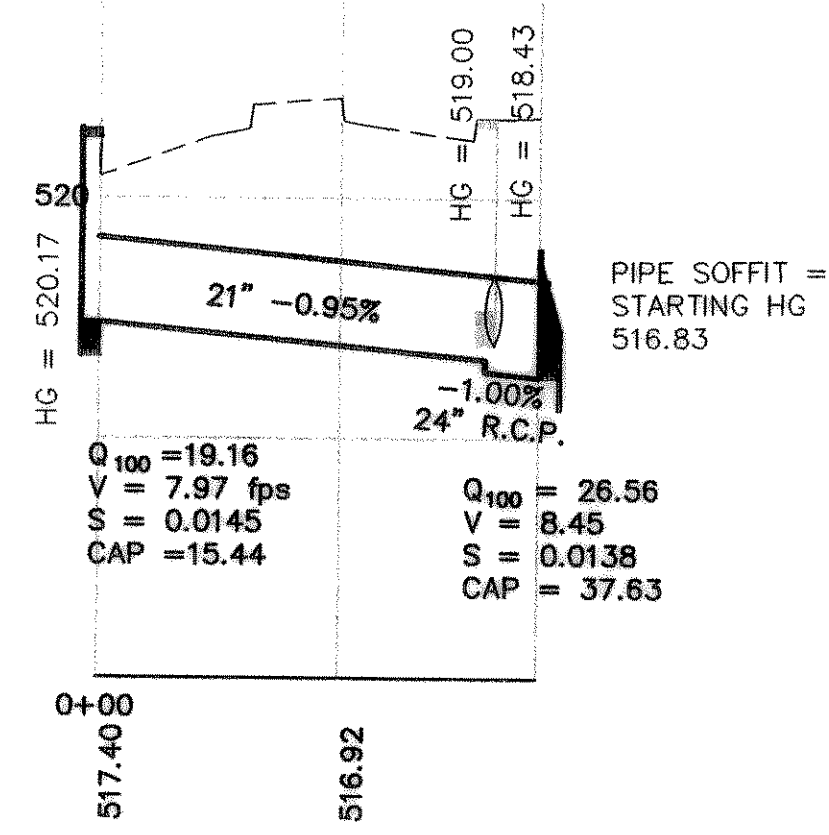


EXISTING STORM SYSTEM



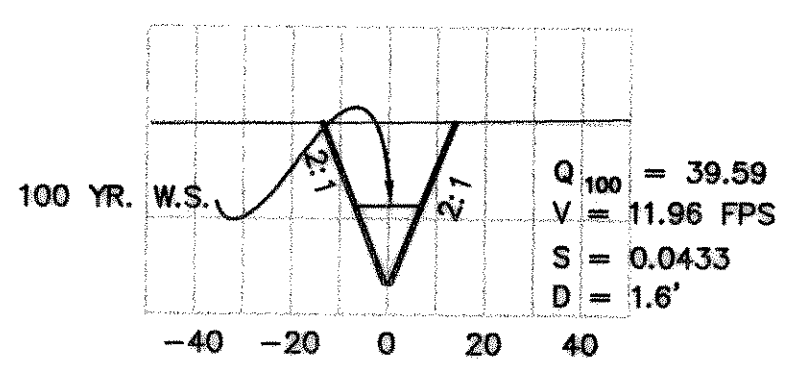
SLOPES BASED ON DESIGN FROM HLE PLANS THE SHORES PHASE THREE REVISED 10-1-90

TOP = 521.40
H.G. = 520.17

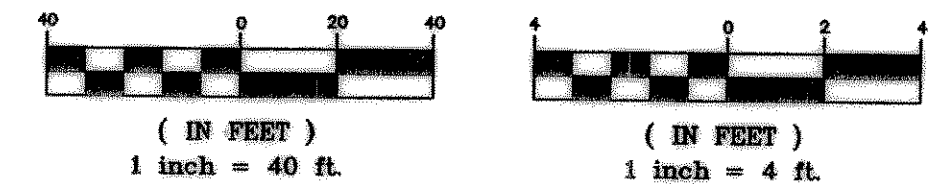
