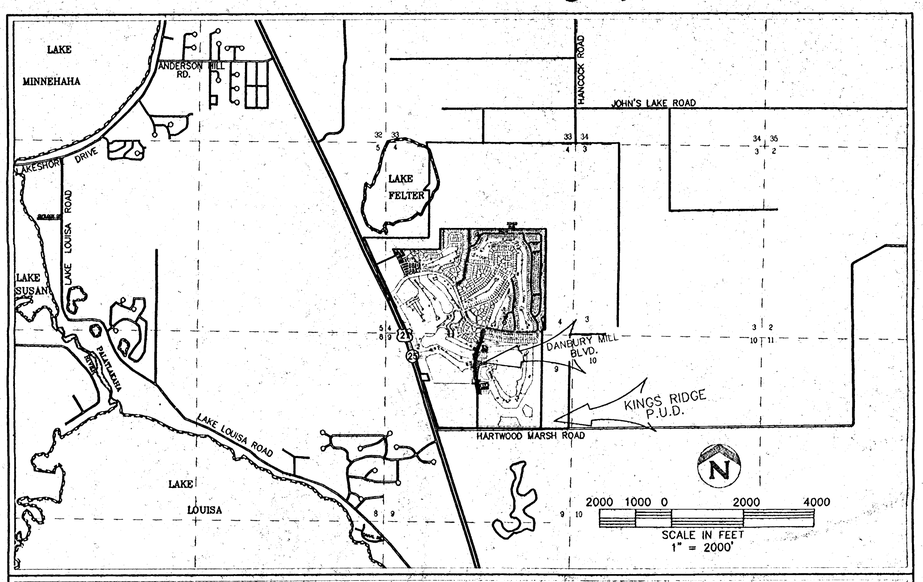
PLANS FOR CONSTRUCTION
DANBURY MILL BOULEVARD AT KING'S RIDGE
A Planned Unit Development
Lake County, Florida

Owner / Developer:

LENNAR ACTIVE ADULT COMMUNITIES
7600 Nob Hill Rd.
Tamarac, FL 33321
(954) 722-0121

Engineer/Planner:

FARNER, BARLEY & ASSOC., INC.
350 North Sinclair Avenue
Tavares, FL 32778
(352) 343-8481
ROBERT E. FARNER, P.E.



VICINITY MAP

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LEGAL DESCRIPTION

DANBURY MILL BOULEVARD

COMMENCE AT THE INTERSECTION OF THE NORTHERLY LINE OF TRACT "B" AND THE SOUTHEASTERLY LINE OF KINGS RIDGE BOULEVARD ACCORDING TO THE PLAT OF SOUTH HAMPTON AT KINGS RIDGE AS RECORDED IN PLAT BOOK 38, PAGES 47 AND 48, PUBLIC RECORDS OF LAKE COUNTY, FLORIDA; SAID POINT BEING ON A CURVE CONCAVE NORTHEASTERLY AND HAVING A RADIUS OF 535.00 FEET TO WHICH A RADIAL LINE BEARS S42°15'30"W; THENCE ALONG THE NORTHERLY LINE OF TRACT "B" RUN SOUTHEASTERLY 289.78 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 31°02'02" TO THE END OF SAID CURVE; THENCE S78°46'32"E 114.74 FEET TO THE POINT OF BEGINNING; SAID POINT BEING THE BEGINNING OF A CURVE CONCAVE SOUTHWESTERLY AND HAVING A RADIUS OF 25.00 FEET; THENCE RUN SOUTHEASTERLY 39.27 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 90°00'00" TO THE END OF SAID CURVE; THENCE ALONG THE EASTERLY LINE OF TRACT "B" RUN S11°13'28"W 202.68 FEET TO THE BEGINNING OF A CURVE CONCAVE WESTERLY AND HAVING A RADIUS OF 1185.00 FEET; THENCE SOUTHERLY 277.97 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 13°26'24" TO THE END OF SAID CURVE; THENCE S24°39'52"W 198.54 FEET TO THE BEGINNING OF A CURVE CONCAVE EASTERLY AND HAVING A RADIUS OF 515.00 FEET; THENCE SOUTHERLY 218.95 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 24°21'33" TO THE END OF SAID CURVE; THENCE S00°18'19"W 224.74 FEET TO THE BEGINNING OF A CURVE CONCAVE EASTERLY AND HAVING A RADIUS OF 1515.00 FEET; THENCE SOUTHERLY 371.76 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 14°03'34" TO THE END OF SAID CURVE; THENCE S13°45'13"E 171.01 FEET TO THE BEGINNING OF A CURVE CONCAVE WESTERLY AND HAVING A RADIUS OF 1185.00 FEET; THENCE SOUTHEASTERLY 114.83 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 05°33'08"; THENCE DEPARTING SAID CURVE ALONG A RADIAL LINE RUN N81°47'54"E 70.00 FEET TO A POINT ON A CURVE CONCAVE WESTERLY AND HAVING A RADIUS OF 1255.00 FEET; THENCE RUN NORTHWESTERLY 121.61 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 05°33'08" TO THE END OF SAID CURVE; THENCE N13°45'13"W 171.01 FEET TO THE BEGINNING OF A CURVE CONCAVE EASTERLY AND HAVING A RADIUS OF 1445.00 FEET; THENCE NORTHERLY 354.58 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 14°03'34" TO THE END OF SAID CURVE; THENCE N00°18'19"E 224.74 FEET TO THE BEGINNING OF A CURVE CONCAVE EASTERLY AND HAVING A RADIUS OF 445.00 FEET; THENCE NORTHERLY 189.19 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 24°21'33" TO THE END OF SAID CURVE; THENCE N24°39'52"E 198.54 FEET TO THE BEGINNING OF A CURVE CONCAVE WESTERLY AND HAVING A RADIUS OF 1255.00 FEET; THENCE NORTHERLY 294.39 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 13°26'24" TO THE END OF SAID CURVE; THENCE N11°13'28"E 202.68 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHEASTERLY AND HAVING A RADIUS OF 25.00 FEET; THENCE NORTHEASTERLY 39.27 FEET ALONG THE ARC THEREOF THROUGH A CENTRAL ANGLE OF 90°00'00" TO THE POINT OF CUSP; THENCE ALONG A TANGENT LINE RUN N78°46'32"W 120.00 FEET TO THE POINT OF BEGINNING.

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RETENTION
POND #1-O
BERM - 180.00
BOTTOM - 172.00
25 YR.-96 HR.
FLOOD ELEV. - 179.11

D-1
GRATE-176.00
INV.-171.00

D-7

D-2

D-6

D-3

D-4

D-5

D-8

D-9

D-10

D-11

S-1

S-41

S-60

DANBURY MILL BLVD.

STA. 10+62.00
BEGIN PROJECT

INV.-170.00

PLACE UNDERDRAIN W/SOCK IN IN THROAT OF EXIST. INLET TO TO PREVENT SILTATION OF EXIST. STORM SYSTEM.

RETENTION
POND #1-OA
BERM - 178.00
BOTTOM - 170.00
25 YR.-96 HR.
FLOOD ELEV. - 174.59

RETENTION
POND #3-A
BERM - 170.00
BOTTOM - 162.00
25 YR.-96 HR.
FLOOD ELEV. - 168.26

EXISTING MAINTENANCE FACILITY

RETENTION
POND #3-A2
BERM - 175.00
BOTTOM - 164.00
25 YR.-96 HR.
FLOOD ELEV. - 173.32

EXIST. GOLF COURSE IRRIGATION MAIN CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BEGINNING CONSTRUCTION

CONST. SILT FENCE FOR EROSION CONTROL (TYP.) SEE DETAIL SHEET 6

5' BICYCLE/GOLF CART PATH (TYP.)

STANDARD CURB & GUTTER (TYP.)

