San Angelo-Tom Green County Health Department

PUBLIC HEALTH BUILDING - 2 CITY HALL PLAZA
P.O. BOX 1751
SAN ANGELO, TEXAS 76902

S. Michael Loving
Director
915/657-4214

Mr. Russell Pehl
SK Engineering
1122 South Bryant
San Angelo, TX 76903

April 1, 2009

Re: Stonewall Reserve, Section 3-5

Dear Mr. Pehl,

We have received and reviewed the plat and planning materials for the above subdivision. The area is not located in a regulated floodplain and the soils appear generally limited for a conventional onsite septic systems (OSSF) based on the clay content. Each lot will have a site evaluation preformed to determine the type of OSSF to be installed . The lot sizes are sufficient size for onsite sewage systems.

No wells are present in the subdivision at time of approval. If wells are installed after approval then wells must be 100 feet from existing or new septic systems.

All OSSFs in the subdivision must be constructed in compliance with the existing rules and regulations.

If these conditions are met, this department has no objections to the approval of the subdivision.

Sincerely,

Pam Weishuhn

Pamela Weishuhn
Tom Green County Designated Representative

SKG
ENGINEERING
SURVEYING ♦ LABORATORY ♦ ENVIRONMENTAL

1122 SOUTH BRYANT BLVD.
SAN ANGELO, TEXAS 76903

PHONE: 325.655.1288
FAX: 325.657.8189

DRAINAGE STUDY
FOR
STONEWALL RESERVE
SECTIONS 3-5
APRIL 13, 2009

STATE OF TEXAS
RUSSELL T. GULLY
87727
REGISTERED
PROFESSIONAL ENGINEER

4.13.09

Stonewall Reserve Sections 3-5 Drainage Study

A drainage study was done on Stonewall Reserve Sections 3-5. The study was done to show that the street sections proposed with the borrow ditches along both sides provides sufficient drainage for the site. This study was executed using the rational method and FlowMaster Version 5.15.

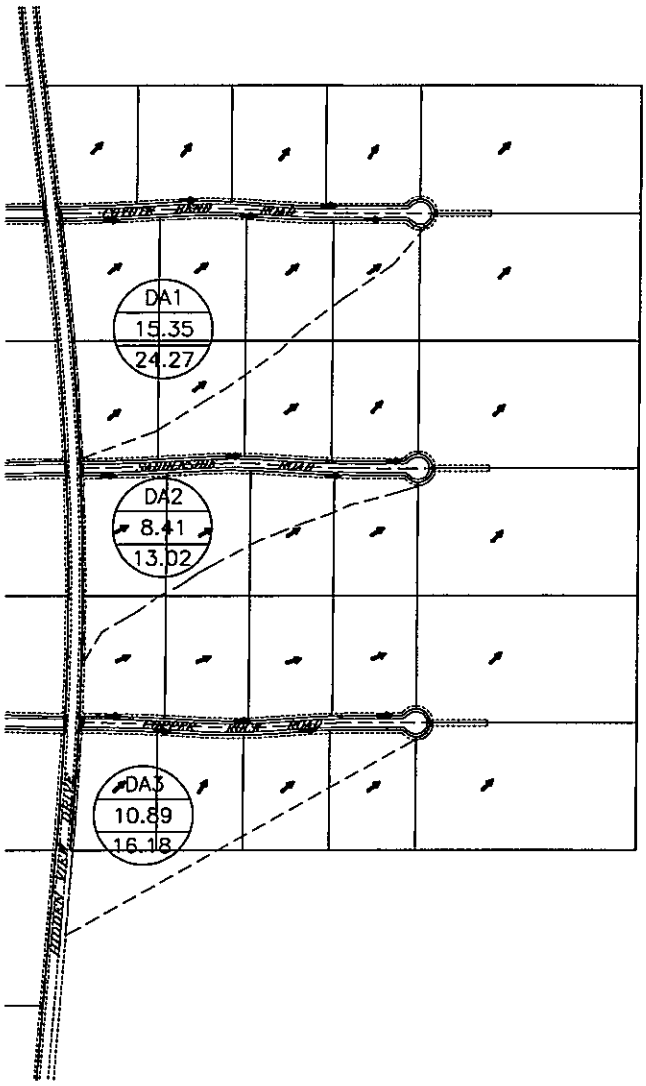
The site was divided into 3 drainage areas with each area draining into 1 borrow ditch. A map of the areas can be found in Appendix A. The rational method was used to calculate the flow rate of each drainage area. The C of 0.4 was used which was taken from the San Angelo Stormwater Design Manual. The calculations for this can be found in Appendix B.

After finding the flow rates of each drainage area, a typical section of the street and channel was put into FlowMaster. A model was executed for each drainage area utilizing all slopes of the propsed road that the drainage area drains to. The calculations can be found in Appendix C.

After running the models it was determined that the roads and channels proposed are sufficient enough to convey a 10-yr storm. The velocities of all the channels were under 6 fps.

APPENDIX A:

DRAINAGE AREA MAP



LEGEND:

DRAINAGE AREA FLOW ARROW

DA1 / AC / CFS — DRAINAGE AREA ID, DRAINAGE AREA, DRAINAGE AREA FLOW FLOW RATE

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SCALE: 1"= 300'

STONEWALL RESERVE
SECTION 3-5
DRAINAGE AREA MAP

08-A-1858

APPENDIX B:

STORMWATER CALCULATIONS

Project: STONEWALL RESERVE
Project Number: 08-A-1858
Design By: Erica Carter

Reference: National Engineering Handbook (Section 4)
San Angelo Drainage Manual

*Calculate Q(CFS) DRAINAGE AREA 1

(Developed Conditions)

Parameters:	Area=	15.35 acres		
	C(ext.)=	0.4	(taken from table 5-5)	SADM
	10- year			

***Calculate Velocities and Tc** (Developed Conditions)

Sheet Flow (200')

Initial Tc 10 min (Taken from table 5-6)

Oveland Flow (1000')

Parameters:	Hydraulic Length:	1000 ft		
	Slope:	0.015 ft/ft		
	C	16	(Taken from table 5-7)	SADM

1) Use Equation: V=C*S^.5

V1= 1.96 ft/sec

2) TC1=L1/(V1*60)

TC1= 8.51 mins

Open Channel Flow (236')

Parameters:	Hydraulic Radius=	0.75
	Slope=	0.015 ft/ft
	n=	0.32

1) Use Equation: V=[1.49*R^(2/3)*S^(.5)]\n

V2= 0.47 ft/sec

2) TC2=L1/(V1*60)

TC2= 8.36 mins

Total Time of Concentration: 26.86

*Calculate Q(CFS) DRAINAGE AREA 2 (Developed Conditions)

Parameters:	Area=	8.41 acres		
	C(ext.)=	0.4	(taken from table 5-5)	SADM
	10- year			

*Calculate Velocities and Tc (Developed Conditions)

Sheet Flow (200')

Initial Tc 10 min (Taken from table 5-6)

Oveland Flow (1000')

Parameters:	Hydraulic Length:	1000 ft		
	Slope:	0.015 ft/ft		
	C	16	(Taken from table 5-7)	SADM

1) Use Equation: V=C*S^.5

V1= 1.96 ft/sec

2) TC1=L1/(V1*60)

TC1= 8.51 mins

Open Channel Flow (252')

Parameters:	Hydraulic Radius=	0.75
	Slope=	0.015 ft/ft
	n=	0.32

1) Use Equation: V=[1.49*R^(2/3)*S^(.5)]\n

V2= 0.47 ft/sec

2) TC2=L1/(V1*60)

TC2= 8.92 mins

Total Time of Concentration: 27.43

*Calculate Q(CFS) DRAINAGE AREA 3 (Developed Conditions)

Parameters:	Area=	10.89 acres		
	C(ext.)=	0.4	(taken from table 5-5)	SADM
	10-year			

***Calculate Velocities and Tc** (Developed Conditions)

Sheet Flow (200')

Initial Tc 10 min (Taken from table 5-6)

Overland Flow (1000')

Parameters:	Hydraulic Length:	1000 ft	
	Slope:	0.015 ft/ft	
	C	16	(Taken from table 5-7)

1) Use Equation: V=C*S^.5

V1= 1.96 ft/sec

2) TC1=L1/(V1*60)

TC1= 8.51 mins

Open Channel Flow (316')

