



**TECHNICAL RECONSTRUCTION ATTACHMENT**

**Roadway Plans for Hammock Dunes Place**

**Spring, Texas**

**HWY21FH007**

(25 pages)

# THE WOODLANDS LAND DEVELOPMENT COMPANY, L.P.

ON BEHALF OF

## HARRIS COUNTY MUNICIPAL UTILITY DISTRICT NO. 386

PLANS FOR  
FOR CONSTRUCTION OF

# WATER DISTRIBUTION, SANITARY SEWER AND DRAINAGE FACILITIES

TO SERVE

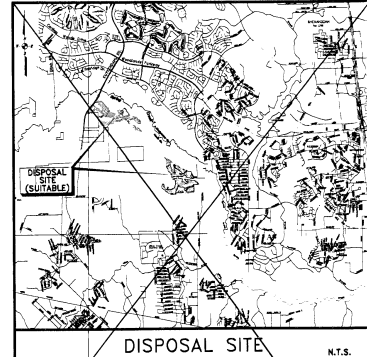
## CARLTON WOODS AT VILLAGE OF HARMONY BEND, SEC. 3

HARRIS COUNTY, TEXAS

DESIGN JOB NO. 1205-010-00

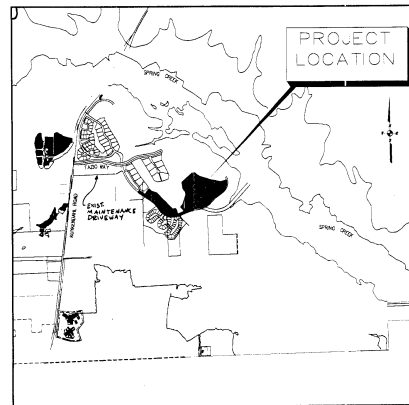
CONTRACT NO. 1

DISPOSAL SITE LOCATED IN ZONE X AND ZONE AE BASED ON FRM MAP # A820100000 (LEFT DATE NOV. 6, 1985)



DISPOSAL SITE	MATERIAL TYPE	DESCRIPTION
'A'	SUITABLE	SOUTH SIDE SPRING CREAK BETWEEN GOSSLING RD. AND KUTZENDAH RD.

NOTE: SEE GROUND DISPOSAL PLAN FOR THE WOODLANDS VILLAGE-PT. 2  
FOR JOB NO. 319-093-01, DATED 03-03-03 FOR DETAILED DISPOSAL PLAN.



LOCATION MAP  
N.T.S.  
KEY MAP 250 K.L.

SHT. NO.	DESCRIPTION
1.	COVER SHEET
2.	WATER DISTRIBUTION AND SANITARY SEWER INDEX 1
3.	WATER DISTRIBUTION AND SANITARY SEWER INDEX 2
4.	PAVING AND STORM SEWER INDEX 1
5.	PAVING AND STORM SEWER INDEX 2
6.	DRAINAGE AREA MAP AND POLLUTION PREVENTION PLAN 1
7.	DRAINAGE AREA MAP AND POLLUTION PREVENTION PLAN 2
8.	OVERALL DRAINAGE AREA MAP
9.	DRAINAGE CALCULATIONS
10.	CONSTRUCTION NOTES
11.	PLAN AND PROFILE - SOUTH FAZIO WAY (PVT.)
12.	PLAN AND PROFILE - SOUTH FAZIO WAY (PVT.)
13.	PLAN AND PROFILE - SOUTH FAZIO WAY (PVT.)
14.	PLAN AND PROFILE - SOUTH FAZIO WAY (PVT.)
15.	PLAN AND PROFILE - THORNBLADE CIRCLE (PVT.)
16.	PLAN AND PROFILE - THORNBLADE CIRCLE PVT. AND OVERFLOW "1"
17.	PLAN AND PROFILE - HAWKWOOD DUNES PLACE (PVT.)
18.	PLAN AND PROFILE - HAWKWOOD DUNES PLACE (PVT.)
19.	PLAN AND PROFILE - STORM SEWER OUTFALL "1"
20.	PAVING DETAILS
21.	PAVING DETAILS
22.	PAVING AND DRAINAGE DETAILS
23.	SANITARY SEWER AND WATER LINE DETAILS
24.	POLLUTION PREVENTION DETAILS AND NOTES
25.	EXPRESS REVIEW SHEET

Big State Excavation Inc  
15831 Kuykendahl  
Suite 200  
Houston, TX 77060

*Neil Cantrell*  
NEIL CANTRELL, V.P.

**PATE ENGINEERS**  
3333 N.W. Freeway, Suite 300 Houston, Tx. Phone: 713-462-3178

Surveyed By: *B.D. Booyers 3/10/03*

FE NO. \_\_\_\_\_

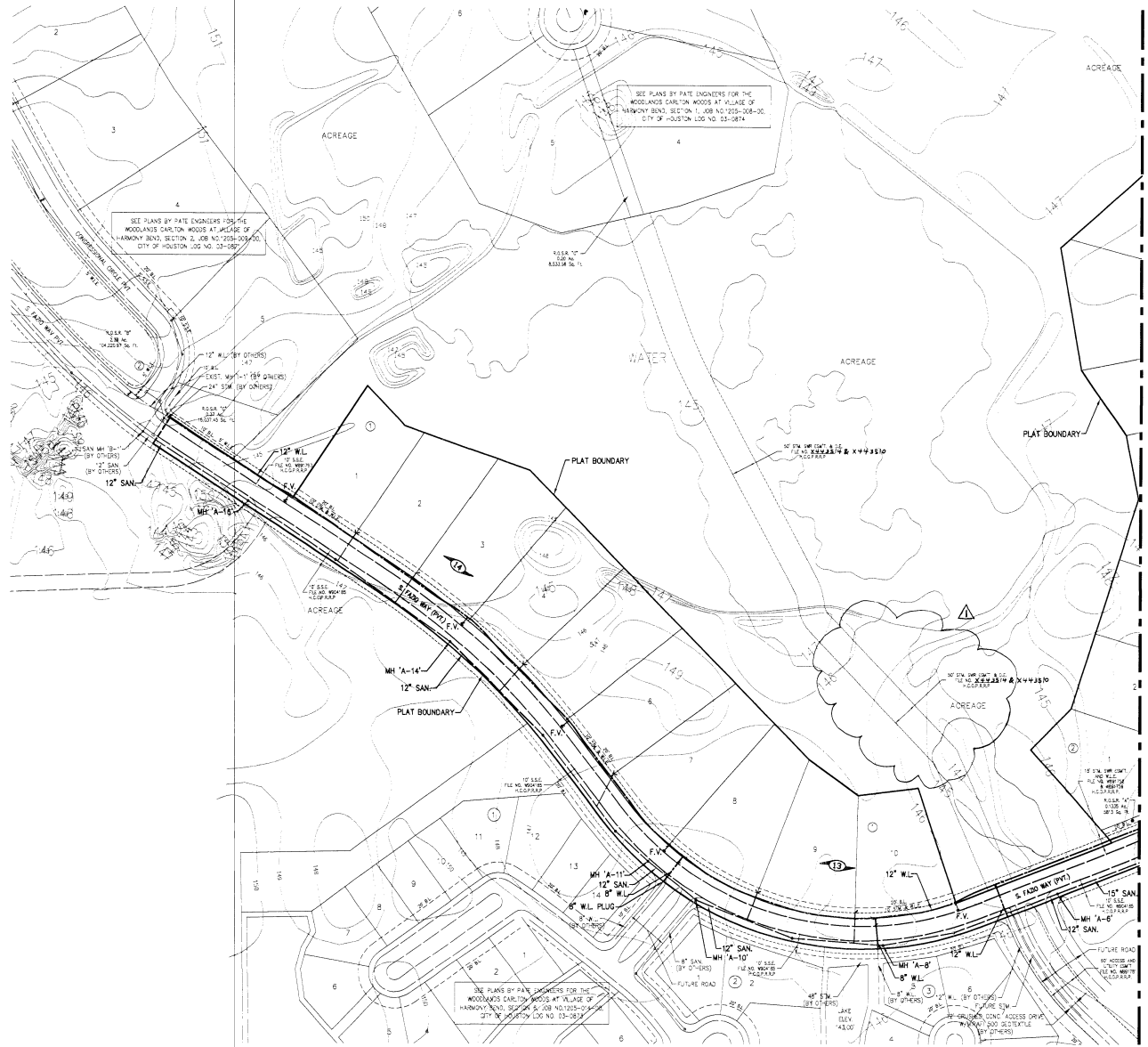
<i>Water</i>	STORM WATER QUALITY
<i>Wastewater</i>	TRAFFIC AND TRANSPORTATION
<i>Storm Water</i>	WATER PRODUCTION
STREET & BRIDGE	
CITY ENGINEER	
<i>Director of Public Works and Engineering</i>	

SHEET NO 1 OF 25 SHEETS

BENCHMARK:  
THE WOODLANDS LAND DEVELOPMENT COMPANY, L.P.  
MONUMENTS:  
ALL ELEVATIONS SET TO NGS. NGVD. 1984 ADJUSTMENT  
1973 ADJUSTMENT = -0.07  
MONUMENT DESIGNATION HD-19 ELEV. 149.19  
BRASS SET IN CONCRETE LOCATED BY  
COORDINATES X=3,101,101.08 Y=871,584.78

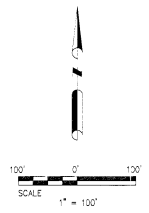
PATE ENGINEERS  
A COMMERCIAL ENTITY OF THE STATE OF TEXAS  
INCORPORATED IN TEXAS  
NOV. 10, 2003 2:30pm

1-217524-4



SANITARY SEWER AND WATER LINE LEGEND

- EXIST. SANITARY SEWER
- o-o- EXIST. SANITARY MANHOLE
- EXIST. WATERLINE
- R- EXIST. FLUSHING VALVE w/ GATE VALVE
- SHEET INDEX
- CONTOUR PRIOR TO FILL BY OTHERS
- PROP. SANITARY SEWER
- o-o- PROP. SANITARY MANHOLE
- - - PROP. 8" LEAD W/ WYE TO SERVE 2 LOTS
- - - PROP. 6" LEAD TO SERVE 1 LOT
- PROP. WATERLINE
- F.V.- PROP. FLUSHING VALVE w/ GATE VALVE
- R- PROP. REDUCER
- - - PROP. 2" BLOW OFF VALVE w/ PLUG



MATCH LINE - SEE SHEET 3



Bob D. Bigger  
2-5-04

**PATE ENGINEERS**  
13333 N.W. FRANKS BLVD. SUITE 200 HOUSTON, TX 77079-7133-462-2718

APPROVED B.D.B. DATE: AUG. 2003  
ISSUED FOR PLAN DRAWN BY: D.E.C. DATE: 12/05-010-00

BENCHMARK:  
THE WOODLANDS LAND DEVELOPMENT COMPANY  
MONUMENTS:  
ALL ELEVATIONS SET TO NGS NAD83 ADJUSTMENT  
1983 ADJUSTMENT = +0.07'  
MONUMENT DESIGNATION: 154-19 ELEV. 148.19  
BRASS SET IN CONCRETE, LOCATED BY  
COORDINATES: 484151.0100N 19481584.78E

THE WOODLANDS LAND  
DEVELOPMENT COMPANY, LP.  
H.C.M.U.D. NO. 386

**CARLTON WOODS AT VILLAGE  
OF HARMONY BENDS,  
SEC. 3**

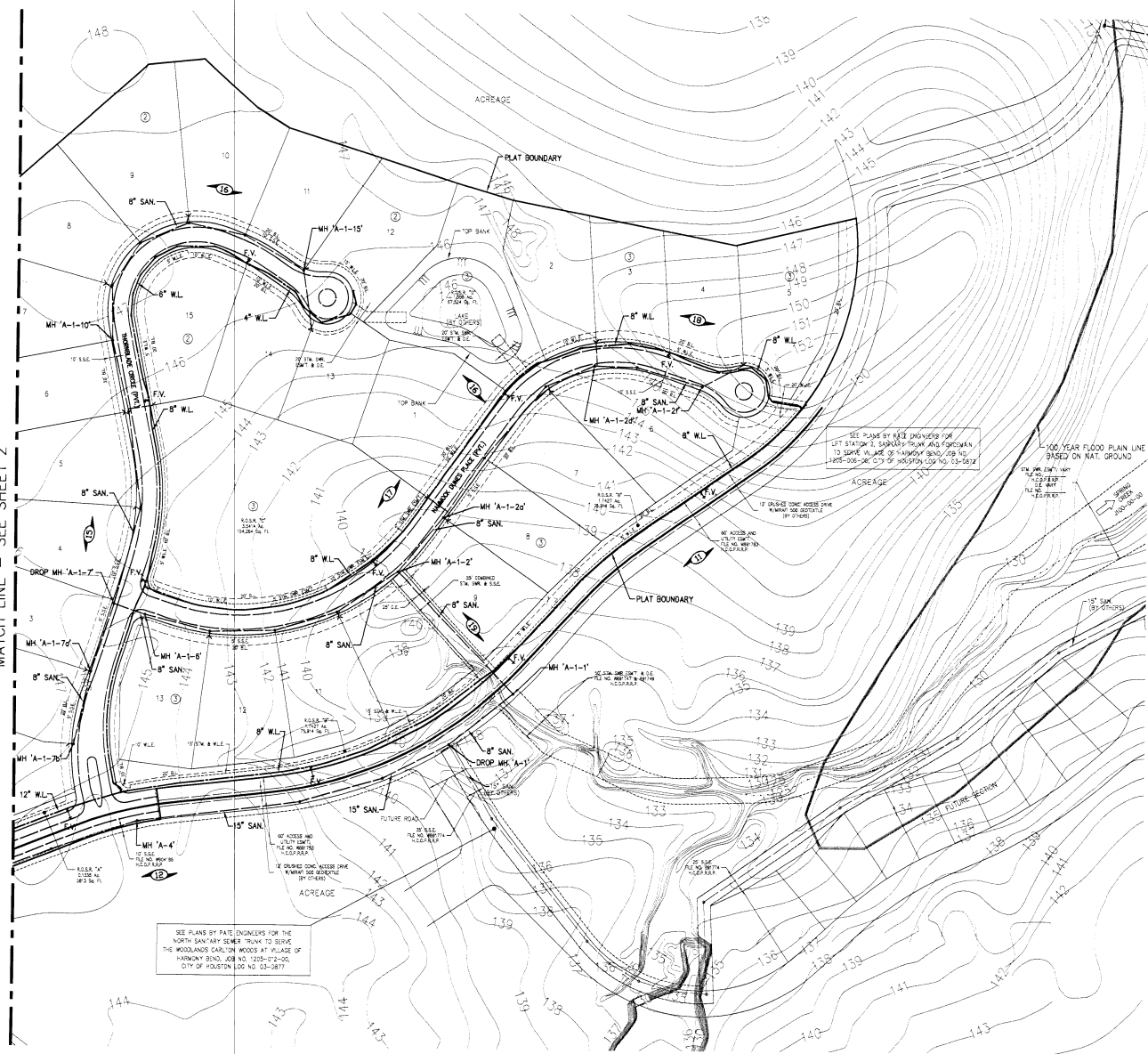
**WATER DISTRIBUTION AND SANITARY  
SEWER INDEX 1**

DATE: 12/05/03	BY: [Signature]	SCALE: AS SHOWN
PROJECT: [Signature]	DATE: 12/05/03	DATE: 12/05/03

FILE NO: \_\_\_\_\_  
DRAWING SCALE: 1"=100'  
VERT: ---ORZ 1  
SHEET No: 2 OF 25

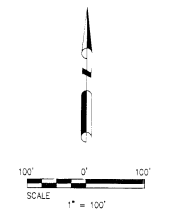
**FLOODPLAIN NOTE:**  
ACCORDING TO FLOOD INSURANCE RATE MAP NO. 48201C00700 J, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED NOVEMBER 6, 1996, THE PROPERTY SHOWN HEREON LIES WITHIN THE AREA DESIGNATED AS "ZONE X" DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAN.

MATCH LINE - SEE SHEET 2



**SANITARY SEWER AND WATER LINE LEGEND**

- EXIST. SANITARY SEWER
- o-o- EXIST. SANITARY MANHOLE
- EXIST. WATERLINE
- x- EXIST. FLUSHING VALVE w/ GATE VALVE
- SHEET INDEX
- CONTOUR PRIOR TO FILL BY OTHERS
- PROP. SANITARY SEWER
- o-o- PROP. SANITARY MANHOLE
- PROP. 6" LEAD w/ WYE TO SERVE 2 LOTS
- PROP. 6" LEAD TO SERVE 1 LOT
- PROP. WATERLINE
- F.V.- PROP. FLUSHING VALVE w/ GATE VALVE
- PROP. REDUCER
- PROP. 2" BLOW OFF VALVE w/PLUG

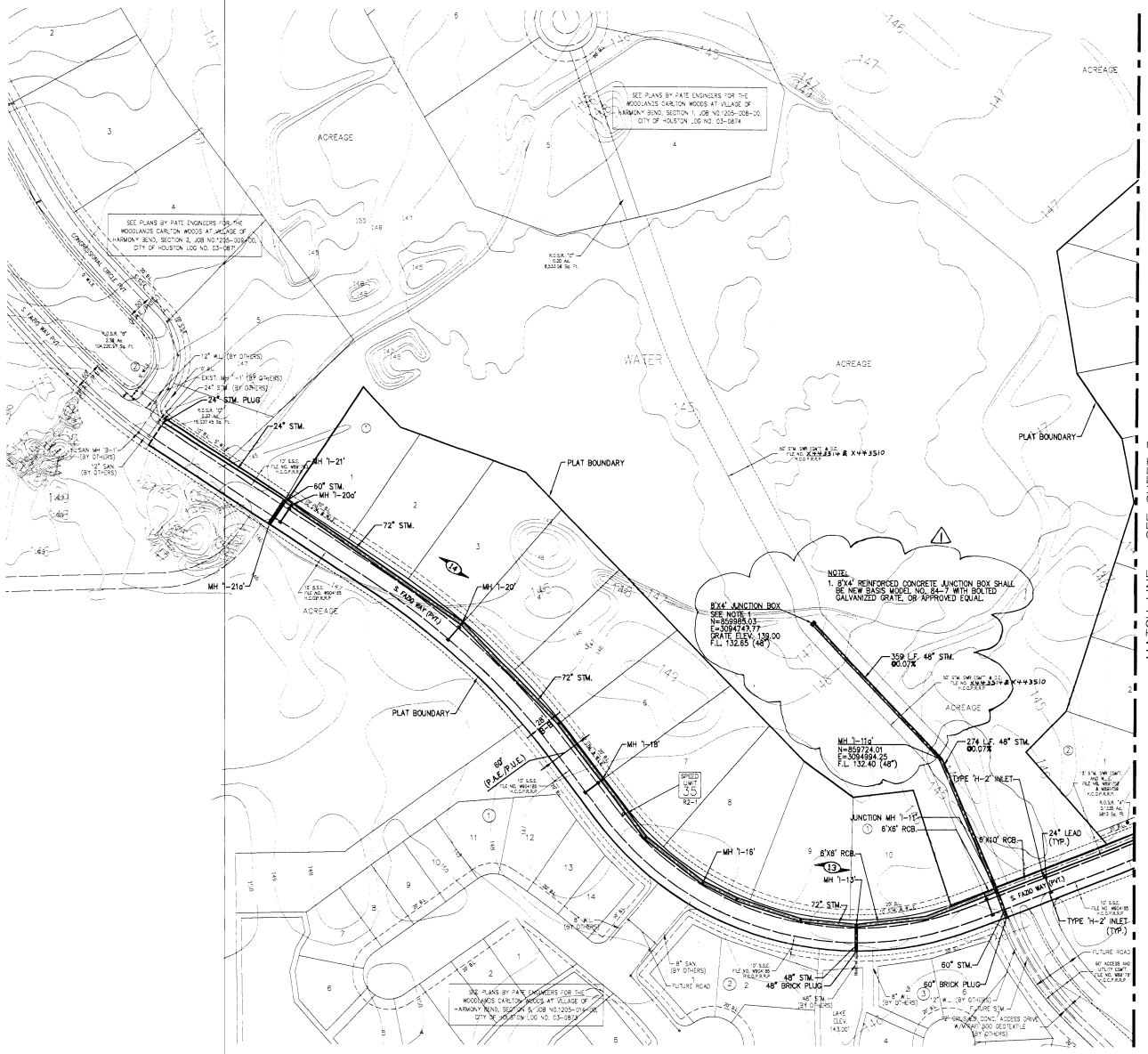


*Bob L. Butler*  
9-10-03

**PATE ENGINEERS**  
13333 N.W. Freeman, Suite 200 Houston, TX 77040-2718

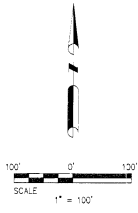
PROJECT: B.O.B.	DATE: AUG. 2003
DESIGNER: R.A.H.	BY: D.E.C.
JOB NO. 1205-010-00	
BENCHMARK: THE WOODLANDS LAND DEVELOPMENT COMPANY	
MONUMENTS: ALL ELEVATIONS SET TO NGVD 1984 ADJUSTMENT 1974 ADJUSTMENT = -0.02 ± ELEV. 149.19 MONUMENT DESIGNATION: MH 'A-1' ELEV. 149.19 BRASS SET IN CONCRETE LOCATED BY: COORDINATES: 484321.0108E - 17487584.718N	
<b>THE WOODLANDS LAND DEVELOPMENT COMPANY, L.P.</b> <b>H.C.M.U.D. NO. 386</b>	
<b>CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3</b> <b>WATER DISTRIBUTION AND SANITARY SEWER INDEX 2</b>	
DATE: 8/20/03	SCALE: 1"=100'
BY: R.A.H.	CHK: D.E.C.
DATE: 8/20/03	DATE: 8/20/03
FILE NO:	DRAWING SCALE: 1"=100'
VERT: HORIZ:	CITY OF HOUSTON
SHEET No. 3 OF 25	

**FLOODPLAIN NOTE:**  
 ACCORDING TO FLOOD INSURANCE RATE MAP NO. 48201C00700 J, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED NOVEMBER 6, 1998, THE PROPERTY SHOWN HEREON LIES WITHIN THE AREA DESIGNATED AS "ZONE X" DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.



