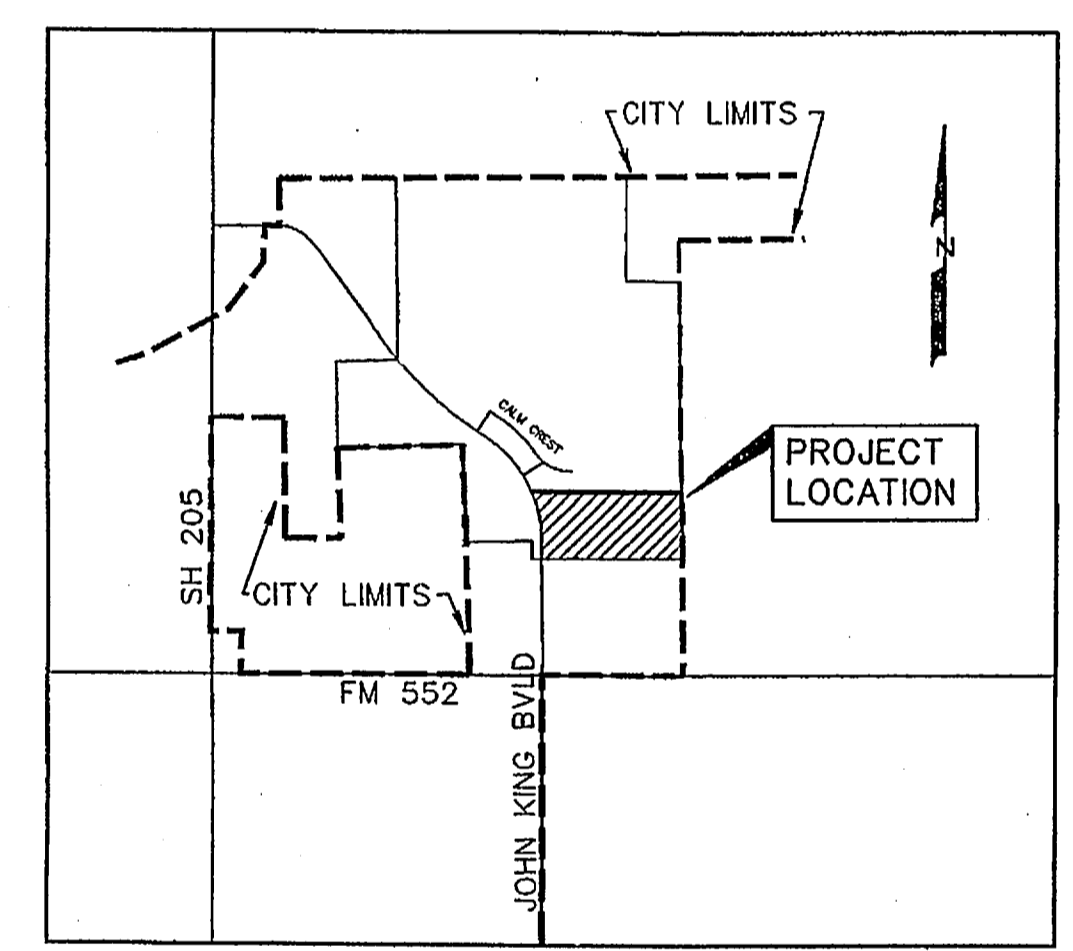


DEVELOPMENT PLANS FOR BREEZY HILL PHASE 2 CITY OF ROCKWALL, TEXAS

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VICINITY MAP
NOT TO SCALE

PREPARED FOR
BH PHASE IIA SF, LTD. & BH PHASE IIB SF, LTD.
8214 WESTCHESTER DRIVE, SUITE 710 DALLAS, TEXAS 75225

CORWIN ENGINEERING, INC. — CONSULTING ENGINEERS

200 W. BELMONT, SUITE E

TBPE FIRM #5951

ALLEN, TEXAS 75013

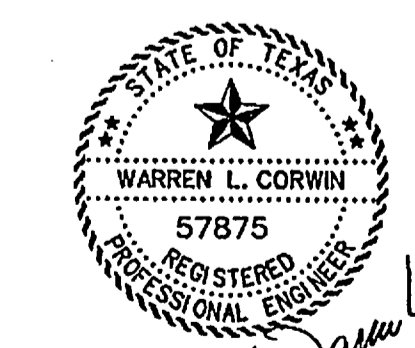
NOTE:
CITY OF ROCKWALL STANDARDS
AND NCTCOG 3rd ADDITION STANDARDS
SHALL BE USED FOR REFERENCE.

RELEASED FOR CONSTRUCTION
ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN
REMAINS WITH THE DESIGN ENGINEER. THE CITY
OF ROCKWALL, IN REVIEWING AND RELEASING
PLANS FOR CONSTRUCTION, ASSUMES NO
RESPONSIBILITY FOR ADEQUACY OR ACCURACY
OF DESIGN.

08-22-13 *KEM*
CITY DATE

Warren L. Corwin
8/19/2013

The seal appearing on
this document was
authorized by
Warren L. Corwin,
P.E. 57875, on
August 19, 2013



AS-BUILT JULY 2014
INFORMATION PROVIDED BY CONTRACTORS
(NOT FIELD VERIFIED)

1	PER CITY COMMENTS	6-14-13
NO.	REVISIONS	BY DATE

MAY 2013

LEGAL DESCRIPTION

WHEREAS, BH PHASE IIA SF, LTD., and BH PHASE IIB SF, LTD., are the owners of a tract of land situated in the City of Rockwall, Texas, containing 128.13 acres...

POINT OF BEGINNING, at the southwest corner of a 21,887 acre tract, as described in Clerk's File No. 2012-467951 in said deed records...

THENCE, North 00°27'00" East, along the east line of said 21,887 acre tract, for a distance of 250.00 feet, to a 1/2 inch iron rod set...