Parameters:	Hydraulic Radius=	0.75
	Slope=	0.015 ft/ft
	n=	0.32

1) Use Equation: V=(1.49*R^(2/3)*S^(.5))\n

V2= 0.47 ft/sec

2) TC2=L1/(V1*60)

TC2= 11.19 mins

Total Time of Concentration: 29.69

1. Select your county. 2. Enter the time of concentration

Titus
Tom Green
Travis
Trinity
Tyler
Upshur
Upton
Uvalde
Val Verde

	0.768	0.769	0.777	0.771	0.782	0.770
	37	51	64	75	88	95
	7.9	9.0	9.0	9.0	9.0	7.9
Intensity (in/hr)*	2.4	3.2	4.0	4.7	5.3	6.2

	0.768	0.769	0.777	0.771	0.782	0.770
	940	1295	1626	1905	2235	2413
	7.9	9.0	9.0	9.0	9.0	7.9
Intensity (mm/hr)*	61.4	82.3	100.4	120.2	135.6	156.5

* for time of Concentration = 27 mins

DA1

	Proposed Conditions					
Runoff Coefficient	0.4	0.4	0.4	0.4	0.4	0.4
Area (acres)	15.35	15.35	15.35	15.35	15.35	15.35
Flowrate (cfs)	14.84	19.90	24.27	29.06	32.78	37.84

[redacted]

1. Select your county. 2. Enter the time of concentration

Titus
Tom Green
Travis
Trinity
Tyler
Upshur
Upton
Uvalde
Val Verde

[redacted]	0.768	0.769	0.777	0.771	0.782	0.770
	37	51	64	75	88	95
	7.9	9.0	9.0	9.0	9.0	7.9
Intensity (in/hr)*	2.4	3.2	3.9	4.6	5.2	6.0
[redacted]	0.768	0.769	0.777	0.771	0.782	0.770
	940	1295	1626	1905	2235	2413
	7.9	9.0	9.0	9.0	9.0	7.9
Intensity (mm/hr)*	60.1	80.6	98.3	117.7	132.7	153.2

* for time of Concentration = 28 mins

DA2

	Proposed Conditions					
Runoff Coefficient	0.4	0.4	0.4	0.4	0.4	0.4
Area (acres)	8.41	8.41	8.41	8.41	8.41	8.41
Flowrate (cfs)	7.96	10.68	13.02	15.59	17.58	20.28

[redacted]

1. Select your county. 2. Enter the time of concentration

[redacted]

- Titus
- Tom Green
- Travis
- Trinity
- Tyler
- Upshur
- Upton
- Uvalde
- Val Verde

	0.768	0.769	0.777	0.771	0.782	0.770
	37	51	64	75	88	95
	7.9	9.0	9.0	9.0	9.0	7.9
Intensity (in/hr)*	2.3	3.0	3.7	4.4	5.0	5.8

[redacted]

	0.768	0.769	0.777	0.771	0.782	0.770
	940	1295	1626	1905	2235	2413
	7.9	9.0	9.0	9.0	9.0	7.9
Intensity (mm/hr)*	57.6	77.4	94.4	113.0	127.4	146.9

* for time of Concentration = **30** mins

DA3

	Proposed Conditions					
Runoff Coefficient	0.4	0.4	0.4	0.4	0.4	0.4
Area (acres)	10.89	10.89	10.89	10.89	10.89	10.89
Flowrate (cfs)	9.88	13.28	16.18	19.38	21.85	25.19

APPENDIX C:

STREET/CHANNEL MODELS

Drainage Area 1a
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA1(a)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.8000 %	
Elevation range: 0.00 ft to 2.00 ft.		
Discharge	24.27	cfs

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.82	0.00	16.00	0.015
16.00	1.50	16.00	25.00	0.030
20.50	0.00			
25.00	1.50			
25.00	2.00			

Results		
Wtd. Mannings Coefficient	0.029	
Water Surface Elevation	1.51	ft
Flow Area	6.83	ft^2
Wetted Perimeter	9.92	ft
Top Width	9.42	ft
Height	1.51	ft
Critical Depth	1.32	ft
Critical Slope	0.016143	ft/ft
Velocity	3.55	ft/s
Velocity Head	0.20	ft
Specific Energy	1.70	ft
Froude Number	0.74	
Flow is subcritical.		

Drainage Area 1b
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA1(b)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data				
Channel Slope	1.2000 %			
Elevation range: 0.00 ft to 1.82 ft.				
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.82	0.00	16.00	0.015
16.00	1.50	16.00	25.00	0.030
20.50	0.00			
25.00	1.50			
Discharge	24.27 cfs			

Results		
Wtd. Mannings Coefficient	0.030	
Water Surface Elevation	1.40	ft
Flow Area	5.88	ft^2
Wetted Perimeter	8.85	ft
Top Width	8.40	ft
Height	1.40	ft
Critical Depth	1.32	ft
Critical Slope	0.016143	ft/ft
Velocity	4.13	ft/s
Velocity Head	0.26	ft
Specific Energy	1.66	ft
Froude Number	0.87	
Flow is subcritical.		

Drainage Area 1c
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA1(c)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	1.4000	%

Elevation range: 0.00 ft to 1.82 ft.

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.82	0.00	16.00	0.015
16.00	1.50	16.00	25.00	0.030
20.50	0.00			
25.00	1.50			

Discharge	24.27	cfs

Results		
Wtd. Mannings Coefficient	0.030	
Water Surface Elevation	1.36	ft
Flow Area	5.55	ft^2
Wetted Perimeter	8.60	ft
Top Width	8.16	ft
Height	1.36	ft
Critical Depth	1.32	ft
Critical Slope	0.016143	ft/ft
Velocity	4.38	ft/s
Velocity Head	0.30	ft
Specific Energy	1.66	ft
Froude Number	0.94	

Flow is subcritical.

Drainage Area 1d
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA1(d)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.7000 %	
Elevation range: 0.00 ft to 2.00 ft.		

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.82	0.00	16.00	0.015
16.00	1.50	16.00	25.00	0.030
20.50	0.00			
25.00	1.50			
25.00	2.00			

Discharge	24.27	cfs

Results		
Wtd. Mannings Coefficient	0.027	
Water Surface Elevation	1.54	ft
Flow Area	7.15	ft²
Wetted Perimeter	11.53	ft
Top Width	11.00	ft
Height	1.54	ft
Critical Depth	1.32	ft
Critical Slope	0.016142	ft/ft
Velocity	3.39	ft/s
Velocity Head	0.18	ft
Specific Energy	1.72	ft
Froude Number	0.74	
Flow is subcritical.		

Drainage Area 2a
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA2(a)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	1.1700 %	
Elevation range: 0.00 ft to 1.82 ft.		
Discharge	13.02	cfs

Station (ft)	Elevation (ft)
0.00	1.50
4.50	0.00
9.00	1.50
25.00	1.82

Start Station	End Station	Roughness
0.00	9.00	0.030
9.00	25.00	0.015

Results		
Wtd. Mannings Coefficient	0.030	
Water Surface Elevation	1.11	ft
Flow Area	3.72	ft^2
Wetted Perimeter	7.04	ft
Top Width	6.68	ft
Height	1.11	ft
Critical Depth	1.03	ft
Critical Slope	0.017541	ft/ft
Velocity	3.50	ft/s
Velocity Head	0.19	ft
Specific Energy	1.30	ft
Froude Number	0.83	
Flow is subcritical.		

Drainage Area 2b
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA2(b)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.9700	%
Elevation range: 0.00 ft to 1.82 ft.		

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.50	0.00	9.00	0.030
4.50	0.00	9.00	25.00	0.015
9.00	1.50			
25.00	1.82			

Discharge	13.02	cfs

Results		
Wtd. Mannings Coefficient	0.030	
Water Surface Elevation	1.15	ft
Flow Area	3.99	ft^2
Wetted Perimeter	7.29	ft
Top Width	6.92	ft
Height	1.15	ft
Critical Depth	1.03	ft
Critical Slope	0.017540	ft/ft
Velocity	3.26	ft/s
Velocity Head	0.17	ft
Specific Energy	1.32	ft
Froude Number	0.76	
Flow is subcritical.		