**STORM SEWER LEGEND**

- PROPOSED STORM SEWER AND MANHOLE
  - PROPOSED STORM SEWER, MANHOLE, AND H-2 INLETS, WITH FLOW DIRECTION ARROWS (H-2 INLETS, WITH 24" LEAD UNLESS OTHERWISE NOTED)
  - INDICATES STORM SEWER EASEMENT
  - CONTOUR
- PAVING LEGEND**
- PROPOSED PAVEMENT WITH CONCRETE CURB AND GRADE ARROWS
  - EXISTING PAVEMENT
  - BARRICADE
  - SHEET INDEX
  - STREET NAME SIGN W/ R1-1 STOP SIGN
  - STREET NAME SIGN



MATCH LINE - SEE SHEET 5

SEE PLANS BY PATE ENGINEERS FOR THE WOODLANDS CARLTON WOODS AT VILLAGE OF HARMONY BEND, SECTION 3, JOB NO. 1205-008-00, CITY OF HOUSTON, JOB NO. 03-2874

SEE PLANS BY PATE ENGINEERS FOR THE WOODLANDS CARLTON WOODS AT VILLAGE OF HARMONY BEND, SECTION 3, JOB NO. 1205-008-00, CITY OF HOUSTON, JOB NO. 03-2874

**NOTE:**  
1. 6'x4' REINFORCED CONCRETE JUNCTION BOX SHALL BE NEW BASE MODEL NO. 64-7 WITH DOTTED GALVANIZED GRATE, OR APPROVED EQUAL

**6'x4' JUNCTION BOX**  
SEE NOTE 1  
N=809724.01  
E=506894.35  
GRATE ELEV. 138.00  
FL. 132.55 (48")

**6'x8' RCB**  
MH 1-18

**60" STM BRICK PLUG**  
MH 1-18

**FLOODPLAIN NOTE:**  
ACCORDING TO FLOOD INSURANCE RATE MAP NO. 48201C00700 J, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED NOVEMBER 6, 1996, THE PROPERTY SHOWN HEREON LIES WITHIN THE AREA DESIGNATED AS "ZONE X" DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.



Bill D. Perry  
2-5-02

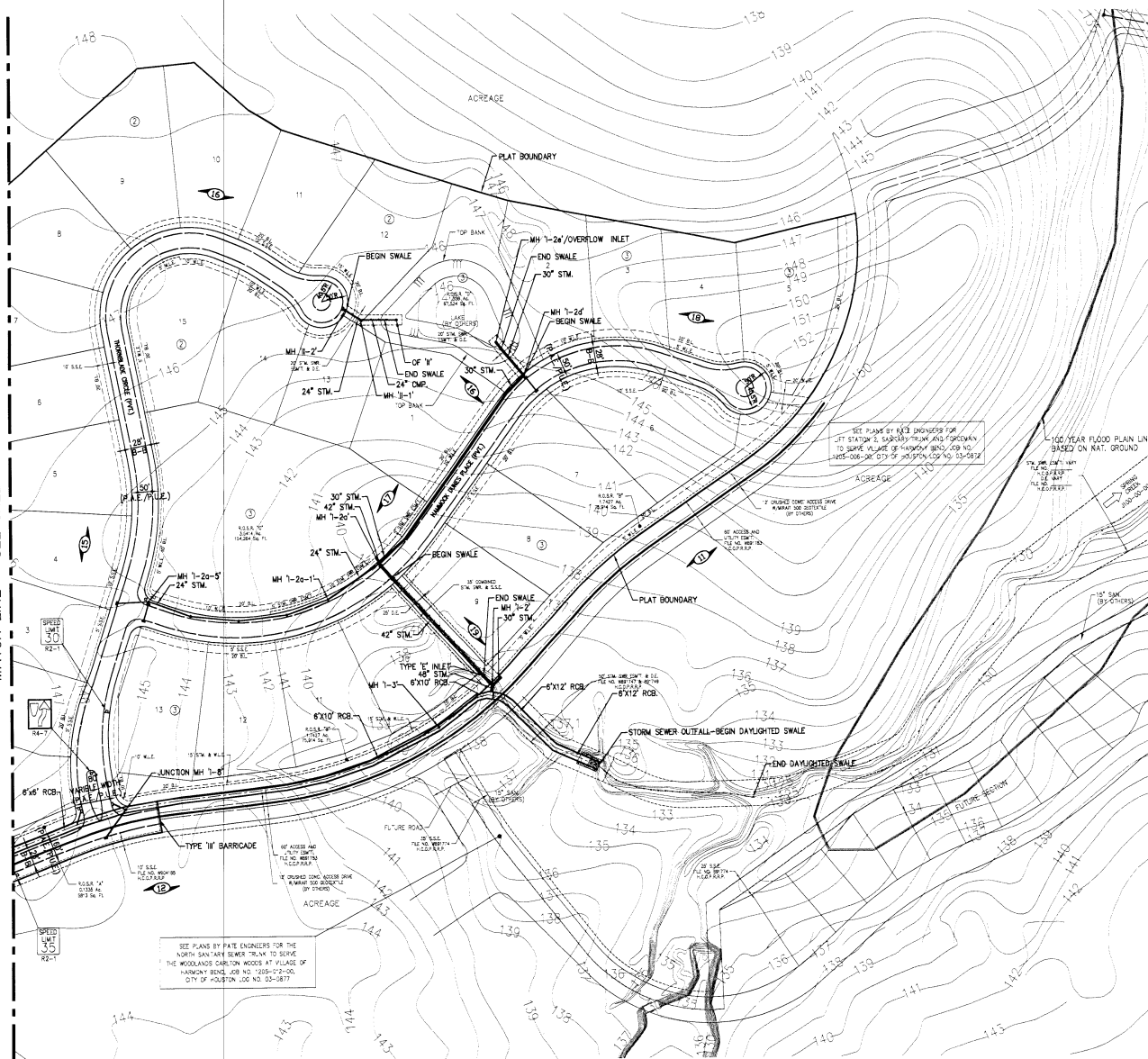
**PATE ENGINEERS**  
1333 N.W. Twenty Sixth Street, Houston, TX. Phone: 713-482-8718

APPROVED BY: B.D.B.	DATE: AUG. 2003
DRAWN BY: R.A.H.	CHECKED BY: D.E.C. JOB NO. 1205-010-00
BENCHMARK: THE WOODLANDS LAND DEVELOPMENT COMPANY	
MONUMENTS: ALL SURVEY MONUMENTS SET TO NOS. NOV. 1984 ADJUSTMENT 1973 ADJUSTMENT: 11.11.07 MONUMENT DESCRIPTION: 141.9' D.I.E. BRASS SET IN CONCRETE, LOCATED BY COORDINATES: 843151.01/378176.01/584.78	
THE WOODLANDS LAND DEVELOPMENT COMPANY, LP. H.C.M.U.D. NO. 386	
CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3	

PAVING AND STORM SEWER INDEX 1		
DATE: 08/20/03	PREPARED BY: B.D.P.	DATE: 08/20/03
BY: R.A.H.	CHECKED BY: D.E.C.	
F.I.E. NO.:		
DRAWING SCALE: 1"=100'		
VERT:    HORIZ:		
SHEET No. 4 OF 25		



MATCH LINE - SEE SHEET 4



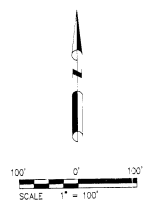
**STORM SEWER LEGEND**

- PROPOSED STORM SEWER AND MANHOLE
- PROPOSED STORM SEWER, MANHOLE, AND H-2 INLETS, WITH FLOW DIRECTION ARROWS (H-2 INLETS, WITH 24" LEAD UNLESS OTHERWISE NOTED)
- INDICATES STORM SEWER EASEMENT

CONTOUR


**PAVING LEGEND**

- PROPOSED PAVEMENT WITH CONCRETE CURB
- EXISTING PAVEMENT
- BARRICADE
- SHEET INDEX
- STREET NAME SIGN
- W/ R-1 STOP SIGN
- STREET NAME SIGN



SEE PLANS BY K&B ENGINEERS FOR STATION 2, SANITARY TRUNK LINE (STW) TO SERVE VILLAGE OF HARMONY BENDS, JOB NO. 045-006-00 CITY OF HOUSTON LOG NO. 03-0872

SEE PLANS BY PATE ENGINEERS FOR THE NORTH SAN ANTONIO BLVD. TRUNK TO SERVE THE WOODLANDS CARLTON WOODS AT VILLAGE OF HARMONY BENDS, JOB NO. 1000-02-000, CITY OF HOUSTON LOG NO. 03-0877



*Pate*  
8-10-03

**PATE ENGINEERS**  
12005 N.W. Freeway, Suite 300 Houston, TX Phone: 713-462-8718

APPROVED BY: B.D.B. DATE: AUG. 2003  
DESIGNED BY: R.A.H. DRAWN BY: D.E.C. SHEET NO. 1205-010-00


BENCHMARK:  
THE WOODLANDS LAND DEVELOPMENT COMPANY  
MONUMENT IS:  
ALL ELEVATIONS SET TO NGS NOV. 1984 ADJUSTMENT  
3/13 ADJUSTMENT = +0.07  
MONUMENT DEPTH 10'-19" ELEV. 149.19  
BRASS SET IN CONCRETE LOCATED BY:  
COORDINATES X=3,151,01.06 Y=271,264.78

THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
H.C.M.U.D. NO. 386

**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**

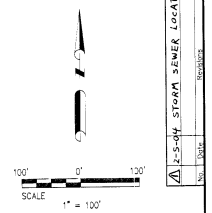
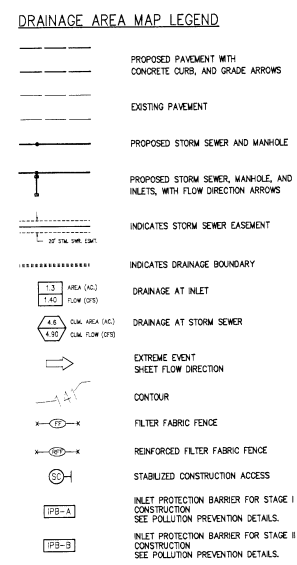
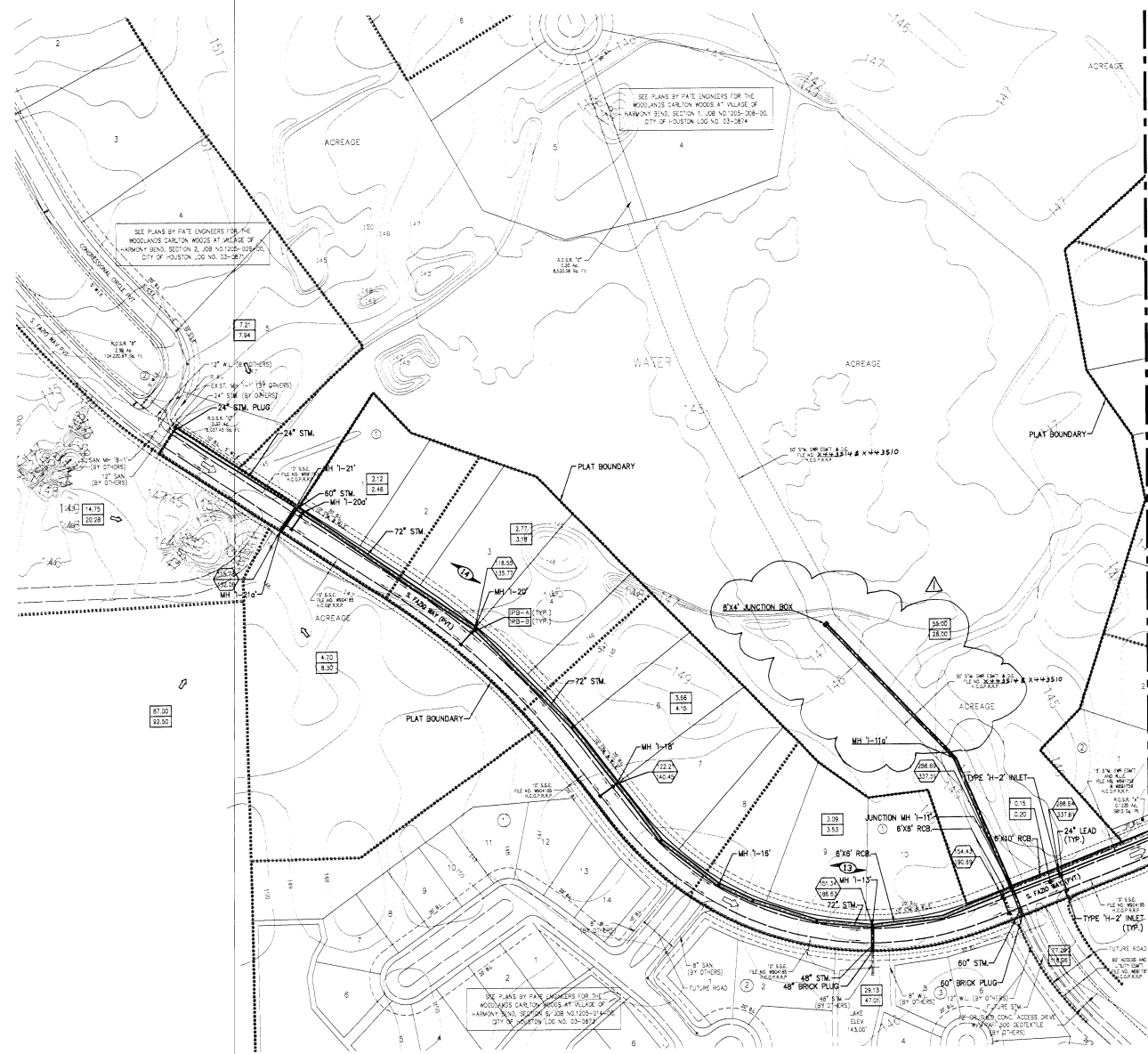
PAVING AND STORM SEWER INDEX 2

DATE: 8/20/03	DRAWN BY: R.A.H.	CHECKED BY: D.E.C.	SCALE: 1"=100'
FILE NO.:		DRAWING SCALE: 1"=100'	
VERT. : -ORZ :		SHEET NO. 5 OF 25	



**FLOODPLAIN NOTE:**

ACCORDING TO FLOOD INSURANCE RATE MAP NO. 48210C00700 J, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED NOVEMBER 6, 1996, THE PROPERTY SHOWN HEREON LIES WITHIN THE AREA DESIGNATED AS "ZONE X" DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.





MATCH LINE - SEE SHEET 7

**NOTES:**  
1. SEE SHEET 8 FOR OVERALL LIMITS OF DRAINAGE AREAS.

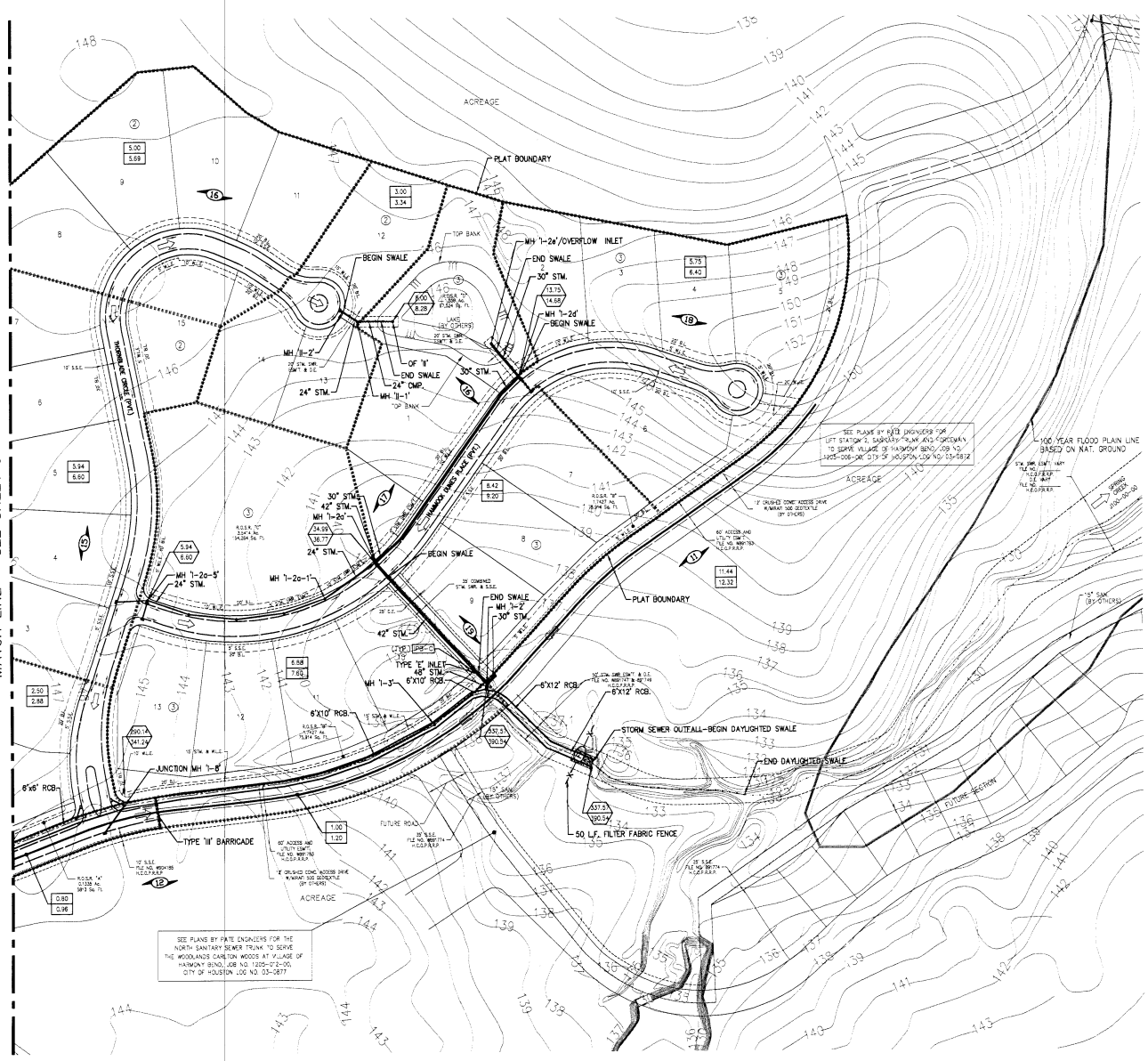
**STREET PONDING NOTE:**  
THE DEPTH OF STREET PONDING AT HIGH POINTS IS NO GREATER THAN 6-INCHES ABOVE TOP OF CURB.  
THE DEPTH OF STREET PONDING AT LOW POINTS IS NO GREATER THAN 18-INCHES ABOVE TOP OF CURB.

**FLOODPLAIN NOTE:**  
ACCORDING TO FLOOD INSURANCE RATE MAP NO. 48201C00700 J, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED NOVEMBER 6, 1996, THE PROPERTY SHOWN HEREON LIES WITHIN THE AREA DESIGNATED AS "ZONE X" DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.
















	<i>B.D. Boy</i> 2-5-08
<b>PATE ENGINEERS</b> 13333 N.W. Freeway, Suite 300, Houston, TX 77040-1333 Phone: 281-462-9778	
APPROVED BY: <b>B.D.B.</b> DATE: <b>AUG. 2003</b> DRAWN BY: <b>R.A.H.</b> DRAWN BY: <b>D.E.C.</b> JOB NO: <b>1205-010-00</b>	
BENCHMARK: THE WOODLANDS LAND DEVELOPMENT COMPANY MONUMENTS: MONUMENT ELEVATIONS SET TO NGS NVD, 1984 ADJUSTMENT 125' ADJUSTMENT = -0.22' MONUMENT DESIGNATION HD-19 ELEV. 149.19 BRASS SET IN CONCRETE, LOCATED BY: COORDINATES X=3,01,010.06 Y=67,384.78	
<b>THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.</b> H.C.M.U.D. NO. 386 <b>CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3</b> DRAINAGE AREA MAP AND POLLUTION PREVENTION PLAN 1	
TITLE: <i>Boyd</i> DATE: <i>8/21/04</i>	DRAWING NUMBER: <i>140</i>
FILE NO:	
DRAWING SCALE: 1"=100' VERT: HORZ:	SHEET No: 6 OF 25

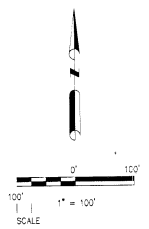
PATE & ENGINEERS, 10008 S. UNIVERSITY DRIVE, SUITE 100, HOUSTON, TEXAS 77055-2428

MATCH LINE - SEE SHEET 6



**DRAINAGE AREA MAP LEGEND**


-  PROPOSED PAVEMENT WITH CONCRETE CURBS, AND GRADE ARROWS
-  EXISTING PAVEMENT
-  PROPOSED STORM SEWER AND MANHOLE
-  PROPOSED STORM SEWER, MANHOLE, AND INLETS, WITH FLOW DIRECTION ARROWS
-  INDICATES STORM SEWER EASEMENT
-  INDICATES DRAINAGE BOUNDARY
-  DRAINAGE AT INLET
-  DRAINAGE AT STORM SEWER
-  EXTREME EVENT SHEET FLOW DIRECTION
-  CONTOUR
-  FILTER FABRIC FENCE
-  REINFORCED FILTER FABRIC FENCE
-  STABILIZED CONSTRUCTION ACCESS
-  INLET PROTECTION BARRIER FOR STAGE I CONSTRUCTION  
SEE POLLUTION PREVENTION DETAILS.
-  INLET PROTECTION BARRIER FOR STAGE II CONSTRUCTION  
SEE POLLUTION PREVENTION DETAILS.