THENCE, North 00°27'00" East, for a distance of 192.83 feet, to a 1/2 inch iron rod set; THENCE, South 89°33'00" East, for a distance of 794.78 feet...

THENCE, North 00°27'00" East, continuing along said east line and approximate centerline, for a distance of 836.60 feet, to a 1/2 inch iron rod set...

THENCE, North 00°27'00" East, for a distance of 152.83 feet, to a 1/2 inch iron rod set; THENCE, South 89°33'00" East, for a distance of 794.78 feet...

THENCE, North 00°27'00" East, for a distance of 329.54 feet, to a 1/2 inch iron rod set on a non-tangent curve to the right, having a radius of 640.00 feet...

THENCE, North 00°27'00" East, for a distance of 687.74 feet (Chord Bearing North 12°19'57" West - 687.87 feet), to the POINT OF BEGINNING and containing 35,917 acres of land.

SURVEYOR CERTIFICATE

I, WARREN L. CORWIN, do hereby certify that the plat shown hereon accurately represents the results of an on-the-ground survey and all corners are as shown thereon and there have been no encroachments, conflicts, protrusions or violations...

DATED the 19th day of Feb. 2014. WARREN L. CORWIN, R.P.L.S. No. 4821

NOTARIAL APPROVAL

Recommended for Final Approval: 7/19/2013. Notary Public in and for the State of Texas: BARBARA ELIZABETH HALLGREN, My Commission Expires January 27, 2016

APPROVED

Warren L. Corwin, City Engineer. City of Rockwall, Texas. Notary Public in and for the State of Texas: Richard M. Skorsburg, My Commission Expires March 9, 2017

Witness Our Hands, this 19th day of March, 2014. Mayor, City of Rockwall. City Secretary: Kristy Ashburn

OWNERS CERTIFICATE

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS, THE COUNTY OF ROCKWALL, STATE OF TEXAS, CLERK OF ROCKWALL COUNTY, TEXAS, do hereby certify that the plat shown on this plat, and designated herein as the BREEZY HILL PHASE IIA & IIB, contains 128.13 acres...

We understand and do hereby consent to the easement strips shown on this plat for the purposes and also understand the easement and accommodation of all utilities desiring to use or using same. We also understand the following:

- 1. No buildings shall be constructed or placed upon, over, or across the utility easements as described herein.
2. Any public utility shall have the right to remove and keep removed any part of any building...

3. The City of Rockwall will not be responsible for any claims of any nature resulting from or caused by the establishment of grade of streets in the subdivision.
4. The developer and subdivision engineer shall bear total responsibility for storm drain improvements.

5. The developer shall be responsible for the necessary facilities to provide drainage patterns and drainage control such that properties within the drainage area are not adversely affected by storm drainage from the development.
6. No house dwelling unit or other structure shall be constructed on any lot in the addition by the owner or any other person until the developer and/or improvements have been accepted...

BH PHASE IIA SF, LTD., My Commission Expires May 9, 2017. Notary Public in and for the State of Texas: Richard M. Skorsburg, My Commission Expires March 9, 2017

STATE OF TEXAS, County of Dallas, before me, the undersigned authority, on this day personally appeared RICHARD M. SKORSBURG, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein stated.

Notary Public in and for the State of Texas My Commission Expires May 9, 2017. Amber Beardsley, My Commission Expires July 9, 2017

NOTE: It shall be the policy of the City of Rockwall to without issuing building permits and all streets, water, sewer and gas lines to be constructed by the City, the approval of a plat by the City does not constitute any representation, assurance or guarantee by the City of such plat shall be approved, authorized or permitted to be issued, nor shall such approval constitute any representation, assurance or guarantee by the City of the adequacy and availability for water for personal use and the protection within such plat, as required under Ordinance 85-54.

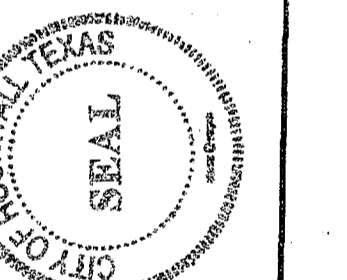
CURVE TABLE. Table with columns: CURVE NO., DELTA, RADIUS, LENGTH, TANGENT, CHORD, BEARING. Contains 22 entries for various curve segments.

LINE TABLE. Table with columns: LINE NO., BEARING, DISTANCE. Contains 7 entries for line segments.