Drainage Area 2c
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA2(c)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	1.2400 %	
Elevation range: 0.00 ft to 1.82 ft.		
Discharge	13.02	cfs

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.50	0.00	9.00	0.030
4.50	0.00	9.00	25.00	0.015
9.00	1.50			
25.00	1.82			

Results		
Wtd. Mannings Coefficient	0.030	
Water Surface Elevation	1.10	ft
Flow Area	3.64	ft^2
Wetted Perimeter	6.97	ft
Top Width	6.61	ft
Height	1.10	ft
Critical Depth	1.03	ft
Critical Slope	0.017540	ft/ft
Velocity	3.58	ft/s
Velocity Head	0.20	ft
Specific Energy	1.30	ft
Froude Number	0.85	
Flow is subcritical.		

Drainage Area 3a
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA3(a)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	1.1600 %	
Elevation range: 0.00 ft to 1.82 ft.		

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.82	0.00	16.00	0.015
16.00	1.50	16.00	25.00	0.030
20.50	0.00			
25.00	1.50			

Discharge	16.18	cfs

Results		
Wtd. Mannings Coefficient	0.030	
Water Surface Elevation	1.21	ft
Flow Area	4.39	ft^2
Wetted Perimeter	7.65	ft
Top Width	7.26	ft
Height	1.21	ft
Critical Depth	1.13	ft
Critical Slope	0.017040	ft/ft
Velocity	3.68	ft/s
Velocity Head	0.21	ft
Specific Energy	1.42	ft
Froude Number	0.84	
Flow is subcritical.		

Drainage Area 3b
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA3(b)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	1.3700 %	
Elevation range: 0.00 ft to 1.82 ft.		

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.82	0.00	16.00	0.015
16.00	1.50	16.00	25.00	0.030
20.50	0.00			
25.00	1.50			

Discharge	16.18	cfs

Results		
Wtd. Mannings Coefficient	0.030	
Water Surface Elevation	1.17	ft
Flow Area	4.13	ft^2
Wetted Perimeter	7.42	ft
Top Width	7.04	ft
Height	1.17	ft
Critical Depth	1.13	ft
Critical Slope	0.017039	ft/ft
Velocity	3.92	ft/s
Velocity Head	0.24	ft
Specific Energy	1.41	ft
Froude Number	0.90	
Flow is subcritical.		

Drainage Area 3c
Worksheet for Irregular Channel

Project Description	
Project File	c:\docume~1\erica_~1\desktop\haestad\fmw\stonewal.fm2
Worksheet	DA3(c)
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data				
Channel Slope	1.1000 %			
Elevation range: 0.00 ft to 1.82 ft.				
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	1.82	0.00	16.00	0.015
16.00	1.50	16.00	25.00	0.030
20.50	0.00			
25.00	1.50			
Discharge	16.18 cfs			

Results		
Wtd. Mannings Coefficient	0.030	
Water Surface Elevation	1.22	ft
Flow Area	4.48	ft^2
Wetted Perimeter	7.73	ft
Top Width	7.33	ft
Height	1.22	ft
Critical Depth	1.13	ft
Critical Slope	0.017039	ft/ft
Velocity	3.61	ft/s
Velocity Head	0.20	ft
Specific Energy	1.42	ft
Froude Number	0.81	
Flow is subcritical.		

Tom Green County

Subdivision Application Form

(Please Print or Type)

Name of Proposed Subdivision: STONEWALL RESERVE SECTION 3

Location: SOUTH OF WALLING-PECAN ROAD, EAST OF HIDDEN VIEW DRIVE

Is location within the ETJ? Yes ____ No ✓ TGC Pct. # 2

Type of Request: Preliminary ____ Final ✓ Replat ____
Amended ____ Vacation ____ Revised ____

Owner(s) of Subdivision: STONEWALL RANCHES

Address: PO BOX 3300 SAN ANGELO, TX 76902

Phone # ____ Fax: ____

Existing Land Use: VACANT

Proposed Land Use: RESIDENTIAL

Total Acreage: 42.540 Number of Proposed Lots: 10

Proposed Source of Water Supply: Individual Well ____ Water Supply ✓

Name of Water System CONCHO RURAL WATER CORP.

Proposed Sewage Disposal System: Individual Septic Tank ✓

Private Sewage System ____

Are any off-site drainage, access or other easements necessary for this subdivision? No ✓ Yes ____ (Please explain) ____

Are there existing deed restrictions on this property? No ✓ Yes ____
If yes, please give the deed record reference:
Volume _____ Page _____

Are there any deviations or variances from existing subdivision rules & regulations requested? No ✓ Yes _____
(Please explain) _____

The owner hereby designates SKG ENGINEERING (Name)
as the official representative. 1122 SOUTH BRYANT BLVD. (Address) SAN ANGELO, TX 76903 (phone) 325-655-1288

Application fee ($150.00 + 10.00 per lot) Paid by Owner _____
Representative ✓. To be paid to the Tom Green County Clerk's office prior to placement on the Commissioners' Court Agenda. Bring Plat, Tax Certificate showing "Zero" taxes owed, and receipt for application fee to Court on day of the Agenda Presentation.

The owner is aware that there will be an additional filing fee after approval by the Tom Green County Commissioners Court. The filing fee will also be paid to the Tom Green County Clerk at the time of filing of the plat for the records.

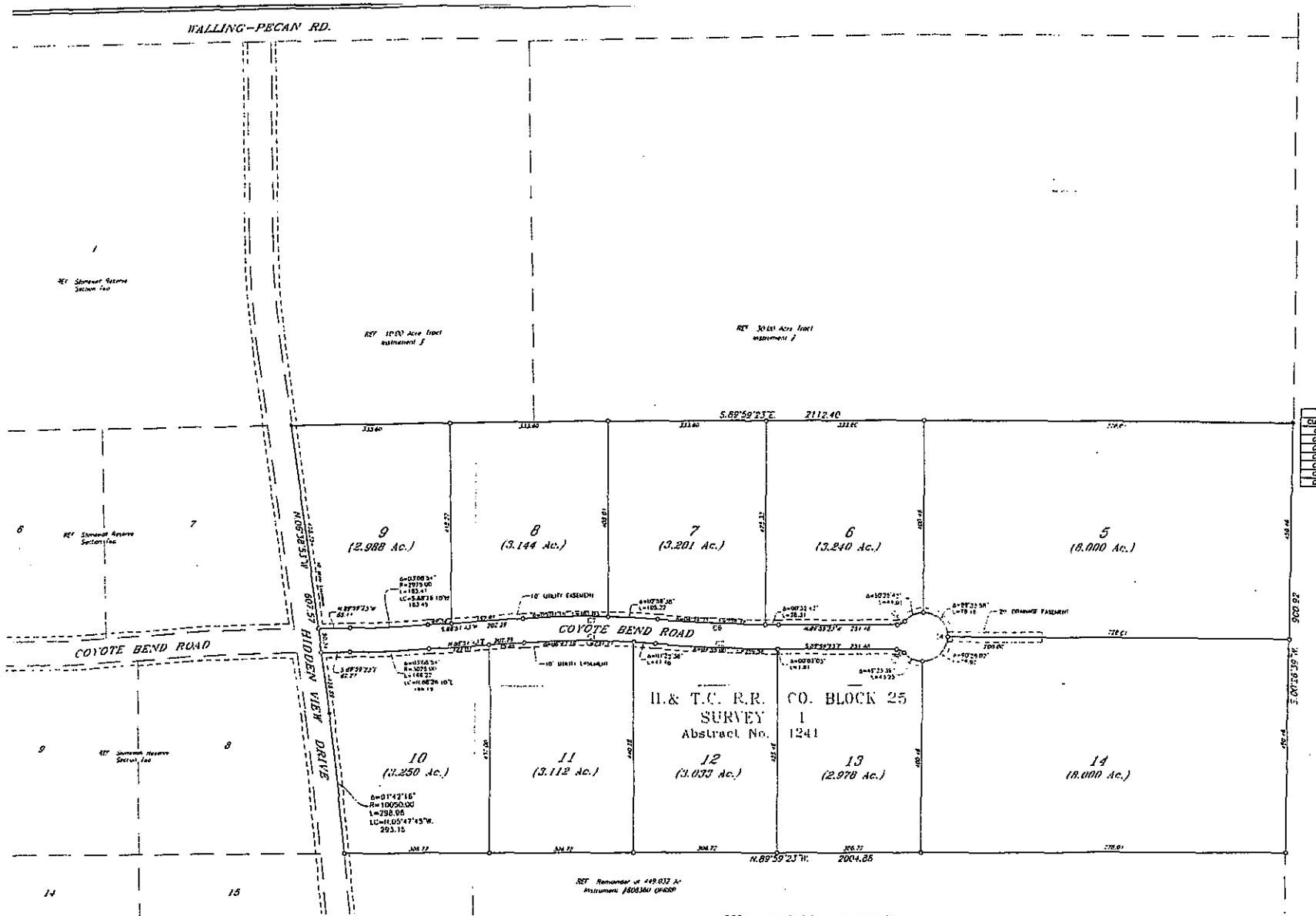
The undersigned hereby applies for subdivision plat approval in accordance with the regulations for the development of subdivisions and manufactured home rental communities as set out by the Commissioners Court of Tom Green County and certifies that the information contained on this application is true and accurate to the best of my knowledge.

