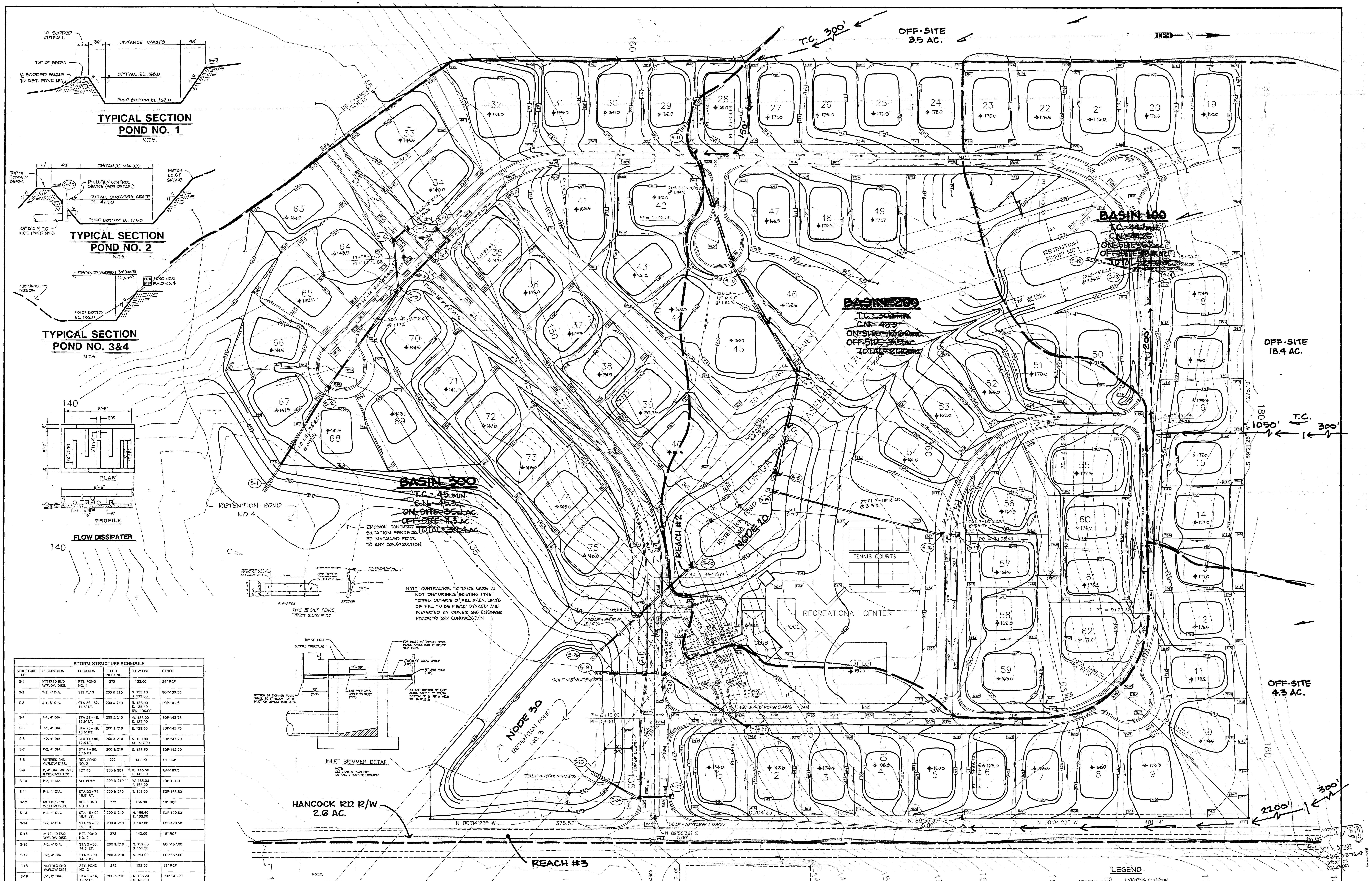

STORM STRUCTURE SCHEDULE					
STRUCTURE I.D.	DESCRIPTION	LOCATION	F.D.O.T. INDEX NO.	FLOW LINE	OTHER
S-1	MITERED END W/FLOW DISS.	RET. POND NO. 4	272	132.00	24" RCP
S-2	P-2, 4' DIA.	SEE PLAN	200 & 210	N. 133.10 S. 133.00	EOP-139.50
S-3	J-1, 6' DIA.	STA 29+62, 14.5' LT.	200 & 210	N. 136.00 S. 135.50 NW. 136.00	EOP-141.6
S-4	P-1, 4' DIA.	STA 28+45, 15.5' LT.	200 & 210	W. 138.00 S. 137.90	EOP-143.75
S-5	P-1, 4' DIA.	STA 28+45, 15.5' RT.	200 & 210	E. 138.50	EOP-143.75
S-6	P-2, 4' DIA.	STA 11+86, 17.5 LT.	200 & 210	N. 138.00 SE. 137.90	EOP-142.20
S-7	P-2, 4' DIA.	STA 1+86, 17.5 RT.	200 & 210	S. 138.50	EOP-142.20
S-8	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	142.00	18" RCP
S-9	P, 4' DIA. W/ TYPE 8 PRECAST TOP	LOT 45	200 & 201	W. 150.00 E. 149.90	RIM-157.5
S-10	P-2, 4' DIA.	SEE PLAN	200 & 210	W. 155.00 E. 154.00	EOP-161.0
S-11	P-1, 4' DIA.	STA 23+76, 15.5' RT.	200 & 210	E. 158.00	EOP-163.60
S-12	MITERED END W/FLOW DISS.	RET. POND NO. 1	272	164.00	18" RCP
S-13	P-2, 4' DIA.	STA 15+09, 15.5' LT.	200 & 210	N. 166.40 S. 166.00	EOP-170.50
S-14	P-2, 4' DIA.	STA 15+09, 15.5' RT.	200 & 210	S. 167.00	EOP-170.50
S-15	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	142.00	18" RCP