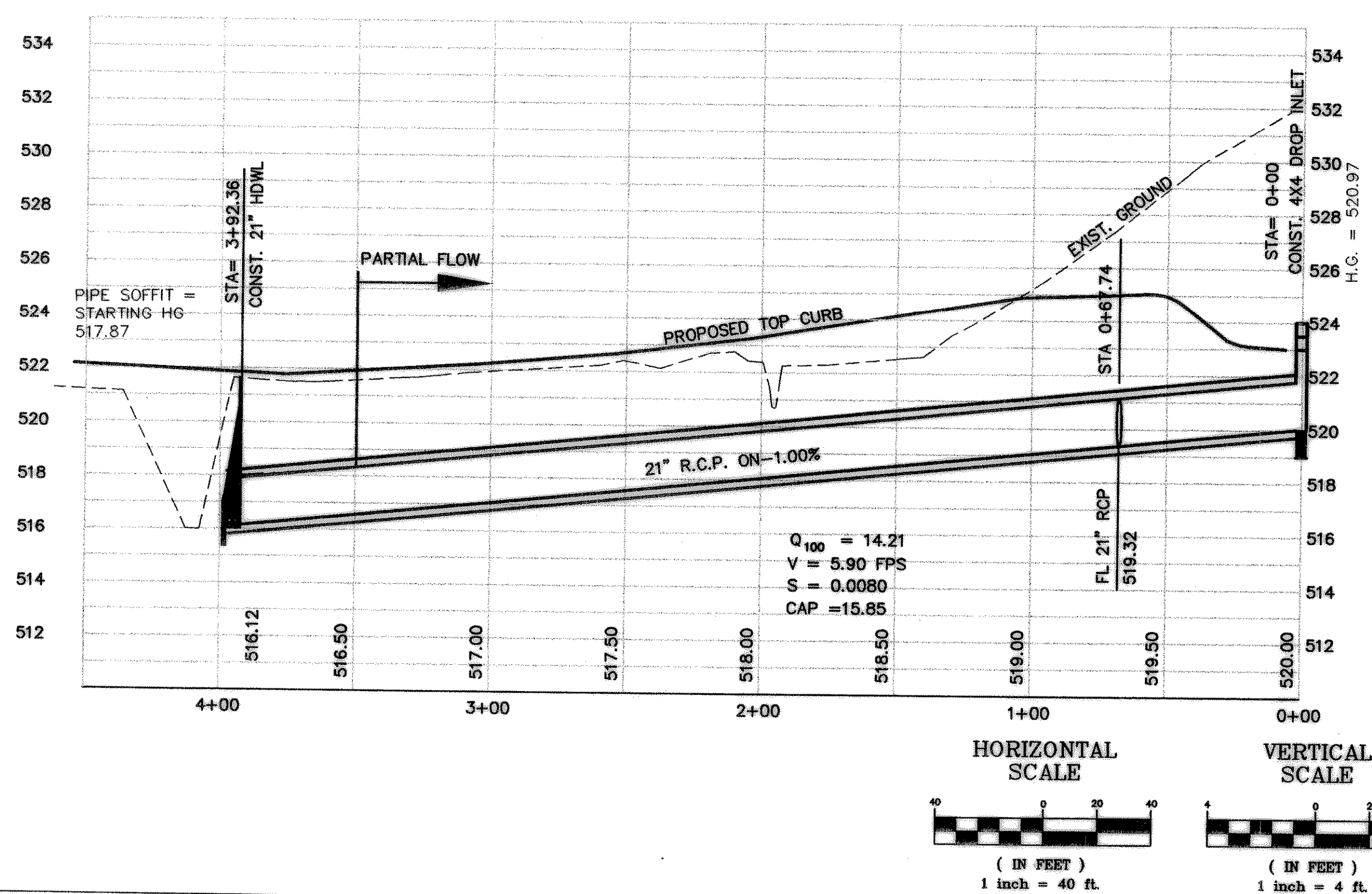
TOP = 521.43
H.G. = 519.73

NOTE: INSTALL GROUTED ROCK RIP RAP 10' WIDE (5' ON EITHER SIDE OF DITCH CENTERLINE) AND UP AROUND HEADWALL AS SHOWN. ROCK SHALL HAVE 50% GREATER THAN 15" DIAMETER.