David R Currie — 4/3/2009
Owner's Signature — Date

G. Carter — 4/3/2009
Representative's Signature — Date

Total Paid: $_____ Date Paid _____

Date of Commissioner's Court Action: _____



CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	LONG CHORD
C1	Δ=08°05'57"	1975.00	279.18	S.89°05'18"E. 278.95
C2	Δ=01°37'04"	3025.00	261.39	S.87°30'52"E. 261.31
C3	Δ=49°59'41"	20.00	17.45	S.64°59'33"E. 16.90
C4	Δ=279°58'23"	50.00	244.34	N.00°00'37"E. 64.29
C5	Δ=49°59'41"	20.00	17.45	S.65°00'28"W. 16.90
C6	Δ=01°37'04"	2975.00	257.07	N.87°30'52"W. 256.99
C7	Δ=05°05'57"	3025.00	286.25	N.89°05'18"W. 286.01

SCALE: 1"= 100'

NOTE: Bearings shown hereon are based on that system 187.019 acres described and reported in Volume 1152, Page 215, Official Public Records of Real Property of Tom Green County, Texas.

To obtain surface equivalent distances multiply map and distance by 1.000201[illegible]

LEGEND:

- Found 1/2" Iron Pipe or Rod
- Set 1/2" Iron Rod with Cap

STONEWALL RESERVE
SECTION THREE
TOM GREEN COUNTY, TEXAS

OWNER: STONEWALL RANCHES, a Texas General Partnership

DESCRIPTION: Being 47.540 Acres out of H.& T.C. R.R. Co., Block 25 Survey No. 1 Abstract No. 1241 Tom Green County, Texas

SKG ENGINEERING
SURVEYING • LABORATORY • ENVIRONMENTAL

TOM GREEN COUNTY NOTES

COUNTY COMMISSIONER'S COURT
Approved for recording this ____ day of _____, 20 ____
By: _____ County Judge

911 COORDINATOR
Approved for recording this ____ day of _____, 20 ____
By: _____

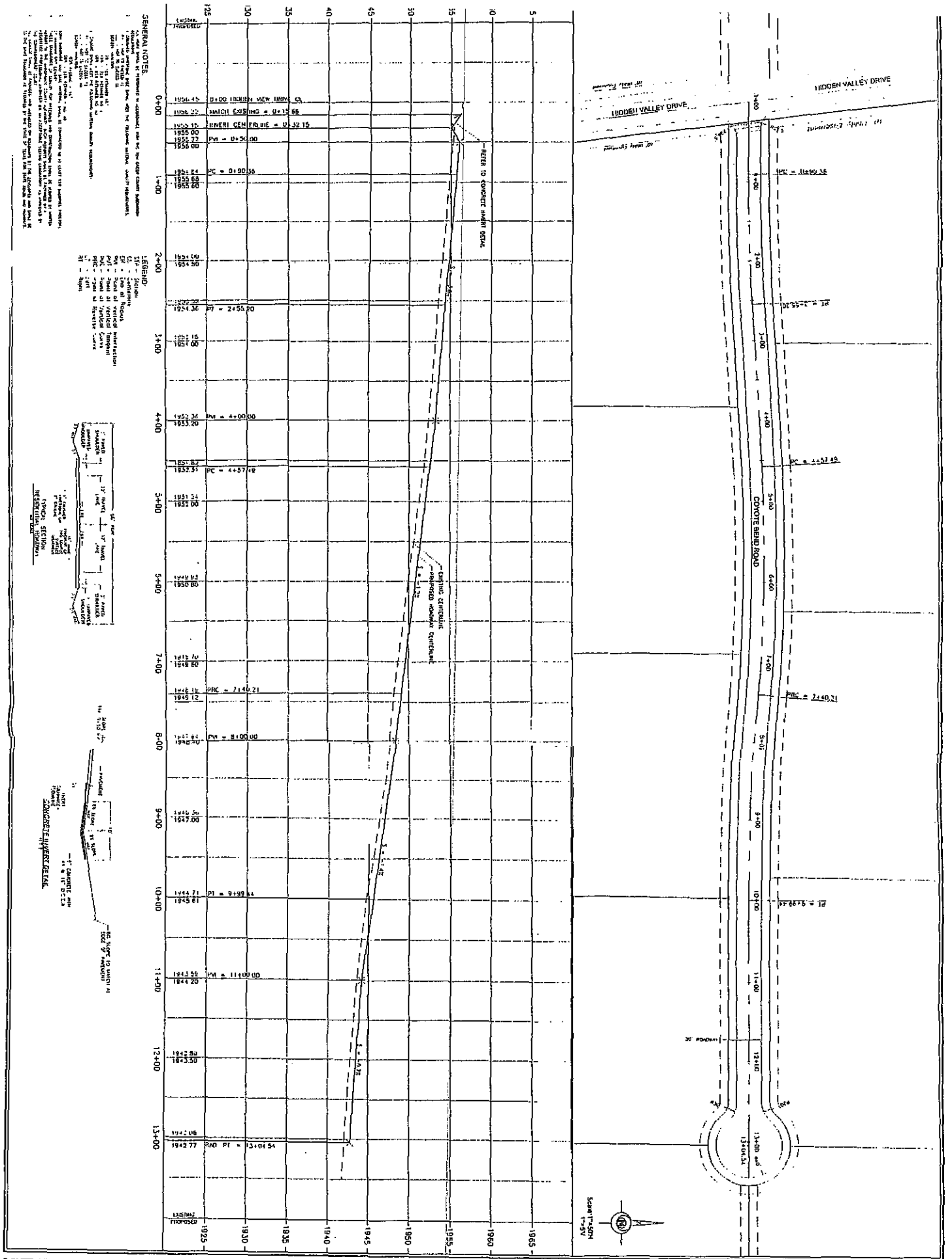
COUNTY CLERK
Filed for record this ____ day of _____, 20 ____ @ _____
County Clerk of Tom Green Co., Tx.
By: _____

ACKNOWLEDGEMENT/DEDICATION
We, Stonewall Ranches, do hereby adopt this plat as the subdivision of the property and dedicate for the use of Republic the parcel and easements shown hereon.
David R. Currie

STATE OF TEXAS
COUNTY OF TOM GREEN
This instrument was acknowledged before me on _____ by David R. Currie, in the capacity shown.
Notary Public, State of Texas

Preliminary: this document shall not be recorded for any purpose

SURVEYOR'S CERTIFICATE
Know all men by these presents that I Russell T. Lee, RPLS, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that corner monuments shown hereon were properly placed, under my supervision, in accordance with the rules for land subdivision. I further certify that the lines of land hereon platted without the administrative jurisdictional area of any City in Tom Green County, Texas.