S-16	P-2, 4' DIA.	STA 3+08, 14.5' LT.	200 & 210	N. 152.00 S. 151.90	EOP-157.80
S-17	P-2, 4' DIA.	STA 3+08, 14.5' RT.	200 & 210	S. 154.00	EOP 157.80
S-18	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	132.00	18" RCP
S-19	J-1, 6' DIA.	STA 3+14, 18.5' LT.	200 & 210	N. 135.20 S. 135.00 NW. 135.20	EOP 141.20
S-20	TYPE H INLET W/POLL CONTROL	RET. POND NO. 2	232	SE. 134.20	STL. RETICULINE GRATE
S-21	P-2, 4' DIA.	STA 3+14, 18.5' RT.	200 & 210	N. 136.90 S. 136.50	EOP-141.20
S-22	P-1, 4' DIA.	STA 2+43, 15.5' LT.	200 & 210	SW. 141.00	EOP-145.14
S-23	P-1, 4' DIA.	STA 0+77, 28' RT.	200 & 210	S. 133.80	EOP-137.83
S-24	P-1, 4' DIA.	STA 0+77, 28' LT.	200 & 210	N. 133.00 S. 132.90	EOP-137.83
S-25	MITERED END W/FLOW DISS.	RET. NO.3	272	132.00	18" RCP
S-26	MITERED END W/FLOW DISS.	RET. POND NO. 3	272	SE. 132.00	48" RCP

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DATE	TO	FOR
PROJECT CONTROL		

ACTIVITY	NAME	DATE
DESIGNED BY:	JBM/JCB	8/92
DRAWN BY:	DEF	8/92
CHECKED BY:	JCB	8/92
APPROVED BY:	J.C.BRANCH	8/92
REGISTRATION NO.	34791	

NO.	DATE	REVISION	APPROVED

POST DEVELOPMENT DRAINAGE MAP

GREATER PINES PHASE 1

LAKE COUNTY, FLORIDA

SCALE: 1"=50'
DATE: AUG. 1992
JOB NO. G6765.01
FILE: GPBASE3

SHEET NO. 1 OF 1

OCT 02 1992

PHASE I BOUNDARY (TYP.)

T.C.= 43.4 MIN.

OFF-SITE NORTH & N.W. 22.7 AC.