SEE PLANS BY PATE ENGINEERS FOR  
 THE EXTENSIVE DRAINAGE PLAN AND CONDUIT  
 TO SERVE VILLAGE OF HARMONY BENDS, JOB NO.  
 1205-005-001 CITY OF HOUSTON JOB NO. 03-0872

100-YEAR FLOOD PLAIN LINE  
 BASED ON NAT. GROUND


SEE PLANS BY PATE ENGINEERS FOR THE  
 NORTH SANITARY SEWER TRUNK TO SERVE  
 THE WOODLANDS CARLTON WOODS AT VILLAGE OF  
 HARMONY BENDS, JOB NO. 1205-010-000,  
 CITY OF HOUSTON JOB NO. 03-0877



*Paul Boyer*  
 9-10-03

**PATE & ENGINEERS**  
 13333 N. FRENCH, SUITE 300 HOUSTON, TX PHONE 713-462-0718

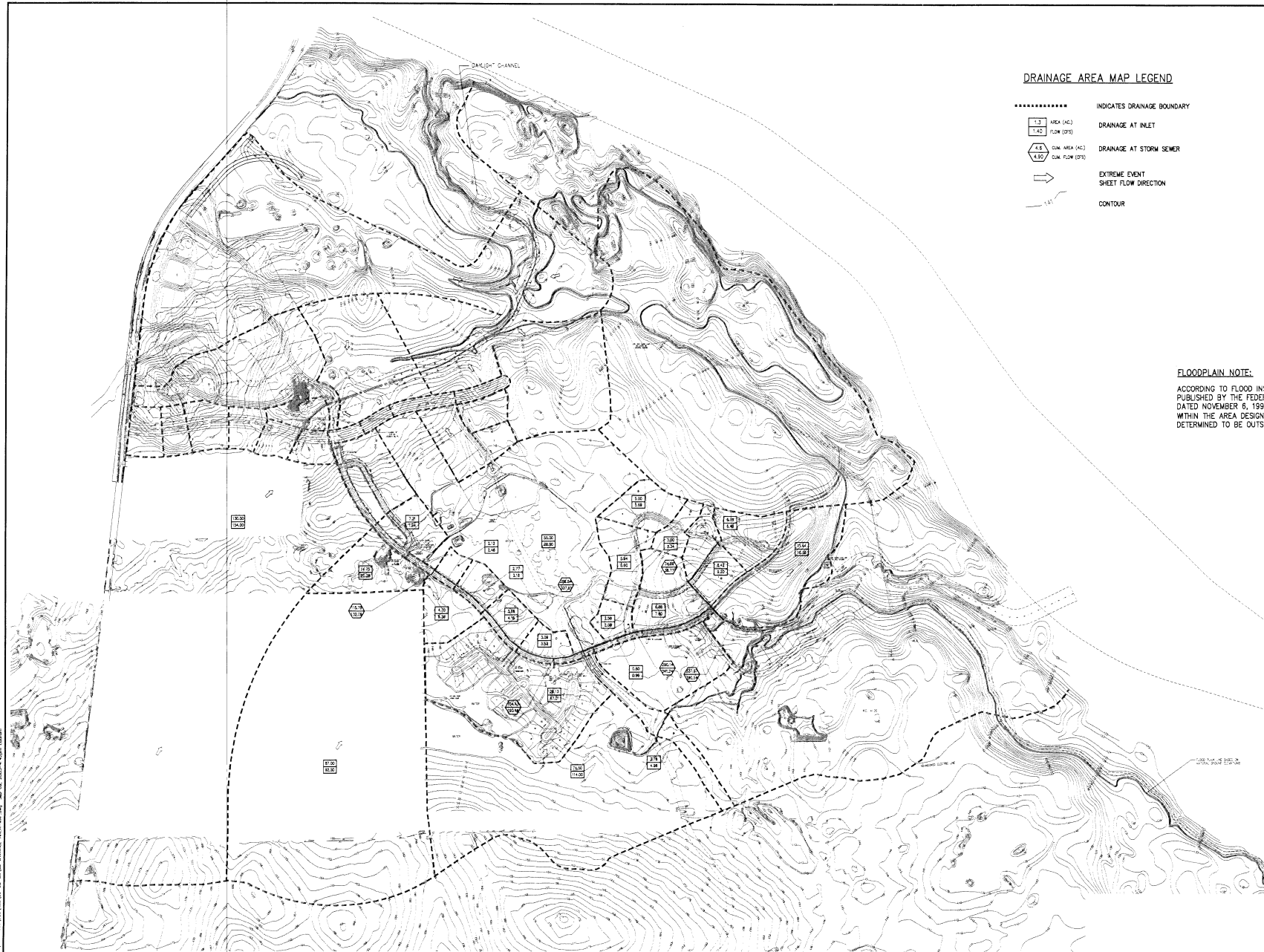
APPROVED BY: B.O.B.	DATE: AUG. 2003
DESIGNED BY: R.A.H.	REVISION NO: 1205-010-00
BENCHMARK: THE WOODLANDS LAND DEVELOPMENT COMPANY	
MONUMENTS: ELEVATIONS SET TO NGS, NVD, 1984 ADJUSTMENT	
1913 ADJUSTMENT = 43.07	
MONUMENT DESIGNATION 10-19 ELEV. 145.78	
SHAW'S 200' X 100' CONCRETE LOCATED BY COORDINATES X=3101.0136 Y=871.58478	
<p><b>THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.</b>  <b>H.C.M.U.D. NO. 386</b></p>	
<p><b>CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3</b></p>	
<p><b>DRAINAGE AREA MAP AND POLLUTION PREVENTION PLAN 2</b></p>	
DATE: 10/29/03	DATE: 10/29/03
BY: R.A.H.	BY: R.A.H.
CHECKED BY: R.A.H.	CHECKED BY: R.A.H.
FILE NO:	
DRAWING SCALE: 1"=100'	
VERT. HORZ. :	



SHEET No. 7 OF 25

**FLOODPLAIN NOTE:**  
 ACCORDING TO FLOOD INSURANCE RATE MAP NO. 48201C00700 J, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED NOVEMBER 6, 1996, THE PROPERTY SHOWN HEREON LIES WITHIN THE AREA DESIGNATED AS "ZONE X" DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.



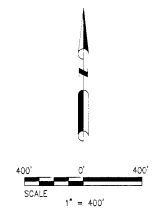


**DRAINAGE AREA MAP LEGEND**

- INDICATES DRAINAGE BOUNDARY
- |      |
|------|
| 1.3  |
| 1.42 |

 AREA (AC) DRAINAGE AT INLET
- |      |
|------|
| 1.1  |
| 1.36 |

 DIA. AREA (AC) DIA. FLOW (CFS) DRAINAGE AT STORM SEWER
- EXTREME EVENT SHEET FLOW DIRECTION
- CONTOUR



**FLOODPLAIN NOTE:**

ACCORDING TO FLOOD INSURANCE RATE MAP NO. 48201C00700 J, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, DATED NOVEMBER 8, 1996, THE PROPERTY SHOWN HEREON LIES WITHIN THE AREA DESIGNATED AS "ZONE X" DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAN.



*Bob D. Buzzer*  
7-10-03

**PATE ENGINEERS**  
13333 N.W. Freeway, Suite 300 - Houston, TX - Phone: 713-442-0778

APPROVED: B.D.B. DATE: AUG. 2003  
 DESIGNED BY: RAH DRAWN BY: D.E.C. JOB NO.: 1205-010-00

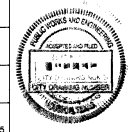
**BENCHMARK:**  
 THE WOODLANDS LAND DEVELOPMENT COMPANY  
 MONUMENTS: ALL ELEVATIONS SET TO NGS. NOV. 1984 ADJUSTMENT  
 1978 ADJUSTMENT = +0.00'  
 MONUMENT DESIGNATION HD-19 ELEV. 148.19  
 BRASS SET IN CONCRETE, LOCATED BY  
 COORDINATES X=3,071,01.08 Y=871,534.78

THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
 H.C.M.U.D. NO. 386

**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**  
 OVERALL DRAINAGE AREA MAP

DATE: 8/10/03	INSTRUMENTED BY: B.D.B.	TITLE:
BY: RAH	DRAWN BY: D.E.C.	DATE:
CHECKED BY: RAH	DESIGNED BY: RAH	DATE:

FILE NO.:  
 DRAWING SCALE: 1"=400'  
 VERT:    HORZ:    :  
 SHEET No. 8 OF 25



PATE ENGINEERS  
 13333 N.W. Freeway, Suite 300 - Houston, TX - Phone: 713-442-0778



GENERAL CONSTRUCTION NOTES

- 1. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES TO THE EXISTING PUBLIC OR PRIVATE UTILITY LINES INCLUDING BUT NOT LIMITED TO WATER, GAS, SANITARY SEWER, AND POWER LINES...

WATER CONSTRUCTION NOTES CONTINUED

- 5. PROVIDE A MINIMUM 1" (ONE FOOT) OF CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.

WATER CONSTRUCTION NOTES

- 1. BEDDING FOR SANITARY SEWER SHALL BE PLACED IN ACCORDANCE WITH APPLICABLE STANDARDS AND FEDERAL REGULATION.

STORM SEWER CONSTRUCTION NOTES

- 1. STORM SEWERS AND LEADS SHALL BE REINFORCED CONCRETE PIPE, C-78, CLASS III WITH RUBBER GASKET JOINTS AND SHALL BE INSTALLED, BEDDED, AND BACKFILLED IN ACCORDANCE WITH CITY OF HOUSTON DRAWING NOS. 02817-01, 02817-02, 02817-03 AND 02817-04 AS APPLICABLE UNLESS SHOWN OTHERWISE ON DRAWINGS.

CONSTRUCTION NOTES FOR PAVING (HARRIS COUNTY)

- 1. PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH HARRIS COUNTY REGULATIONS OF HARRIS COUNTY TEXAS FOR THE APPROVAL AND ACCEPTANCE OF INFRASTRUCTURE AND THE LATEST REVISIONS AND/OR AMENDMENTS OF SAME.

UNDERGROUND ENERGY GAS NOTES

CAUTION: UNDERGROUND GAS FACILITIES LOCATION OF UNDERGROUND ENERGY GAS MAIN LINES... (Text continues with safety warnings and utility coordination instructions)

SPRINK NOTES

THE LOCATIONS OF SPRINK TELEPHONE CO. UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY... (Text continues with utility location notes)

UNDERGROUND ENERGY ELECTRIC

WARNING: OVERHEAD ELECTRICAL FACILITIES OVERHEAD LINES ARE SHOWN ON THE PROPERTY... (Text continues with overhead line safety warnings)

PIPELINE NOTE

ALL PIPELINES WITH HARRIS COUNTY RIGHT-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH HARRIS COUNTY SPECIFICATIONS... (Text continues with pipeline construction requirements)

MOUNTABLE CURB NOTES

- 1. ALL TOP-OF-CURB ELEVATIONS SHOWN ARE BASED ON 4-INCH CURB... (List continues with curb construction details)

STORM WATER PRE-CONSTRUCTION INSPECTION REQUIREMENTS

- 1. THE CONTRACTOR SHALL CONTACT THE HARRIS COUNTY STORM WATER QUALITY TESTING SECTION AT 713-356-2000 PRIOR TO CONSTRUCTION INSPECTION... (Text continues with inspection requirements)

STANDARD PERMIT NOTES

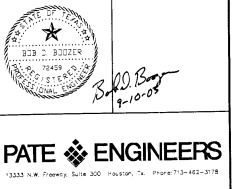
- A. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF HARRIS COUNTY, TEXAS FOR ROAD PLANNING PRIOR TO STARTING CONSTRUCTION.

EXISTING SYSTEM LEGEND

Table with two columns: Symbol and Description. Symbols include various line styles, arrows, and boxes representing existing utilities like water meter, gas meter, fire hydrant, etc.

ABBREVIATIONS

Table with three columns: Abbreviation, Full Name, and Description. Lists abbreviations for utility types such as SAN - SANITARY, STW - STORM, and others.



PATE ENGINEERS

1333 N.W. Freeway, Suite 300 Houston, TX. Phone: 713-643-3718

PROJECT: B.D.B. DATE: AUG. 2003

REVISION: RAH B.M.W. P.T. D.E.C. SHEET NO. 1225-100-00

BENCHMARK

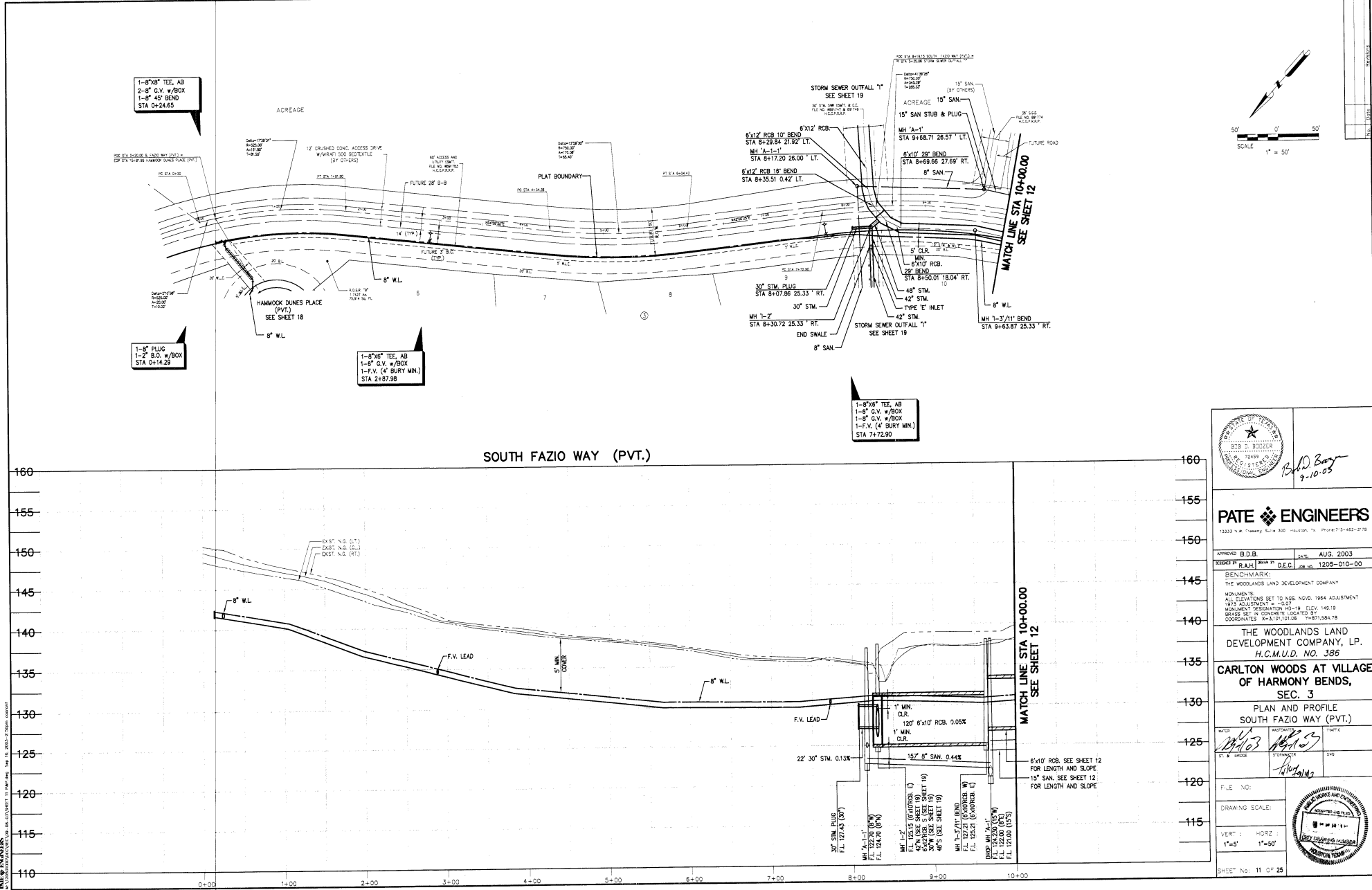
THE WOODLANDS LAND DEVELOPMENT COMPANY

THE WOODLANDS LAND DEVELOPMENT COMPANY, LP

CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3

CONSTRUCTION NOTES

FILE NO.: N/A DRAWING SCALE: N/A SHEET NO. 10 OF 25



*R.D. Boyer*  
9.10.05

**PATE ENGINEERS**  
12333 N.W. Chevaly Suite 300 Houston, TX Phone 713-462-2718

APPROVED B.D.B. DATE: AUG. 2003  
 REVIEWED BY: R.A.H. DRAWN BY: D.E.C. DATE: 1205-010-00

BENCHMARK:  
 THE WOODLANDS LAND DEVELOPMENT COMPANY  
 MONUMENTS:  
 ALL ELEVATIONS SET TO NGS NAD 83 1984 ADJUSTMENT  
 TYPICAL ADJUSTMENT = -0.01'  
 MONUMENT DESIGNATOR: M-19, ELEV. 149.19  
 BRASS SET IN CONCRETE LOCATED BY  
 COORDINATES: X=63,010.0108 Y=87,584.78

THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
 H.C.M.U.D. NO. 386

**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**

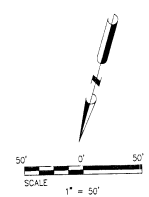
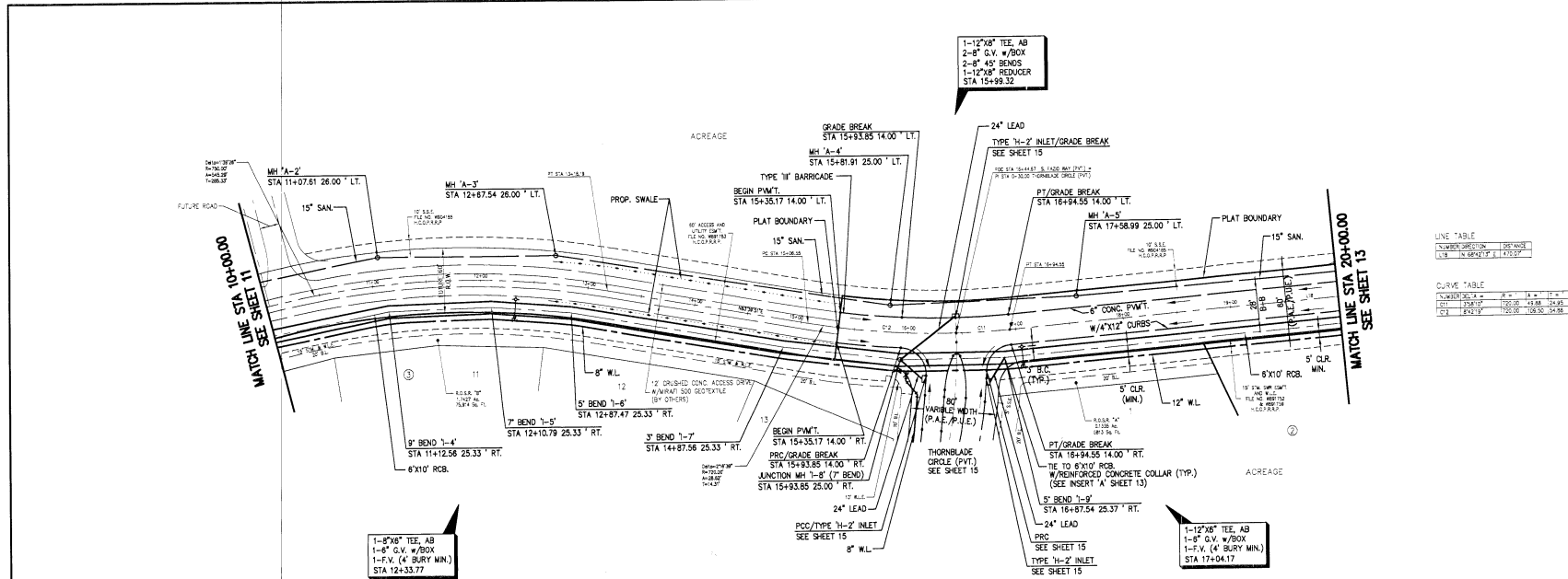
PLAN AND PROFILE SOUTH FAZIO WAY (PVT.)

DATE: 8/10/05  
 BY: R.A.H. / D.E.C.  
 CHECKED BY: R.D.B.  
 SCALE: 1"=50'

FILE NO.:  
 DRAWING SCALE:  
 VERT: 1"=5'

SHEET No. 11 OF 25





LINE TABLE

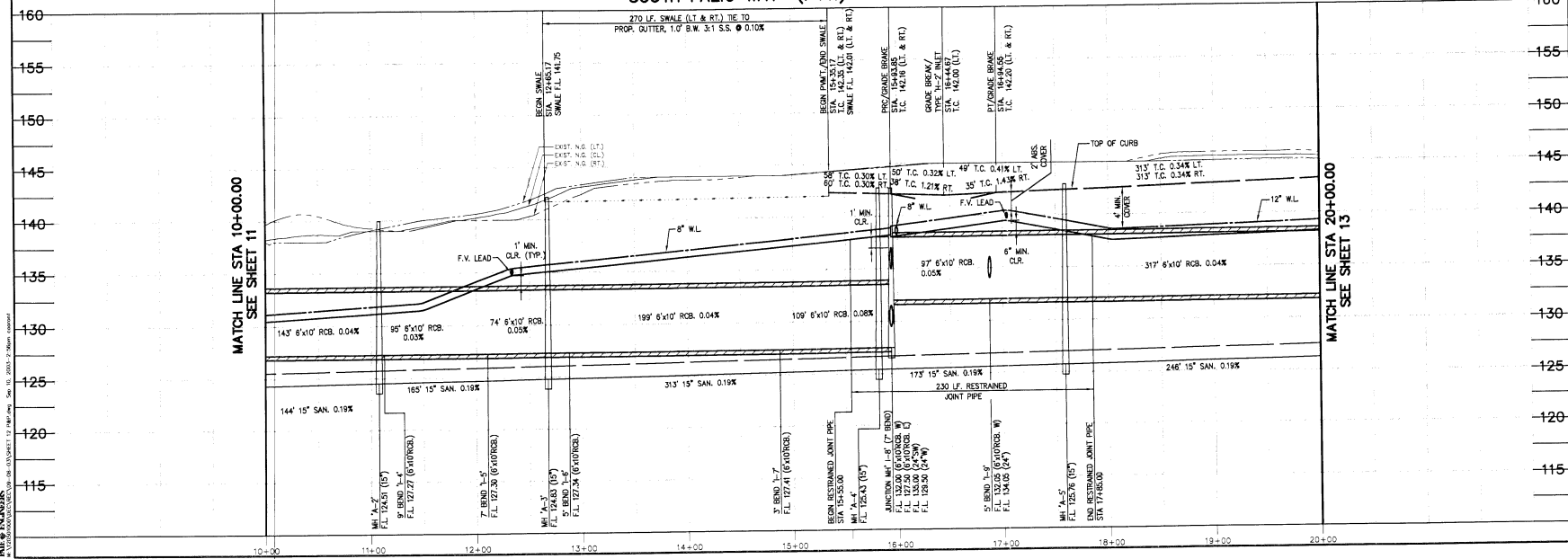
NUMBER	SECTION	DESIGN
101	12+00.00	125.00
102	12+00.00	125.00
103	12+00.00	125.00

CURVE TABLE

STATION	PC	PT	PI	END
11+00.00	11+00.00	11+00.00	11+00.00	11+00.00
12+00.00	12+00.00	12+00.00	12+00.00	12+00.00
13+00.00	13+00.00	13+00.00	13+00.00	13+00.00

**SOUTH FAZIO WAY (PVT.)**



*R. D. Boyer*  
9-10-03

**PATE ENGINEERS**  
13333 N. Freeway, Suite 300, Houston, TX, Phone 773-462-9178

APPROVED B.O.B. DATE: AUG. 2003  
 DESIGNED BY: R.A.H. DRAWN BY: D.E.C. JOB NO.: 1205-010-00

BENCHMARK:  
 THE WOODLANDS LAND DEVELOPMENT COMPANY

MONUMENTS  
 ALL ELEVATIONS SET TO NGS IND. 1984 ADJUSTMENT  
 1973 ADJUSTMENT = -0.07'  
 MONUMENT DESIGNATION: 10-19, ELEV. 148.19  
 BEARS SET 4 MONUMENTS LOCATED BY  
 COORDINATES X=431011.026 Y=871584.78