CONST. 12" PVC RE-USE MAIN FROM EXIST. WWTP

CONST. 6" PVC FORCE MAIN

CONST. 12" PVC RE-USE MAIN

CONST. 12" PVC WATER MAIN

STA. 28+28.60
END PROJECT

LEGEND

	C/L DANBURY MILL BLVD.
	R/W LINE
RM	12" REUSE MAIN
EFF.-RM	12" EFFLUENT REUSE MAIN FROM WATER PLANT
FM	6" FORCE MAIN
SS	8" GRAVITY MAIN
WM	12" POTABLE WATER MAIN
	SILT FENCE

60 30 0 60 120 180
SCALE IN FEET
1" = 60'

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350 North Sinclair Avenue O Tavares, Florida 32778 O (352) 343-8481

DANBURY MILL BOULEVARD MASTER PLAN

DATE 5-5-97
JOB NO. 941216.045
DWG. NO. MASTER
F.B. ____ PG. ____
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CHKD BY KK

SHT. 2 OF 8

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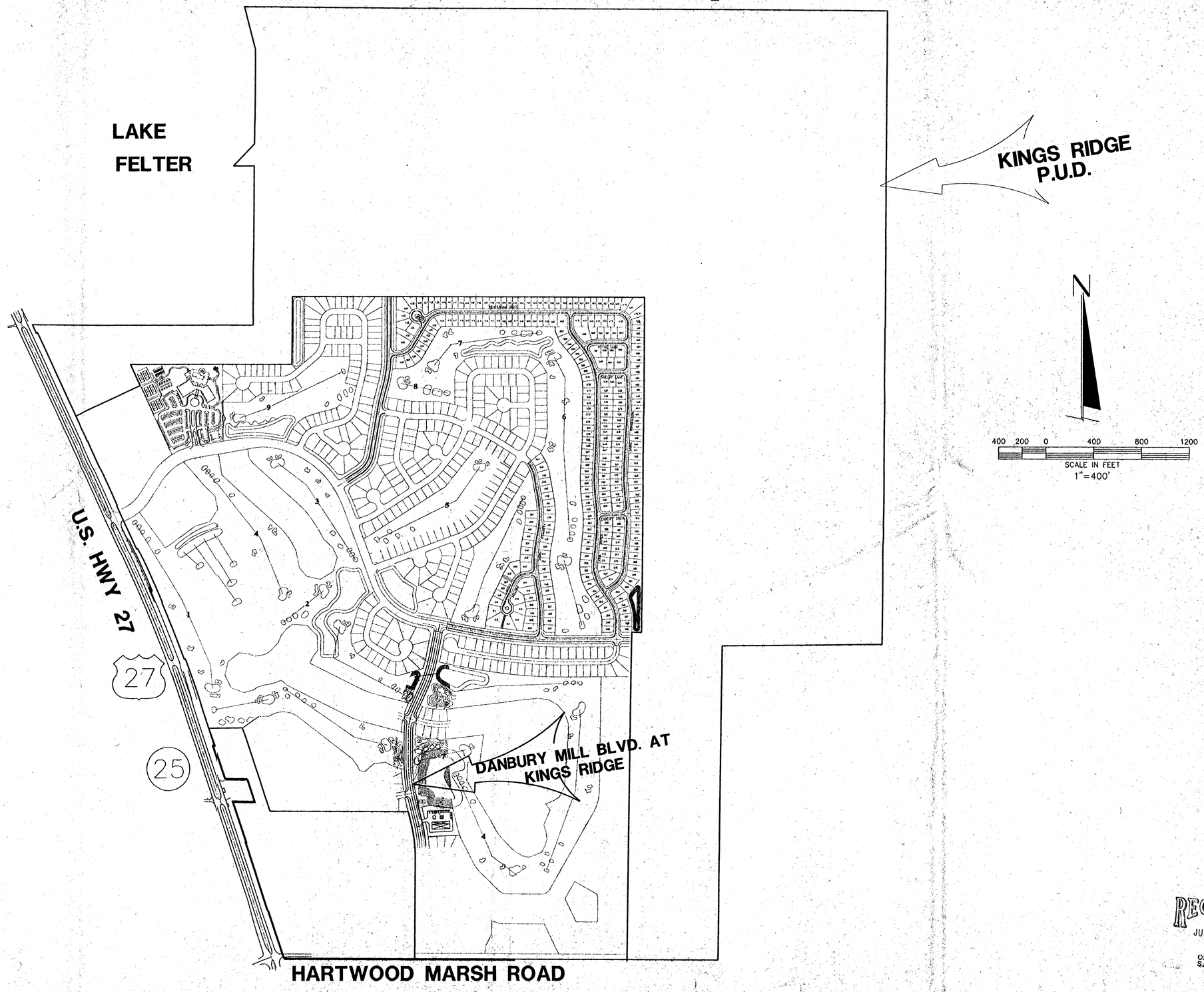

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AERIAL PHOTO

DATE 5-1-97
JOB NO. 941216.045
DWG. NO. AERIAL
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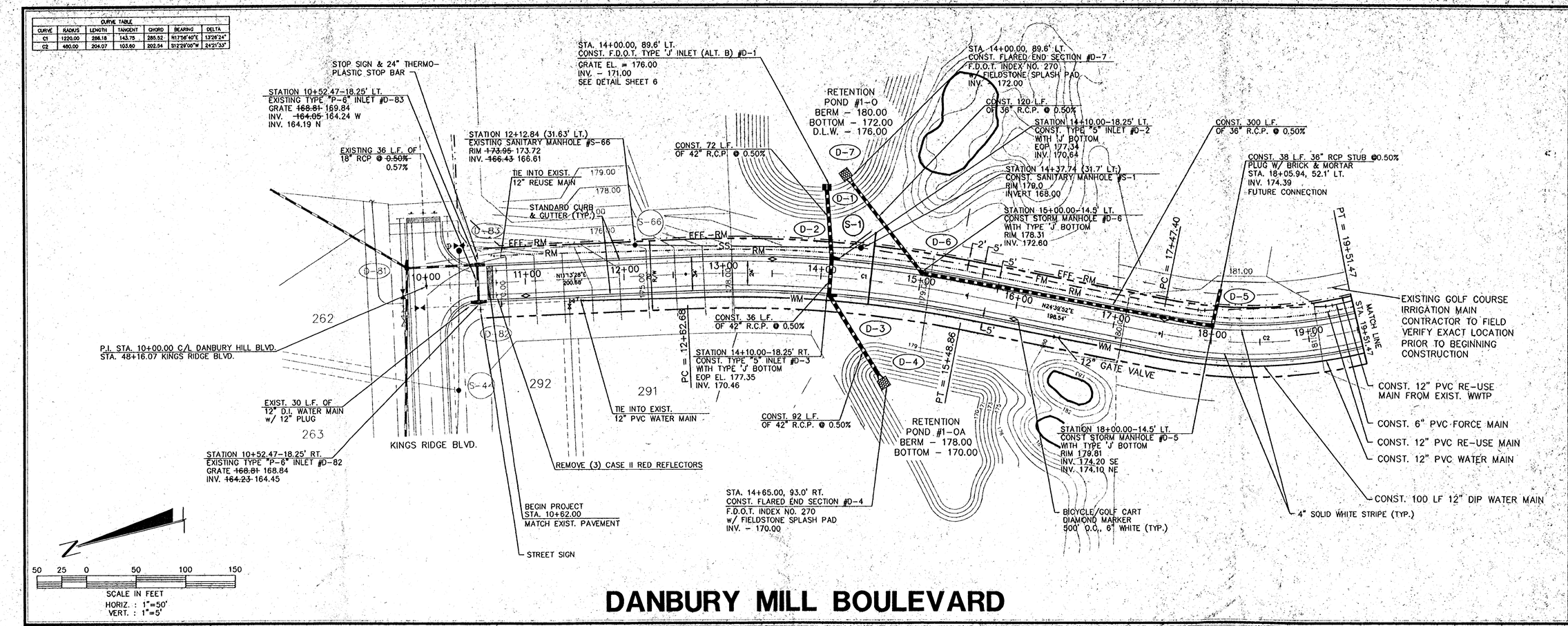
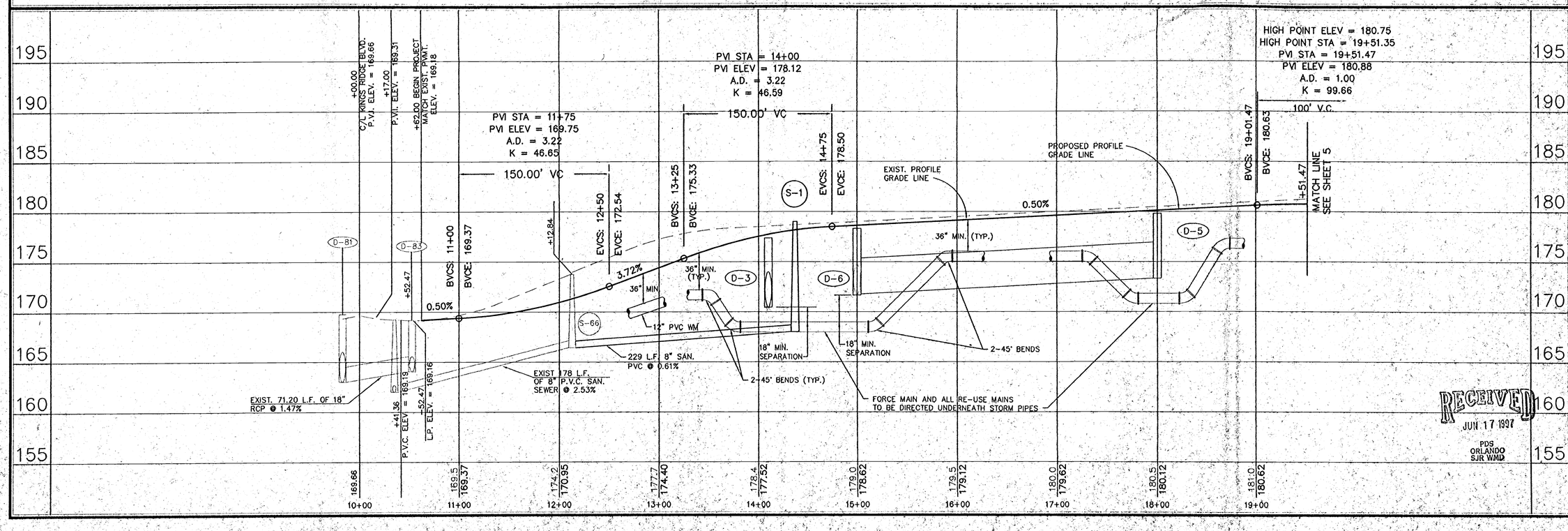
CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	1220.00	286.18	143.75	285.52	N17°56'40"E	13°26'24"
C2	480.00	204.07	103.60	202.54	S12°29'00"W	24°21'33"