SECTION A-A

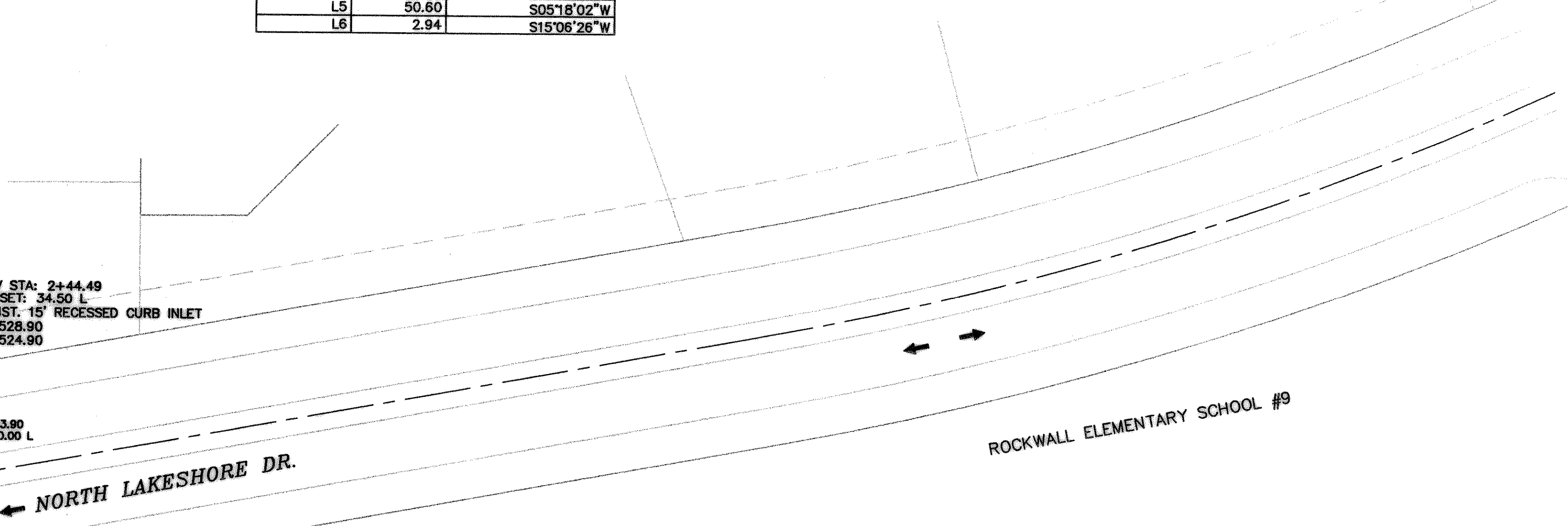


STORM LINE A



LINE	LENGTH	BEARING
L2	154.87	N81°12'48"E
L3	154.87	N81°12'48"E
L4	118.16	S65°18'02"W
L5	50.60	S05°18'02"W
L6	2.94	S15°06'26"W