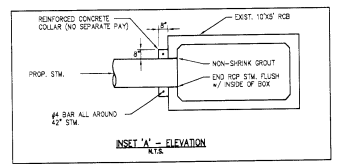
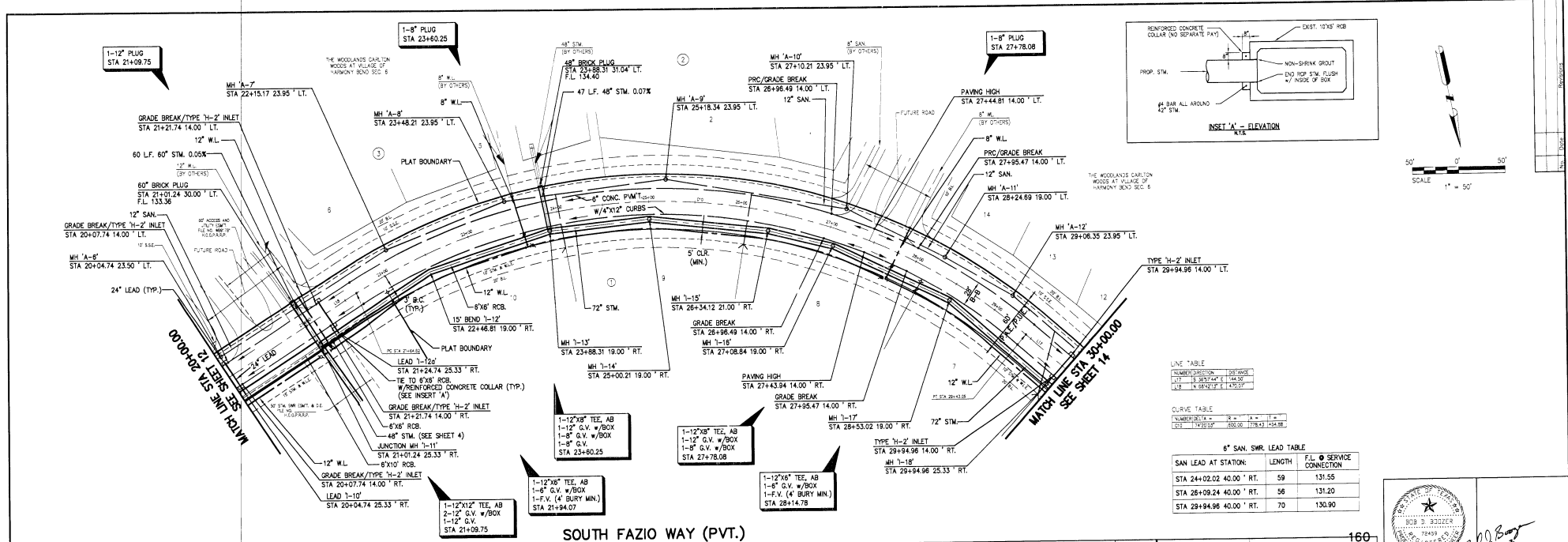
**THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.**  
**H.C.M.U.D. NO. 386**  
**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**  
**PLAN AND PROFILE SOUTH FAZIO WAY (PVT.)**

DATE: 8/10/03  
 ASSISTANT: [Signature]  
 D.E.C. DATE: 8/10/03  
 DATE: 8/10/03

FILE NO.:  
 DRAWING SCALE:  
 VERT. 1"=5'  
 HORIZ. 1"=50'

SHEET No. 12 OF 25

PATE ENGINEERS  
 13333 N. FREEWAY, SUITE 300, HOUSTON, TEXAS 77040  
 PHONE 773-462-9178 FAX 773-462-9179  
 WWW.PATEENGINEERS.COM



LINE TABLE

NUMBER	DESCRIPTION	DATE
1	ISSUED FOR PERMITS	10/14/03
2	REVISED FOR CONSTRUCTION	11/10/03

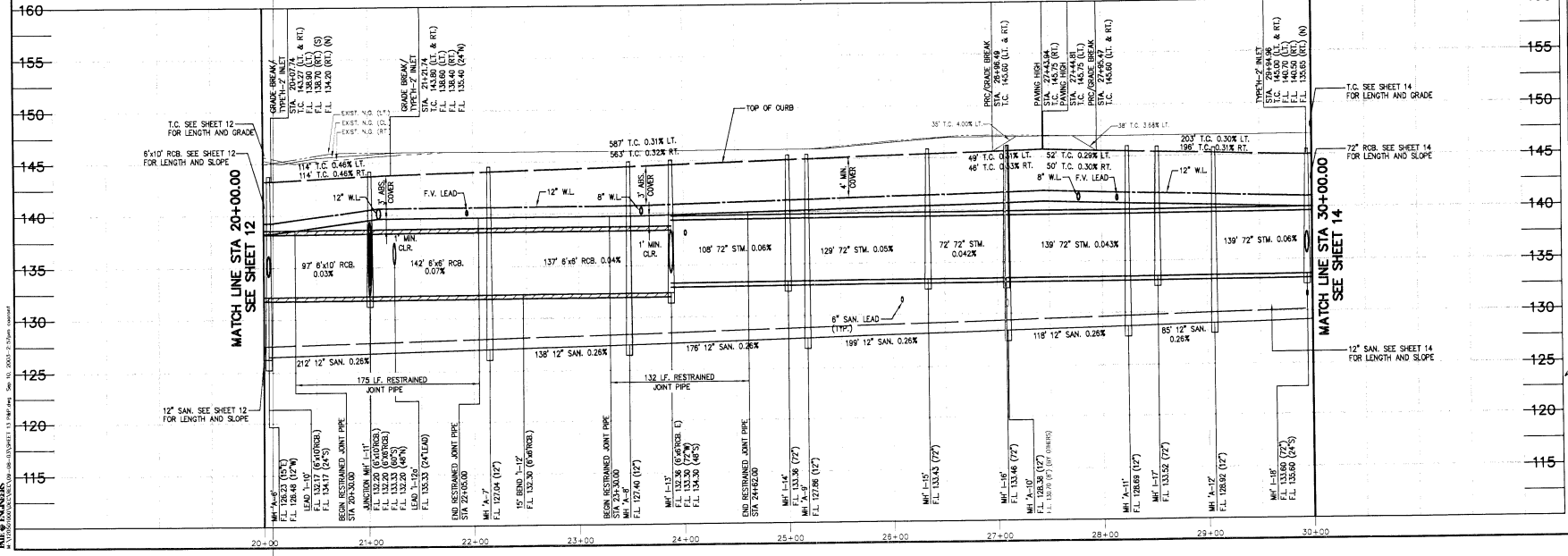
CURVE TABLE

NUMBER	DESCRIPTION	DATE
1	ISSUED FOR PERMITS	10/14/03
2	REVISED FOR CONSTRUCTION	11/10/03

8" SAN. SWR. LEAD TABLE

SAN LEAD AT STATION:	LENGTH	F.L. SERVICE CONNECTION
STA 24+02.02 40.00' RT.	59	131.55
STA 26+09.24 40.00' RT.	56	131.20
STA 29+94.96 40.00' RT.	70	130.90

**SOUTH FAZIO WAY (PVT.)**



*R.A.H. Brouwer*  
9-10-03

**PATE ENGINEERS**  
13333 N.W. Frisco, Suite 300, Houston, TX Phone: 713-462-1718

APPROVED B.D.B. DATE: AUG. 2003  
 DRAWN BY: R.A.H. CHECKED BY: D.E.C. JOB NO.: 1205-010-00

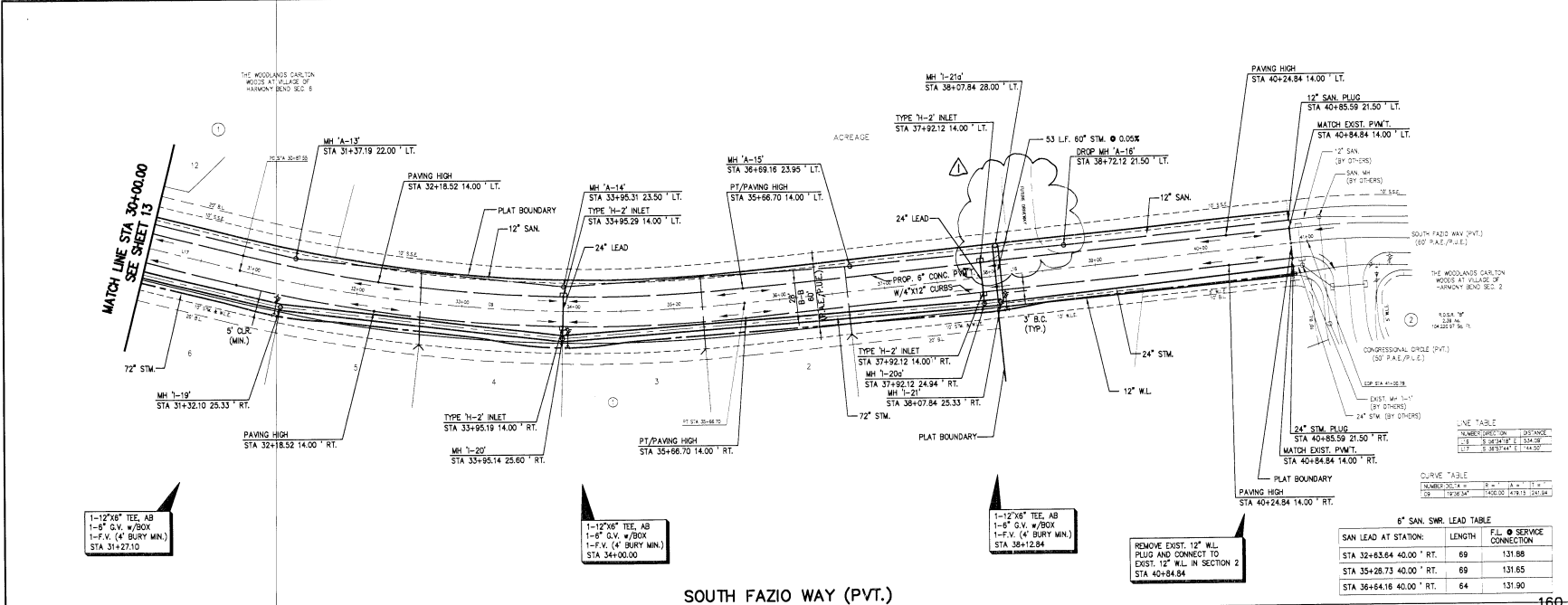
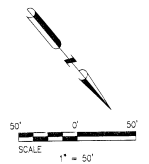
BENCHMARK:  
 THE WOODLANDS LAND DEVELOPMENT COMPANY  
 ALL ELEVATIONS SET TO NGS NGVD '84 ADJUSTMENT  
 1919 BENCHMARK # 4037  
 MONUMENT ORIENTATION 105-19 ELEV. 149.19  
 COORDINATES X=5101.0108 Y=871.88478

THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
 H.C.M.U.D. NO. 386  
 CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3  
 PLAN AND PROFILE SOUTH FAZIO WAY (PVT.)

FILE NO.:  
 DRAWING SCALE:  
 VERT: 1"=5'  
 HORIZ: 1"=50'

SHEET NO. 13 OF 25





**LINE TABLE**

NUMBER	START STATION	END STATION	GRADE
1	30+00.00	31+27.10	0.00%
2	31+27.10	32+18.52	0.35%
3	32+18.52	33+95.29	0.26%
4	33+95.29	35+66.70	0.26%
5	35+66.70	37+92.12	0.26%
6	37+92.12	38+07.84	0.06%
7	38+07.84	38+72.12	0.06%
8	38+72.12	40+24.84	0.26%
9	40+24.84	40+84.84	0.26%
10	40+84.84	42+00.00	0.26%

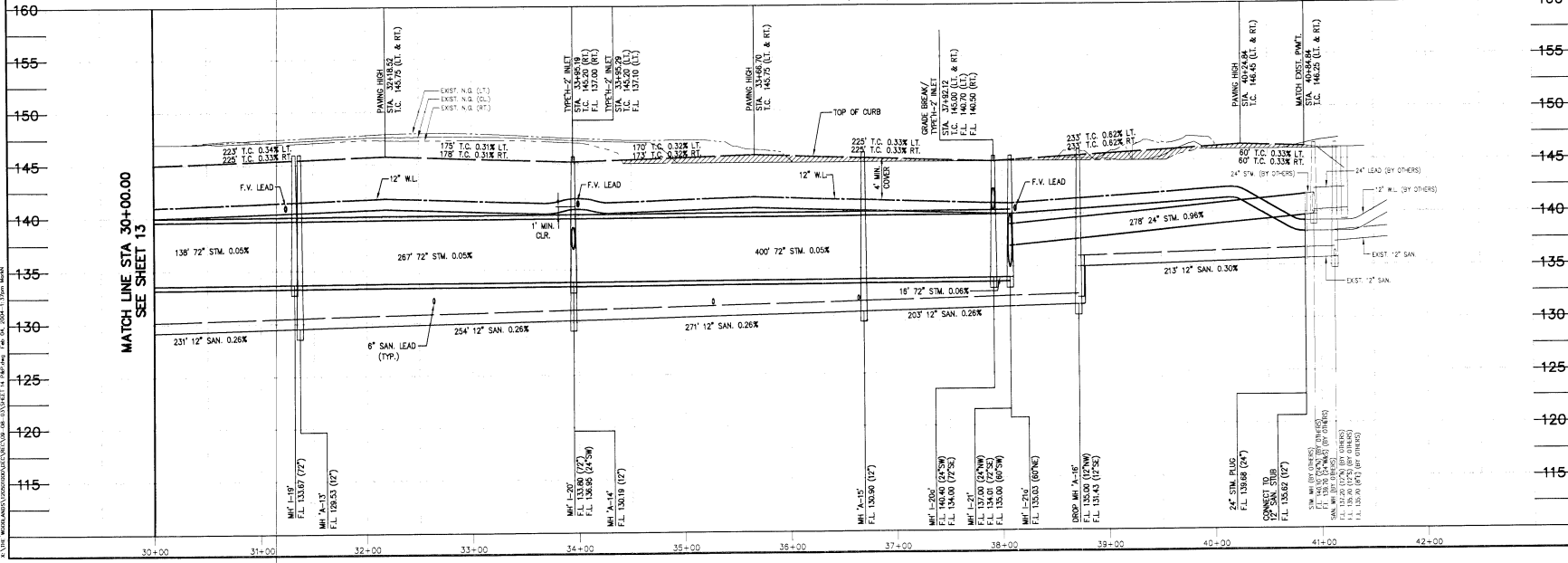
**CURVE TABLE**


NUMBER	START STATION	END STATION	LENGTH	DELTA
1	30+00.00	31+27.10	27.10	10.00°
2	31+27.10	32+18.52	9.42	10.00°
3	32+18.52	33+95.29	17.77	10.00°
4	33+95.29	35+66.70	17.41	10.00°
5	35+66.70	37+92.12	22.42	10.00°
6	37+92.12	38+07.84	15.72	10.00°
7	38+07.84	38+72.12	6.28	10.00°
8	38+72.12	40+24.84	22.72	10.00°
9	40+24.84	40+84.84	6.00	10.00°
10	40+84.84	42+00.00	15.16	10.00°

**6" SAN. SWR. LEAD TABLE**

SAN LEAD AT STATION:	LENGTH	F.L. @ SERVICE CONNECTION
STA 32+63.64 40.00" RT.	69	131.88
STA 35+28.73 40.00" RT.	69	131.65
STA 36+64.16 40.00" RT.	64	131.90





*Budd Boyer*  
2-5-04

**PATE ENGINEERS**  
 13332 N.W. Freeway, Suite 200, Houston, TX, Phone 713-462-3178

APPROVED B.D.B. DATE: AUG. 2003  
 DESIGN BY: R.A.H. REVIEW BY: D.E.C. JOB NO: 1205-010-00

BENCHMARK:  
 THE WOODLANDS LAND DEVELOPMENT COMPANY

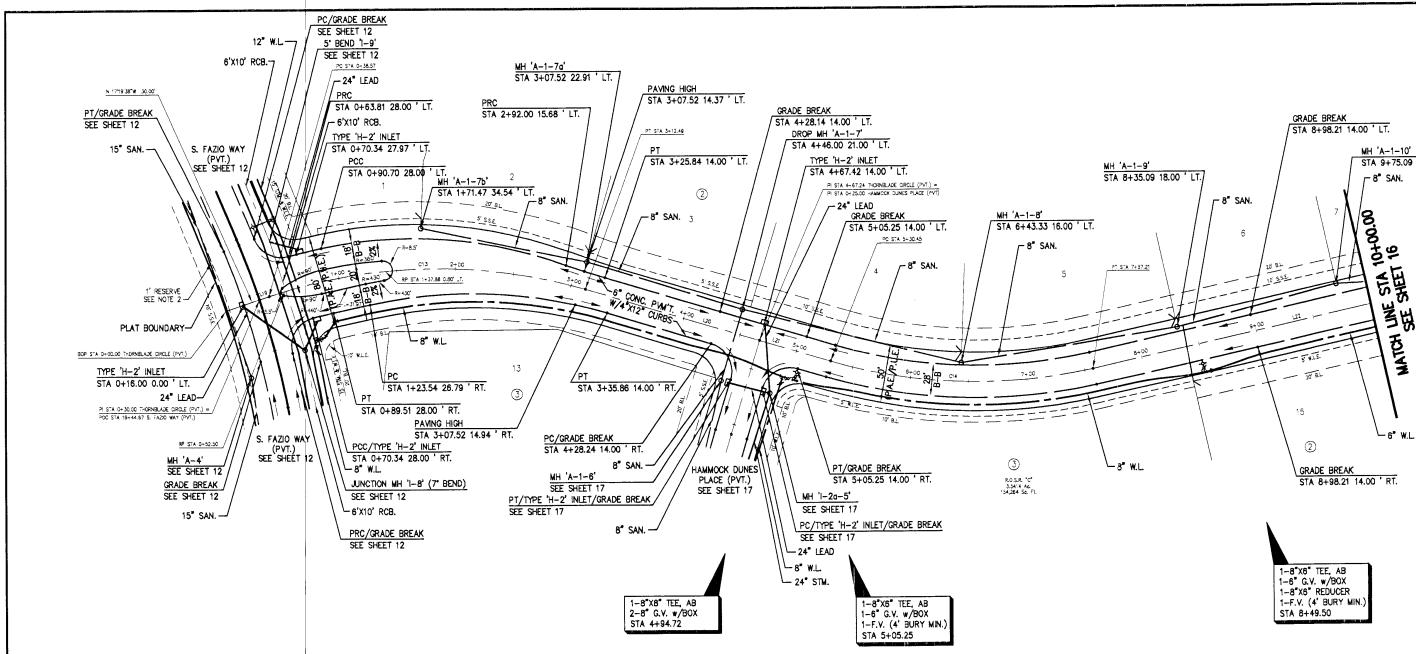
MONUMENTS:  
 ALL ELEVATIONS SET TO NGS NGVD 1984 ADJUSTMENT  
 1974 ADJUSTMENT = +2.03  
 MONUMENT ASSOCIATION H.C.-19 D.E.V. 149-19  
 BENCH SET IN CONCRETE LOCATED BY  
 COORDINATES X=310,101.08 Y=871,584.78

THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
 H.C.M.U.D. NO. 386  
**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**  
 PLAN AND PROFILE  
 SOUTH FAZIO WAY (PVT.)

DATE: 12/5/04  
 DRAWN BY: E. FORTUNE  
 CHECKED BY: J. BROWN

FILE NO:  
 DRAWING SCALE:  
 VERT: 1"=5'  
 HORIZ: 1"=50'

SHEET NO. 14 OF 25



LINE TABLE

STATION	DESCRIPTION	LENGTH
0+00	15' INLET	15.00
0+16.00	15' INLET	16.00
0+32.00	15' INLET	16.00
0+48.00	15' INLET	16.00
0+64.00	15' INLET	16.00
0+80.00	15' INLET	16.00
0+96.00	15' INLET	16.00
1+12.00	15' INLET	16.00
1+28.00	15' INLET	16.00
1+44.00	15' INLET	16.00
1+60.00	15' INLET	16.00
1+76.00	15' INLET	16.00
1+92.00	15' INLET	16.00
2+08.00	15' INLET	16.00
2+24.00	15' INLET	16.00
2+40.00	15' INLET	16.00
2+56.00	15' INLET	16.00
3+12.00	15' INLET	16.00
3+28.00	15' INLET	16.00
3+44.00	15' INLET	16.00
3+60.00	15' INLET	16.00
3+76.00	15' INLET	16.00
3+92.00	15' INLET	16.00
4+08.00	15' INLET	16.00
4+24.00	15' INLET	16.00
4+40.00	15' INLET	16.00
4+56.00	15' INLET	16.00
5+12.00	15' INLET	16.00
5+28.00	15' INLET	16.00
5+44.00	15' INLET	16.00
5+60.00	15' INLET	16.00
5+76.00	15' INLET	16.00
5+92.00	15' INLET	16.00
6+08.00	15' INLET	16.00
6+24.00	15' INLET	16.00
6+40.00	15' INLET	16.00
6+56.00	15' INLET	16.00
7+12.00	15' INLET	16.00
7+28.00	15' INLET	16.00
7+44.00	15' INLET	16.00
7+60.00	15' INLET	16.00
7+76.00	15' INLET	16.00
7+92.00	15' INLET	16.00
8+08.00	15' INLET	16.00
8+24.00	15' INLET	16.00
8+40.00	15' INLET	16.00
8+56.00	15' INLET	16.00
9+12.00	15' INLET	16.00
9+28.00	15' INLET	16.00
9+44.00	15' INLET	16.00
9+60.00	15' INLET	16.00
9+76.00	15' INLET	16.00
9+92.00	15' INLET	16.00
10+00.00	15' INLET	16.00

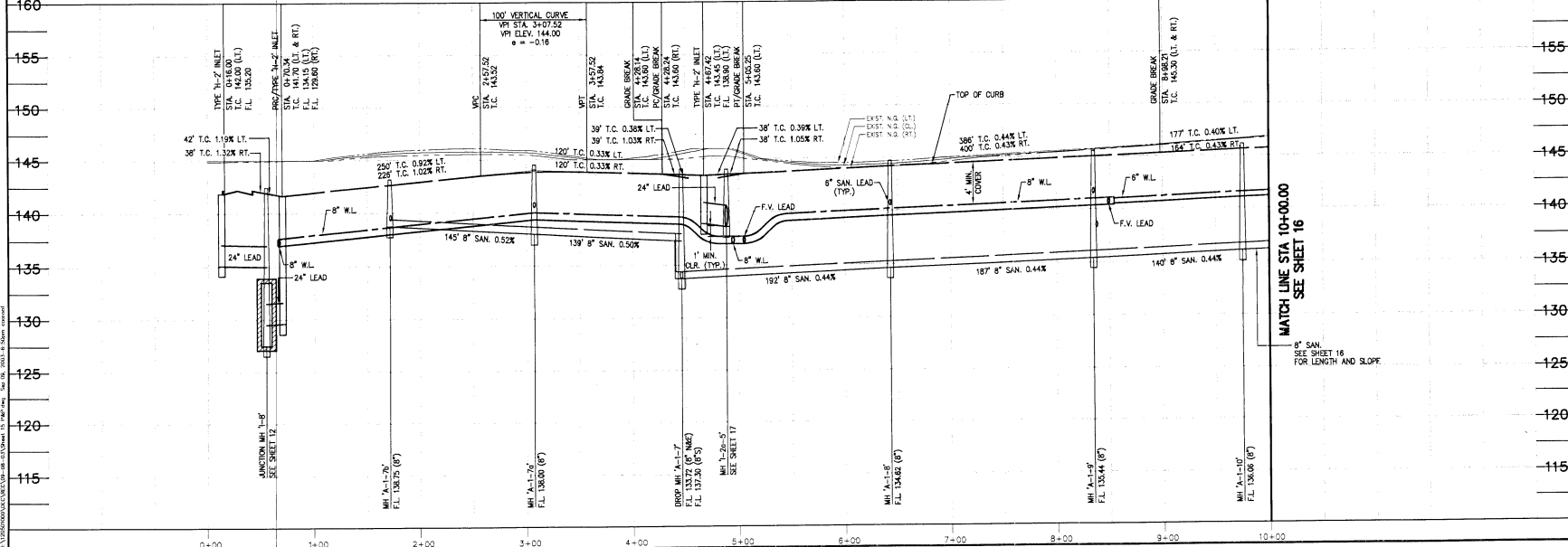
CURVE TABLE

STATION	PC	PT	PI	LC	EC	STATION	PC	PT	PI	LC	EC
0+00	0+16.00	0+32.00	0+16.00	16.00	0+32.00	0+00	0+16.00	0+32.00	0+16.00	16.00	0+32.00
1+12	1+28.00	1+44.00	1+28.00	16.00	1+44.00	1+12	1+28.00	1+44.00	1+28.00	16.00	1+44.00
2+24	2+40.00	2+56.00	2+24.00	16.00	2+56.00	2+24	2+40.00	2+56.00	2+24.00	16.00	2+56.00
3+36	3+52.00	3+68.00	3+36.00	16.00	3+68.00	3+36	3+52.00	3+68.00	3+36.00	16.00	3+68.00
4+48	4+64.00	4+80.00	4+48.00	16.00	4+80.00	4+48	4+64.00	4+80.00	4+48.00	16.00	4+80.00
5+60	5+76.00	5+92.00	5+60.00	16.00	5+92.00	5+60	5+76.00	5+92.00	5+60.00	16.00	5+92.00
6+72	6+88.00	7+04.00	6+72.00	16.00	7+04.00	6+72	6+88.00	7+04.00	6+72.00	16.00	7+04.00
7+84	8+00.00	8+16.00	7+84.00	16.00	8+16.00	7+84	8+00.00	8+16.00	7+84.00	16.00	8+16.00
8+96	9+12.00	9+28.00	8+96.00	16.00	9+28.00	8+96	9+12.00	9+28.00	8+96.00	16.00	9+28.00
10+00	10+16.00	10+32.00	10+00.00	16.00	10+32.00	10+00	10+16.00	10+32.00	10+00.00	16.00	10+32.00

6" SAN. SWR. LEAD TABLE

SAN LEAD AT STATION	LENGTH	F.L. @ SERVICE CONNECTION
STA 1+72.00 42.96' LT.	8	139.30
STA 3+07.52 31.34' LT.	8	140.50
STA 6+43.33 25.00' LT.	9	140.50
STA 8+35.09 25.00' LT.	8	141.50
STA 8+38.19 30.00' RT.	48	138.30

THORNBLADE CIRCLE (PVT.)