DANBURY MILL BOULEVARD



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DANBURY MILL BOULEVARD PLAN and PROFILE

DATE 5-13-97
JOB NO. 941216.045
DWG. NO. PR1
F.B. ___ PG. ___
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CHKD BY KK

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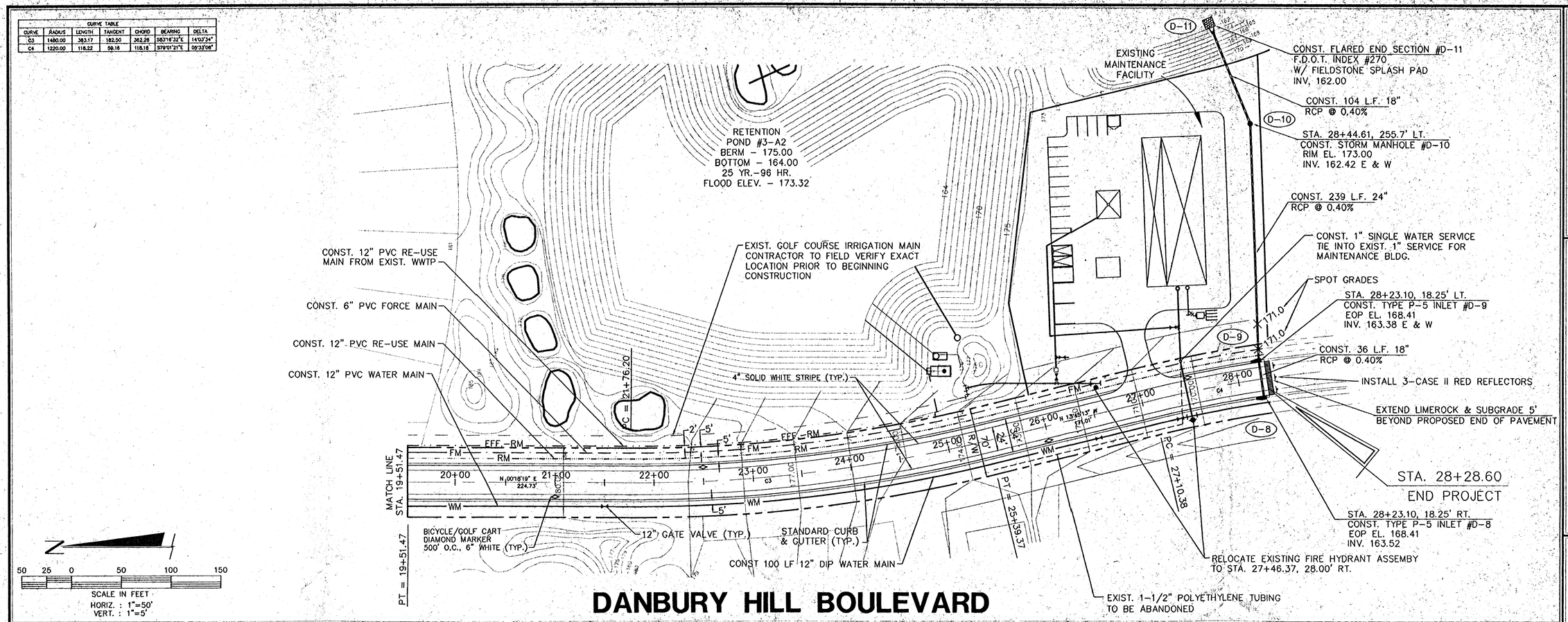
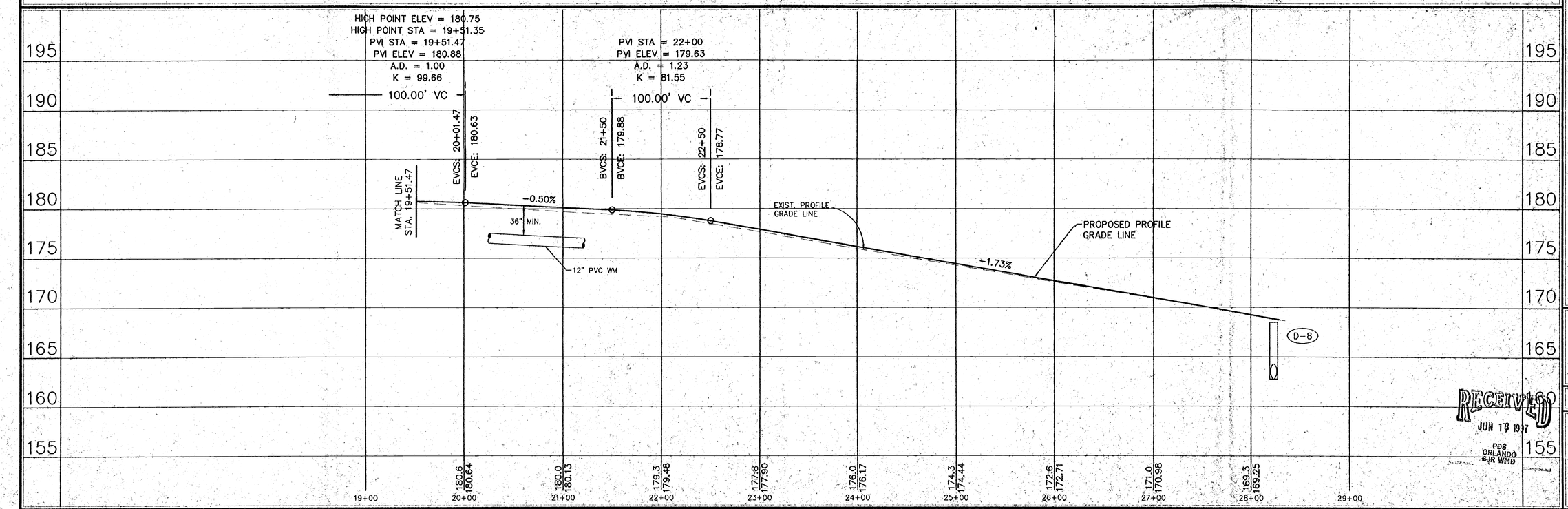
CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C3	1480.00	363.17	182.50	362.28	S63°16'32"E	14°03'34"
C4	1220.00	118.22	59.18	118.18	S79°01'21"E	05°33'08"