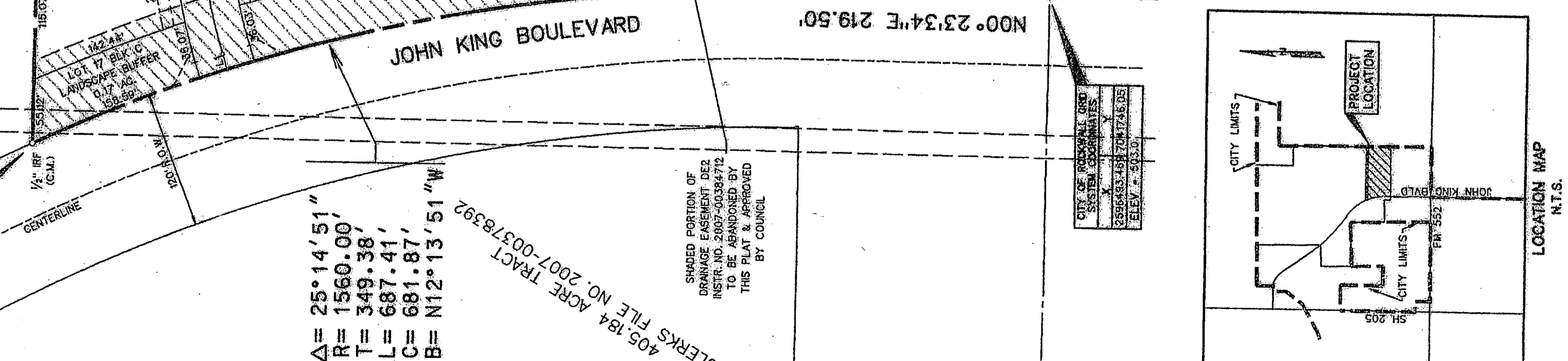
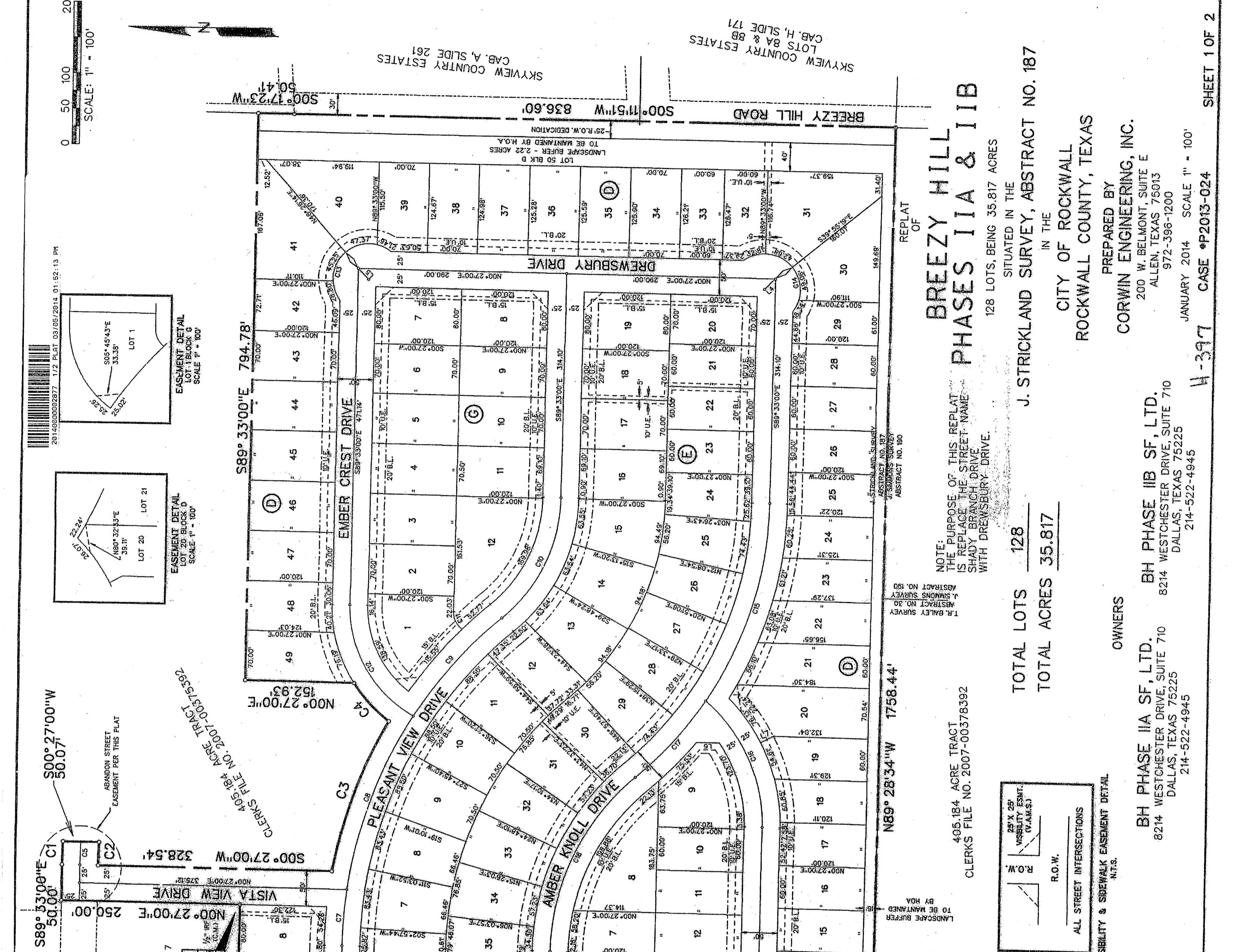
STATE OF TEXAS, County of Dallas, before me, the undersigned authority, on this day personally appeared RICHARD M. SKORSBURG, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein stated.

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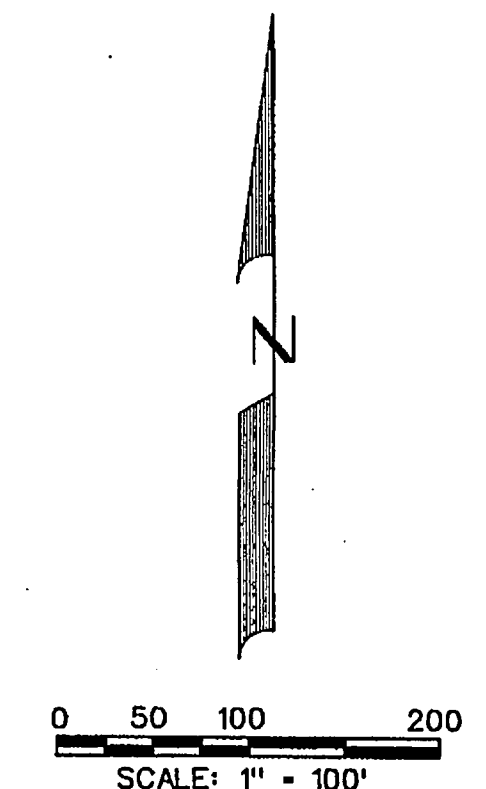


CITY OF ROCKWALL TEXAS. OFFICE OF THE CITY CLERK. CLERK'S FILE NO. 2007-00378392



- NOTES: 1. The area of 405.184 acre tract, as described in Clerk's File No. 2007-00378392, is shown in the shaded area of the map. 2. Allot lines are radii or perpendicular to the street unless otherwise noted by bearing. 3. 1/2 inch iron rods with 'CORWIN ENR INC' caps set at all boundary corners, block corners, points of curvature, points of tangency, and angle points in public right-of-way unless otherwise noted.