10-9-05

**PATE ENGINEERS**  
 12333 N.W. Freeway, Suite 300 Houston, TX Phone: 713-482-9178

APPROVED: B.O.B. DATE: AUG. 2003  
 DESIGNED BY: R.A.H. DRAWN BY: D.E.C. JOB NO.: 1205-010-00

BENCHMARK: THE WOODLANDS LAND DEVELOPMENT COMPANY  
 MONUMENTS: ALL ELEVATIONS SET TO NOS. INDV. 1984 ADJUSTMENT  
 1973 ADJUSTMENT +0.02  
 MONUMENT DESIGNATION: 45-19 ELEV. 149.19  
 BRASS SET IN CONCRETE, LOCATED BY COORDINATES: X=2,121,011.08 Y=87,584.78

**THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.**  
 H.C.M.U.D. NO. 386

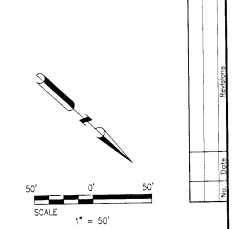
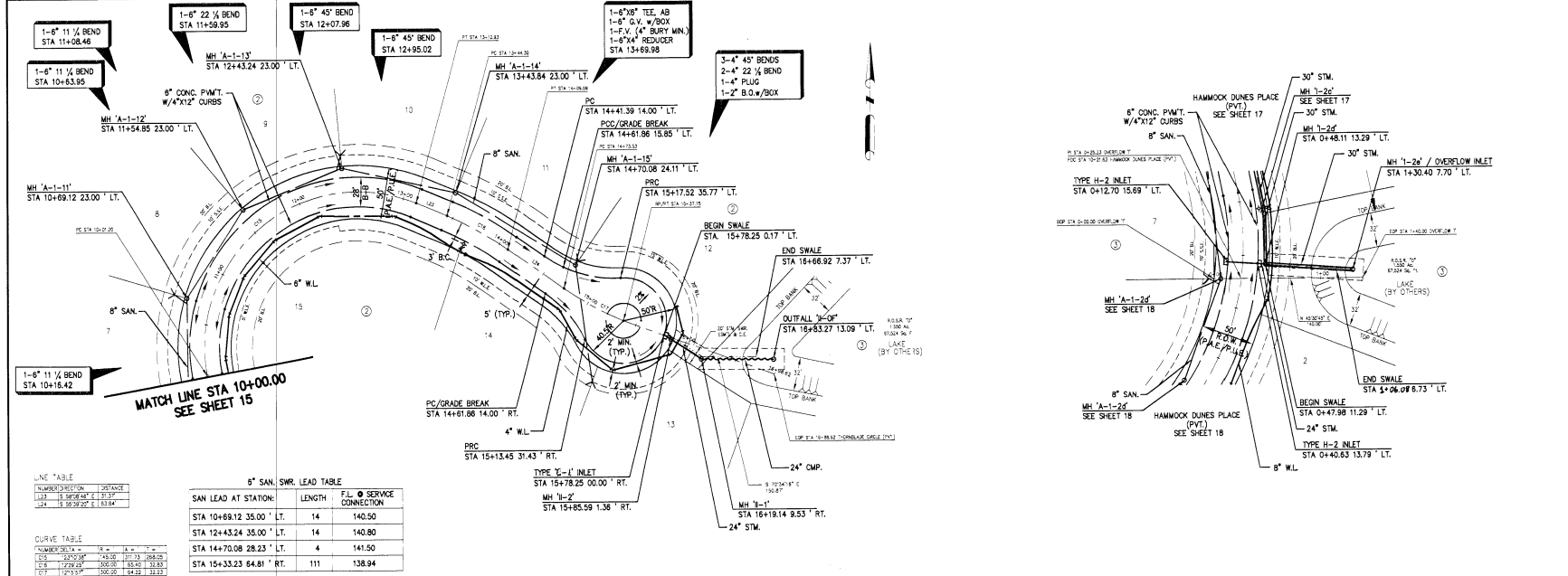
**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**  
 PLAN AND PROFILE  
 THORNBLADE CIRCLE (PVT.)

DATE: 10-9-05  
 DRAWN BY: R.A.H.  
 CHECKED BY: D.E.C.

FILE NO.: 1205-010-00  
 DRAWING SCALE: 1"=5' 1"=50'  
 VERT.: 1"=5' 1"=50'

SHEET NO. 15 OF 25





LINE TABLE

NUMBER	SECTION	START	END	LENGTH
1	15	10+00.00	10+69.12	69.12
2	15	10+69.12	12+43.24	74.12
3	15	12+43.24	14+70.08	86.84
4	15	14+70.08	15+33.23	63.15

8" SAN. SWR. LEAD TABLE

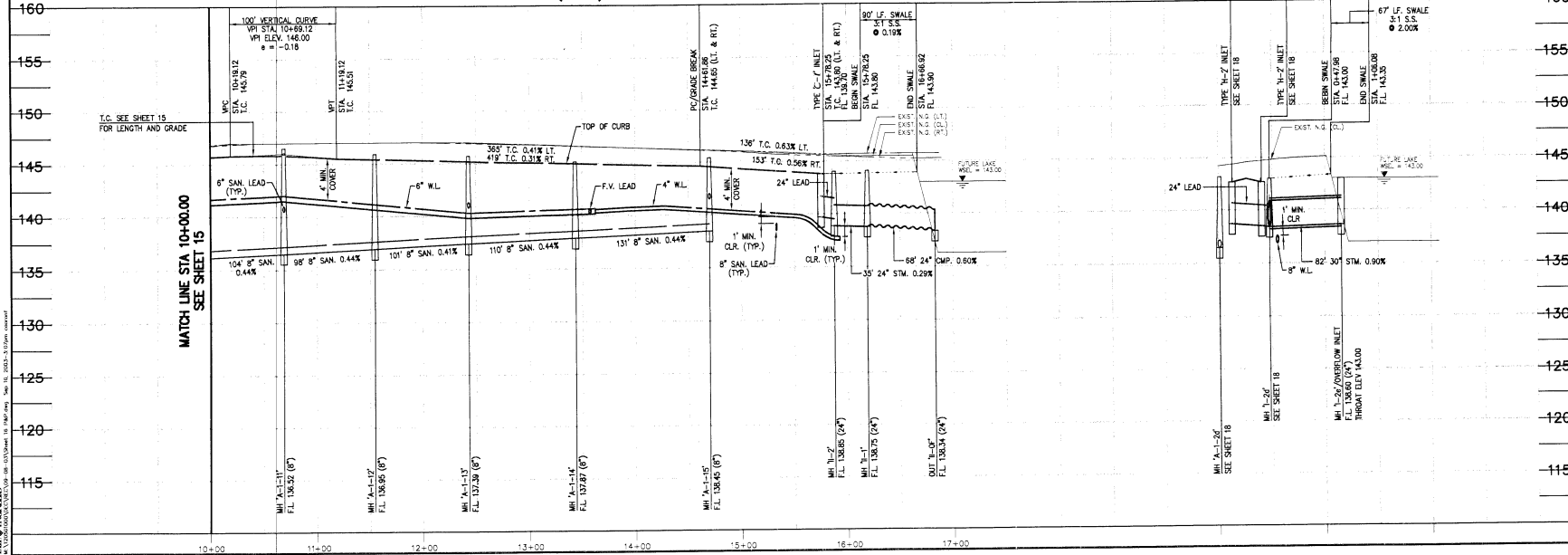
STATION	LENGTH	F.L.	CONNECTION
STA 10+69.12 35.00' LT.	14	140.50	
STA 12+43.24 35.00' LT.	14	140.80	
STA 14+70.08 28.23' LT.	4	141.50	
STA 15+33.23 64.81' RT.	111	138.94	

CURVE TABLE

STATION	PC	PVI	PT	LC	EC	SC	ST
10+00.00	10+69.12	11+34.17	12+09.24	11+34.17	10+69.12	10+00.00	10+00.00
12+43.24	13+12.36	13+77.51	14+46.56	13+77.51	12+43.24	12+43.24	12+43.24
14+70.08	14+70.08	14+70.08	14+70.08	14+70.08	14+70.08	14+70.08	14+70.08

THORNBLADE CIRCLE (PVT.)

OVERFLOW "1"



*Bob Boy*  
9-10-03

**PATE ENGINEERS**  
13333 N.W. Freeway, Suite 300 Houston, TX, Phone 713-463-3718

APPROVED B.O.B. DATE: AUG. 2003  
 DRAWN BY: R.A.H. CHECKED BY: D.E.C. JOB NO. 1205-010-00

BENCHMARK:  
 THE WOODLANDS LAND DEVELOPMENT COMPANY  
 MONUMENTS SET TO NGS, NAD 83, 1984 ADJUSTMENT  
 "25" ADJUSTMENT = -0.37'  
 MONUMENT DESIGNATION: 10-19, ELEV. 149.19  
 GRADES SET IN CONCRETE, LOCATED BY:  
 COORDINATES: X=310,101.08 Y=871,584.78

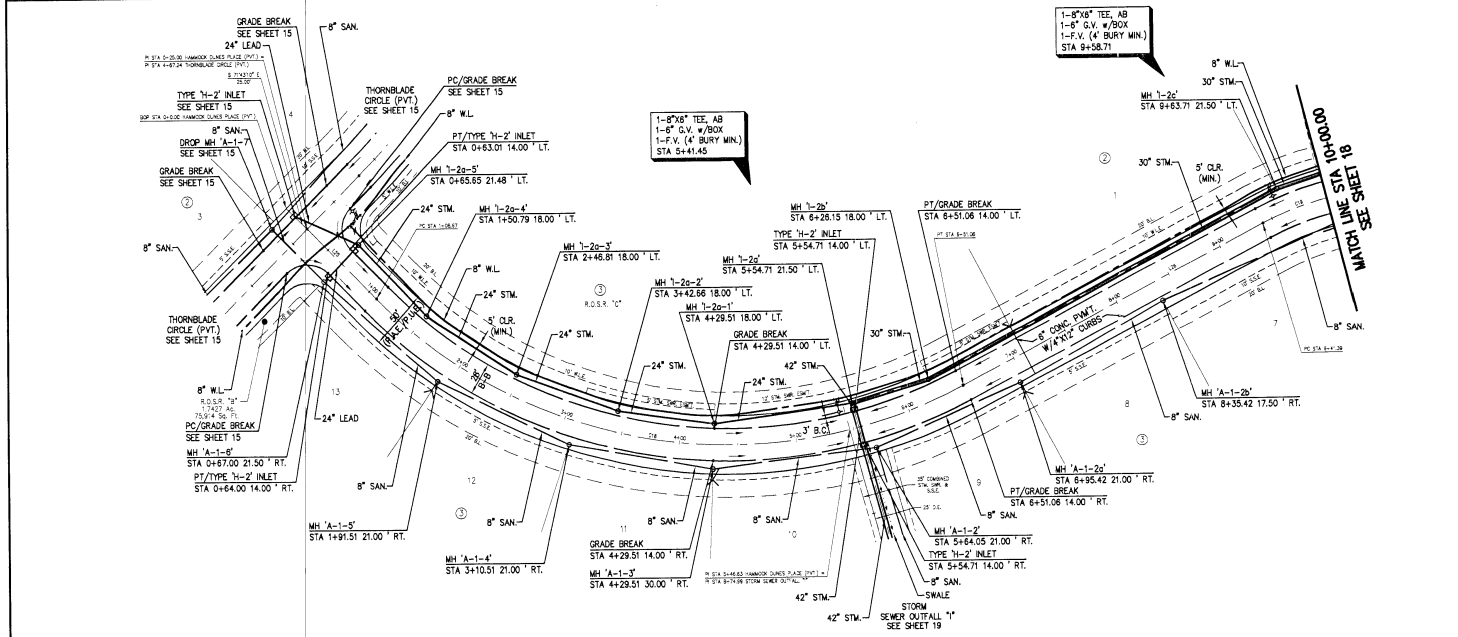
THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
 H.C.M.U.D. NO. 386

CARLTON WOODS AT VILLAGE OF HARMONY BENDS,  
 SEC. 3  
 PLAN AND PROFILE  
 THORNBLADE CIRCLE (PVT.)  
 AND OVERFLOW "1"

DATE: 8/10/03  
 DRAWN BY: R.A.H.  
 CHECKED BY: D.E.C.  
 IN CHARGE: R. P. BOYD

FILE NO.:  
 DRAWING SCALE:  
 VERT: 1"=5'  
 HORZ: 1"=50'

SHEET NO. 16 OF 25



1-8\"/>

1-8\"/>



LINE TABLE

NUMBER	DIRECTION	DISTANCE
128	12\"/>	
129	12\"/>	
130	12\"/>	

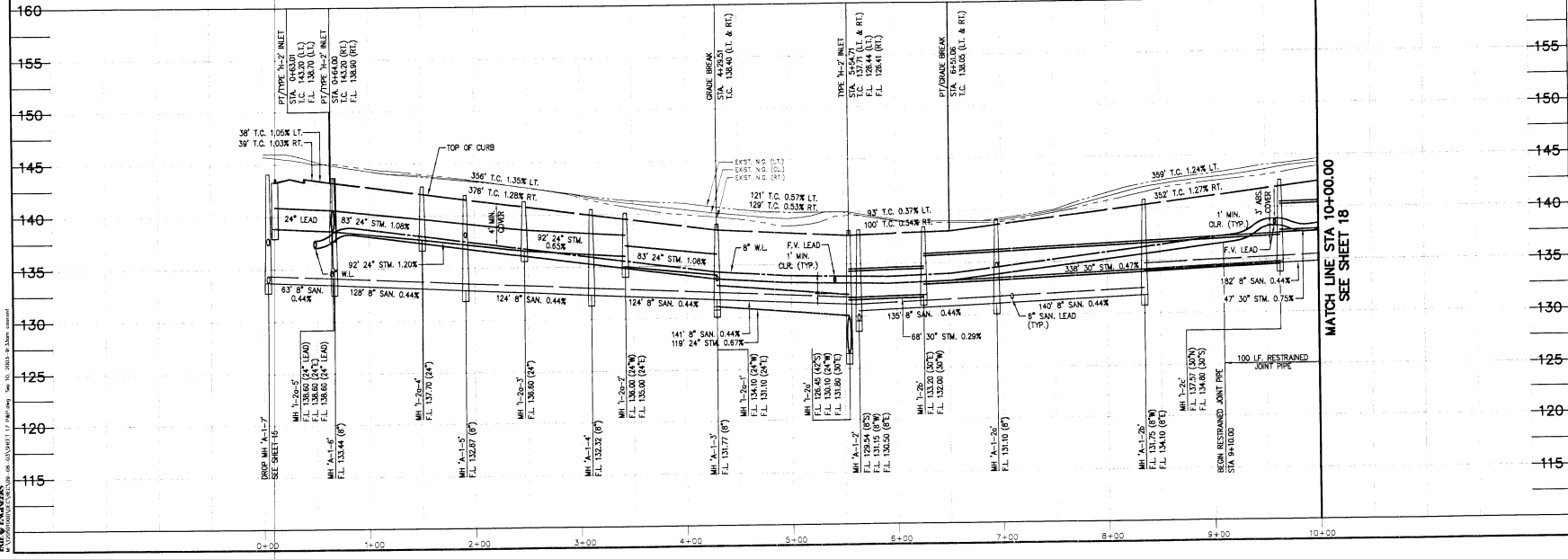
CURVE TABLE

NUMBER	PC	PT	LC	EA	EB	EC
128	128+00.00	128+00.00	128+00.00	128+00.00	128+00.00	128+00.00
129	129+00.00	129+00.00	129+00.00	129+00.00	129+00.00	129+00.00
130	130+00.00	130+00.00	130+00.00	130+00.00	130+00.00	130+00.00

8\"/>

SAN LEAD AT STATION	LENGTH	F.L. @ SERVICE CONNECTION
STA 1+91.51 30.00\"/>		
STA 4+29.51 30.00\"/>		
STA 6+95.42 30.00\"/>		
STA 7+09.93 25.00\"/>		

HAMMOCK DUNES PLACE (PVT.)



*B.J. BODDER*  
9-10-05

**PATE ENGINEERS**  
1333 N.W. Freeway, Suite 300 - Houston, Tx. Phone 713-462-7178

APPROVED B.D.B. DATE: AUG. 2003  
 CHECKED BY: R.A.H. DRAWN BY: D.E.C. JOB NO.: 1205-010-00

**BENCHMARK:**  
 THE WOODLANDS LAND DEVELOPMENT COMPANY  
 MONUMENTS:  
 ALL ELEVATIONS SET TO NGS. NVD. 1984 ADJUSTMENT  
 1933 REVISION = +0.07'  
 MONUMENT DESIGNATION: HD-19, ELEV. 149.19  
 BRASS SET IN CONCRETE LOCATED BY:  
 COORDINATES: X=3791.10108 Y=8784.18478

**THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.**  
**H.C.M.U.D. NO. 386**

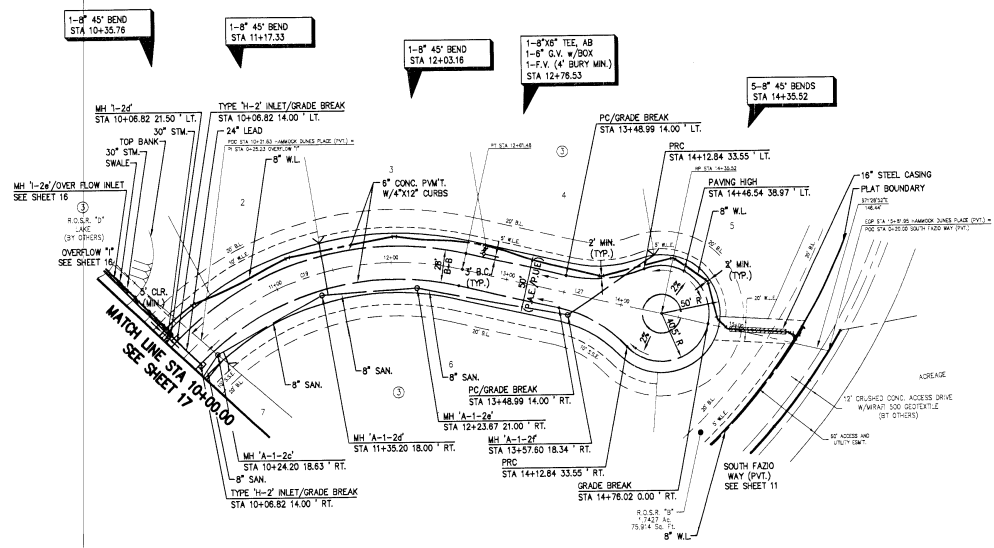
**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**

**PLAN AND PROFILE HAMMOCK DUNES PLACE (PVT.)**

DATE: 8/10/05  
 DRAWN BY: *[Signature]*  
 CHECKED BY: *[Signature]*

FILE NO.:  
 DRAWING SCALE:  
 VERT: 1\"/>





LINE TABLE

TURNING POINT	DISTANCE
127	S 21° 28' 52" E 174.54'

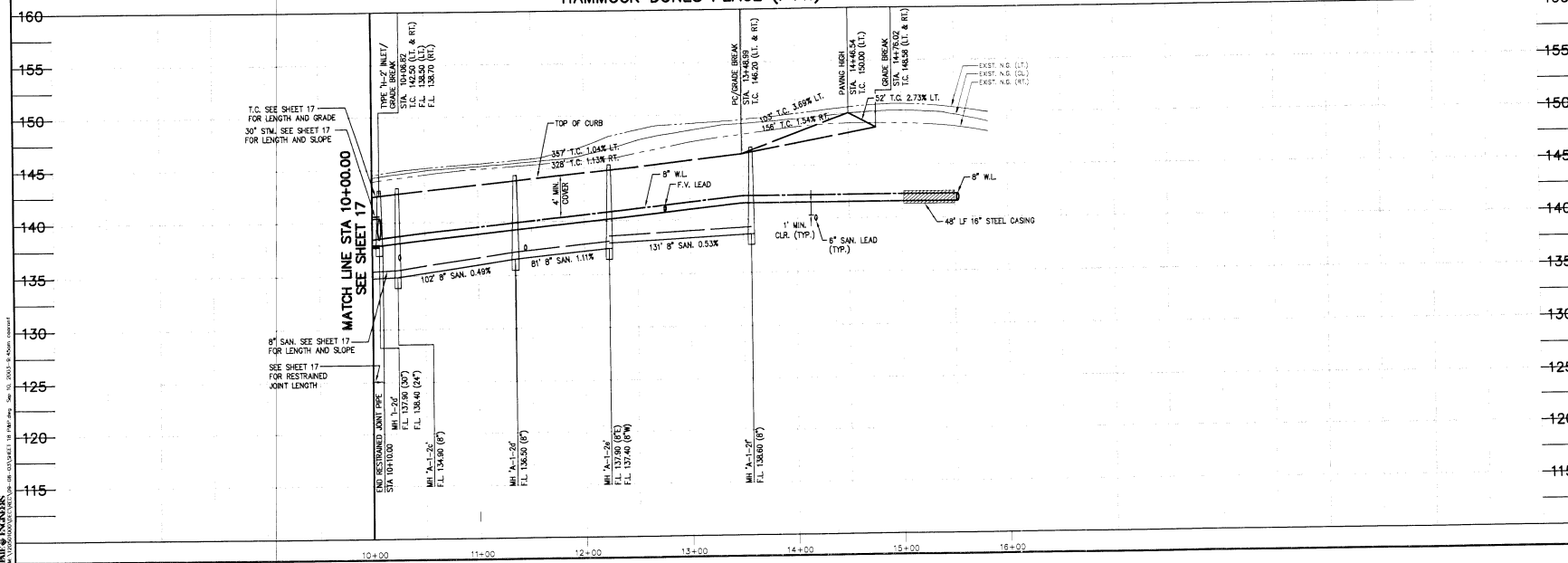
CURVE TABLE


TURNING POINT	P.C.	P.T.C.	L.C.	T.C.
127	1192.24	1262.00	1262.00	1192.24

6" SAN. SWR. LEAD TABLE

SAN LEAD AT STATION:	LENGTH	F.L. @ SERVICE CONNECTION
STA 10+25.98 30.00' RT.	11	135.50
STA 11+44.40 25.00' LT.	44	137.30
STA 14+18.64 47.07' LT.	89	139.80

HAMMOCK DUNES PLACE (PVT.)