DANBURY HILL BOULEVARD



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350 North Sinclair Avenue O Tavares, Florida 32778 O (352) 343-8481

DANBURY HILL BOULEVARD PLAN and PROFILE

DATE 5-13-97
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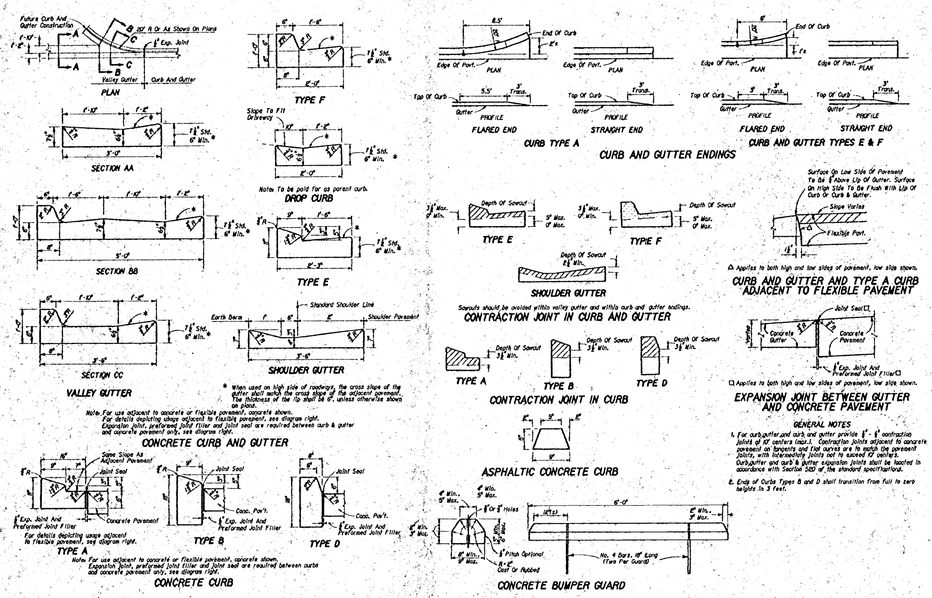
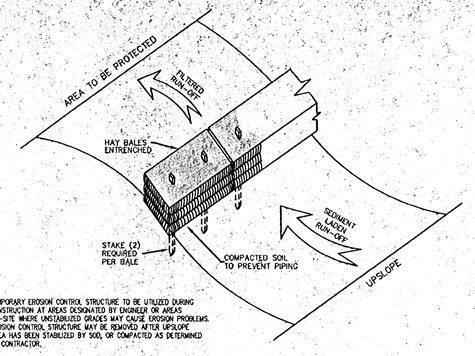


CURB AND CURB & GUTTER

F.D.O.T. INDEX NO. 300



NOTES:

1. TEMPORARY EROSION CONTROL STRUCTURE TO BE UTILIZED DURING CONSTRUCTION AT AREAS DESIGNATED BY ENGINEER OR AREAS ON-SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL STRUCTURE MAY BE REMOVED AFTER UPSLOPE AREA HAS BEEN STABILIZED BY SOD, OR COMPACTED AS DETERMINED BY CONTRACTOR.
2. ALTERNATE EROSION CONTROL STRUCTURE: WOVEN FILTER FABRIC SILT FENCE IN ACCORDANCE WITH F.D.O.T. INDEX #102. FILTER FABRIC IN ACCORDANCE WITH SECTION 985 OF THE F.D.O.T. STANDARD SPECIFICATIONS.

EROSION CONTROL STRUCTURE

NOT TO SCALE

THE FOLLOWING LIST REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF-SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT.

PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES.

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES.

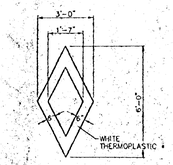
EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT.

NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.

SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THAY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHED APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER.

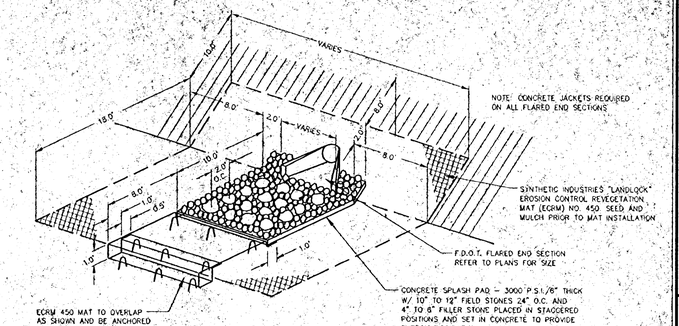
ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEED.



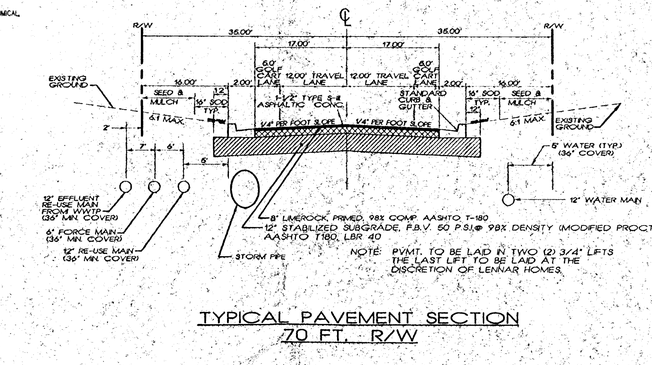
DIAMOND BICYCLE MARKING

D.O.T. INDEX NO. 17346

* PAINT SHALL BE USED IF INSTALLED PRIOR TO 2ND LIFT OF ASPHALT, TYPICAL OF ALL PAVEMENT MARKINGS

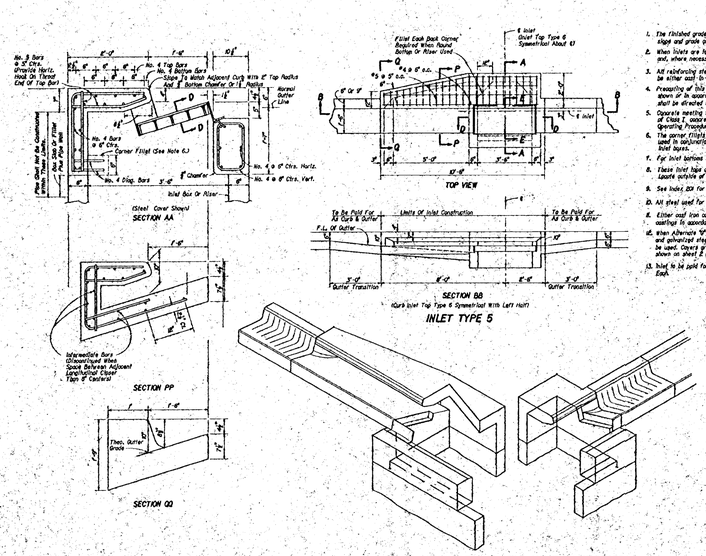


FLARED END w/ Ssplash PAD



NOTE: PVMT. TO BE LAID IN TWO (2) 3/4" LIFTS THE LAST LIFT TO BE LAID AT THE DISCRETION OF LENNAR HOMES.