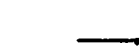
BREZY HILL PHASES IIA & IIB. 128 LOTS, BEING 35.817 ACRES. SITUATED IN THE J. STRICKLAND SURVEY, ABSTRACT NO. 187 IN THE CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS. PREPARED BY CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E, ALLEY 972-396-1200, DALLAS, TEXAS 75015

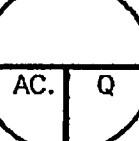


RUNOFF COMPUTATIONS

#	Area (sf)	Area (acres)	Runoff Coefficient	CA	Tc (min)	Q(100) (cfs)	Q(10) (cfs)
1	58282	1.34	0.50	0.67	10	9.80	6.6
2	73827	1.69	0.50	0.85	10	9.80	6.3
3	105108	2.41	0.50	1.21	10	9.80	11.8
4	76710	1.74	0.50	0.87	10	9.80	6.5
5	47070	1.08	0.50	0.54	10	9.80	5.3
6	76163	1.75	0.50	0.87	10	9.80	6.6
7	42159	0.97	0.50	0.48	10	9.80	4.7
8	62465	1.53	0.50	0.78	10	9.80	7.5
9	57243	1.54	0.50	0.77	10	9.80	7.6
10	42317	0.97	0.50	0.49	10	9.80	4.8
11	98957	2.22	0.50	1.11	10	9.80	10.9
12	71158	1.63	0.50	0.82	10	9.80	8.0
13	92831	2.13	0.50	1.09	10	9.80	10.4
14	91658	2.10	0.50	1.05	10	9.80	10.3
15	103549	2.38	0.50	1.19	10	9.80	11.6
16	80394	1.85	0.50	0.92	10	9.80	9.0
17	70769	1.63	0.50	0.81	10	9.80	8.0
18	41529	0.95	0.50	0.48	10	9.80	4.7
19	42378	0.97	0.50	0.49	10	9.80	4.8
20	64428	1.48	0.50	0.74	10	9.80	7.2
21	35528	0.82	0.50	0.41	10	9.80	4.0
22	30430	0.70	0.50	0.35	10	9.80	3.4
23	24951	0.57	0.50	0.29	10	9.80	2.6
24	26990	0.62	0.50	0.31	10	9.80	3.0
25	30385	0.70	0.50	0.35	10	9.80	3.4
26	10009	0.23	0.50	0.11	10	9.80	1.1
EX1	122077	28.03	0.35	9.61	20	8.30	81.4
EX2	620315	14.24	0.35	4.98	20	8.30	41.4
EX3	389914	8.88	0.35	3.10	20	8.30	25.7

LEGEND

-  PROP. STORM SEWER
-  PROP. CURB INLETS
-  EXIST. STORM SEWER
-  DRAINAGE AREA DIVIDE
-  FLOW ARROW

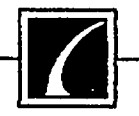
 DRAINAGE AREA AS SHOWN
RELEASED FOR CONSTRUCTION
 REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

CITY _____ DATE _____



The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on August 19, 2013

AS-BUILT JULY 2014
 INFORMATION PROVIDED BY CONTRACTORS
 (NOT FIELD VERIFIED)

 CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBE FIRM #5951			
DEVELOPMENT PLANS FOR BREEZY HILL PHASE 2 ROCKWALL, TEXAS			
EXISTING CONDITIONS DRAINAGE AREA MAP			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE	3 OF 25
13022	MAY 2013	1"=100'	



SEE SHEET FOR EXISTING INLET CAPACITY ANALYSIS

RELEASED FOR CONSTRUCTION. ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

INLET CALCULATIONS

No.	Inlet Location	Design Storm Freq. (years)	Tc (min)	Area Runoff: C=CA			Carry-Over from Upstream (cfs)	Total Gutter Flow (cfs)	Gutter Capacity (cfs)	Gutter Slope (ft/100ft)	Selected Inlet					
				Intensity (in/hr)	Runoff Coeff. "C"	Area (acres)					Type	Length (ft)	Inlet Capacity (cfs)	Carry-Over to Inlet (cfs)		
1	4+65 Shady Branch	100	10	9.8	0.5	1.34	6.6	0.0	6.6	14.0	0.50%	6" pbl	10	STD.	7.8	0.0
2	4+65 Shady Branch	100	10	9.8	0.5	1.69	8.3	0.0	8.3	14.0	0.50%	6" pbl	10	STD.	7.8	0.5
3	0+70 Lone Run	100	10	9.8	0.5	2.41	11.8	0.5	12.3	14.0	0.50%	6" pbl	15	STD.	13.5	0.0
4	0+70 Lone Run	100	10	9.8	0.5	1.74	8.5	0.0	8.5	14.0	0.50%	6" pbl	15	STD.	13.5	0.0
5	1+35 Pleasant View	100	10	9.8	0.5	1.08	5.3	0.0	5.3	25.0	1.60%	6" pbl	10	STD.	6.7	0.0
6	1+35 Pleasant View	100	10	9.8	0.5	1.75	8.6	0.0	8.6	25.0	1.60%	6" pbl	15	STD.	10.3	0.0
7	6+50 Pleasant View	100	10	9.8	0.5	0.97	4.7	0.0	4.7	33.1	2.80%	6" pbl	10	STD.	6.4	0.0
8	6+50 Pleasant View	100	10	9.8	0.5	1.53	7.5	0.0	7.5	33.1	2.80%	6" pbl	10	STD.	6.4	1.1
9	1+90 Pleasant View	100	10	9.8	0.5	1.54	7.6	0.0	7.6	28.2	2.04%	6" pbl	15	STD.	10.8	0.0
10	1+90 Pleasant View	100	10	9.8	0.5	0.97	4.8	1.1	5.8	28.2	2.04%	6" pbl	10	STD.	6.1	0.0
11	8+86 Amber Knoll	100	10	9.8	0.5	2.22	10.9	0.0	10.9	14.0	0.50%	6" pbl	15	STD.	13.5	0.0
12	8+86 Amber Knoll	100	10	9.8	0.5	1.63	8.0	0.0	8.0	14.0	0.50%	6" pbl	10	STD.	7.8	0.2
13	2+83 Amber Knoll	100	10	9.8	0.5	2.13	10.4	0.2	10.6	38.7	3.82%	6" pbl	15	STD.	9.8	0.8
14	0+62 Amber Knoll	100	10	9.8	0.5	2.10	10.3	0.0	10.3	34.3	3.00%	6" pbl	15	STD.	10.0	0.3
15	1+21 Lone Crest	100	10	9.8	0.5	2.38	11.6	0.0	11.6	32.5	2.70%	6" pbl	15	STD.	10.1	1.5
16	1+10 Lone Crest	100	10	9.8	0.5	1.85	9.0	0.0	9.0	32.5	2.70%	6" pbl	15	STD.	10.1	0.0
17	4+03 Noah Crest	100	10	9.8	0.5	1.63	8.0	1.1	9.1	14.0	Low Pt	6" pbl	10	STD.	21.0	0.0
18	4+03 Noah Crest	100	10	9.8	0.5	0.95	4.7	1.5	6.2	14.0	Low Pt	6" pbl	10	STD.	21.0	0.0