COYOTE BEND ROAD
STREET PLAN-PROFILE
STA. 0+00 to End

STONEWALL RESERVE
SECTION THREE
TOM GREEN COUNTY,
TEXAS

SKG
ENGINEERING
SURVEYING • LABORATORY • ENVIRONMENTAL

1"=50'
ST4

DUPLICATE

TOM GREEN COUNTY CLERK
124 W. BEAUREGARD
SAN ANGELO, TX 76903
(325)659-6553

ISSUED TO: PLAT APPLICATION FEE

RECEIPT #: 319526 DATE: 04/14/2009 03:04:27 PM
DEPARTMENT: RE WORK STATION: INDEX01

SERVICE	PAGES	FEE
MISCELLANEOUS,APPLIC	1	150.00
MISCELLANEOUS,ADDITI	10	100.00

Total Amount Due 250.00

CHECK 23306 250.00
PD BY SKG/STONEWALL RESERVE SEC 4

Total Amount Paid 250.00

THANK YOU

Tom Green County

Subdivision Application Form

(Please Print or Type)

Name of Proposed Subdivision: STONEWALL RESERVE SECTION 4

Location: SOUTH OF WALLING-PECAN ROAD, EAST OF HIDDEN VIEW DRIVE, SOUTH OF SECTION 3

Is location within the ETJ? Yes ____ No ✓ TGC Pct. # 2

Type of Request: Preliminary ____ Final ✓ Replat ____
Amended ____ Vacation ____ Revised ____

Owner(s) of Subdivision: STONEWALL RANCHES

Address: PO BOX 3300 SAN ANGELO, TX 76902

Phone # ____ Fax: ____

Existing Land Use: VACANT

Proposed Land Use: RESIDENTIAL

Total Acreage: 40.867 Number of Proposed Lots: 10

Proposed Source of Water Supply: Individual Well ____ Water Supply ✓

Name of Water System CONCHO RURAL WATER CORP

Proposed Sewage Disposal System: Individual Septic Tank ✓

Private Sewage System ____

Are any off-site drainage, access or other easements necessary for this subdivision? No ✓ Yes ____ (Please explain) ____

Are there existing deed restrictions on this property? No ✓ Yes ____
If yes, please give the deed record reference:
Volume _____ Page _____

Are there any deviations or variances from existing subdivision rules & regulations requested? No ✓ Yes _____
(Please explain) _____

The owner hereby designates SKG ENGINEERING (Name)
as the official representative. 1122 SOUTH BRYANT BLVD. (Address) SAN ANGELO, TX 7690 325-655-1288 (phone)

Application fee ($150.00 + 10.00 per lot) Paid by Owner _____
Representative ✓. To be paid to the Tom Green County Clerk's office prior to placement on the Commissioners' Court Agenda. Bring Plat, Tax Certificate showing "Zero" taxes owed, and receipt for application fee to Court on day of the Agenda Presentation.

The owner is aware that there will be an additional filing fee after approval by the Tom Green County Commissioners Court. The filing fee will also be paid to the Tom Green County Clerk at the time of filing of the plat for the records.

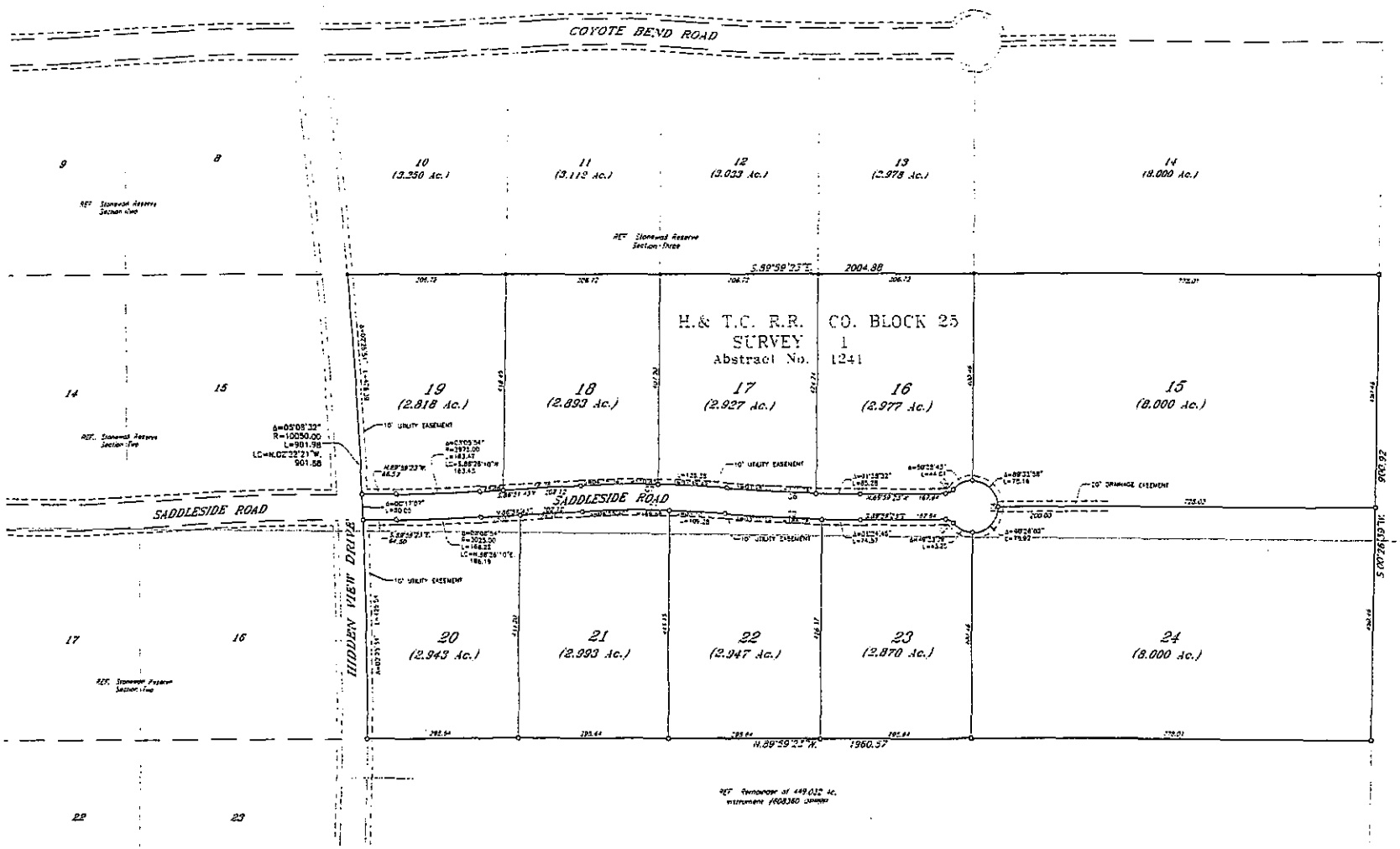
The undersigned hereby applies for subdivision plat approval in accordance with the regulations for the development of subdivisions and manufactured home rental communities as set out by the Commissioners Court of Tom Green County and certifies that the information contained on this application is true and accurate to the best of my knowledge.

David R. Currie — 4/3/2009
Owner's Signature — Date

E. Carter — 4/3/2009
Representative's Signature — Date

Total Paid: $_____ Date Paid _____

Date of Commissioner's Court Action: _____



CURVE TABLE

CURVE	DELTA	RADIUS	LENGTH	LONG CHORD
C1	Δ=06°05'33"	1972.00	209.14	S.89°03'21"E. 208.93
C2	Δ=04°16'59"	3025.00	281.32	S.87°10'54"W. 281.22
C3	Δ=45°59'41"	20.00	17.45	S.61°59'23"E. 16.90
C4	Δ=279°59'23"	50.00	244.34	N.00°00'37"E. 54.29
C5	Δ=45°59'41"	20.00	17.45	S.65°00'46"W. 16.90
C6	Δ=04°16'59"	3975.00	297.01	N.87°10'54"W. 296.93
C7	Δ=06°05'33"	2025.00	215.27	N.89°03'21"W. 215.27

SCALE: 1" = 100'

GRAPHIC SCALE 1" = 100'

NOTE: Bearings shown hereon are based on that certain 787.013 acre conveyance and recorded in Volume 1155, Page 334, Official Public Records of Real Property of Tom Green County, Texas.

The grids on surface horizontal distances shown hereon are based on TCADGRID153.

LEGEND:

- Found ½" Iron Pipe or Rod
- Set ½" Iron Rod with Cap.

STONEWALL RESERVE
SECTION FOUR
TOM GREEN COUNTY, TEXAS

OWNER: STONEWALL RANCHES, a Texas General Partnership

DESCRIPTION: Being 49.087 Acres out of H. & T.C. R.R. Co., Block 25, Survey No. 1, Abstract No. 1241, Tom Green County, Texas

SKG ENGINEERING
SURVEYING • LABORATORY • ENVIRONMENTAL
[illegible] SOUTH BRYANT BLVD. SAN ANGELO, TEXAS 76903 PHONE 325-655-5138 FAX 325-947-9379
www.skg.com

TOM GREEN COUNTY NOTES

No construction or development within this subdivision may begin until all Tom Green County requirements have been complied.