PHASE I & PORTION OF PHASE V 76.8 AC. CN = 43.4

FUTURE PHASE V

PHASE I BOUNDARY (TYP.)

½ OF HANCOCK RD R/W = 2.6 AC

NOTE: SEE DRAINAGE CALC'S. FOR OFF-SITE AREAS.

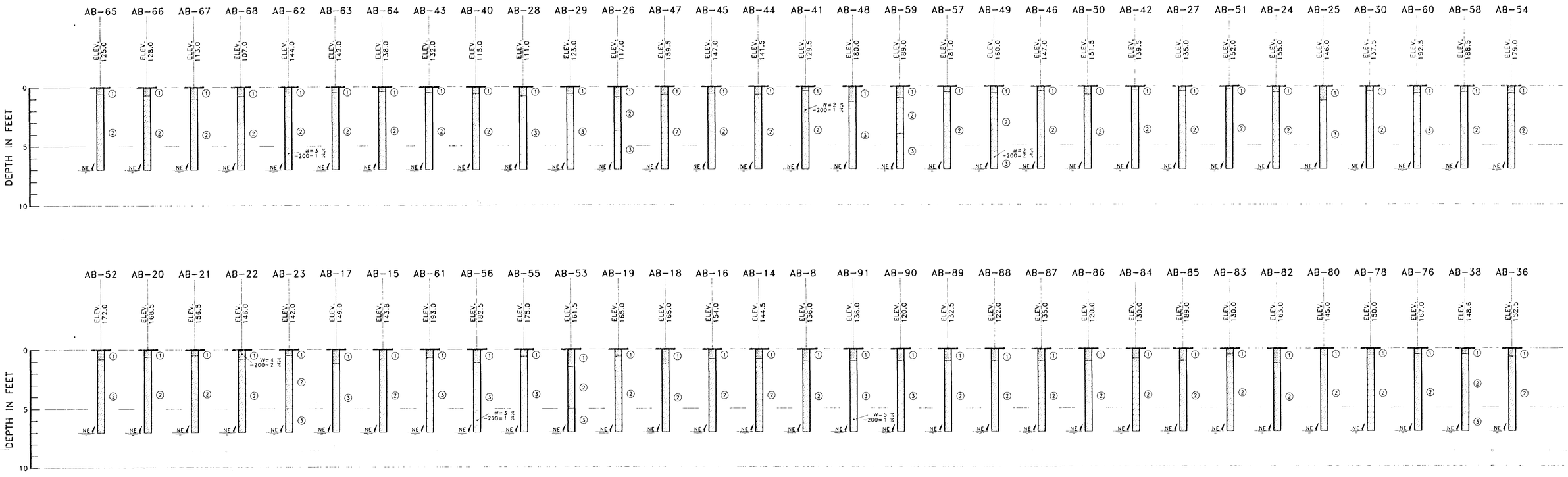
SCALE 1" : 50'

CPH JOB NO. G6765.01

GREATER PINES PHASE 1
PREDEVELOPMENT DRAINAGE MAP

OCT 0 2 1992

10/2/92



SOIL PROFILES

VERT. SCALE : 1" = 4'

LEGEND

① GRAY BROWN FINE SAND (A-3)

② ORANGISH-BROWN TO DARK ORANGISH-BROWN FINE SAND (A-3)

③ LIGHT GRAYISH-BROWN TO LIGHT ORANGISH-BROWN FINE SAND (A-3)