RUNOFF COMPUTATIONS

Area #	Area (ac)	Area (acres)	Runoff Coefficient	CA (mm)	Tc (min)	Q (cfs)
1	59282	1.34	0.50	0.87	10	9.80
2	73827	1.69	0.50	0.85	10	9.80
3	105168	2.41	0.50	1.21	10	9.80
4	73710	1.74	0.50	0.87	10	9.80
5	47070	1.08	0.50	0.54	10	9.80
6	78163	1.75	0.50	0.87	10	9.80
7	42169	0.97	0.50	0.48	10	9.80
8	89495	1.53	0.50	0.78	10	9.80
9	67243	1.54	0.50	0.77	10	9.80
10	42317	0.97	0.50	0.48	10	9.80
11	89857	2.22	0.50	1.11	10	9.80
12	71138	1.63	0.50	0.82	10	9.80
13	92831	2.13	0.50	1.08	10	9.80
14	91689	2.10	0.50	1.05	10	9.80
15	103549	2.38	0.50	1.19	10	9.80
16	80384	1.85	0.50	0.92	10	9.80
17	70789	1.53	0.50	0.81	10	9.80
18	41523	0.95	0.50	0.48	10	9.80
19	42378	0.97	0.50	0.49	10	9.80
20	84428	1.48	0.50	0.74	10	9.80
21	35526	0.82	0.50	0.41	10	9.80
22	39490	0.70	0.50	0.35	10	9.80
23	24851	0.57	0.50	0.29	10	9.80
24	16091	0.37	0.50	0.18	10	9.80
25	30385	0.70	0.50	0.35	10	9.80
26	10008	0.23	0.50	0.11	10	9.80
27	18859	0.26	0.50	0.12	10	9.80
EX1	1220877	28.03	0.35	9.81	20	8.30
EX2	620315	14.24	0.35	4.98	20	8.30
EX3	385914	8.68	0.35	3.10	20	8.30

LEGEND

- PROP. STORM SEWER
- PROP. CURB INLETS
- EXIST. STORM SEWER
- DRAINAGE AREA DIVIDE
- FLOW ARROW
- DRAINAGE AREA NO.

AS-BUILT JULY 2014
INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)



The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on August 19, 2013

CORWIN ENGINEERING, INC.
200 W. BELMONT, SUITE E
ALLEN, TEXAS 75013 (972)396-1200
TBP FIRM #5951

DEVELOPMENT PLANS FOR BREEZY HILL PHASE 2 ROCKWALL, TEXAS

DRAINAGE AREA MAP

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
J3022	MAY 2013	SCALE: 1"=60'	4 OF 25