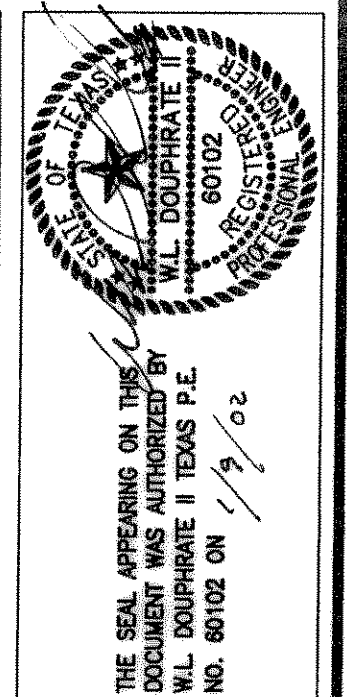
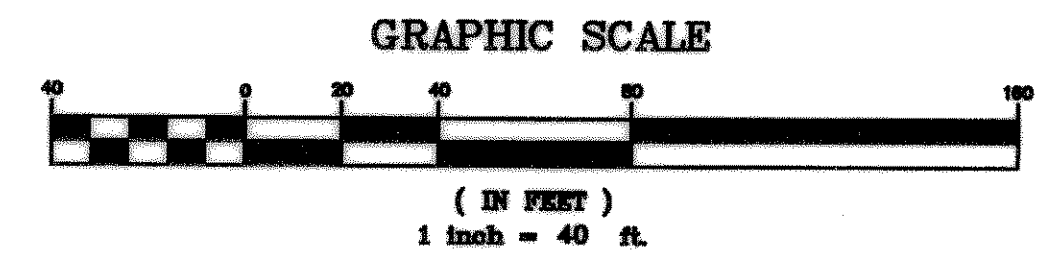
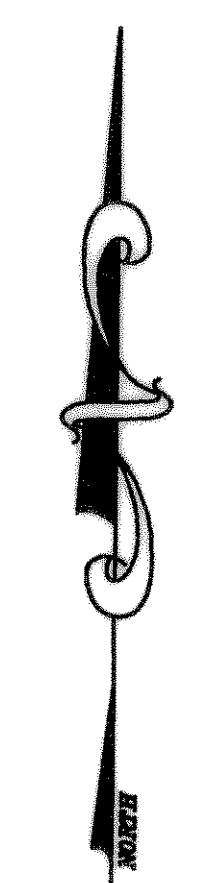
CURVE	LENGTH	RADIUS	CB	CHORD	DELTA
C2	32.11	175.00	S75°57'23"W	32.07	10°30'51"
C4	201.91	175.00	N48°09'37"E	190.90	86°06'22"



PROJECT	From	To	Length	Box Height	Width	DESIGN Q100	Pipe Size (in)	CAP Q100	FULL V	PARTIAL V	PARTIAL FLOW %	FLOW CHT. No.	Kj	Flow R(ft)	Flow R^2/3	Flow Area	FULL S	DESIGN S	HGL Rise	HGL Number
HLE	91.00	80	11			26.56	24	37.63	8.45	9.13	0.71	1.08		0.5000	0.6300	3.1416	0.0138	0.0001	0.1516	518.28
Junction Loss	80.00	0	80			19.16	21	15.44	7.97	7.97	1.24	1.00	0.5500	0.4375	0.5763	2.4053	0.0146	0.0095	0.5679	519.00
									8.45										1.1697	520.17
STM - A	388.00	0	388			13.03	21	15.85	5.42	5.85	0.82	1.08		0.4375	0.5763	2.4053	0.0068	0.0100	2.6238	517.87
																				520.49

BENCHMARK:
BRASS CAP MONUMENT NO. 10 SET IN CONCRETE IN THE CENTER OF GRASS MEDIAN IN MASTERS DRIVE BETWEEN NORTH LAKESHORE & SHORES BLVD. N 7032464.6317, E 2589554.1518
ELEV. = 524.62

REVISED TO CONFORM TO CONSTRUCTION RECORDS.
[Signature] DATE: 11-05-2002



DOUPHRADE & ASSOCIATES, INC.
ENGINEERING - PROJECT MANAGEMENT - SURVEYING
2235 RIDGE RD., # 200 ROCKWALL, TEXAS 75087
PHONE: (972)771-9004 FAX: (972)771-9005

STORM SEWER PLAN & PROFILE
STORM LINE A & GRADE TO DRAIN 2
ROCKWALL ELEMENTARY SCHOOL #9 AREA
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

REVISION:
- REVISIONS PER CITY COMMENTS 6/7/01
- REVISIONS PER CITY COMMENTS 8/9/01
- REVISIONS PER CITY COMMENTS 12/5/01
- REVISIONS PER DEVELOPER 12/8/01

W.L.D.
CHECKED
K.E.B.
DRAWN
6/01
DATE
9919-S-STM-REV
PROJECT