(A-3) AASHTO SOIL CLASSIFICATION GROUP SYMBOL

W NATURAL MOISTURE CONTENT IN PERCENT

-200 PERCENT OF FINES PASSING THE NO. 200 SIEVE

▽ DEPTH TO GROUNDWATER LEVEL : MEASURED 12 - 89

NE ▽ GROUNDWATER LEVEL NOT ENCOUNTERED WITHIN DEPTH OF BORING

SUBSURFACE SOIL INVESTIGATION

GREATER PINES

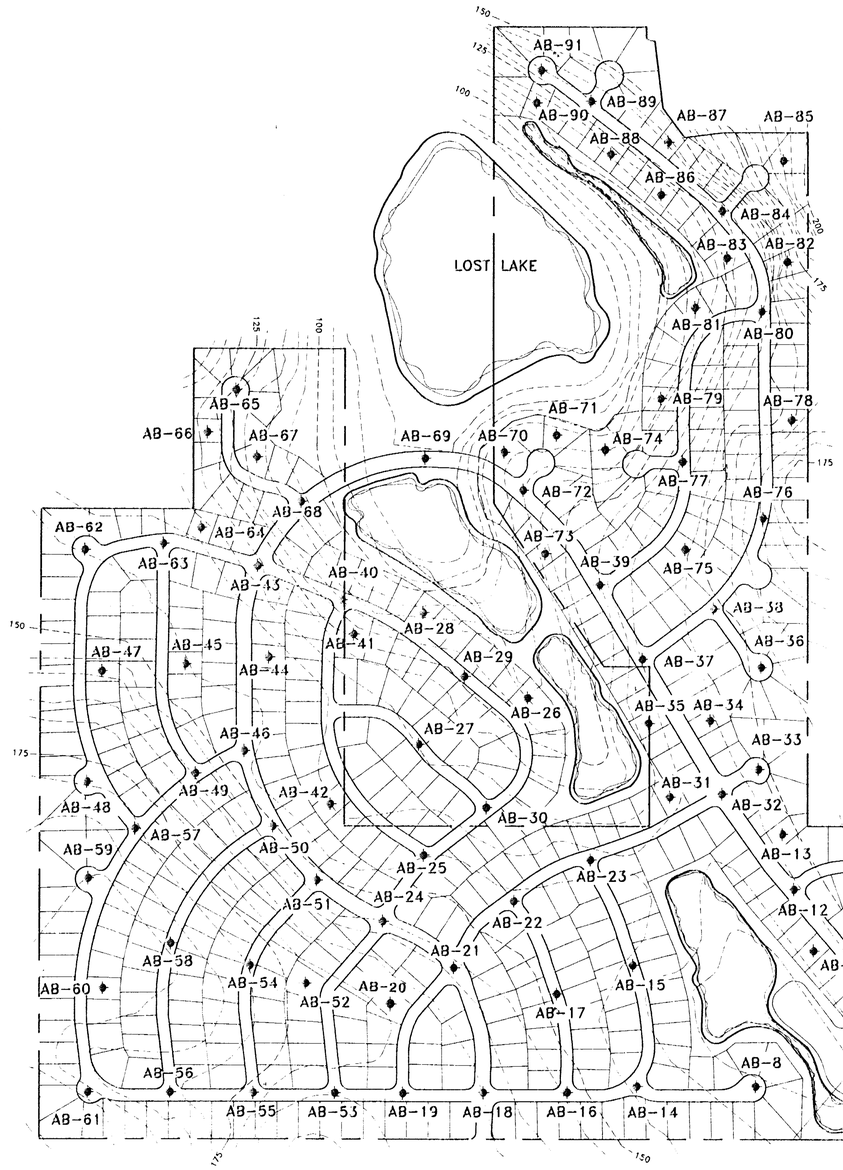
LAKE COUNTY, FLORIDA

Michael D. Sims & Associates, Inc.

DRAWN : GFH	APPROVED : MDS	SCALE : 1"=4
DATE : 7-24-92	SHEET 2 OF 2	JOB NO. 92-053.12

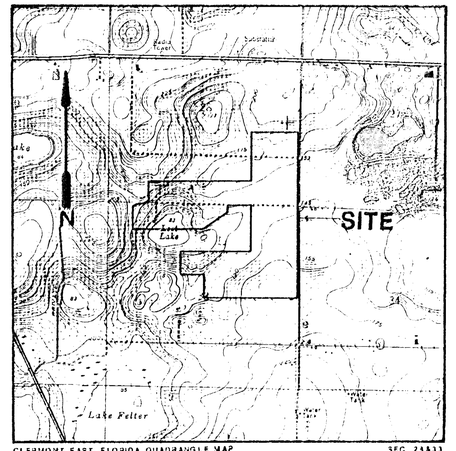
\053\053-12.DWG

11/16/92



LOCATION PLAN

SCALE : 1" = 300'