No structure in this subdivision shall be occupied until connected to a public water system or an on-site wastewater system that has been approved and permitted by the Tom Green County Environmental Health Department.

Tom Green County Commissioners Court assumes no responsibility whatsoever as to the potable water available for any lots in this subdivision.

COUNTY COMMISSIONER'S COURT
Approved for recording this ____ day of _____ 20____

By: _____
County Judge

911 COORDINATOR
Approved for recording this ____ day of _____ 20____

By: _____

COUNTY CLERK
Filed for record this ____ day of _____ 20____ @ ____
County Clerk of Tom Green Co., Tx.

By: _____

ACKNOWLEDGEMENT/DEDICATION
We, Stonewall Ranches, as herein owner, does hereby adopt this plat as the subdivision of our property and dedicate for the use of the public the fee and easements shown hereon.

_____
David R. Currie

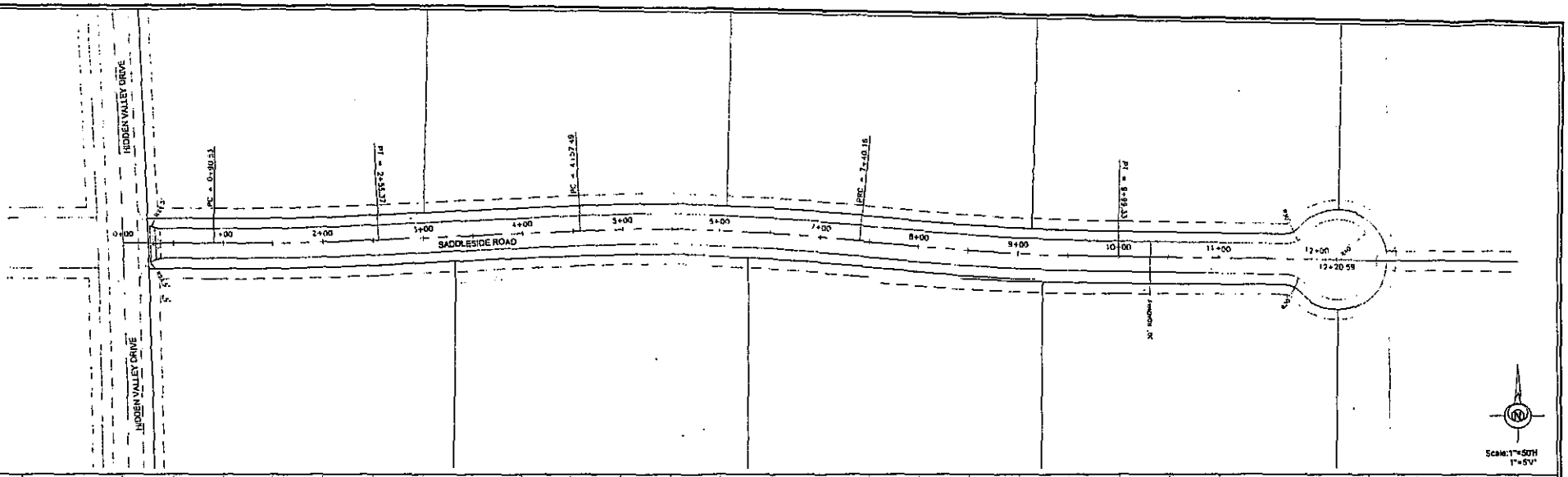
STATE OF TEXAS
COUNTY OF TOM GREEN
This instrument was acknowledged before me on _____
by David R. Currie, in the capacity shown.

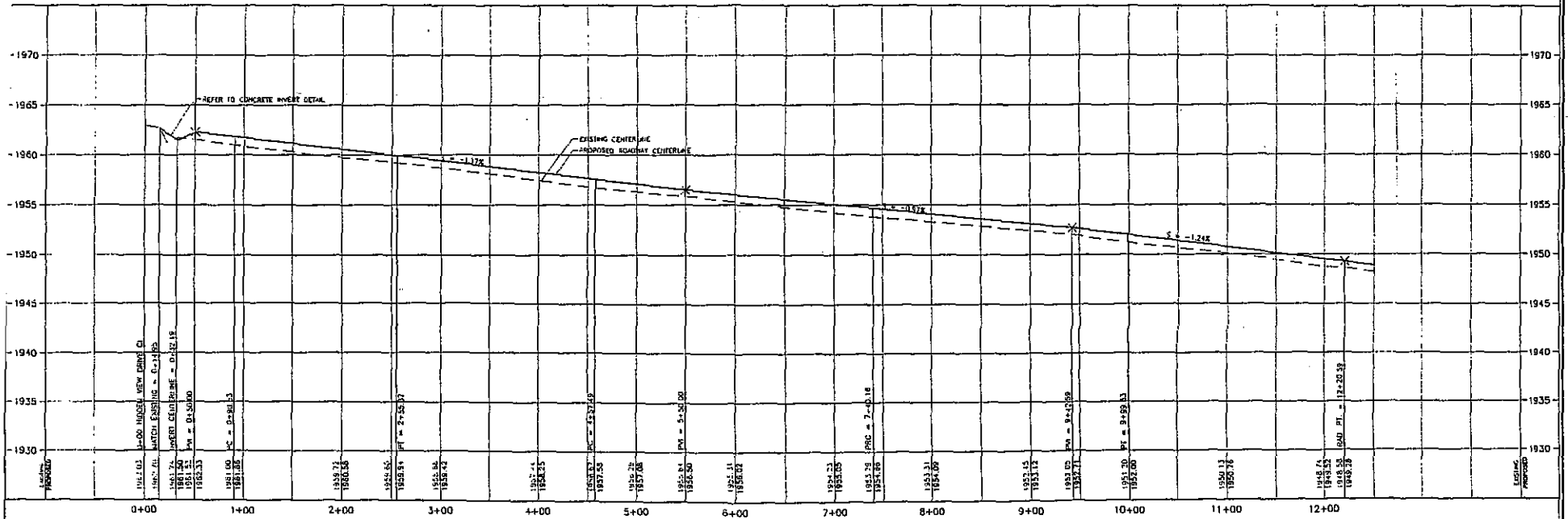
_____
Notary Public, State of Texas

Preliminary, this document shall not be recorded for any purpose

SURVEYOR'S CERTIFICATE
Know all men by these presents: that I, Russell T. Curry RPLS, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that corner monuments shown thereon were properly placed, under my supervision, in accordance with the rules for land subdivision. further certify that the tract of land within described without the extraterritorial jurisdiction limits of any City in Tom Green County, Texas.

76-----1858



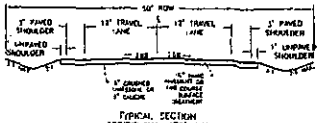


GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TOM GREEN COUNTY SUBDIVISION REGULATIONS.
2. [illegible] BASE SHALL MEET THE FOLLOWING MATERIAL QUALITY REQUIREMENTS:
   PI - NOT TO EXCEED 10
   LL - NOT TO EXCEED 35
   SCREEN ANALYSIS:
   [illegible] - 100 RETAINED 1½"
   [illegible] - 55 RETAINED NO 4
   [illegible] - 45 RETAINED NO 16
3. [illegible] SHALL MEET THE FOLLOWING MATERIAL QUALITY REQUIREMENTS:
   PI - NOT TO EXCEED 12
   LL - NOT TO EXCEED 40
   SCREEN ANALYSIS:
   [illegible] PASSING 1½"
   [illegible] - 55 RETAINED NO 40
4. [illegible] BASE MATERIAL SHALL BE COMPACTED TO AT LEAST 95% (MODIFIED PROCTOR) OF MAXIMUM DRY DENSITY.
5. THERE ELEVATIONS OF COUNTY FOR WATERLINE AND CONSTRUCTION SHALL BE VERIFIED BY WRITTEN REPORT TO THE APPROPRIATE COUNTY AUTHORITY. SUCH REPORTS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR THE ACCEPTANCE TESTING LABORATORY, AS APPROVED BY THE TOM GREEN COUNTY.
6. THE REPORT SHALL BE PROVIDED AND PROCESSED ON FORMATS BY THE DEVELOPER AND SHALL BE TO THE SAME STANDARDS AS REQUIRED BY THE STATE OF TEXAS FOR STATE ROADS AND HIGHWAYS.