TYPICAL PAVEMENT SECTION 70 FT. R/W

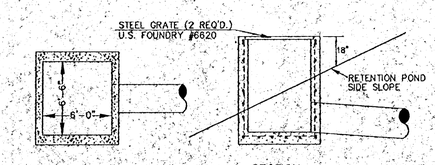


GENERAL NOTES

1. The finished grade and slope of the inlet tops are to conform with the finished cross slope and grade of the proposed sidewalk and/or gutter.
2. When inlets are to be constructed on a curve, refer to the plans to determine the radius and, where necessary, modify the inlet details accordingly. Bend steel when necessary.
3. All reinforcing steel shall have 1½" minimum cover unless otherwise shown. Inlet tops shall be either cast in place or precast concrete.
4. Precasting of this inlet top will be permitted. Precast units must conform to the dimensions shown or be equivalent to approved shop drawings. Request for shop drawing approval shall be directed to the State Drainage Engineer.
5. Concrete meeting the requirements of A.S.T.M. C 478 (4,000 P.S.I.) may be used in lieu of Class I, concrete for precast units, manufactured in plants which are under the Standard Operating Procedures for the inspection of precast drainage products.
6. The corner fillets shown for rectangular throats are necessary only when throats are to be used in conjunction with circular inlet bottoms or when used on skew with rectangular inlet tops.
7. For inlet bottoms see Index No. 200.
8. These inlet tops are designed for use with standard curb and gutter Type E and Type F. Locate outside of pedestrian crossing where practical.
9. See Index 224 for supplemental details.
10. All steel used for frame and cover shall meet the requirements of ASTM A-36.
11. Either cast iron covers or steel covers may be used. Iron covers shall be Class No. 30 castings in accordance with ASTM A-48.
12. When alternate "B" Cover is specified in place either the cast iron cover and galvanized steel frame or the the galvanized steel cover and frame must be used. Covers are to be coated in accordance with the grating detail shown on sheet 2 of 2. No flow of test water.
13. Inlet to be paid for under the contract unit price for Inlets (Curb (Type ....)). Each.

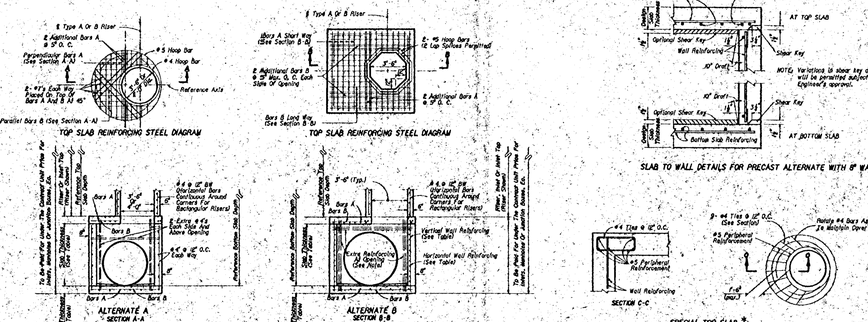
CURB INLET TOPS, TYPES 5 & 6

F.D.O.T. INDEX NO. 211



TYPE 'J' INLET - ALT. B

(TYPE 'P' INLET F.D.O.T. INDEX NO. 200)



GENERAL NOTES

1. Standard structure bottoms 4'-0" diameter and smaller (Ann. A) and 3'-6" square (Ann. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted on all structures.
2. Walls of circular structures (Alternate A) constructed in place may be of non-reinforced concrete or brick or reinforced concrete. Precast and rectangular structures (Alternate B) shall be constructed of reinforced concrete only.
3. Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with a wall thickness in accordance with either A.S.T.M. C-478 (up to 96" diameter) or A.S.T.M. C-76, Class III. B wall, specified where the additional steel cage area is placed in the center one-third of the wall.
4. Top and floor slab thickness and reinforcement are for precast and cast in place construction. Top and floor slabs shall be of Class III concrete. Concrete as specified in A.S.T.M. C-478 (4000 psi) may be used in lieu of Class I and Class II concrete in precast items manufactured in plants which are under the "Prepaid Operating Procedures" for the inspection of precast drainage products.
5. All reinforcement shall be A.S.T.M. A615. Grade 60 or 65 KSI welded wire fabric, either smooth or deformed.
6. Structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 7, and 10, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. All B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any other bottom inlet unless otherwise shown in the plans or other standard drawings.
7. Rectangular structures may be varied as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
8. Except when A12 hooks are specifically required, reinforcement hip and slab shall be straight embedment.
9. All steel bars shall have 1½ minimum cover unless otherwise shown except for precast circular units manufactured under ASTM C-76 or ASTM C-478. Horizontal steel in rectangular structures shall be lapped a minimum of 24 bar diameters at corners.
10. All steel bars shall have 1½ minimum cover unless otherwise shown except for precast circular units manufactured under ASTM C-76 or ASTM C-478. Horizontal steel in rectangular structures shall be lapped a minimum of 24 bar diameters at corners.
11. The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats and used in skew with rectangular risers, inlet and inlet throats. Fillets will be required in lieu of the bottom step of the A.H. B riser when used with the A.H. A box. Each fillet shall be reinforced with 2-#5 bars.
12. Inlet throats, riser or manhole tops shall be secured to structures as shown on Index No. 20.
13. Structures with depths over 4' are to be checked for flotation by designer of piped drainage.
14. Units larger than specified standard may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Such larger units shall be furnished at no additional cost to the Department. Larger alternate B units cannot replace Alternate A units without approval of the Engineer. This note applies to this index only.
15. For manhole and junction box tops, for frames and covers, and, for supplementary details see Index No. 20.

STRUCTURE BOTTOMS, TYPES J AND P

F.D.O.T. INDEX NO. 200

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▲ ENGINEERS ▲ SURVEYORS ▲ PLANNERS
350 North Sinclair Avenue, Ocoee, Florida 32778 - O (904) 343-8481

PAVING and DRAINAGE DETAIL SHEET

DATE 5-13-97
JOB NO. 941216.045
DWG. NO. P-DETAIL
F.B. PG.
DRAWN BY DM
CHKD BY KK

SHT 8 OF 8

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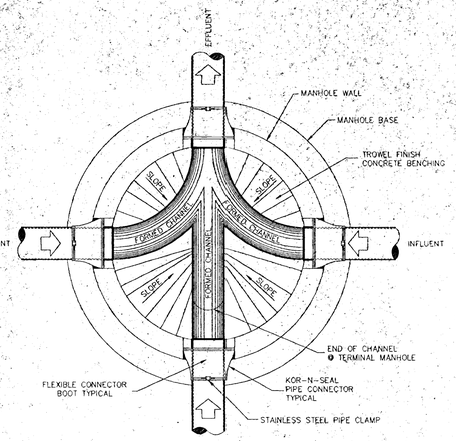


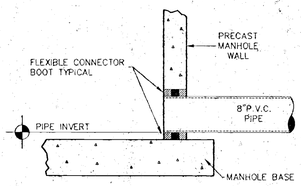
FLOW PATTERNS FOR INVERT CHANNELS

NOTES:
1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS. HALF PIPE INVERT CHANNELS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOWS.
3. CHANNELS FOR FUTURE CONNECTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND AND COVERED WITH 1" OF MORTAR.
4. WHERE PIPE INVERTS DIFFER BY MORE THAN 2 FEET (2'), PROVIDE A TEE AND DROP-PIPE TO PREVENT SPLATTER