STORM SEWER CALCULATIONS

Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	CA	Accumulated CA	Tc (Min)	Design Storm (Years)	I (in/hr)	Q (CFS)	S (ft)	Pipe Size (in)	Velocity (fps)	Head Loss (ft)	Flow Time (Min)	Time at D/S (Min)	Δ Velocity Head (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream	Proposed Grade
0+76.04	0+00.00	76.04	Pond	28.03	28.03	0.35	9.81	9.81	20.00	100	8.30	68.1	0.0017	5X3	4.7	0.34	0.27	20.27	0.34	498.97	498.63	
11+25.60	11+05.00	20.60	6	1.75	1.75	0.50	0.88	0.88	10.00	100	9.80	8.6	0.0015	24	2.7	0.11	0.13	10.13	0.11		530.77	533.79
10+73.56	10+50.33	23.23	D3	7.19	7.19	0.50	0.54	1.42	10.13	100	9.78	48.9	0.0039	24	4.4	0.30	0.12	10.25	0.19	530.74	530.55	533.79
10+50.33	6+35.68	213.65	19	0.97	0.97	0.50	0.49	5.50	10.62	100	9.70	53.4	0.0169	30	10.9	1.84	0.33	10.95	0.29	512.63	512.34	
6+35.68	2+99.64	337.04	7.0	2.50	2.20	0.50	1.14	6.64	10.95	100	9.65	84.1	0.0092	36	9.1	1.29	0.52	11.57	-0.28	508.72	509.00	521.55
2+99.64	1+01.96	197.68	D4	2.52	2.73	0.50	1.37	8.01	11.57	100	9.55	76.5	0.0058	42	8.0	0.99	0.41	11.98	-0.15	505.89	506.04	
1+01.96	0+78.99	22.97	DS.17	13.93	13.62	0.50	6.81	14.82	11.98	100	9.48	140.5	0.0051	54	8.8	1.20	0.04	12.02	0.21	504.89	504.68	509.92
0+78.99	0+22.59	56.40	18	0.95	0.95	0.50	0.48	15.30	12.02	100	9.48	145.0	0.0054	54	9.1	1.29	0.10	12.12	0.09	504.57	504.48	509.92
7+33.55	7+33.55	24.73	2	1.69	1.59	0.50	0.80	0.80	10.00	100	9.80	7.8	0.0056	18	4.4	0.30	0.09	10.09	0.30		534.10	537.18
0+48.27	0+00.00	48.27	3	2.41	2.52	0.50	1.26	3.60	12.57	100	9.39	39.8	0.0068	30	6.9	0.74	0.12	12.69	0.43	531.21	531.22	533.57
0+48.27	0+00.00	48.27	3	2.41	2.52	0.50	1.26	3.60	12.57	100	9.39	39.8	0.0068	30	6.9	0.74	0.12	12.69	0.43	531.19	530.76	533.57
0+00.00	0+00.00																			530.43		
0+89.23	0+00.00	89.23	10	0.97	1.19	0.50	0.60	1.37	10.12	100	9.78	13.4	0.0035	24	4.3	0.29	0.35	10.47	0.20	505.90	505.70	508.14
0+89.23	0+00.00	89.23	10	0.97	1.19	0.50	0.60	1.37	10.12	100	9.78	13.4	0.0035	24	4.3	0.29	0.35	10.47	0.20	505.90	505.70	508.14
0+00.00	0+00.00																			505.39		
4+44.54	4+44.54	29.88	15	2.38	2.06	0.50	1.03	1.03	10.00	100	9.80	10.1	0.0082	18	5.7	0.50	0.08	10.08	0.50		510.40	512.79
4+44.54	0+93.75	350.79	16	1.05	1.85	0.50	0.92	1.95	10.08	100	9.79	19.1	0.0071	24	6.1	0.58	0.36	11.04	0.08	510.14	510.06	513.87
0+93.75	0+00.00	93.75	D6	8.08	7.85	0.50	3.93	5.88	11.04	100	9.63	56.6	0.0072	36	8.0	0.99	0.20	11.24	0.41	507.56	505.57	
0+00.00	0+00.00																			504.89	504.68	509.92
8+77.36	2+74.05	603.31	11.12	3.85	3.81	0.50	1.91	1.91	10.00	100	9.80	18.7	0.0068	24	6.0	0.56	1.68	11.68	0.56		515.47	535.98
2+74.05	0+53.05	221.00	13	2.13	2.00	0.50	1.00	2.91	11.68	100	9.53	27.7	0.0150	24	8.8	1.20	0.42	12.10	0.64	511.34	510.70	518.93
0+53.05	0+00.00	53.05	14	2.10	2.04	0.50	1.02	3.93	12.10	100	9.46	37.2	0.0270	24	11.8	2.16	0.07	12.17	0.96	507.38	506.42	511.62
0+00.00	0+00.00																			504.99	505.57	
5+71.39	0+18.64	552.75	EX2.24	14.61	14.61	0.35	5.17	5.17	20.00	100	8.30	42.9	0.0041	36	6.1	0.58	1.51	21.51	0.58		500.87	502.50
0+18.64	0+00.00	18.64	0	0.00	0.00	0.00	0.00	5.17	20.00	100	8.30	42.9	0.0007	5X3	3.0	0.14	0.10	20.10	0.07	498.58	498.51	505.50
0+00.00	0+00.00																			498.50		

EXISTING INLET CAPACITY ANALYSIS

No.	Inlet Location	Freq. (years)	Tc (min)	"I" (in/hr)	Coeff. "C"	"A" (acres)	Q (cfs)	Upstream (cfs)	Flow (cfs)	Capacity (cfs)	Slope (ft/100ft)	Crown Type	Length (ft)	Capacity (cfs)	Downstream Inlet (cfs)	
Pre-Project																
J3	223+50 John King	100	10	9.8	0.9	0.70	6.2	0.0	6.2	20.0	0.80%	6" pbl	15	REC.	10.0	0.0
J4	222+42 John King	100	10	9.8	0.9	0.28	2.5	0.0	2.5	20.0	-	6" pbl	15	REC.	32.0	0.0
J5	219+50 John King	100	10	9.8	0.9	0.76	6.7	0.0	6.7	41.0	4.36%	6" pbl	15	REC.	8.1	0.0
J6	221+50 John King	100	10	9.8	0.9	0.28	2.4	0.0	2.4	32.0	2.00%	6" pbl	15	REC.	9.0	0.0
Post-Project																
J3	223+50 John King	100	10	9.8	0.64	1.97	12.4	0.0	12.4	18.4	0.80%	6" pbl	15	STD.	10.0	2.4
J4	222+42 John King	100	10	9.8	0.61	0.98	5.9	2.4	8.3	18.4	-	6" pbl	15	STD.	32.0	0.0
J5	219+50 John King	100	10	9.8	0.50	0.76	6.7	0.0	6.7	42.9	4.36%	6" pbl	15	STD.	8.1	0.0
J6	221+50 John King	100	10	9.8	0.70	0.51	3.6	0.0	3.6	29.0	2.00%	6" pbl	15	STD.	9.0	0.0