CLERMONT EAST, FLORIDA QUADRANGLE MAP
DATED 1982, PHOTOREVISED 1985

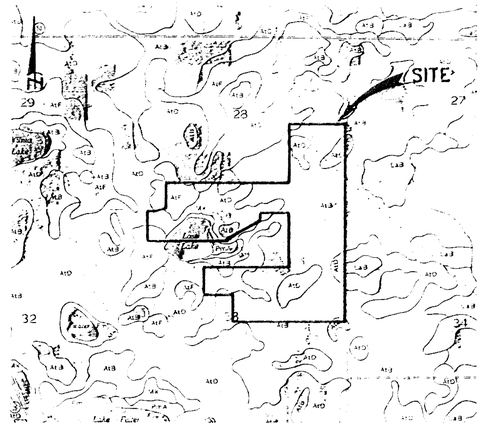
SEC. 23&33
T23S
R25E

VICINITY MAP

NTS

SOIL LEGEND

AtB	ASTATULA SAND, DARK SURFACE, 0 TO 5 PERCENT SLOPES
AtD	ASTATULA SAND, DARK SURFACE, 5 TO 12 PERCENT SLOPES
AtF	ASTATULA SAND, DARK SURFACE, 12 TO 40 PERCENT SLOPES
LoB	LAKE SAND, 0 TO 5 PERCENT SLOPES
Mk	MYAKKA SAND
PmA	PLACID AND MYAKKA SANDS, 0 TO 5 PERCENT SLOPES



U.S.D.A. SOILS MAP

NTS

LEGEND

- ✦ LOCATION OF AUGER BORING
- 150 CONTOUR OF EXISTING ELEVATION IN FEET AS PER DATA PROVIDED BY GLATTING, LOPEZ, KERCHER AND ANGLIN, PROJECT NO. 2899.01, DATED 10-11-89

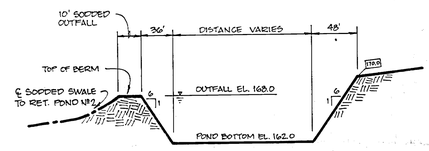
SUBSURFACE SOIL INVESTIGATION

GREATER PINES

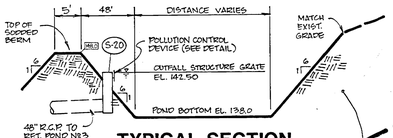
LAKE COUNTY, FLORIDA

Michael D. Sims & Associates, Inc.
Consulting Engineers in the Earth Sciences, Environmental, Hydrogeologic, and Construction Materials Testing

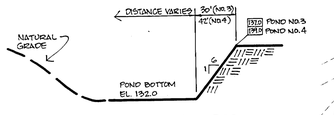
DRAWN :	APPROVED :	SCALE :
GFH	MDS	1"=300'
DATE :	SHEET	JOB NO.
7-24-92	1 OF 2	32-035.12