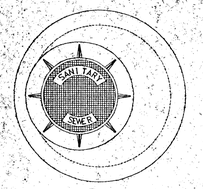
TYPICAL MANHOLE PLAN

GENERAL REUSE NOTES

1. ALL REUSE PIPING TO BE OWNED AND MAINTAINED BY THE CITY OF CLERMONT SHALL BE A SOLID PURPLE COLOR.
2. REUSE MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18 FOR PIPE SIZES 4"-12". PIPES 14" & LARGER SHALL BE AWWA C-905, DR 25. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS LATEST RECOMMENDATIONS.
3. DEPTH OF REUSE LINES TO BE 36" BELOW FINISHED GRADE.
4. REUSE MAINS TO BE LOCATED 5' FROM BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
5. WHERE REUSE AND SEWER MAINS OR POTABLE WATER MAINS CROSS WITH LESS THAN 18" VERTICAL CLEARANCE, THE SEWER OR WATER MAIN WILL BE 20' OF DUCTILE IRON PIPE, CENTERED ON THE POINT OF CROSSING. WHEN A REUSE MAIN PARALLELS A SEWER OR WATER MAIN, A SEPARATION OF AT LEAST 5' (CENTER TO CENTER), OR 3' (OUTSIDE TO OUTSIDE) SHOULD BE MAINTAINED.
   IF SEPERATION CANNOT BE MAINTAINED, THE REUSE MAIN AND SEWER MAIN OR WATER MAIN SHALL BE DUCTILE IRON PIPE FOR THE PORTION OF THE REUSE MAIN LESS THAN THE REQUIRED SEPARATION FROM THE SEWER MAIN OR WATER MAIN, OR INSTALLATION OF THE REUSE MAIN IN A SEPERATE TRENCH, OR ON AN UNDISTURBED EARTH SHELF, AT LEAST 18" ABOVE THE CROWN OF THE SEWER MAIN OR WATER MAIN.
6. ALL REUSE MAINS UNDER PAVEMENT SHALL BE DUCTILE IRON PIPE AND SHALL EXTEND 5' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB.
7. ALL IRRIGATION SLEEVING UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE EDGE OF PAVEMENT OR BACK OF CURB.

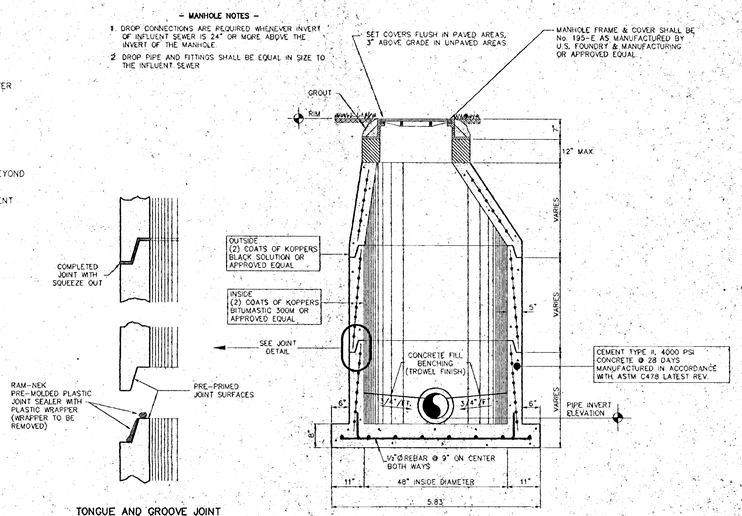


PIPE CONNECTION TO PRECAST SANITARY MANHOLE



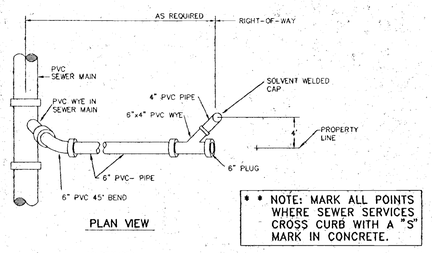
- MANHOLE NOTES -

1. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE.
2. DROP PIPE AND FITTINGS SHALL BE EQUAL IN SIZE TO THE INFLUENT SEWER.



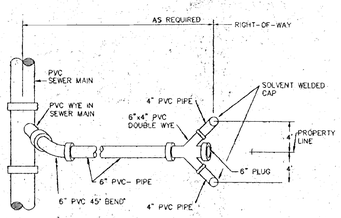
SANITARY PRECAST MANHOLE DETAIL

ALTERNATE-PRECAST MANHOLE TOPS:
1. APPROVED CONCENTRIC CONE DESIGN MAY BE USED AS AN ALTERNATE.
2. APPROVED FLAT SLAB TOP MAY BE USED AS AN ALTERNATE (6" MIN. THICKNESS).

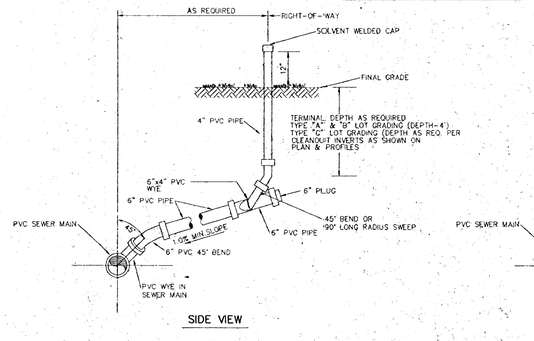


PLAN VIEW

** NOTE: MARK ALL POINTS WHERE SEWER SERVICES CROSS CURB WITH A "S" MARK IN CONCRETE.

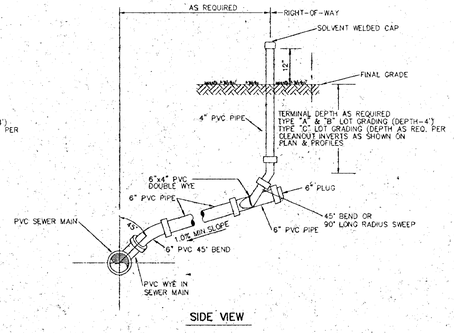


PLAN VIEW



SIDE VIEW

SANITARY SEWER SERVICE
PVC SINGLE SERVICE

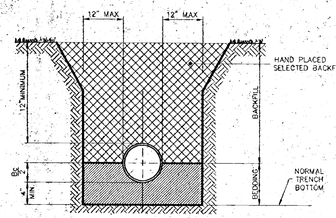


SIDE VIEW

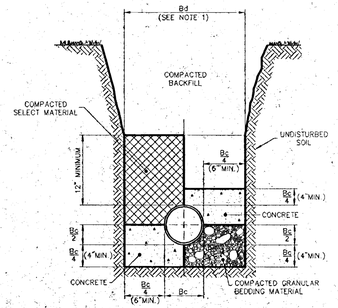
SANITARY SEWER SERVICE
PVC DOUBLE SERVICE

NOTES: FOR BEDDING AND TRENCHING

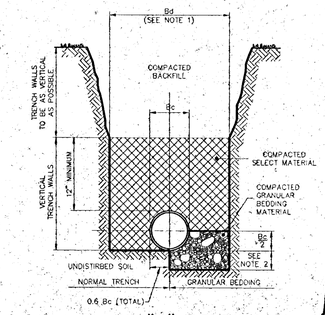
1. Dimension Bc = Pipe O.D.
   Dimension Bd = Trench Width at Top of Pipe
   Maximum Bd = Bc + 30"
   Minimum Bd = Maximum Dimension of Bell + 8" (Unsheeted Trench)
2. Depth for removal for unsuitable material shall be as required to reach suitable foundation. For rock or other non-cushioning material, depth shall be 6" below bottom of utility.