*Paul D. Boyer*  
7-10-03

**PATE ENGINEERS**  
13333 N.W. Freeway, Suite 300 Houston, Tx. Phone 772-452-3719

APPROVED B.D.B. DATE: AUG. 2003  
 DESIGNED P.R.H. DRAWN P.D.E.C. JOB NO. 1205-010-00

BENCHMARK:  
 THE WOODLANDS LAND DEVELOPMENT COMPANY  
 MONUMENTS  
 ALL ELEVATIONS SET TO NGS. NVD. 1984 ADJUSTMENT  
 18.3 BOUNDS MONUMENT # 1027  
 MONUMENT DESIGNATION 45-19. ELEV. 149.79  
 COORDINATES X=5101.101.08 Y=871.084.79

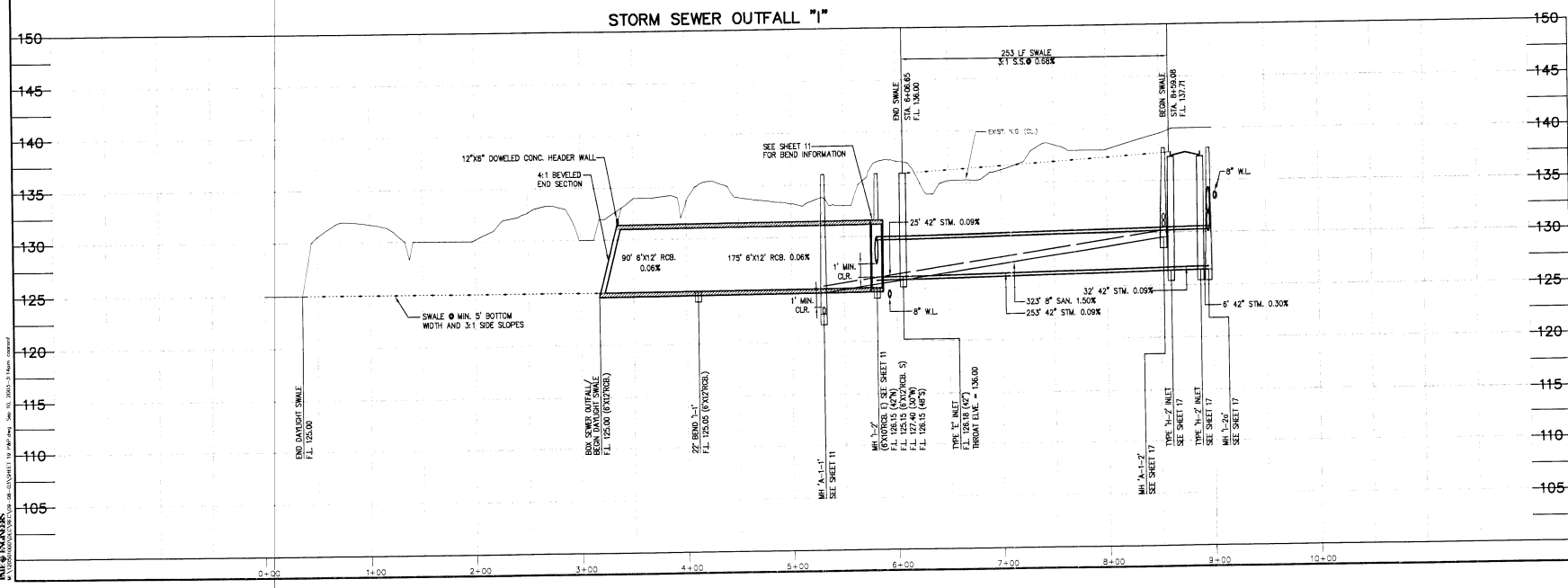
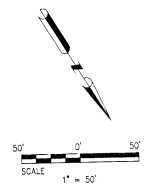
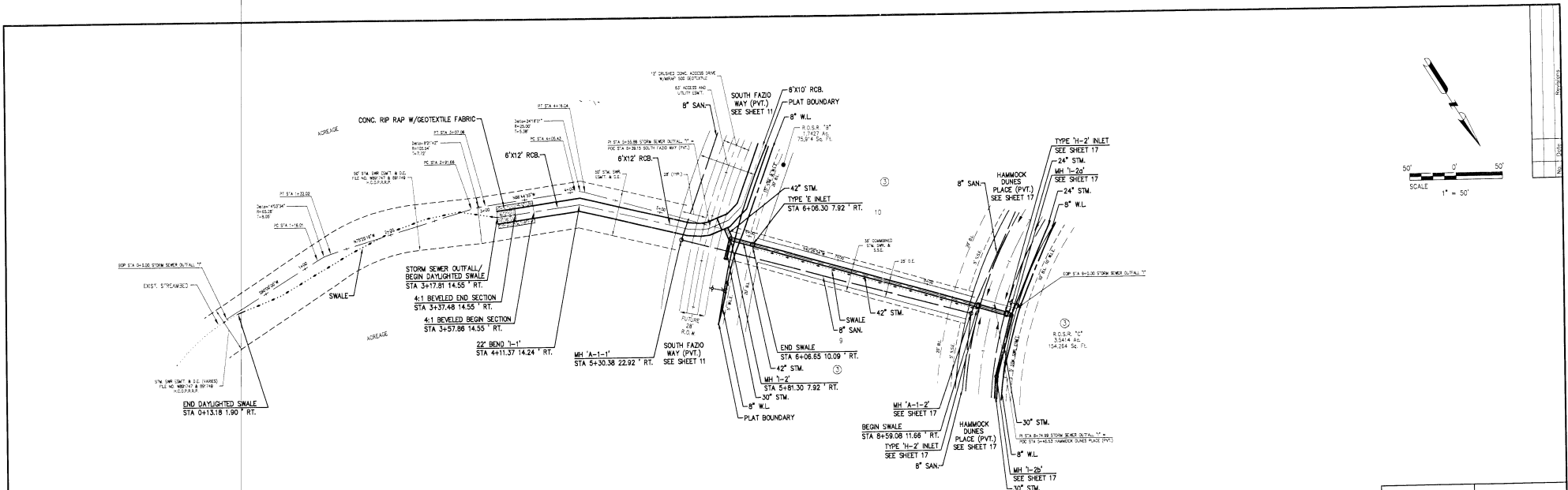
THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
 H.C.M.U.D. NO. 386


CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3  
 PLAN AND PROFILE  
 HAMMOCK DUNES PLACE (PVT.)

DATE: 7/10/03  
 DRAWN BY: P.D.E.C.  
 CHECKED BY: P.D.E.C.  
 DATE: 7/10/03

FILE NO.:  
 DRAWING SCALE:  
 VERT. 1"=5'  
 HORZ. 1"=50'

SHEET NO. 18 OF 25





*Bob D. Stodder*  
9-10-03

**PATE ENGINEERS**  
13333 N.W. Parkway, Suite 300, Houston, TX 77040-7733-0738

---

APPROVED B.D.S. DATE: AUG. 2003

DESIGNED BY: B.S.M. DRAWN BY: D.E.C. JOB NO.: 1208-010-00

BENCHMARK: THE WOODLANDS LAND DEVELOPMENT COMPANY

MONUMENTS: ALL ELEVATIONS SET TO NAD 83. 1984 ADJUSTMENT. 1973 ADJUSTMENT = -0.02'. MONUMENT RESERVATION HEIGHT: CLEV. 149.19'. BRASS SET IN CONCRETE. LOCATED BY COORDINATES: NAD 83 (1984) 149°15'58.78"


**THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.**  
H.C.M.U.D. NO. 386

**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**

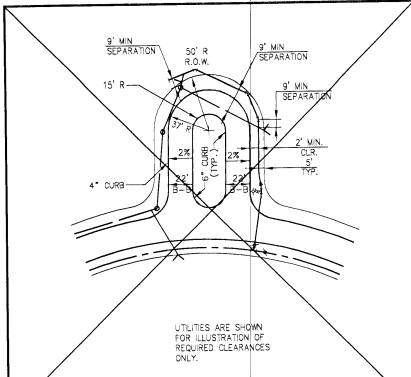
PLAN AND PROFILE  
STORM SEWER OUTFALL "1"

DATE: 8/10/03 DRAWN BY: B.S.M. CHECKED BY: D.E.C. DATE: 8/10/03

FILE NO.: DRAWING SCALE: 1"=5' HORIZ: 1"=50'

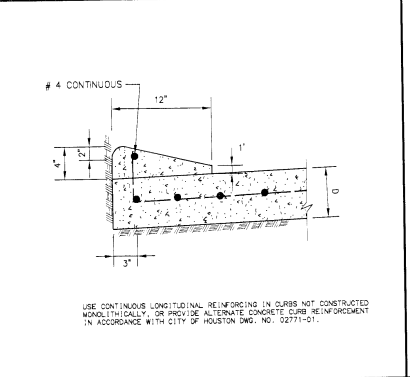


SHEET No. 19 OF 25



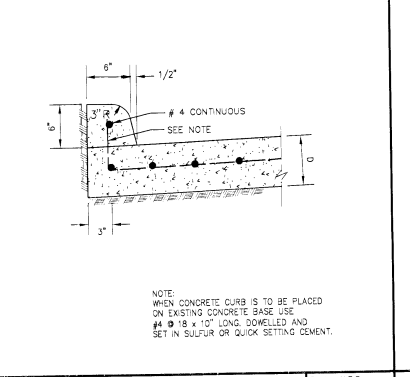
UTILITIES ARE SHOWN FOR ILLUSTRATION OF REQUIRED CLEARANCES ONLY.

1 CUL-DE-SAC W/ ESPLANADE Scale: N.T.S. File:



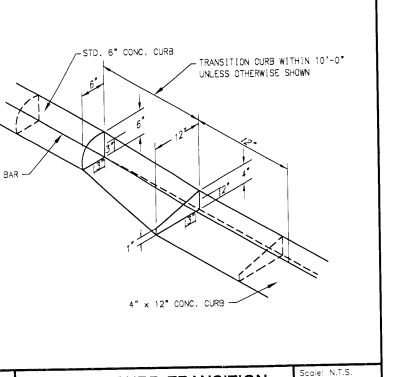
USE CONTINUOUS LONGITUDINAL REINFORCING IN CURBS NOT CONSTRUCTED MONOLITHICALLY, OR PROVIDE ALTERNATE CONCRETE CURB REINFORCEMENT IN ACCORDANCE WITH THE CITY OF HOUSTON DWG. NO. 02771-01.

2 4" MOUNTABLE CURB Scale: N.T.S. File:

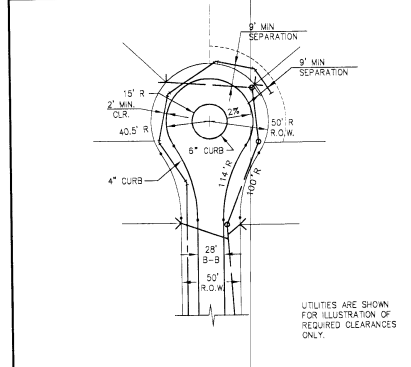


NOTE: WHEN CONCRETE CURB IS TO BE PLACED ON EXISTING CONCRETE BASE USE #4 @ 18" x 12" LONG, DOWELLED AND SET IN SULFUR OR QUICK SETTING CEMENT.

3 6" CONCRETE CURB Scale: N.T.S. File:

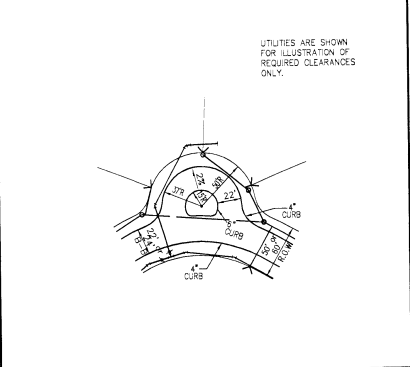


4 TYPICAL CURB TRANSITION Scale: N.T.S. File:



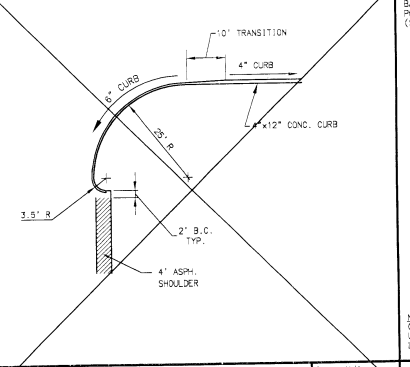
UTILITIES ARE SHOWN FOR ILLUSTRATION OF REQUIRED CLEARANCES ONLY.

5 TYPICAL CUL-DE-SAC Scale: N.T.S. File:

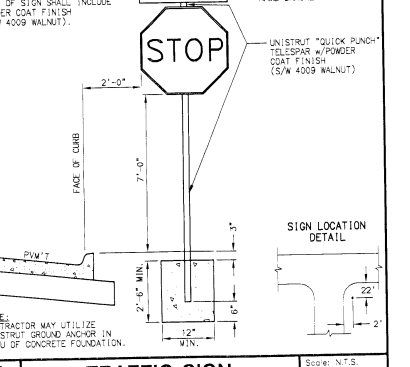


UTILITIES ARE SHOWN FOR ILLUSTRATION OF REQUIRED CLEARANCES ONLY.

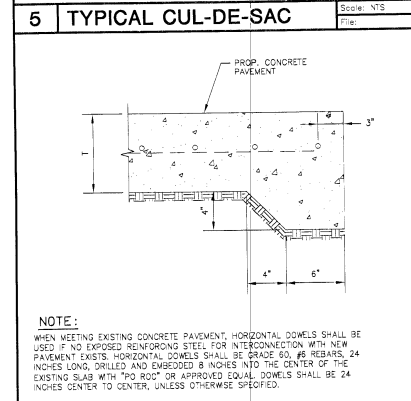
6 TYPICAL KNUCKLE CUL-DE-SAC Scale: N.T.S. File:



7 TYPICAL CURB RETURN - SHOULDER TO CURB Scale: N/A File:



8 TRAFFIC SIGN Scale: N.T.S. File:



NOTE: WHEN MEETING EXISTING CONCRETE PAVEMENT, HORIZONTAL DOWELS SHALL BE USED IF NO EXPOSED REINFORCING STEEL FOR INTERCONNECTION WITH NEW PAVEMENT EXISTS. HORIZONTAL DOWELS SHALL BE GRADE 60, #8 REBARS, 24 INCHES LONG, DRILLED AND SUBSIDED 8 INCHES INTO THE CENTER OF THE EXISTING SLAB WITH "PO ROD" OR APPROVED EQUAL. DOWELS SHALL BE 24 INCHES CENTER TO CENTER, UNLESS OTHERWISE SPECIFIED.

9 STANDARD PAVING HEADER Scale: N.T.S. File:

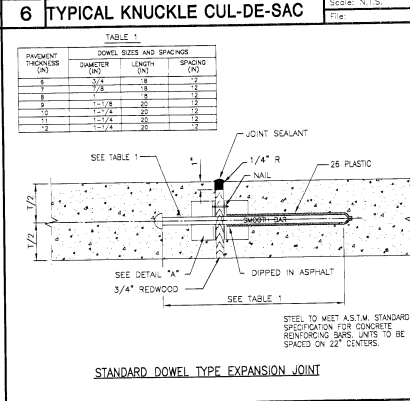
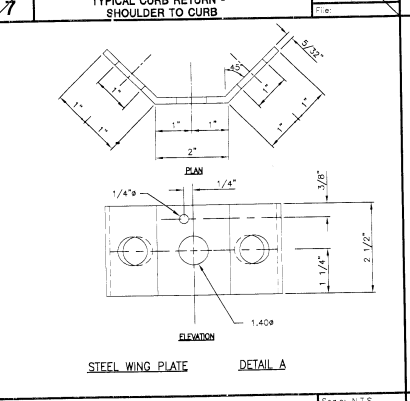


TABLE 1			
DOWEL SIZES AND SPACING			
PAVEMENT THICKNESS (IN)	DIMETER (IN)	LENGTH (IN)	SPACING (IN)
5	3/8	18	12
6	7/8	18	12
8	1-1/8	22	12
10	1-1/4	22	12
12	1-1/2	22	12
14	1-3/4	22	12

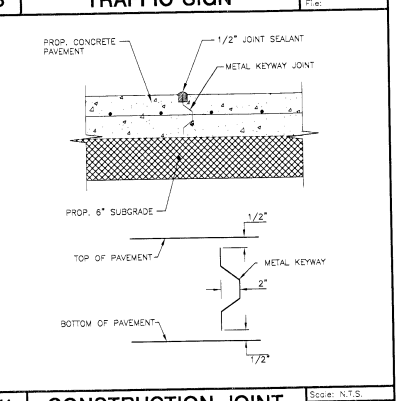
STANDARD DOWEL TYPE EXPANSION JOINT

10 EXPANSION JOINT Scale: N.T.S. File:



STEEL WING PLATE DETAIL A

11 CONSTRUCTION JOINT Scale: N.T.S. File:



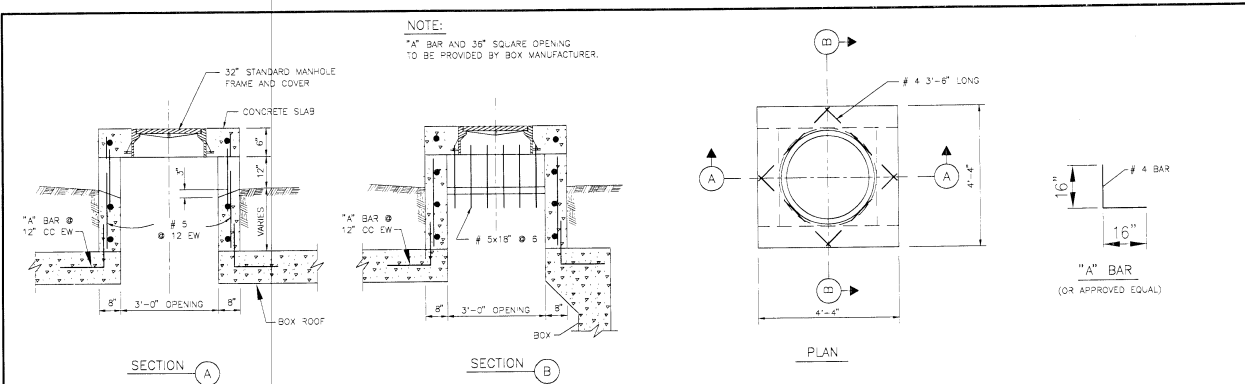
11 CONSTRUCTION JOINT Scale: N.T.S. File:

**PATE ENGINEERS**  
13333 N.W. Freeway, Suite 300 Houston, TX. Phone: 713-463-9775

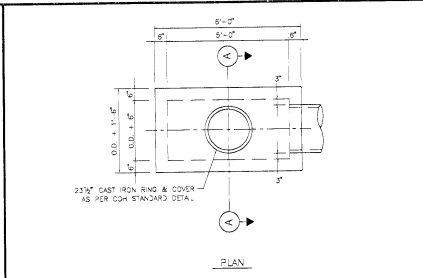
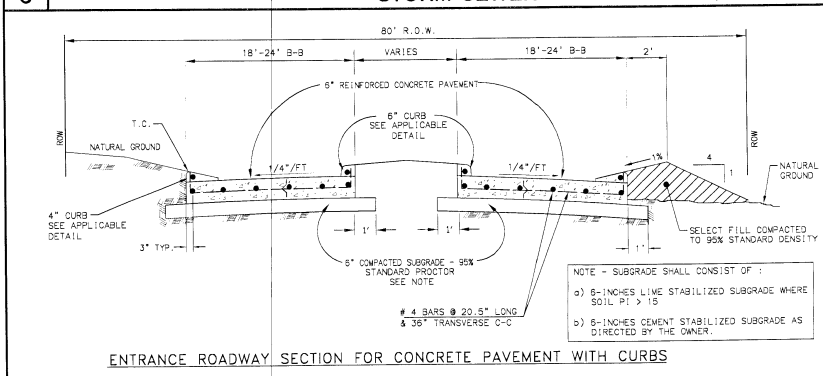
APPROVED B.D.B. DATE: AUG. 2003  
 DRAWN BY: R.A.H. CHECKED BY: D.E.C. JOB NO: 1205-010-00  
 BENCHMARK: THE WOODLANDS LAND DEVELOPMENT COMPANY  
 WORKSHEET: ALL ELEVATIONS SET TO NGS. NVD. 1984 ADJUSTMENT  
 1253 ADJUSTMENT = +0.37'  
 MONUMENT RESOLUTION 10'-19" ELEV. 148.19  
 GRADES SET IN CONCRETE LOCATED BY COORDINATES X=510.10108 Y=871.58478  
**THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.**  
 H.C.M.U.D. NO. 386  
**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**  
 PAVING DETAILS  
 DATE: 11/03/03 DRAWN BY: R.A.H. CHECKED BY: D.E.C.  
 FILE NO: 1205-010-00  
 DRAWING SCALE: AS SHOWN  
 VERT. : HORZ. :  
 SHEET NO: 20 OF 25

PATE & ASSOCIATES, INC. 13333 N.W. Freeway, Suite 300, Houston, TX 77040-1333

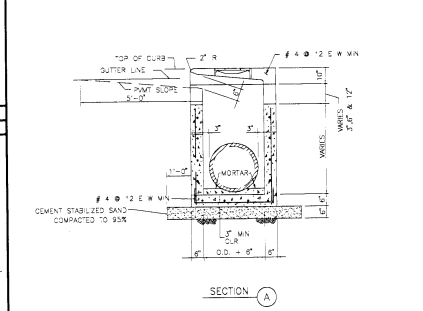
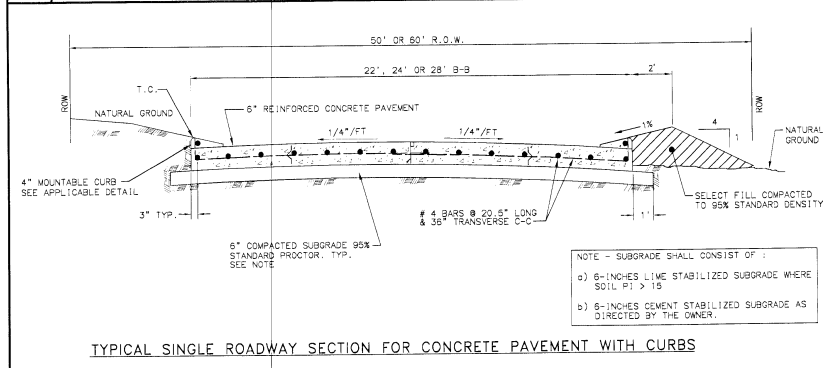
DATE: 3/10/2003  
 TIME: 10:00 AM  
 USER: BDD  
 PLOT: 1000



**3 STORM SEWER TYPE 'E' INLET (MODIFIED)** Scale: File:



**2 ENTRANCE PAVEMENT SECTION - 80' R.O.W. w/ CURB** Scale: N.T.S. File:




**4 MODIFIED TYPE "H-2" INLET** Scale: N.T.S. File:

**NOTE:**  
 1. CENTER REINFORCING IN CONCRETE WALLS AND SLAB.  
 2. 8" THICK BRICK WALLS AND 1"-2" THICK POLYURETHANE-INSULATED CONCRETE BASE MAY BE USED IN USE OF PRECAST CONCRETE. CEMENT STABILIZED SAND BASE CAN BE OMITTED WHEN USING 1"-2" THICK POLYURETHANE-INSULATED CONCRETE BASE.