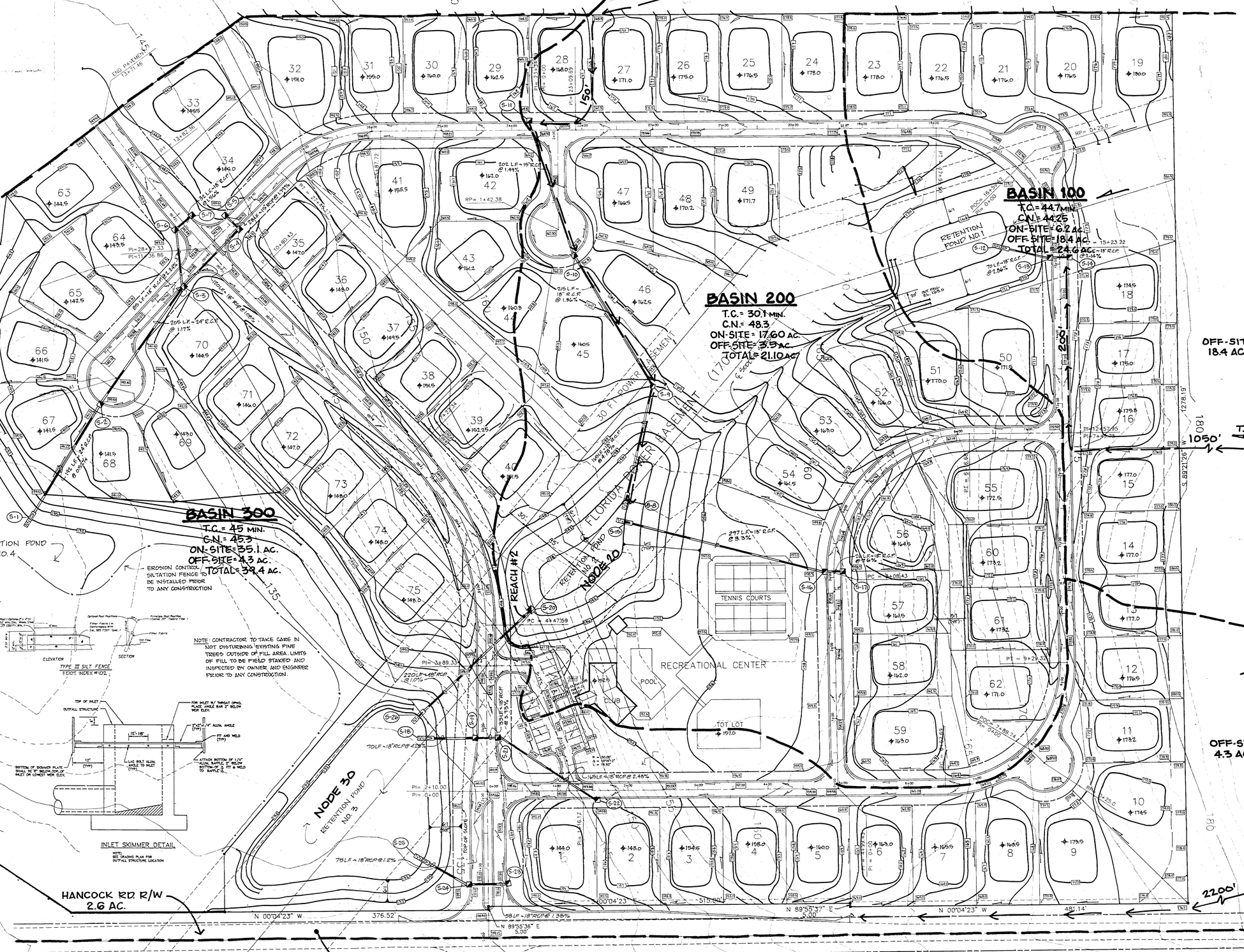
TYPICAL SECTION
POND NO. 1
N.T.S.



TYPICAL SECTION
POND NO. 2
N.T.S.



TYPICAL SECTION
POND NO. 3&4
N.T.S.



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LEGEND

- 170 EXISTING CONTOUR
- 170 PROPOSED CONTOUR
- PROPOSED SPOT ELEV.
- PROPOSED MITERED END SECT. & FLOW DISSIPATOR
- PROP. STORM SYSTEM W/ INLET
- 170.0 PROP. FIN. FLOOR ELEV.

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ACTIVITY	NAME	DATE
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DRAWN BY:	DEF	8/92
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APPROVED BY:	J.C.BRANCH	8/92
REGISTRATION NO.	34791	

NO.	DATE	REVISION	APPROVED
1	12-1-92	ADDED EASEMENT LIMITS RET. 4	J.C.B.

POST DEVELOPMENT DRAINAGE MAP

GREATER PINES PHASE 1

LAKE COUNTY, FLORIDA

SCALE: 1"=50'
DATE: AUG. 1992
JOB NO. G6765.01
FILE: GPBASE3

SHEET NO. 1 OF 1

REVISED SUPERSEDES PREVIOUS PRINT DEC 01 1992

PERMIT DATA SERVICES Patricia

U.S. HWY. 50

50

50

HANCOCK ROAD

ABANDONED ORANGE GROVE

PINE TREE FARM (PLANTED)

PINE TREE FARM (PLANTED)

LOST LAKE

ABANDONED ORANGE GROVE

SCATTERED PINES (PLANTED)

N

SCALE: 1"= 400'