STANDARD BEDDING DETAIL
FOR P.V.C. GRAVITY SEWER PIPE TYPICAL



CLASS "A" BEDDING
SPECIAL CONDITIONS



CLASS "B" BEDDING
NORMAL CONDITIONS

RECEIVED
JUN 13 1997
FDS ORLANDO SJR WMD

JUN 13 1997

REVISIONS
DATE

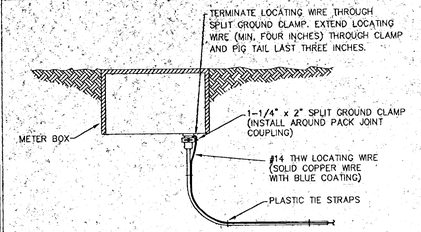
FARNER BARLEY AND ASSOCIATES, INC.
▲ ENGINEERS ▲ SURVEYORS ▲ PLANNERS
350 North Sinclair Avenue, O Tavares, Florida 32778, O (904) 343-8481

SANITARY SEWER DETAIL SHEET

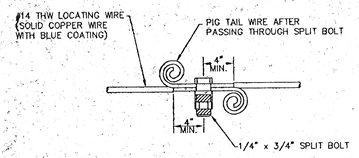
DATE 5-13-97
JOB NO. 941216.045
DWG. NO. S-DETAIL
F.B. ____ PG. ____
DRAWN BY DM
CHKD BY KK

SHT. 7 OF 8

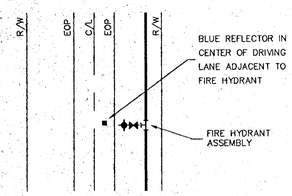
AC:\SDETAIL Tue Jun 10 11:26:16 1997 KARL



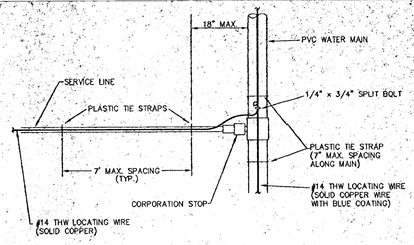
SERVICE AND METER



LOCATING WIRE SPLICING



FIRE HYDRANT REFLECTOR DETAIL

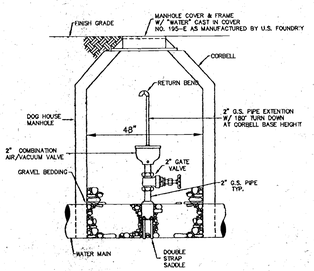


CONNECTION TO PVC MAIN

LOCATING WIRE INSTALLATION FOR SINGLE FAMILY WATER SERVICES

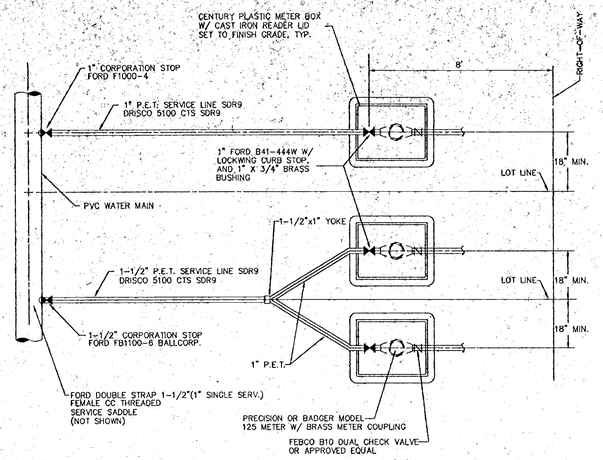
NOTES:

1. THE ENDS OF ALL LOCATING WIRES, WHETHER THEY ARE SPLICED, CONNECTED, OR TERMINATED, SHALL HAVE THE LAST THREE INCHES PIG TAILED AS DETAILED HEREON.
2. AFTER INSTALLATION OF THE LOCATING WIRE THE SYSTEM SHALL BE SUBJECTED TO TESTING, PRIOR TO BACKFILL, IN ORDER TO ESTABLISH THAT THE SYSTEM IS FUNCTIONAL.

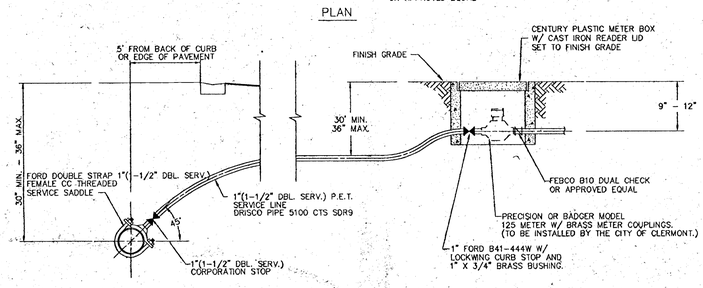


COMBINATION AIR RELEASE & AIR / VACUUM VALVE FOR WATER MAINS

NOT TO SCALE



PLAN



SECTION

WATER SERVICE CONNECTION DETAILS

NOT TO SCALE

(NOTE: METERS TO BE INSTALLED BY CITY OF CLERMONT)

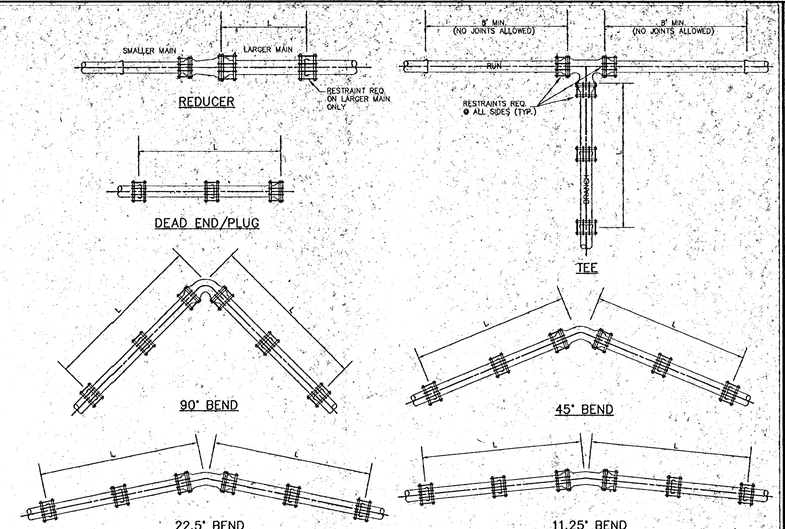


TABLE OF THRUST RESTRAINT LENGTHS

PIPE SIZE (inches)	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEES		DEAD END & PLUG		REDUCER		
	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	P.V.C. (L)	DUCTILE IRON (L)	PIPE SIZES	P.V.C. (L)	DUCTILE IRON (L)
4	20'	16'	8'	7'	4'	3'	2'	2'	15'	10'	45'	28'	6"x4"	32'	21'
6	28'	22'	12'	9'	6'	4'	3'	2'	33'	21'	63'	40'	8"x6"	34'	22'
8	36'	29'	15'	12'	7'	6'	4'	3'	52'	33'	82'	52'	10"x8"	33'	21'
10	43'	34'	18'	14'	9'	7'	4'	3'	68'	43'	98'	62'	12"x10"	34'	21'
12	50'	40'	21'	17'	10'	8'	5'	4'	85'	53'	116'	73'	16"x12"	63'	40'
16	63'	51'	26'	21'	13'	10'	6'	5'	116'	73'	148'	93'			

THRUST RESTRAINT DESIGN NOTES

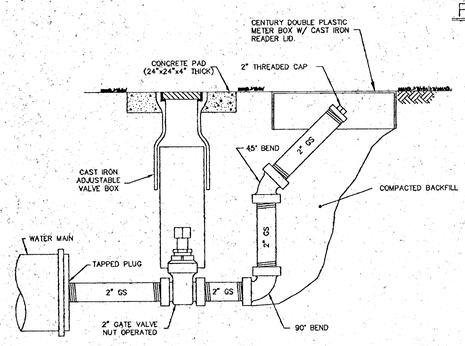
1. RESTRAINT JOINTS, FITTINGS, & VALVE REQUIREMENTS CALCULATED BY THE THRUST RESTRAINT DESIGN PROGRAM PROVIDED BY EBAA IRON SALES, INC.
2. DATA BASED ON MAX. WATER PRESSURE OF 150 p.s.i., THE UNIFIED SOILS CLASSIFICATION SYSTEM (SOIL TYPE SP), THE PIPE BEDDED IN NATIVE SOIL w/ A MINIMUM OF 2.5' COMPACTED FILL OVER THE PIPE, AND USING A SAFETY FACTOR OF 1.5 FOR THE DATA.
3. ALL FITTINGS & VALVES TO BE RESTRAINED WITH "MEGA-LUG" RESTRAINTS, & ALL BELL & SPIGOT JOINTS TO BE RESTRAINED WITH A RESTRAINING HARNESS WITHIN THE REQUIRED LENGTH OF RESTRAINED PIPE (L).