MODIFIED TYPE "H-2" INLET FOR SIDE ENTRY  
 N.T.S.

**1 PAVEMENT SECTION - 50' or 60' R.O.W.** Scale: File:



*B.D. Dodder*  
9-10-03

**PATE ENGINEERS**  
 1333 N.W. Parkway Suite 300 - Ft. Lauderdale, Florida 33304-5716

APPROVED: B.D.B. DATE: AUG. 2003  
 DESIGNED BY: R.A.H. DRAWN BY: D.E.C. JOB NO. 1203-010-00

BEN CHILKARSKI  
 THE WOODLANDS LAND DEVELOPMENT COMPANY

MONUMENTS:  
 ALL ELEVATIONS SET TO NOD. NVD. 1984 ADJUSTMENT  
 1972 ACQUISITION # 1-027  
 MONUMENT LOCATION 10-19. ELEV. 148.19  
 GRADES SET IN CONCRETE, LOCATED BY  
 COORDINATES 104319.10106 78451.58478


THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
 H.C.M.U.D. NO. 386

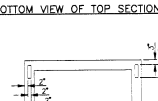
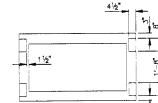
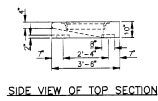
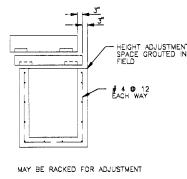
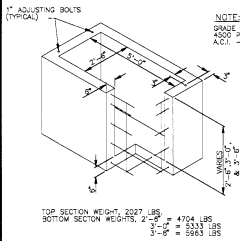
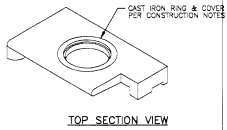
CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3

PAVING DETAILS

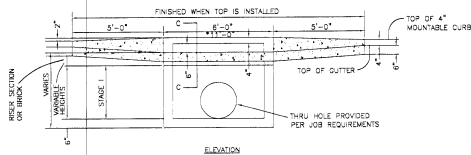
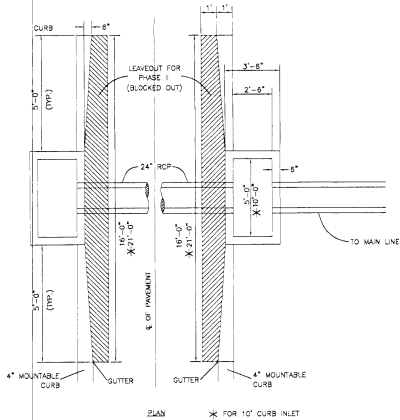
WATER: *[Signature]* TYPIC  
 ST & BRIDGE: *[Signature]* TYPIC

FILE NO:  
 DRAWING SCALE: AS SHOWN  
 VERT: +0.02 :  
 SHEET No. 21 OF 25



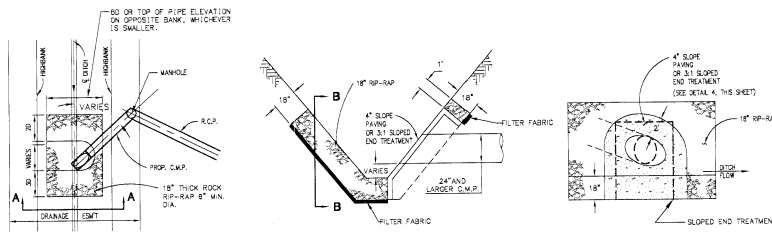


**PRECAST TYPE 'H-2' INLET**



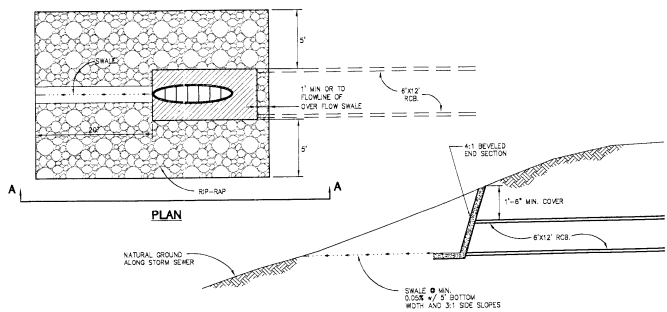
**1 H-2 INLET W/ MODIFIED BLOCKOUT**

Scale: N.T.S.  
Title:

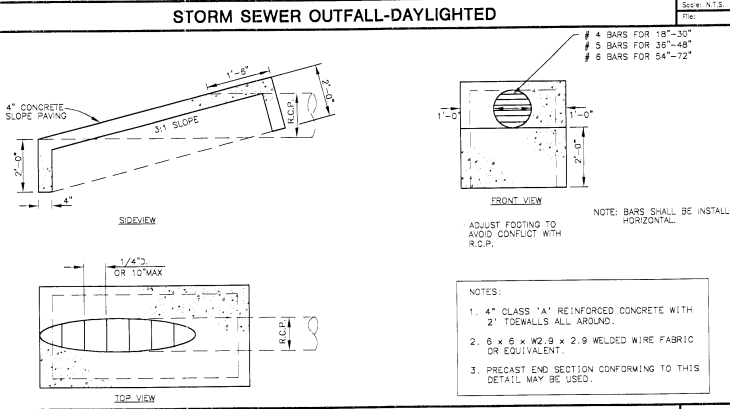


- NOTES:**
1. SLOPE PAVING SHALL BE 4" CLASS 'A' REINFORCED CONCRETE WITH 18" TOEWALL ALL AROUND.
  2. 18" THICK R/P-RAP SAKRETE OR BROKEN CONCRETE (NO EXPOSED RE-BARS & MIN. 50' THICKNESS PER BLOCK) INCLUDING 50 TO 100 LBS. PER BLOCK.) HAND PLACED ON FILTER FABRIC.
  3. R/P RIGIDITY SLOPE PROTECTION SHALL COMPLY WITH THESE DIMENSIONS AND REQUIREMENTS MODIFIED FOR RECTANGULAR CONFIGURATION.
  4. TIMBER BENT AS PER COH DWD NO. 02842-01. BURIED IN SLOPE.

**2 DITCH OUTFALL W/ SLOPE PROTECTION**



**3 STORM SEWER OUTFALL-DAYLIGHTED**



**4 3:1 SLOPED END SECTION**

Scale: N.T.S.  
Title:

*Bob D. Boney*  
7-10-03

**PATE ENGINEERS**  
13332 N.W. Freeway, Suite 200 - Houston, TX - Phone: 713-482-0778

APPROVED B.D.B. DATE: AUG. 2003  
 REVISIONS: NONE  
 DRAWN BY: D.E.C. DATE: 1205-010-00

BENCHMARK:  
 THE WOODLANDS LAND DEVELOPMENT COMPANY

MONUMENTS:  
 ALL ELEVATIONS SET TO VGS NOV. 1984 ADJUSTMENT  
 1974 ADJUSTMENT = +0.07'  
 MONUMENT ORIENTATION: 105-19' ELEV. 149.19'  
 BRASS SET IN CONCRETE LOCATED BY:  
 COORDINATES: X=45107.0108 Y=871284.78

**THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.**  
**H.C.M.U.D. NO. 386**

**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**

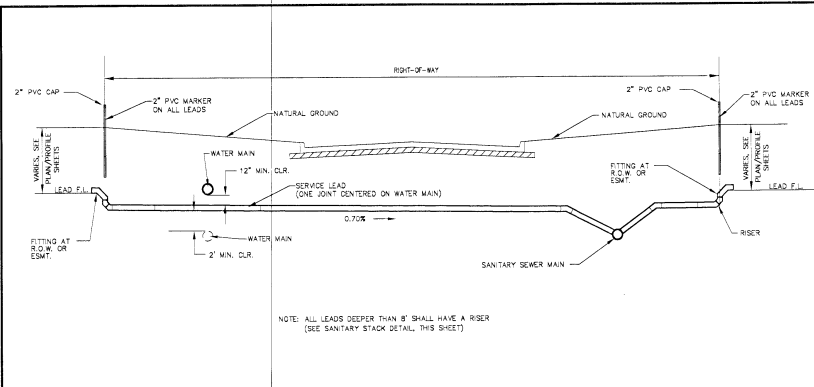
**PAVING AND DRAINAGE DETAILS**

DATE: 7/10/03  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]

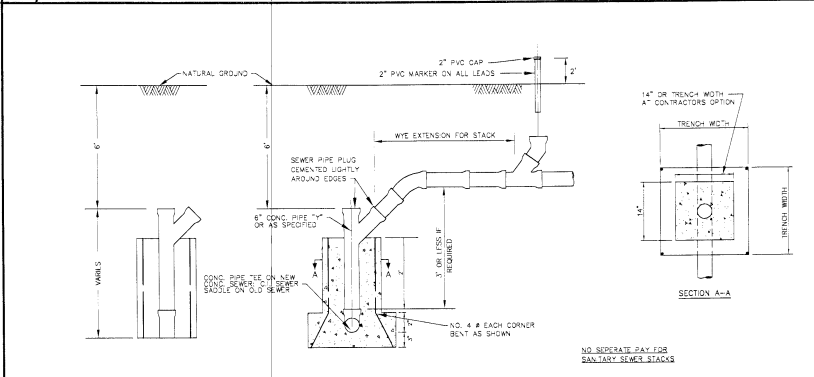
FILE NO.:  
 DRAWING SCALE: AS SHOWN  
 VERT.: -ORZ  
 CITY: HOUSTON, TEXAS

PROFESSIONAL ENGINEER  
 STATE OF TEXAS  
 NO. 72453

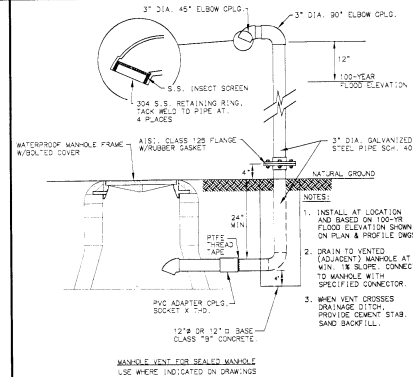
SHEET No. 22 OF 28



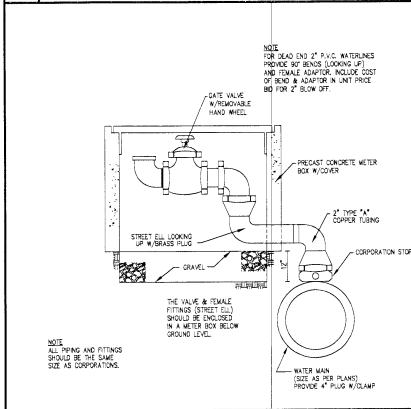
1 SANITARY AND WATER INTERSECTION DETAIL Scale: N.T.S. P.E.



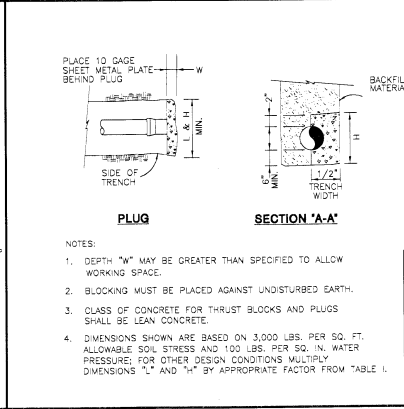
3 SANITARY STACK W/ WYE EXTENSION Scale: N.T.S. P.E.



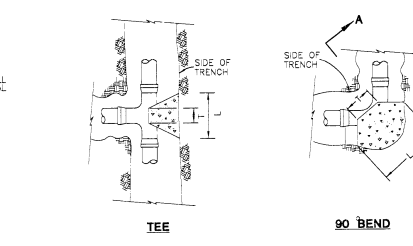
4 VENTED MANHOLE DETAIL Scale: N.T.S. P.E.



5 2" BLOW OFF, GATE VALVE & BOX DETAIL Scale: N.T.S. P.E.



6 THRUST BLOCK DETAIL Scale: N.T.S. P.E.

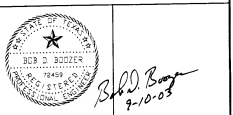


**TABLE I**  
CORRECTION FACTORS FOR ALLOWABLE SOIL STRESS SHOWN

MAX. WATER PRESSURE P.S.I.G.	1,000 LB/SF	2,000 LB/SF	3,000 LB/SF	4,000 LB/SF	5,000 LB/SF	10,000 LB/SF
75	1.50	1.08	0.87	0.75	0.67	0.48
100	1.73	1.22	1.00	0.87	0.77	0.55
150	2.12	1.50	1.22	1.06	0.95	0.67
200	2.45	1.73	1.41	1.22	1.10	0.77

**BLOCKING DIMENSION IN INCHES**

NOMINAL PIPE SIZE	90° BEND		45° BEND		TEE		PLUG	
	W	L	W	L	W	L	W	L
4"	6	12	10	8	10	12	8	6
6"	8	16	14	8	13	14	12	8
8"	10	21	18	10	15	18	13	10
12"	12	32	24	12	23	18	18	12
18"	USE RESTRAINED JOINTS							



**PATE ENGINEERS**  
13333 N.W. Freeway, Suite 200 Houston, Tx. Phone 713-462-2178

APPROVED: B.D.B. DATE: AUG. 2003  
DESIGNED BY: R.A.H. DRAWN BY: D.E.C. JOB NO.: 1205-010-00

BENCHMARK:  
THE WOODLANDS LAND DEVELOPMENT COMPANY  
MONUMENTS:  
ALL ELEVATIONS SET TO NGS. NAD83 1984 ADJUSTMENT  
1933 ADJUSTMENT # - 213  
NAD83 DATUM ELEVATION 10-19. ELEV. 149.19  
BRASS SET IN CONCRETE LOCATED BY  
COORDINATES X=31,011.0156 Y=97,584.78

THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.  
H.C.M.U.D. NO. 386  
CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3

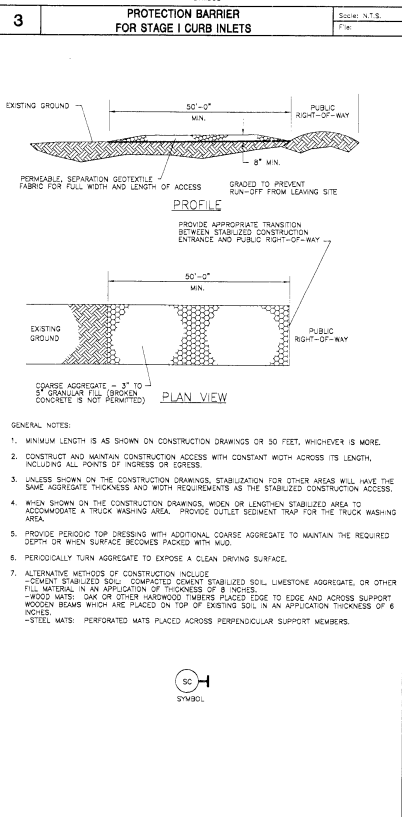
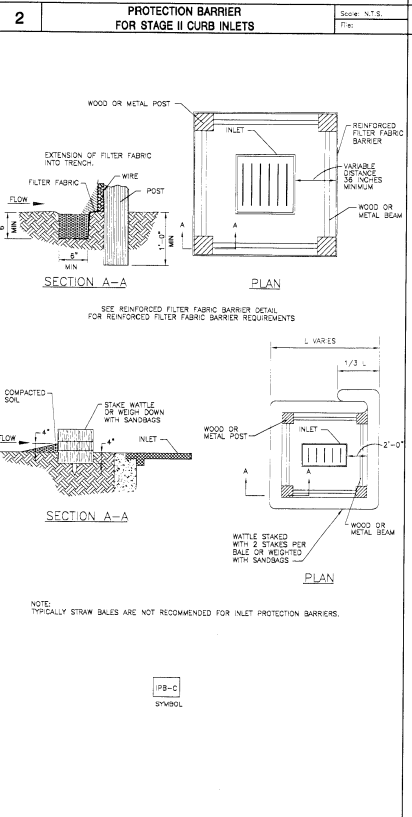
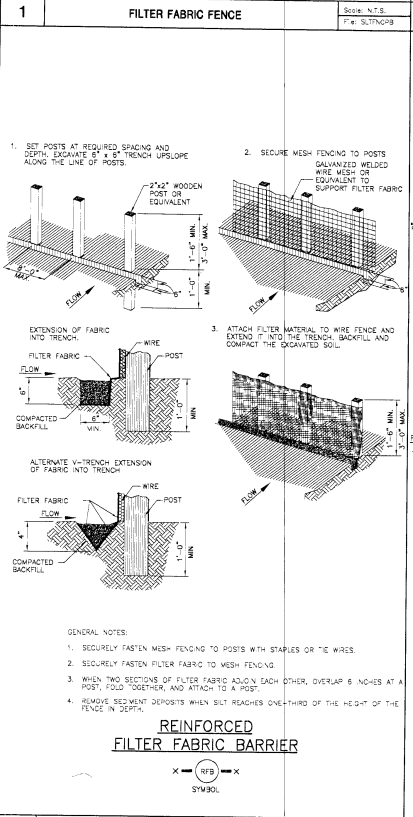
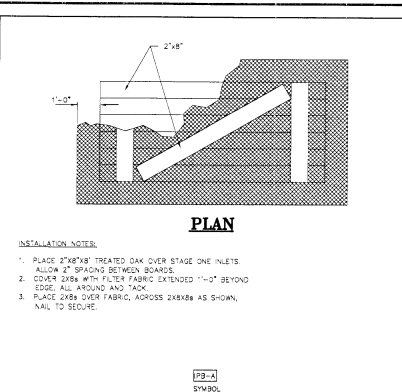
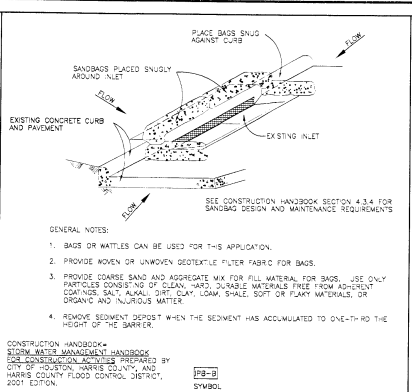
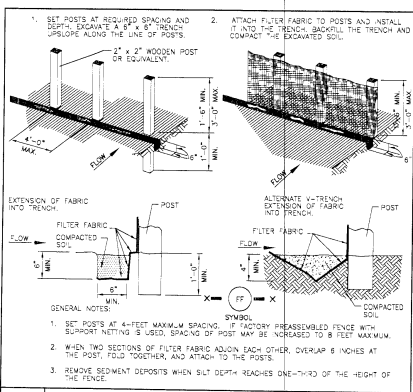
SANITARY SEWER AND WATER LINE DETAILS

DATE: 8/10/03  
DRAWN BY: R.A.H.  
CHECKED BY: D.E.C.  
SCALE: AS SHOWN

FILE NO.:  
DRAWING SCALE: AS SHOWN  
VERT: HORZ:  
SHEET NO. 23 OF 25







**INSTALLATION NOTES:**

1. PLACE 2\"/>

**EROSION AND SEDIMENTATION CONTROL NOTES:**

1. PROVISIONS SHALL BE MADE TO PROTECT DOWNSTREAM WATERCOURSES (I.E., STORM SEWER SYSTEMS, DITCHES, WETLANDS, ETC.) FROM SEDIMENT RUNOFF DEVELOPED FROM THE CONSTRUCTION PROCESS. PROVISIONS INCLUDE, BUT ARE NOT LIMITED TO, STRUCTURAL CONTROLS SUCH AS SILT FENCING, GEOTEXTILE FABRIC PROTECTION OF STORM SEWERS, HAY BALES, DICES, AND SANDBAG BARRIERS, AND / OR VEGETATION CONTROLS SUCH AS SEEDING OR EXISTING VEGETATIVE BUFFER STRIPS (MINIMUM 25 FEET WIDE).
2. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AT LOCATIONS SHOWN ON PLANS.
3. CONTRACTOR SHALL PERFORM DAILY STREET CLEANING ON ROADS AND STREETS ADJACENT TO THE PROJECT WHICH ARE USED AS ACCESS ROUTES FOR CONSTRUCTION TRAFFIC IF DIRT AND MUD IS NOT ADEQUATELY REMOVED FROM VEHICLES AT THE STABILIZED CONSTRUCTION EXITS.
4. LOCATE FUEL/WATER STORAGE AREAS AWAY FROM STORMWATER CONVEYANCE SYSTEMS. USE A MINIMUM 50 MIL POLYETHYLENE LINER UNDER ABOVE GROUND STORAGE TANKS. USE 2 FOOT HIGH BERMS AROUND FUEL STORAGE AREAS.
5. CONTRACTOR WILL ADVISE OWNER IMMEDIATELY, VERBALLY, AND IN WRITING, OF ANY FUEL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTIONS TAKEN TO REMEDY THE PROBLEM.
6. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL ENVIRONMENTAL LAWS.
7. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
8. CONTRACTOR SHALL INSPECT ALL STRUCTURAL CONTROLS WITHIN 24 HOURS AFTER ANY STORM EVENT THAT MEETS OR EXCEEDS 0.5 INCHES OF RAINFALL IN A 24 HOUR PERIOD. DURING PROLONGED RAINFALL EVENTS, CONTRACTOR SHALL INSPECT STRUCTURAL CONTROLS ON A DAILY BASIS. AT A MINIMUM, STRUCTURAL CONTROLS SHOULD BE INSPECTED ONCE EVERY 14 CALENDAR DAYS. A QUALIFIED REPRESENTATIVE OF THE CONTRACTOR, AS APPROVED BY THE OWNER, SHALL PROVIDE THESE INSPECTIONS. SHOULD CONTROLS BECOME INEFFECTIVE, NECESSARY REPAIRS SHALL BE PERFORMED TO RETURN THE INTEGRITY OF THE STRUCTURAL CONTROLS. REMOVE ALL SEDIMENT IF IT ACCUMULATES TO 1/3 THE HEIGHT OF THE SILT FENCE. MATERIAL MAY BE SPREAD ON ADJACENT PROPERTY.
9. CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEMS THROUGHOUT THE DURATION OF THE CONTRACT, OR SEPARATE PAY.
10. CONTRACTOR WILL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
11. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
12. EQUIPMENT STAGING AREA TO BE DESIGNATED BY CONTRACTOR AND APPROVED BY OWNER PRIOR TO CONSTRUCTION.
13. AT COMPLETION OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE EROSION AND SEDIMENTATION CONTROL SYSTEMS BEFORE RELIEVING CONTRACTOR OF HIS MAINTENANCE RESPONSIBILITIES. PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF SEDIMENTATION CONTROL SYSTEMS AFTER THE PROJECT HAS BEEN ACCEPTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
14. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE PROJECT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
15. UTILITY CONTRACTOR SHALL PROVIDE STAGE II INLET PROTECTION BARRIERS AT ALL PROPOSED INLETS AS SHOWN ON THIS SHEET.
16. UTILITY CONTRACTOR SHALL PROVIDE STAGE II INLET PROTECTION BARRIERS AT ALL PROPOSED INLETS AS SHOWN ON THIS SHEET.
17. UTILITY CONTRACTOR SHALL PROVIDE HYDROMULCH SEEDING FOR ALL DISTURBED AREAS BETWEEN CURB AND R.O.W.