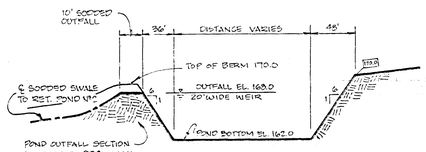
DPH

SHEET 8 OF 8

TREE LOCATION MAP

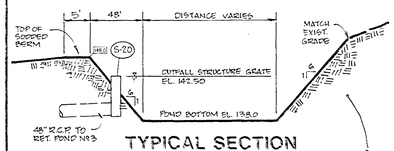
4-069-0276A

OCT 02 1992



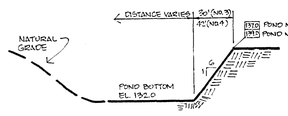
TYPICAL SECTION POND NO. 1

N.T.S.



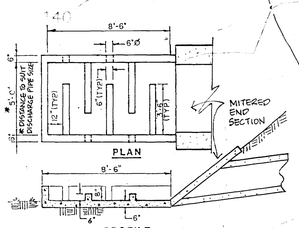
TYPICAL SECTION POND NO. 2

N.T.S.



TYPICAL SECTION POND NO. 3&4

N.T.S.



FLOW DISSIPATER

NOTE: CONTRACTOR TO TAKE CARE IN NOT DISTURBING EXISTING PINE TREES OUTSIDE OF FILL AREA. LIMITS OF FILL TO BE FIELD STAKED AND INSPECTED BY OWNER AND ENGINEER PRIOR TO ANY CONSTRUCTION.

STORM STRUCTURE SCHEDULE

STRUCTURE I.D.	DESCRIPTION	LOCATION*	F.D.O.T. INDEX NO.	FLOW LINE	OTHER
S-1	MITERED END W/FLOW DISS.	RET. POND NO. 4	272	132.00	24" RCP
S-2	P-2, 4' DIA.	SEE PLAN	200 & 210	N. 133.10 S. 133.00	EOP-139.50
S-3	J-1, 6' DIA.	STA 29 + 62, 14.5' LT.	200 & 210	N. 135.25 S. 135.15 NW. 135.25	EOP-141.6
S-4	P-1, 4' DIA.	STA 28 + 45, 15.5' LT.	200 & 210	W. 137.24 S. 137.14	EOP-143.75
S-5	P-1, 4' DIA.	STA 28 + 45, 15.5' RT.	200 & 210	E. 137.80	EOP-143.75
S-6	P-2, 4' DIA.	STA 11 + 86, 17.5 LT.	200 & 210	N. 137.05 SE. 136.95	EOP-142.32
S-7	P-2, 4' DIA.	STA 1 + 86, 17.5 RT.	200 & 210	S. 138.50	EOP-142.32
S-8	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	142.00	18" RCP
S-9	P, 4' DIA. W/ TYPE 8 PRECAST TOP	LOT 45	200 & 201	W. 150.00 E. 149.90	RIM-157.5
S-10	P-2, 4' DIA.	SEE PLAN	200 & 210	W. 155.00 E. 154.00	EOP-161.0
S-11	P-1, 4' DIA.	STA 23 + 76, 15.5' RT.	200 & 210	E. 158.00	EOP-163.47
S-12	MITERED END W/FLOW DISS.	RET. POND NO. 1	272	164.00	18" RCP
S-13	P-2, 4' DIA.	STA 15 + 09, 15.5' LT.	200 & 210	N. 166.40 S. 166.00	EOP-170.50
S-14	P-2, 4' DIA.	STA 15 + 09, 15.5' RT.	200 & 210	S. 167.00	EOP-170.50
S-15	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	142.00	18" RCP
S-16	P-2, 4' DIA.	STA 3 + 08, 14.5' LT.	200 & 210	N. 152.00 S. 151.90	EOP-157.80
S-17	P-2, 4' DIA.	STA 3 + 08, 14.5' RT.	200 & 210	S. 154.00	EOP-157.80
S-18	MITERED END W/FLOW DISS.	RET. POND NO. 2	272	132.00	18" RCP
S-19	P-2, 4' DIA.	STA 3 + 14, 13.5' LT.	200 & 210	N. 135.20 S. 135.00	TOP 144.17
S-20	TYPE H INLET	RET. POND NO. 2	232	SE. 134.30	STL RETICULINE GRATE EL. 142.50
S-21	P-2, 4' DIA.	STA 3 + 14, 18.5' RT.	200 & 210	N. 136.90 S. 136.50	EOP-144.17
S-22	P-1, 4' DIA.	STA 2 + 43, 15.5' LT.	200 & 210	SW. 141.00	EOP-147.32
S-23	P-1, 4' DIA.	STA 0 + 77, 20' RT.	200 & 210	S. 133.80	EOP-139.20
S-24	P-1, 4' DIA.	STA 0 + 77, 20' LT.	200 & 210	N. 133.00 S. 132.90	EOP-139.20
S-25	MITERED END W/FLOW DISS.	RET. NO.3	272	132.00	18" RCP
S-26	MITERED END W/FLOW DISS.	RET. POND NO. 3	272	SE. 132.00	48" RCP
S-27	"E" INLET W/STL RETICULINE GRATE	REC. AREA PARKING	232	E. 139.00 S. 138.90	GRATE ELEV. 145.5

