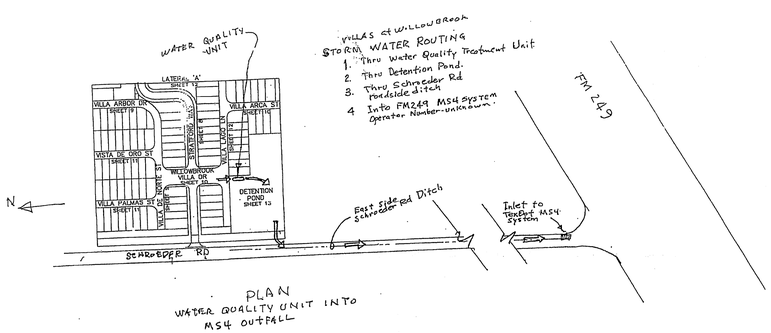


WATER QUALITY UNIT DESIGN AND FABRICATION SPREADSHEET

Enter Project Name:	Villas at Willowbrook
Enter Date:	1/24/05
Enter Project #:	482-U
Engineer:	B. K. Wilson
Does system have a by-pass?	YES
Select by-pass diameter (in):	30 IN.
Enter beginning by-pass invert elev. (ft):	124.21
Select system inlet diameter (in):	10 IN.
Enter desired flow treatment (CFS):	1.32
Select Particle Size Based on Sieve #:	140 Sieve
Gravity (cm/sec^2):	981.5
Density of Particle (g/cm^3):	1.9
Density of Medium (g/cm^3):	1
Viscosity (dyne-sec/cm^2):	0.01002
Settling Distance (ft):	0.991666667
Settling Velocity (ft/sec):	0.01805466
Settling Time (sec):	55
Outlet Orifice (in):	6.15
Outlet pipe (in):	8

	60" Chamber	48" Chamber	42" Chamber	36" Chamber
Velocity In Chamber (ft/sec):	0.0672	0.1050	0.1372	0.1867
Length Of Sediment Chamber (in):	141.33	141.33	141.33	141.33
Length Of Oil Chamber (in):	70.67	70.67	70.67	70.67
Length Of Module (ft):	19.67	19.67	19.67	19.67

Select Desired Chamber Size: 36" Chamber

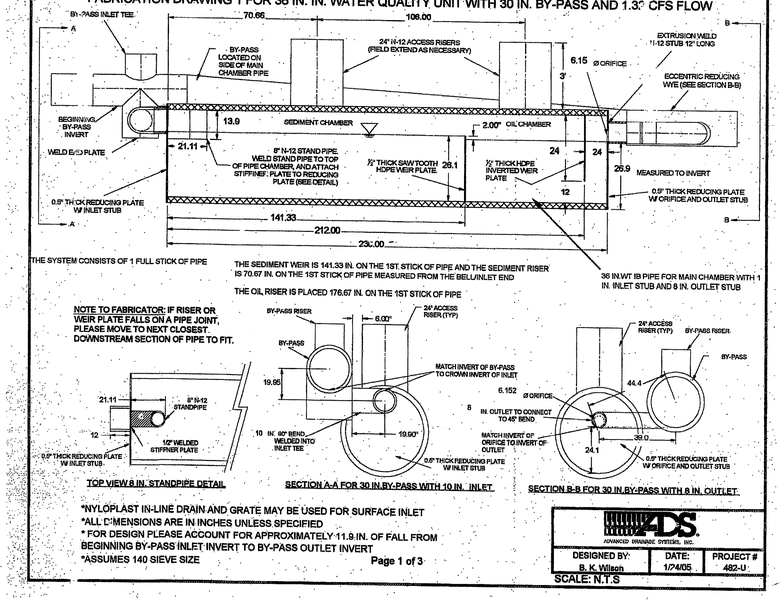
Actual Volume Stored (GAL):	705.0
Volume Stored for full barrel (GAL)	1039.3
Actual Volume (ft^3)	94.3
Volume Stored for full barrel (ft^3)	138.9

Particle Diameter Table Sieve	
Sieve Number	Particle Size
200	.000244 ft (.0075 cm)
140	.000348 ft (.0106 cm)
100	.000492 ft (.0150 cm)
50	.000984 ft (.0300 cm)

Select one: Fabricated Fittings on By-pass (24 In or larger)

ADS
ADVANCED DRAINAGE SYSTEMS, INC.

VILLAS AT WILLOWBROOK
FABRICATION DRAWING 1 FOR 36 IN. IN. WATER QUALITY UNIT WITH 30 IN. BY-PASS AND 1.3 CFS FLOW



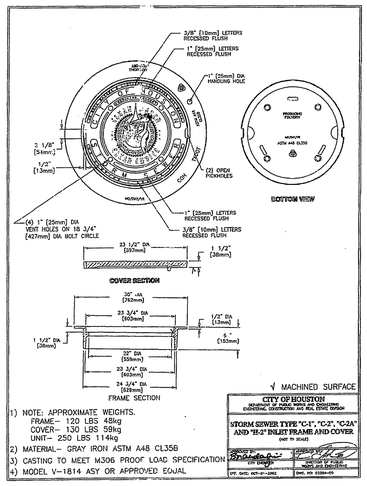
*NYLOPLAST IN-LINE DRAIN AND GRATE MAY BE USED FOR SURFACE INLET
*ALL DIMENSIONS ARE IN INCHES UNLESS SPECIFIED
* FOR DESIGN PLEASE ACCOUNT FOR APPROXIMATELY 11.9 IN. OF FALL FROM BEGINNING BY-PASS INLET INVERT TO BY-PASS OUTLET INVERT
*ASSUMES 140 SIEVE SIZE