THRUST RESTRAINT DETAILS

GENERAL WATER NOTES

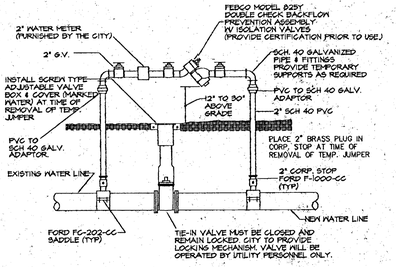
1. WATER SYSTEM COMPONENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555 FLORIDA ADMINISTRATIVE CODE.
2. ALL PIPING SHALL BEAR THE "NSF" SEAL FOR POTABLE WATER.
3. WATER MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18 FOR PIPE SIZES 4"-12" PIPES 14" OR LARGER SHALL BE AWWA C-905, DR 25. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS LATEST RECOMMENDATIONS.
4. DEPTH OF WATER LINES TO BE 36" BELOW FINISHED GRADE.
5. WATER MAINS TO BE LOCATED 5' FROM BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
6. WHERE WATER AND SEWER MAINS CROSS WITH LESS THAN 18" VERTICAL CLEARANCE, THE SEWER WILL BE 20' OF EITHER CAST IRON PIPE OR CONCRETE ENCASED P.V.C. PIPE, CENTERED ON THE POINT OF CROSSING. WHEN A WATER MAIN PARALLELS A SEWER MAIN, A SEPARATION OF AT LEAST 10' SHOULD BE MAINTAINED. IF 10' SEPERATION CANNOT BE MAINTAINED, THE WATER MAIN AND SEWER MAIN SHALL BE DUCTILE IRON PIPE FOR THE PORTION OF THE WATER MAIN LESS THAN 10' FROM THE SEWER MAIN, OR INSTALLATION OF THE WATER MAIN IN A SEPERATE TRENCH, OR ON AN UNDISTURBED EARTH SHELF, AT LEAST 18" ABOVE THE CROWN OF THE SEWER MAIN.
7. ALL WATER MAINS UNDER PAVEMENT SHALL BE DUCTILE IRON AND SHALL EXTEND 5' BEYOND THE BACK OF CURB.
8. ALL SLEEVES UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE BACK OF CURB.

* * NOTE: MARK ALL POINTS WHERE WATER SERVICES CROSS CURB WITH A "W" MARK IN CONCRETE.



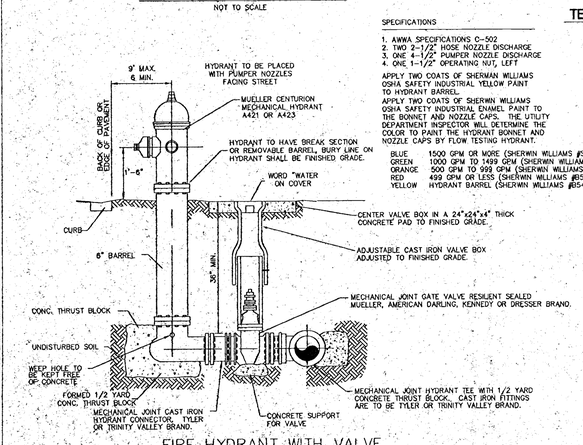
BLOWOFF VALVE DETAIL

NOT TO SCALE



TEMPORARY JUMPER CONNECTION DETAIL

NOTE: LOCATION TO BE DETERMINED AT TIME OF PRECONSTRUCTION CONFERENCE W/ CITY.



FIRE HYDRANT WITH VALVE

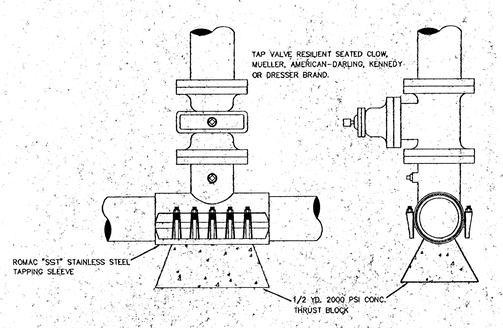
(STANDARD FIRE HYDRANT ASSEMBLY)

SPECIFICATIONS

1. AWWA SPECIFICATIONS C-502
2. TWO 2-1/2" HOSE NOZZLE DISCHARGE
3. ONE 4-1/2" PUMPER NOZZLE DISCHARGE
4. ONE 1-1/2" OPERATING NUT, LEFT

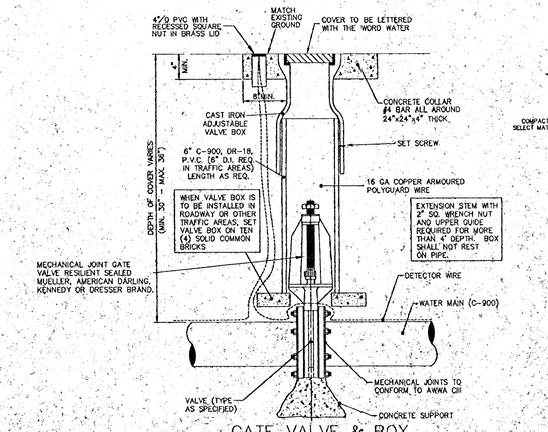
APPLY TWO COATS OF SHERWIN WILLIAMS OSHA SAFETY INDUSTRIAL YELLOW PAINT TO HYDRANT BARREL.
APPLY TWO COATS OF SHERWIN WILLIAMS OSHA SAFETY INDUSTRIAL ENAMEL PAINT TO THE BONNET AND NOZZLE CAPS. THE UTILITY DEPARTMENT INSPECTOR WILL DETERMINE THE COLOR TO PAINT THE HYDRANT BONNET AND NOZZLE CAPS BY FLOW TESTING HYDRANT.

BLUE	1500 GPM OR MORE (SHERWIN WILLIAMS #SW4086)
GREEN	1000 GPM TO 1499 GPM (SHERWIN WILLIAMS #B54614)
ORANGE	500 GPM TO 999 GPM (SHERWIN WILLIAMS #B54E39)
RED	499 GPM OR LESS (SHERWIN WILLIAMS #B54R38)
YELLOW	HYDRANT BARREL (SHERWIN WILLIAMS #B54Y37)



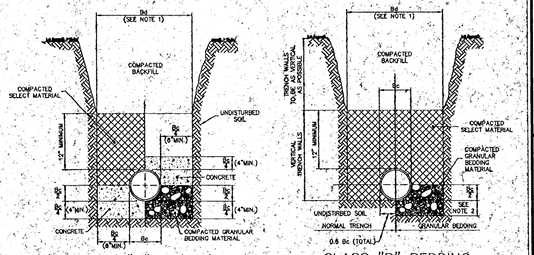
WET TAP SLEEVE & TAP VALVE

NOT TO SCALE



GATE VALVE & BOX

NOT TO SCALE



CLASS "A" BEDDING SPECIAL CONDITIONS

CLASS "B" BEDDING NORMAL CONDITIONS

NOTES: FOR BEDDING AND TRENCHING

1. Dimension Bc = Pipe O.D.
   Dimension Bd = Trench Width at Top of Pipe
   Maximum Bd = Bc + 30"
   Minimum Bd = Maximum Dimension of Bell + 8" (Unsheeted Trench)
2. Depth for removal for unsuitable material shall be as required to reach suitable foundation. For rock or other non-cushioning material, depth shall be 6" below bottom of utility.

RECEIVED
JUN 13 1997
PDS ORLANDO SJR WMD

REVISIONS | DATE

FARNER BARLEY AND ASSOCIATES, INC.
▲ ENGINEERS ▲ SURVEYORS ▲ PLANNERS
350 North Sinclair Avenue O Tavares, Florida 32778-O (904) 343-8481

WATER DISTRIBUTION DETAIL SHEET

DATE 5-15-97
JOB NO. 941216.045
DWG. NO. W-DETAIL
F.B. PG.
DRAWN BY KK
CHKD BY
SHT 8 OF 8

JUN 11 1997

C:\TEMP\W-DETAIL Tue Jun 10 13:26:26 1997 KAR