LEGEND:

STA - Station
CL - Centerline
ER - End of Radius
PVI - Point of Vertical Intersection
PVT - Point of Vertical Tangent
PVC - Point of Vertical Curve
PRC - Point of Reverse Curve
LT - Left
RT - Right



TYPICAL SECTION
RESIDENTIAL ROADWAY
N.T.S.

CONCRETE INVERT DETAIL
N.T.S.

SKG ENGINEERING
SURVEYING • LANDSCAPE • ENVIRONMENTAL
1133 SOUTH BRYANT BLVD.
SAN ANGELO, TEXAS 76903
PHONE: 325 655 3246
FAX: 325 942 2092
www.skgengineering.com

STATE OF TEXAS
RUSSELL T. GULLY
87727
REGISTERED PROFESSIONAL ENGINEER
4-9-09

STONEWALL RESERVE SECTION FOUR TOM GREEN COUNTY, TEXAS

SADDLESIDE ROAD
STREET PLAN-PROFILE
STA. 0+00 to End

DESIGNED BY: SKG	DWG. DATE: 04-09-2009
JOB NO: 08-A-1055	SHEET NO: ST5
SCALE: 1"=50'	

DUPLICATE

TOM GREEN COUNTY CLERK
124 W. BEAUREGARD
SAN ANGELO, TX 76903
(325)659-6553

ISSUED TO: PLAT APPLICATION FEE

RECEIPT #: 319525 **DATE: 04/14/2009 03:02:41 PM**
DEPARTMENT: RE **WORK STATION: INDEX01**

SERVICE	PAGES	FEE
MISCELLANEOUS,APPLIC	1	150.00
MISCELLANEOUS,ADDITI	10	100.00

Total Amount Due 250.00

CHECK 23307 250.00
PD BY SKG/STONEWALL RESERVE SEC 5

Total Amount Paid 250.00

THANK YOU

Tom Green County

Subdivision Application Form

(Please Print or Type)

Name of Proposed Subdivision: STONEWALL RESERVE SECTION 5

Location: SOUTH OF WALLING-PECAN, EAST OF HIDDEN VIEW DRIVE, SOUTH OF SECTION 4

Is location within the ETJ? Yes ____ No ✓ TGC Pct. # 2

Type of Request: Preliminary ____ Final ✓ Replat ____
Amended ____ Vacation ____ Revised ____

Owner(s) of Subdivision: STONEWALL RANCHES

Address: PO BOX 3300 SAN ANGELO, TX 76902

Phone # ____ Fax: ____

Existing Land Use: VACANT

Proposed Land Use: RESIDENTIAL

Total Acreage: 40.787 Number of Proposed Lots: 10

Proposed Source of Water Supply: Individual Well ____ Water Supply ✓

Name of Water System CONCHO RURAL WATER CORP.

Proposed Sewage Disposal System: Individual Septic Tank ✓

Private Sewage System ____

Are any off-site drainage, access or other easements necessary for this subdivision? No ✓ Yes ____ (Please explain) ____

Are there existing deed restrictions on this property? No ✓ Yes ____
If yes, please give the deed record reference:
Volume _____ Page _____

Are there any deviations or variances from existing subdivision rules & regulations requested? No ✓ Yes _____
(Please explain) _____

The owner hereby designates SLG ENGINEERING (Name)
as the official representative. 1122 SOUTH BRYANT BLVD. SAN ANGELO, TX 7690 (Address) 325-655-1288 (phone)

Application fee ($150.00 + 10.00 per lot) Paid by Owner _____
Representative ✓. To be paid to the Tom Green County Clerk's office prior to placement on the Commissioners' Court Agenda. Bring Plat, Tax Certificate showing "Zero" taxes owed, and receipt for application fee to Court on day of the Agenda Presentation.

The owner is aware that there will be an additional filing fee after approval by the Tom Green County Commissioners Court. The filing fee will also be paid to the Tom Green County Clerk at the time of filing of the plat for the records.

The undersigned hereby applies for subdivision plat approval in accordance with the regulations for the development of subdivisions and manufactured home rental communities as set out by the Commissioners Court of Tom Green County and certifies that the information contained on this application is true and accurate to the best of my knowledge.

David R Currie — 4/3/2009
Owner's Signature — Date

S. Carter — 4/3/2009
Representative's Signature — Date

Total Paid: $_____ Date Paid _____

Date of Commissioner's Court Action: _____

SADDLESIDE ROAD

SADDLESIDE ROAD

17 16 20 21 22 23 24

REF. Stonewall Reserve Section Five

REF. Stonewall Reserve Section Five

S.89°59'23"E. 1960.57

H.& T.C. R.R. CO. BLOCK 25
SURVEY 1
Abstract No. 1241

22 23

29 (2.925 Ac.) 28 (2.992 Ac.) 27 (2.949 Ac.) 26 (2.870 Ac.) 25 (8.000 Ac.)

HIDDEN VIEW DRIVE

COPPER ROCK ROAD

COPPER ROCK ROAD

10' UTILITY EASEMENT

20' DRAINAGE EASEMENT

J.S. GRANT SURVEY
REF.: Vol. 471, Pg. 6 DR

S.00°26'39"W. 920.02

25 24

30 (2.819 Ac.) 31 (2.874 Ac.) 32 (2.907 Ac.) 33 (2.957 Ac.) 34 (8.000 Ac.)

N.04°48'23"E. 93.97

N.89°59'23"W. 1996.74

REF.: remainder of 449.032 Ac. instrument #608380 OPRRP

CURVE TABLE				
CURVE	DELTA	RADIUS	LENGTH	LONG CHORD
C1	Δ=08°06'01"	1023.00	289.78	N.85°06'31"E. 288.68
C2	Δ=04°57'06"	2975.00	257.11	N.87°32'04"E. 257.03
C3	Δ=17°59'41"	50.00	17.45	S.84°59'13"E. 16.90
C4	Δ=279°59'22"	50.00	244.34	N.00°00'02"E. 64.28
C5	Δ=48°59'41"	20.00	17.45	S.85°00'18"W. 16.92
C6	Δ=04°57'06"	3025.00	261.43	S.87°32'04"W. 261.18
C7	Δ=08°06'01"	1975.00	279.22	S.85°06'31"W. 278.99

SCALE: 1"= 100'

0 50 100

GRAPHIC SCALE

NOTE: Bearings shown hereon are based on that certain 287.219 acres described and recorded in Volume 1155, Page 258 Official Public Records of Real Property, Tom Green County, Texas.

To obtain across horizontal distances multiply map grid distance by 1.000207153.

LEGEND:

- Found 3/4" Iron Pipe or Rod unless otherwise noted
- Set 1/2" Iron Rod with Cap

STONEWALL RESERVE
SECTION FIVE
TOM GREEN COUNTY, TEXAS

OWNER: STONEWALL RANCHES, a Texas General Partnership

DESCRIPTION: being 49.797 Acres out of H.& T.C. R.R. Co. Block 25
Survey No. 1, Abstract No. 1241 Tom Green County, Texas

SKG
ENGINEERING
SURVEYING • LABORATORY • ENVIRONMENTAL
1527 South Bryant Blvd.
San Angelo, Texas 76904
(325) 653-1199
FAX 325-653-4159
www.skgs.com

TOM GREEN COUNTY NOTES

No construction in the development within this subdivision may begin until Tom Green County requirements have been satisfied.

No structure in this subdivision shall be occupied until connected to a public water supply capable of providing requirements based and has been approved and certified by the Tom Green County Environmental Health Department.

Tom Green County Commissioner's Court makes no representation whatsoever as to the ground water availability for any tract in this subdivision.

COUNTY COMMISSIONER'S COURT
Approved for recording this ____ day of _____, 20____.

By: _____
County Judge

911 COORDINATOR
Approved for recording this ____ day of _____, 20____.

By: _____

COUNTY CLERK
Filed for record this ____ day of _____, 20____ @ _____
County Clerk of Tom Green Co., Tx.

By: _____

ACKNOWLEDGEMENT/DEDICATION
We, Stonewall Ranches, do hereby adopt this plat as the subdivision of our property and dedicate for the use of the public the streets and easements shown hereon.