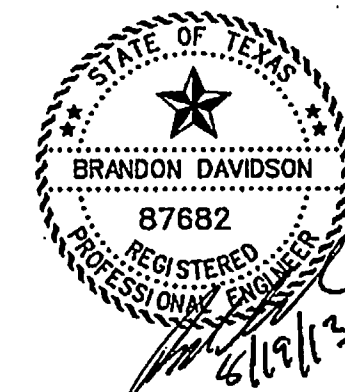
EXISTING CULVERT CAPACITY ANALYSIS

Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	CA	Accumulated CA	Tc (Min)	Design Storm (Years)	I (in/hr)	Q (CFS)	S (ft)	Pipe Size (in)	Velocity (fps)	Head Loss (ft)	Flow Time (Min)	Time at D/S (Min)	Δ Velocity Head (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream	Proposed Grade	
0+00.00	0+00.00																						
Ex. 2'-5"x3' Box Culvert in John King																							
North Box																							
1+66.00	0+00.00	166.00	Pond	28.03	28.03	0.35	9.81	9.81	20.00	100	8.30	68.1	0.0017	5x3	4.7	0.34	0.59	20.59	0.34	498.39	498.05	0.00	
0+00.00	0+00.00																				497.76		
South Box																							
1+66.00	0+70.00	96.00	22-26, EX2	16.81	16.81	0.37	5.27	5.27	20.00	100	8.30	52.0	0.0010	5x3	3.6	0.20	0.44	20.44	0.20		498.39	497.95	0.00
0+70.00	0+00.00	70.00	Line J	4.45	4.45	0.50	4.01	10.28	20.44	100	8.30	85.3	0.0027	5x3	5.9	0.54	0.20	20.64	0.34	498.29	497.95	0.00	

THE CALCULATED HYDRAULIC GRADE LINES FOR BOTH CULVERTS ARE BELOW THE TOP OF THE BOX AT THE UPSTREAM END THEREFORE THE BOXES HAVE ADEQUATE CAPACITY

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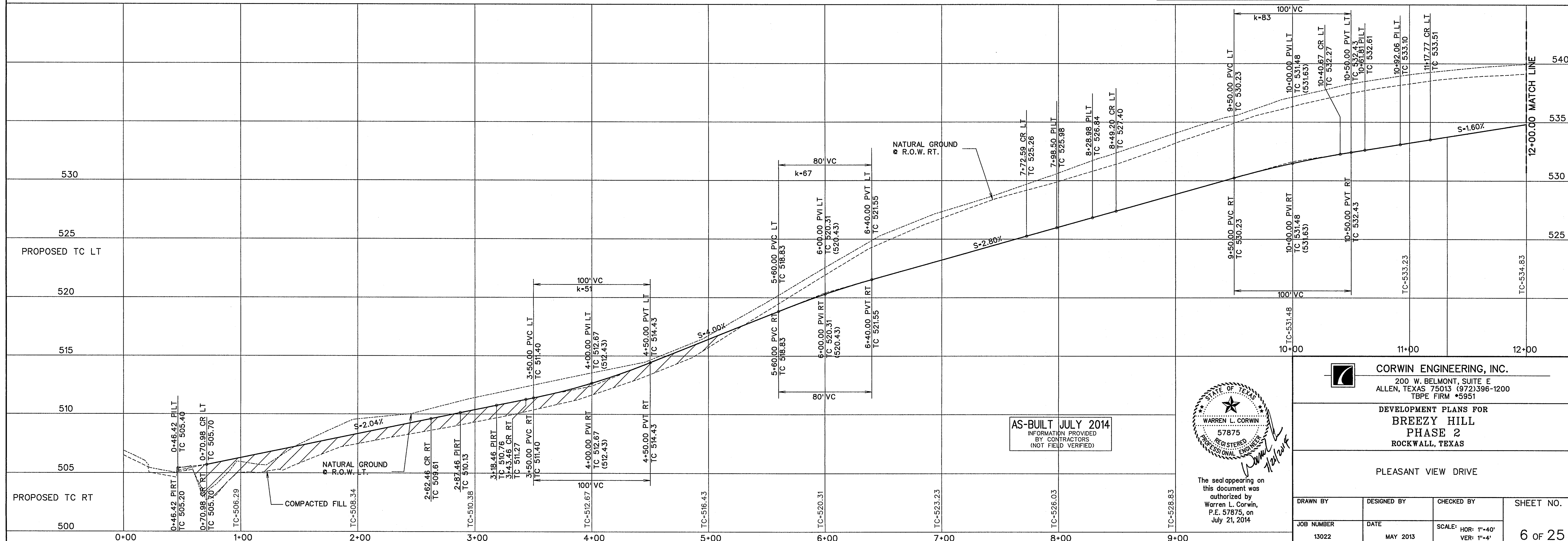
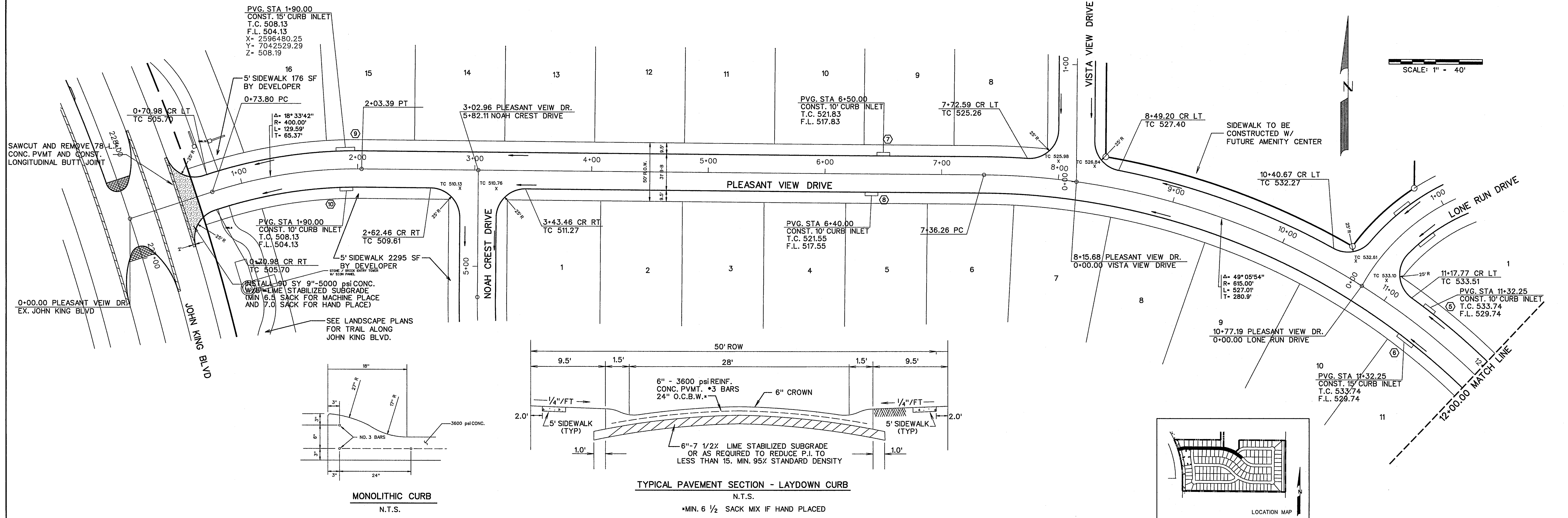
CITY _____ DATE _____