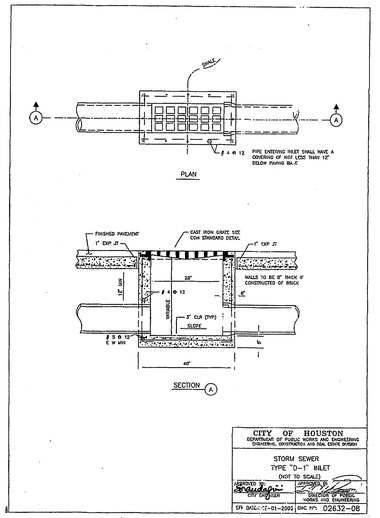
Page 1 of 3

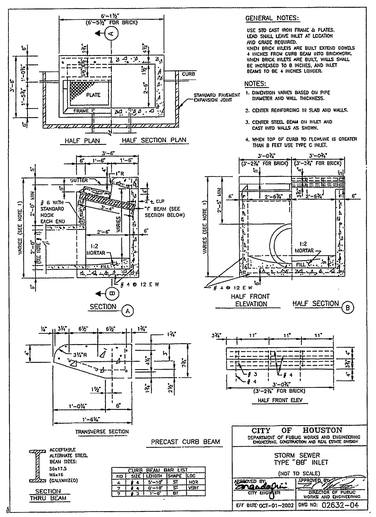
ADS ADVANCED DRAINAGE SYSTEMS, INC.

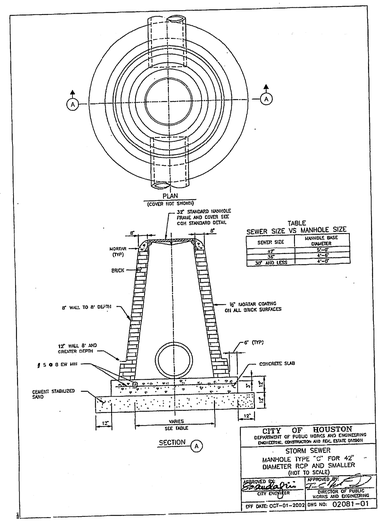
DESIGNED BY:	DATE:	PROJECT #
B. K. Wilson	1/24/05	482-U

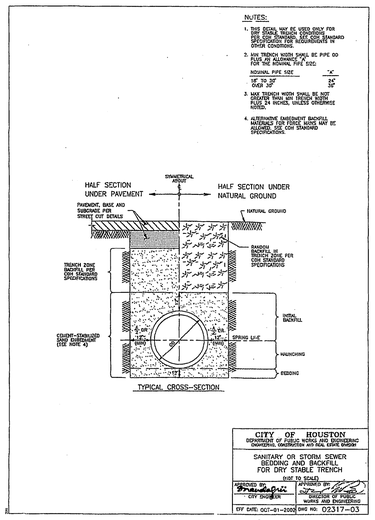
SCALE: N.T.S

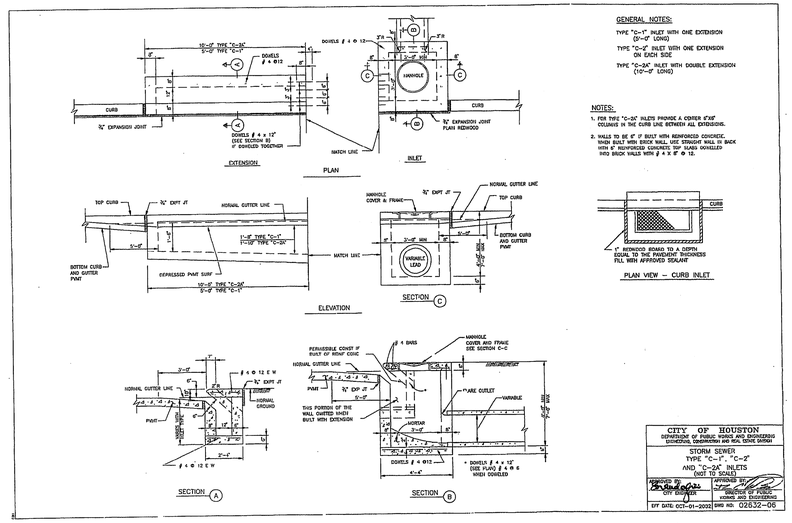












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1405 ALLSTON ST.
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(713)802-1019

REGISTERED TO PRACTICE IN TEXAS
BOBBY K. WILSON
25963
REGISTERED PROFESSIONAL ENGINEER
01-01-05

VILLAS AT WILLOWBROOK

STORM SEWER DETAILS and STORM WATER QUALITY UNIT DETAILS

WATER	WASTEWATER	TRAFFIC
Rothgeb 4.6.05	4-1-05	
ST. & BRIDGE	STORMWATER	SWQ
FILE NO:		
DRAWING SCALE:		
SCALE NONE		
SHEET No: 18 OF 24		

PUBLIC WORKS AND ENGINEERING
40820
CITY DRAWING NUMBER
HOUSTON, TEXAS

ACAD-18_STM DETAILS.DWG