*FOR CURB TYPE INLETS, DIMENSION SHOWN FROM CENTERLINE PAVEMENT TO CENTER OF MANHOLE LID.

NOTE:

1. ALL STORM STRUCTURES AND PIPING USED SHALL BE CONSTRUCTED AND INSTALLED PER F.D.O.T. AND LAKE COUNTY REQUIREMENTS. ALL STRUCTURES HAVE BEEN REFERENCED TO AN F.D.O.T. INDEX NO. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH THE DETAILS THEREIN.
2. NO CONSTRUCTION ACTIVITY SHOULD TAKE PLACE BEYOND ANY ENVIRONMENTAL DESIGNATED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DESTRUCTION WITHIN THESE AREAS.
3. THE CONTRACTOR SHALL OBTAIN A COPY OF ALL EXISTING PERMITS AND BE RESPONSIBLE FOR ABIDING BY ALL REQUIREMENTS ISSUED BY THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, LAKE COUNTY AND ANY OTHER JURISDICTIONAL AGENCIES.
4. ANY DISCREPANCY WITH GRADE ELEVATIONS AS DESIGNED AND EXISTING FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION IN THAT PARTICULAR AREA.
5. CONTRACTOR IS TO GRADE THE PROPOSED ELEVATIONS AS INDICATED. ANY SUBSTANTIAL DIFFERENCE OTHER THAN OWNER OR ENGINEER APPROVED SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
6. FINISH GRADE FOR HOUSE PADS SHALL BE GRADED 12" BELOW THE FINISHED FLOOR ELEVATION AS INDICATED.

NOTE: SEE SHEET 7 OF 7 FOR HANCOCK ROAD DRAINAGE

NOTE: GRADE 5' WIDE FLAT SURFACE, 2 FT ABOVE ℄ OF HANCOCK RD. ALONG R. SEE SEC. "A-A" SHEET 7 OF 7. COMPACT TO 98% MAX. DENSITY PER AASHTO - T-180.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEV.
- PROPOSED MITERED END SECT. & FLOW DISSIPATOR
- FROM STORM SYSTEM W/ INLET
- PROP. FIN. FLOOR ELEV.
- BASIN LIMITS
- T.C. PATH

Conklin Porter and Holmes ENGINEERS, INC.
POST OFFICE BOX 2808
500 W. FULTON STREET
SANFORD, FLORIDA 32771
TEL 407 322-6841 TEL 407 831-5717

DATE | TO | FOR — PROJECT CONTROL

ACTIVITY	NAME	DATE
DESIGNED BY:	JBM/JCB	8/92
DRAWN BY:	DEF	8/92
CHECKED BY:	JCB	8/92
APPROVED BY:	J.C.BRANCH	8/92
REGISTRATION NO.	34791	

NO. | DATE | REVISION | APPROVED

POSTDEVELOPMENT STORM SEWER DRAINAGE MAP

GREATER PINES PHASE 1

LAKE COUNTY, FLORIDA

SCALE: 1"=50'
DATE: AUG. 1992
JOB NO. G6765.01
FILE: GPBASE3

SHEET NO. 1 OF 1

11/19/92