*Barry D. Brown*  
7-10-05

**PATE ENGINEERS**

12333 N. Freeway, Suite 300, Houston, TX, Phone 713-462-0778

APPROVED B.O.B. DATE: AUG. 2003  
 DRAWN BY: RAL DATE: DEC. 2002  
 CHECKED BY: BEN CHAMBERLAIN  
 THE WOODLANDS LAND DEVELOPMENT COMPANY

MONUMENTS:  
 ALL ELEVATIONS SET TO NGS. NAD 83 ADJUSTMENT  
 1973 ADJUSTMENT = -0.07'  
 MONUMENT DESIGNATION: 45-19, ELEV. 148.19  
 BRASS SET IN CONCRETE, LOCATED BY  
 COORDINATES: X=630,101.036 Y=501,584.748

**THE WOODLANDS LAND DEVELOPMENT COMPANY, LP.**  
 H.C.M.U.D. NO. 386

**CARLTON WOODS AT VILLAGE OF HARMONY BENDS, SEC. 3**

**POLLUTION PREVENTION DETAILS & NOTES**

DATE: 7/10/05  
 DRAWN BY: RAL  
 CHECKED BY: BEN CHAMBERLAIN

FILE NO.:  
 DRAWING SCALE: AS SHOWN  
 VERT: 1" = 4'-0"  
 HORZ: 1" = 40'-0"



**1. PAVING**

I. DESIGN THICKNESS OF PAVING: 6 INCHES

II. STABILIZED SUBGRADE TO A DEPTH OF 6 INCHES

III. DESIGN STRENGTH OF CONCRETE: 3000 PSI

IV. TYPE AND PLACEMENT OF STEEL: #4 BARS  
20.5" LONGITUDINAL AND 26" TRANSVERSE (ON CENTER)

NOTES:  
1 - V TO BE COMPLETED ONLY IF PAVING IS TO BE ACCEPTED BY HARRIS COUNTY

**DRIVEWAYS**

I. NUMBER OF DRIVEWAY APPROACHES PROPOSED: 0

II. HARRIS COUNTY STANDARD DRIVEWAY DETAIL APPEARS ON SHEET \_\_\_\_\_

NOTES:  
1 - TO BE COMPLETED ONLY IF PROJECT DETAILS CONSTRUCTION OF DRIVEWAYS AT TIME OF DEVELOPMENT

**CURBING**

I. ISLANDS AND MEDIANS REQUIRE STANDARD 6" CURBING

II.  STANDARD 6" CURBING PROPOSED  
 4" x 12" CURBING PROPOSED  
 6" OR 4" x 12" ALLOWED EXCEPT AT MEDIANS AND ISLANDS

**TRAFFIC CONSIDERATIONS**

I. **MEDIAN CUTS**  
 NO MEDIAN CUT OR RELOCATION IS PROPOSED  
 MEDIAN MODIFICATIONS ARE SHOWN ON SHEET \_\_\_\_\_

II. **LEFT HAND TURN**  
 NO LEFT HAND TURN LANE IS PROPOSED  
 LEFT HAND TURN LANE IS SHOWN ON SHEET \_\_\_\_\_

III. **TRAFFIC CONTROL PLAN**  
 NO WORK IN THE RIGHT OF WAY IS PROPOSED THAT WOULD INTERFERE WITH TRAFFIC FLOW  
 TRAFFIC CONTROL SHOWN ON SHEET \_\_\_\_\_

NOTES:  
1 - V TO BE COMPLETED FOR ALL PROJECTS

**2. SUBDIVISION DRAINAGE**

I. **DRAINAGE SYSTEM TYPE**  
 CURB AND GUTTER (SPECIFY TYPE)  
 6" STANDARD  4" ROLL-OVER  
 ROADSIDE DITCH  
 OTHER: \_\_\_\_\_

II. **DESIGN METHOD USED**  
 CITY OF HOUSTON 2-YEAR FREQUENCY  
 OTHER: \_\_\_\_\_

III. **DRAINAGE SYSTEM OUTFALL**  
 TO POND MEETING HCFCD CRITERIA  
 TO HCFCD DRAINAGE DITCH UNIT NO. 100-00-00  
 TO HARRIS COUNTY ROADSIDE DITCH  
ROAD NAME: \_\_\_\_\_  
 OTHER: \_\_\_\_\_

IV. **DRAINAGE SYSTEM FLOW RATE**  
FLOW PRIOR TO DETENTION: \_\_\_\_\_ CFS  
FLOW AFTER DETENTION (IF REQUIRED): \_\_\_\_\_ CFS

NOTES:  
1 - V REQUIRED ON ALL SUBDIVISION TYPE PROJECTS INCLUDING MANUFACTURED HOME PARKS

**3. SITE DRAINAGE**  
(OTHER THAN SUBDIVISION TYPE PROJECTS)

I. **NEW AREA DRAINAGE**  
 NEW DEVELOPMENT AREA  
 RE-DEVELOPMENT AREA (AMOUNT INCREASED IMPERVIOUS AREA)

II. **RETENTION VOLUME (DRY BASIN)**  
NEW AREA: \_\_\_\_\_ X 0.05 = \_\_\_\_\_ ACFS-FEET  
RETENTION REQUIRED:  
PROPOSED VOLUME = \_\_\_\_\_ ACRE FEET

III. **OUTFALL**  
OUTFALL TO:  ROADSIDE DITCH  
 STORM SEWER  
 OTHER: \_\_\_\_\_

ROADSIDE DITCH OUTFALL:  
ROAD FRONTAGE: \_\_\_\_\_ X 0.0059 = ALLOWED OUTFALL  
PROPOSED OUTFALL RATE: \_\_\_\_\_

STORM SEWER OUTFALL:  
CAPACITY ALLOCATED TO THIS FROM D. A. MAP: \_\_\_\_\_  
FROM DRAINAGE AREA MAP DATED: \_\_\_\_\_  
PREPARED BY: \_\_\_\_\_  
ACTUAL OUTFALL RATE: \_\_\_\_\_

V. **EMBED DETENTION FACILITIES**  
VOLUME THAT QUANTITY FLOWS:  
VOLUME THAT IS PUMPED:  
ENHANCEMENT TO "N" TO ROADSIDE DITCH OR STORM SEWER:  
PUMP SPECIFICATIONS AND OPERATING PLAN ATTACHED ON SHEET \_\_\_\_\_

V. **FLOW RESTRICTOR SIZE**  
OUTFALL PIPE SIZE: \_\_\_\_\_  
RESTRICTOR PIPE SIZE: \_\_\_\_\_

NOTES:  
1. REQUIRED FOR ALL PROJECTS OTHER THAN SUBDIVISION TYPE PROJECTS DEVELOPMENT AND INCLUDES ALL AREA WHICH IS UNDER, UNDER OR GRADING WILL OCCUR. AREAS NOT INCLUDED SET ASHIFT. THE PROJECT'S BOUNDARIES MUST BE DELINEATED AS A "NO WORK" AREA ON THE DRAWING.  
2. I - V REQUIRED WHEN PROPOSED FACILITY WILL INCREASE THE AMOUNT OF RUNOFF TO A DRAINAGE STRUCTURE AND CAPACITY IN THE FULLY DEVELOPED CONDITION OF THE AREA IT SERVES. NO DETENTION IS REQUIRED.

**4. WATER AND WASTEWATER**

**TYPE OF SERVICE PROPOSED**

MUNICIPALITY:  
MUNICIPAL UTILITY DISTRICT: HARRIS COUNTY M.U.D. NO. 386  
OTHER DISTRICT: \_\_\_\_\_

PRIVATE WATER AND WASTEWATER SYSTEMS  
 PRIVATE WATER SYSTEM AND INDIVIDUAL OSSF  
 INDIVIDUAL WATER WELL AND OSSF  
 OTHER:  
 NO UTILITIES ARE PROPOSED

II. **PROOF OF CAPACITY**  
 LETTER FROM DISTRICT AUTHORIZING SERVICE AND CONNECTION  
 TCEQ APPROVAL FOR WATER SYSTEM AND PERMIT FOR WASTEWATER SYSTEM.  
 TCEQ APPROVAL FOR WATER SYSTEM AND OSSF FEASIBILITY REPORT  
 OSSF FEASIBILITY REPORT WHICH CONSIDERS INDIVIDUAL WELLS

III. **AMOUNT OF FLOW**  
 RESIDENTIAL: \_\_\_\_\_ LOTS OR UNITS  
 COMMERCIAL: \_\_\_\_\_ AVERAGE DAILY FLOW  
 OTHER: \_\_\_\_\_

NOTES:  
1. COMPLETE FOR ALL PROJECTS  
2. COMPLETE FOR ALL PROJECTS  
3. COMPLETE ONLY IF "TCEQ USE-CAPACITY" IS PROPOSED

**5. DESCRIPTION OF PROPERTY**

I. LEGAL DESCRIPTION: A 50.15 ACRE SUBDIVISION OUT OF THE WILLIAM WHITE SURVEY A-823, HARRIS COUNTY, TEXAS, CONTAINING 38 LOTS, 3 BLOCK, AND 4 RESTRICTED RESERVES.

NEW PLAT LOCATED IN THESE SURVEYS: \_\_\_\_\_

REPLAT OF RECORDED SUBDIVISION OR RESERVE KNOWN AS LANEBERGER AND BLANK SUBDIVISION

II. **ADJACENT ROADS** KUMKENDALL

III. **JURISDICTIONS**  
 CITY OF HOUSTON  
 CITY OF \_\_\_\_\_  
 CITY OF HOUSTON  
 COUNTY DISTRICT: HARRIS COUNTY M.U.D. NO. 386  
 OTHER: \_\_\_\_\_

NOTES:  
1. COMPLETE FOR ALL PROJECTS  
2. COMPLETE ONLY IF PROJECTS ADJACENT TO A PUBLIC OR PRIVATE ROAD  
3. COMPLETE FOR ALL PROJECTS

**6. STORM WATER QUALITY**

I. **CONSTRUCTION PROTECTIVE MEASURES**  
 PROTECTIVE MEASURES SHOWN ON SHEET(S) 6, 7 & 24

II. **APPLICABILITY FOR PERMANENT FEATURES**  
 EXEMPT NEW DEVELOPMENT UNDER 5 ACRES IN SIZE  
 EXEMPT REDEVELOPMENT UNDER 1 ACRE IN SIZE  
 EXEMPT "GRAND FATHERED" PROJECT.  
 "STORM WATER QUALITY MANAGEMENT PLAN" INCLUDED. (SEPARATE)  
\* TO BE INCLUDED IN THE STORM WATER QUALITY PLAN FOR VILLAGE OF CARLTON WOODS CREEKSIDE PHASE I PER 1205-015-01, REQUEST NO. 182928

III. **STORM WATER QUALITY FEATURES**  
 VEGETATIVE CONTROLS USED: (FILTER STRIP, GRASSY SWALE) CALCULATIONS AND DETAILS APPEAR ON SHEET(S) \_\_\_\_\_  
 POND STRUCTURE USED (WET, DRY, WETLANDS) CALCULATIONS AND DETAILS APPEAR ON SHEET(S) \_\_\_\_\_  
\* TO BE INCLUDED IN THE STORM WATER QUALITY PLAN FOR VILLAGE OF CARLTON WOODS CREEKSIDE PHASE I PER 1205-015-01, REQUEST NO. 182928  
 OTHERS: \_\_\_\_\_

NOTES:  
1 - V REQUIRED ON ALL PROJECTS. IF REQUIRED IF NO EXEMPT OR "GRANDFATHERED"

**7. FLOOD CONTROL DISTRICT CRITERIA**

I. **DETENTION SUMMARY**  
~~SEE DRAINAGE ANALYSIS PREPARED BY THE ENGINEER. NO OUTFALL. CONSTRUCTION MEASURES TO BE PROVIDED BY THE DEVELOPER. SEE DRAINAGE ANALYSIS PREPARED BY THE ENGINEER. NO OUTFALL. CONSTRUCTION MEASURES TO BE PROVIDED BY THE DEVELOPER.~~

SEE DRAINAGE ANALYSIS PREPARED BY PATE ENGINEERS, INC. ENTITLED "INTERIM STORM WATER DETENTION ANALYSIS FOR THE DEVELOPMENT OF THE WOODLANDS CARLTON WOODS CREEKSIDE IN THE VILLAGE OF CREEKSIDE PARK," DATED APRIL 28, 2004, REQUEST NO. \_\_\_\_\_

II. **DETENTION COSTS SUMMARY**  
LAND COSTS: \$ \_\_\_\_\_  
ENGINEERING COSTS: \$ \_\_\_\_\_  
CONSTRUCTION COSTS: \$ \_\_\_\_\_  
TOTAL COSTS: \$ \_\_\_\_\_

III. **FLOODPLAIN STORAGE SUMMARY** (APPLIES ONLY TO PORTION OF LAND LOCATED WITHIN FLOODPLAIN AS DELINEATED BY FIRM MAPS)  
A. TOTAL VOLUME OF MATERIAL PROPOSED TO BE PLACED WITHIN THE FIRM DELINEATED FLOODPLAIN (FILL, BASE, CONCRETE, ASPHALT, ETC.):  
e. BELOW ELEVATION (19' ADJ.) \_\_\_\_\_ CUBIC YARDS  
B. TOTAL VOLUME OF MATERIAL PROPOSED TO BE REMOVED FROM THE FIRM DELINEATED FLOODPLAIN:  
e. BELOW ELEVATION (19' ADJ.) \_\_\_\_\_ CUBIC YARDS

IV. **HCFCD STANDARD NOTES**: SEE SHEET \_\_\_\_\_ OF THESE PLANS.  
V. **HCFCD STANDARD DETAILS**: SEE SHEET \_\_\_\_\_ OF THESE PLANS.  
VI. **REFERS TO PLAN SHEETS** \_\_\_\_\_ FOR EXISTING AND PROPOSED RIGHT-OF-WAY DELINEATION AND COMPLETE RECORDING INFORMATION TO INCLUDE DEEDS FILE NUMBERS, TYPE OF ESTATE (E.G., DRAINAGE EASEMENT, EASE STRIP, ETC.) AND GRANTEES (E.G., CDH, HCFCD, PUBLIC, "XDOT, ETC.)

NOTES:  
1. COMPLETE ONLY IF HCFCD OR HARRIS COUNTY IS REQUESTING DETENTION.  
2. COMPLETE ONLY IF PROJECT IS WITHIN 500 FT. BUFFER OF DRAINAGE CHANNELS OR LANEWAY WATERWAYS.  
3. COMPLETE ONLY IF PROJECT IS WITHIN 500 FT. BUFFER OF DRAINAGE CHANNELS OR LANEWAY WATERWAYS.  
4. COMPLETE ONLY IF PROJECT IS WITHIN 500 FT. BUFFER OF DRAINAGE CHANNELS OR LANEWAY WATERWAYS.  
5. COMPLETE ONLY IF PROJECT IS WITHIN 500 FT. BUFFER OF DRAINAGE CHANNELS OR LANEWAY WATERWAYS.  
6. COMPLETE ONLY IF PROJECT IS WITHIN 500 FT. BUFFER OF DRAINAGE CHANNELS OR LANEWAY WATERWAYS.

**8. FLOOD PLAIN STATUS**

I. **GENERAL INFORMATION**  
FIRM PLAN(S) FOR PROPERTY: 4820100070  
FIRM PLAN(S) DATE: NOV. 5, 1998  
STATUS OF PROPERTY ON MAP  
 ENTIRELY LOCATED IN UNSHADED ZONE "X"  
 ENTIRELY LOCATED IN SHADED AND UNSHADED ZONE "X"  
 LOCATED PARTIALLY IN ZONE "A2" (DELINATE ON SITE PLAN)  
 LOCATED ENTIRELY IN ZONE "A2" (INDICATE BASE FLOOD LEVEL ON SITE PLAN)  
 OTHER:  
 SITE REMOVED FROM FLOODPLAIN BY LOWA OR LOWA-FF CASE NO. \_\_\_\_\_

ELEVATION INFORMATION  
BENCHMARK USED  
 FEAM RM BENCHMARK  
 HARRIS-GALVESTON COASTAL SUBSEQUENCE DISTRICT BENCHMARK (FOR COASTAL AREAS)  
 OTHER:  
DESCRIPTION OF BENCHMARK INCLUDING ELEVATION, DATUM AND YEAR OF ADJUSTMENT: THE WOODLANDS AND DEVELOPMENT COMPANY MONUMENTS  
ELEVATIONS SET TO NAD 83 (NOV 1984 ADJUSTMENT)  
1974 ADJUSTMENT = +0.07 MONUMENT DISLOCATION = -0.19  
ELEV. 149.19 BRASS SET IN CONCRETE LOCATED BY COORDINATES: X=1121.07-08 Y=871.584-78

II. **FLOOD PLAIN DETERMINATION BASED ON GROUND ELEVATION**  
 PROPERTY LIES ENTIRELY ABOVE THE BASE FLOOD LEVEL AND IN ZONE "X" (SHADED OR UNSHADED)  
 PROPERTY LIES PARTIALLY BELOW THE BASE FLOOD LEVEL (MUST BE DELINEATED ON TOPOGRAPHIC SURVEY)

III. **FLOOD HAZARD RECOVERY DATA**  
 I HEREBY ACKNOWLEDGE THAT NEW FLOOD HAZARD RECOVERY DATA FOR THIS AREA HAS BEEN RELEASED, AND I HAVE HAD AN OPPORTUNITY TO REVIEW IT.  
 NO FLOOD HAZARD RECOVERY DATA HAS BEEN RELEASED FOR THIS AREA AT THE TIME OF THIS SUBMITTAL.

NOTES:  
1. COMPLETE FOR ALL PROJECTS  
2. COMPLETE ONLY IF PROJECT IS ADJACENT TO 100-YEAR FLOOD PLAIN

VEILED BY: \_\_\_\_\_

**REVIEWER'S SIGNATURE BLOCK**  
THE PROJECT KNOWN AS  
THE WOODLANDS CARLTON WOODS CREEKSIDE SEC. 3  
IN THE VILLAGE OF CREEKSIDE PARK  
WAS ACCEPTED BY THE FOLLOWING GROUPS FOR THE PURPOSES LISTED BELOW:

**ENGINEERING DIVISION**

BY: Larry Underwood DATE: 5-11-04  
AS TO PLACING AND/OR BRIDGEING ONLY

BY: David B. Bell DATE: 5/7/04  
AS TO STORM WATER QUALITY

**HARRIS COUNTY FLOOD CONTROL DISTRICT**

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
AS TO GENERAL COMPLIANCE WITH DISTRICT CRITERIA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
AS TO LOCATION OF ITEMS IN DISTRICT RIGHT OF WAY

THE PROJECT HAS BEEN REVIEWED, HOWEVER, THIS DOES NOT MEAN THE ENTIRE PROJECT INCLUDING ALL SUPPORTING DATA AND CALCULATIONS HAVE BEEN COMPLETELY CHECKED AND VERIFIED. THESE DRAWINGS ARE 50% DATED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, WHICH THEREFORE CONVEYS THE ENGINEER'S RESPONSIBILITY AND ACCURACY. THIS ACCEPTANCE DOES NOT RELIEVE ANY PARTY FROM COMPLYING WITH ANY OTHER LEGALLY ADOPTED REGULATION OR ORDINANCE RELATED TO LAND DEVELOPMENT. IF CITY SIGNATURES ARE REQUIRED BY ORDINANCE, COUNTY PERMITS WILL NOT BE ISSUED UNTIL SUCH SIGNATURES ARE OBTAINED.

**ENGINEER'S CERTIFICATION**

I, Bob D. Brooker, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS DO HEREBY CERTIFY THAT THE INFORMATION PRESENTED ON THIS SHEET IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.  
THE COMPLETED PROJECT CONSISTS OF DRAWING SHEETS 1 THRU 25.

Bob D. Brooker DATE: 4-15-04  
SIGNATURE

**REVISIONS**

DATE	SHEET NO.	DESCRIPTION	REVIEWER'S ACKNOWLEDGMENT

PROJECT: THE WOODLANDS CARLTON WOODS CREEKSIDE SEC. 3  
IN THE VILLAGE OF CREEKSIDE PARK

REQUEST NO. 180897 APPLICANT NO. 44293

SUBDIVISION I.D. NO. \_\_\_\_\_ PROPERTY NO. \_\_\_\_\_

**EXPRESS REVIEW**

SHEET NUMBER 25 OF 25

NOTE: IF A MAJOR CATEGORY ON THIS SHEET IS NOT REQUIRED FOR THE PROJECT, "X" THROUGH THAT ENTIRE SECTION, CATEGORY (6) MUST BE COMPLETED.