_____
David R. Currie

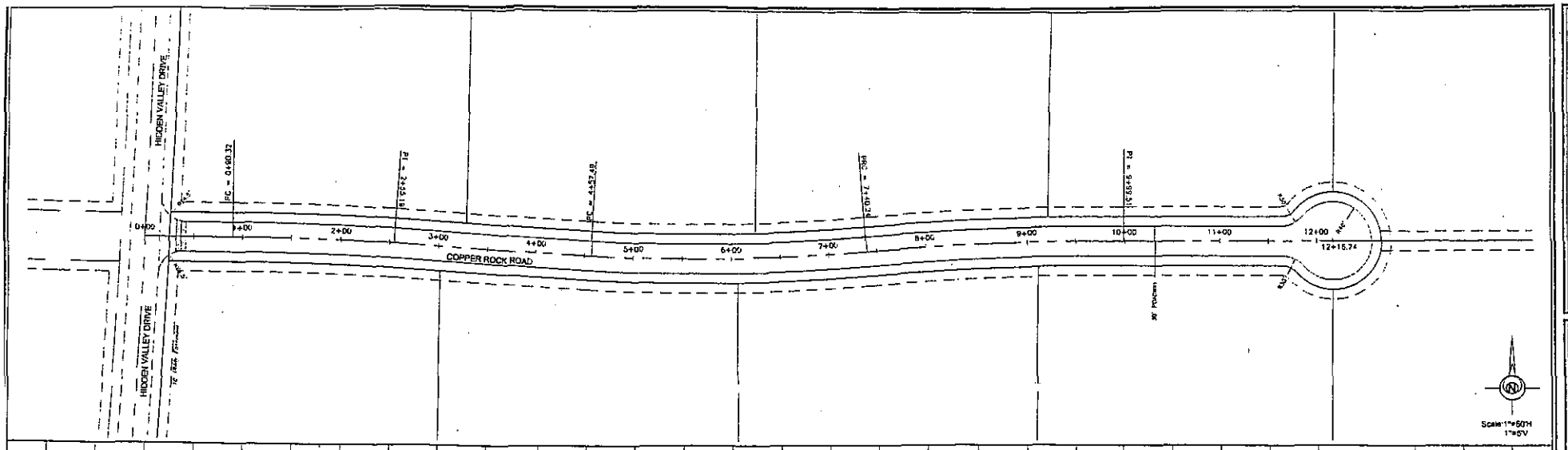
STATE OF TEXAS
COUNTY OF TOM GREEN
This instrument was acknowledged before me on _____
by David R. Currie, in the capacity shown.

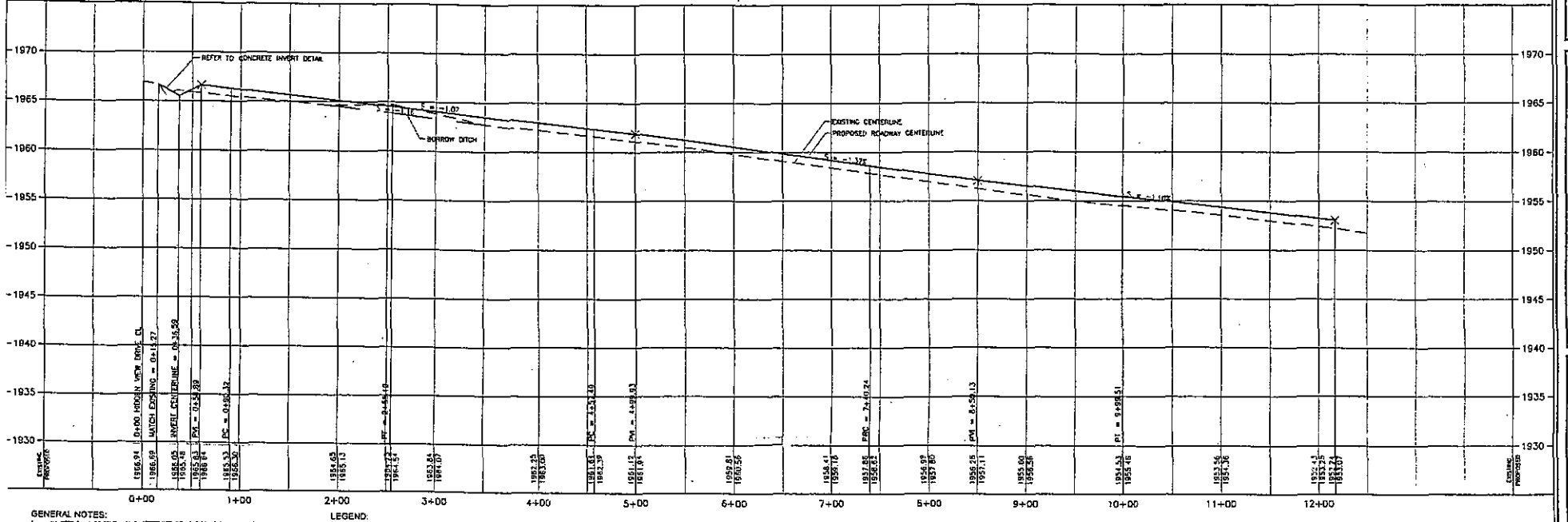
_____
Notary Public, State of Texas

Preliminary, this document shall not be recorded for any purpose.

SURVEYOR'S CERTIFICATE
Know All Men by these presents: that Russell T. Lang, R.P.L.S., do hereby certify that I prepared this plat from an actual and accurate survey of the land and that corner monuments shown thereon were actually placed under my supervision, in accordance with the rules for land subdivision; I further certify that the tract of land herein platted without the extraterritorial jurisdiction area of the City of San Angelo, Tom Green County, Texas.

08-__-11



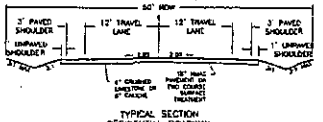


GENERAL NOTES:

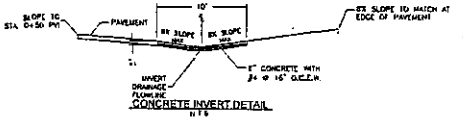
1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TOM GREEN COUNTY SUBDIVISION REGULATIONS.
3. A CRUSHED LIMESTONE BASE SHALL MEET THE FOLLOWING UNIFORM QUALITY REQUIREMENTS:
   PI = NOT TO EXCEED 15
   LL = NOT TO EXCEED 35
   SCREEN ANALYSIS
   [illegible]
   BASE PAVING = 15.5"
   BASE = [illegible] RETAINED = 80 %
2. BOTH SUBGRADE AND BASE MATERIAL SHALL BE COMPACTED TO AT LEAST [illegible] (MODIFIED PROCTOR) OF MAXIMUM DRY DENSITY.
4. VALUE STANDARDS OF QUALITY FOR MATERIALS AND CONSTRUCTION SHALL BE VERIFIED BY WRITTEN REPORT TO THE APPROPRIATE COUNTY AUTHORITY. SUCH REPORTS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER OR AN ACCEPTABLE TESTING LABORATORY, AS APPROVED BY THE COMMISSIONERS' COURT.
5. ALL SIGNAGE SHALL BE PROVIDED AND INSTALLED ON ROADWAYS IN THE DEVELOPED AND SHALL BE TO THE SAME STANDARDS AS REQUIRED BY THE STATE OF TEXAS FOR STATE ROADS AND HIGHWAYS.

LEGEND:

STA - Station
CL - Centerline
EP - End of Radius
PVI - Point of Vertical Intersection
PVT - Point of Vertical Tangent
PVC - Point of Vertical Curve
PRC - Point of Reverse Curve
LT - Left
RT - Right



TYPICAL SECTION
RESIDENTIAL ROADWAY
NO SCALE



CONCRETE INVERT DETAIL
NTS

SKG ENGINEERING
SURVEYING • LABORATORY • ENVIRONMENTAL
1103 SOUTH BRYANT BLVD
SAN ANGELO, TEXAS 76903
PHONE 325 653 3156
FAX 325 653 6705
www.skgeng.com

STATE OF TEXAS
RUSSELL T. GULLY
87727
REGISTERED
PROFESSIONAL ENGINEER
4-9-04

STONEWALL RESERVE SECTION FIVE TOM GREEN COUNTY, TEXAS

COPPER ROCK ROAD
STREET PLAN-PROFILE
STA. 0+00 to End

DESIGNED BY RBC	DWG DATE 04-08-2004
JOB NO 06-J-1868	SHEET NO ST6
SCALE 1"=50'	