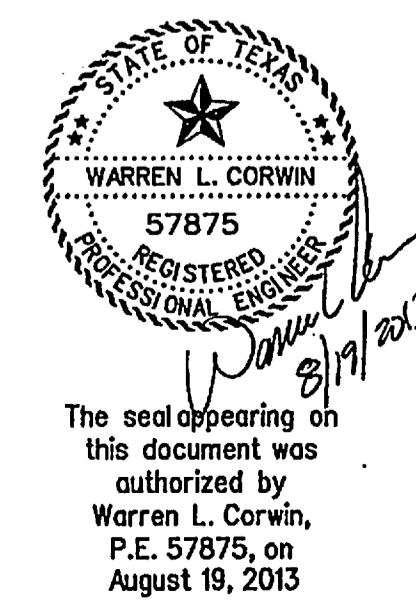
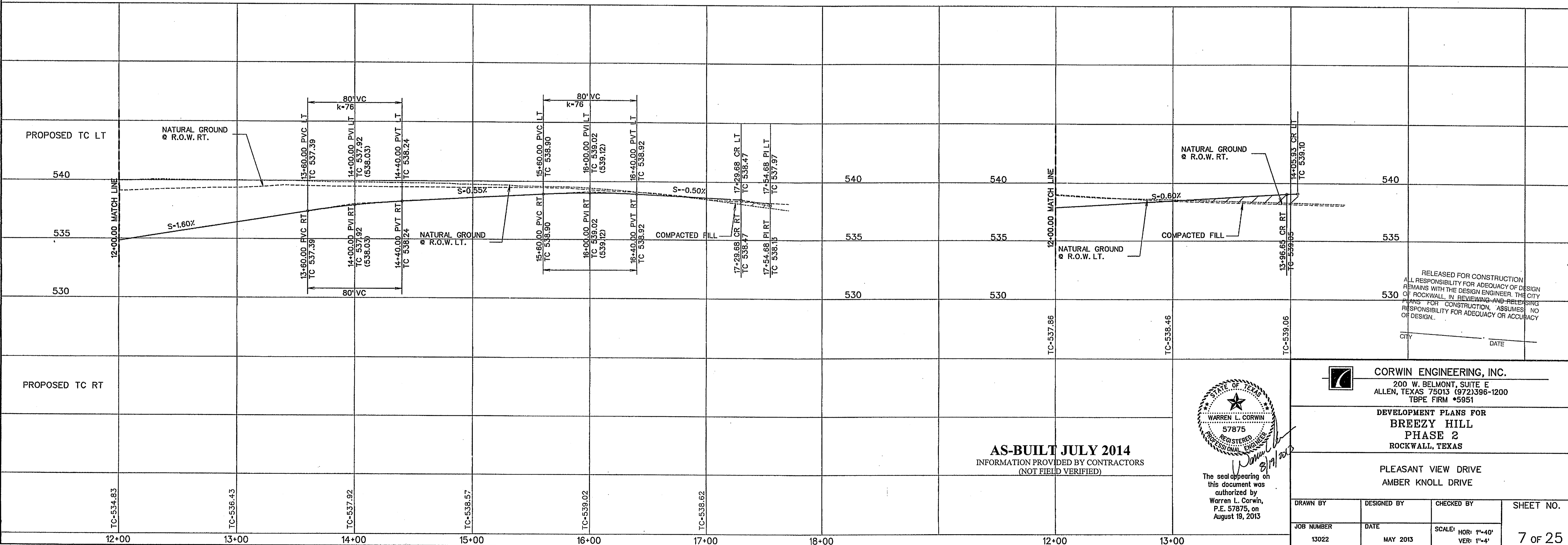
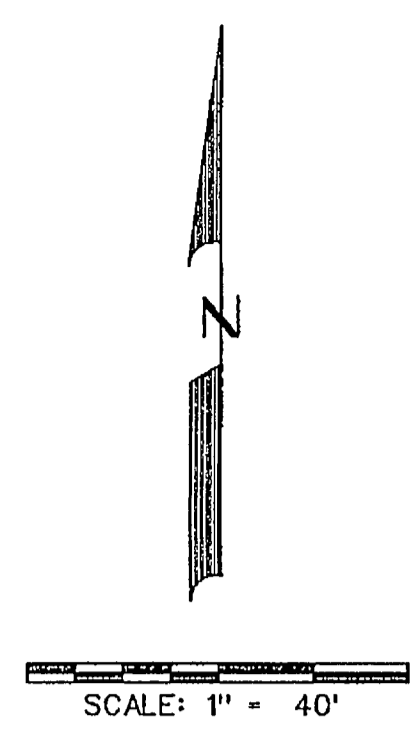
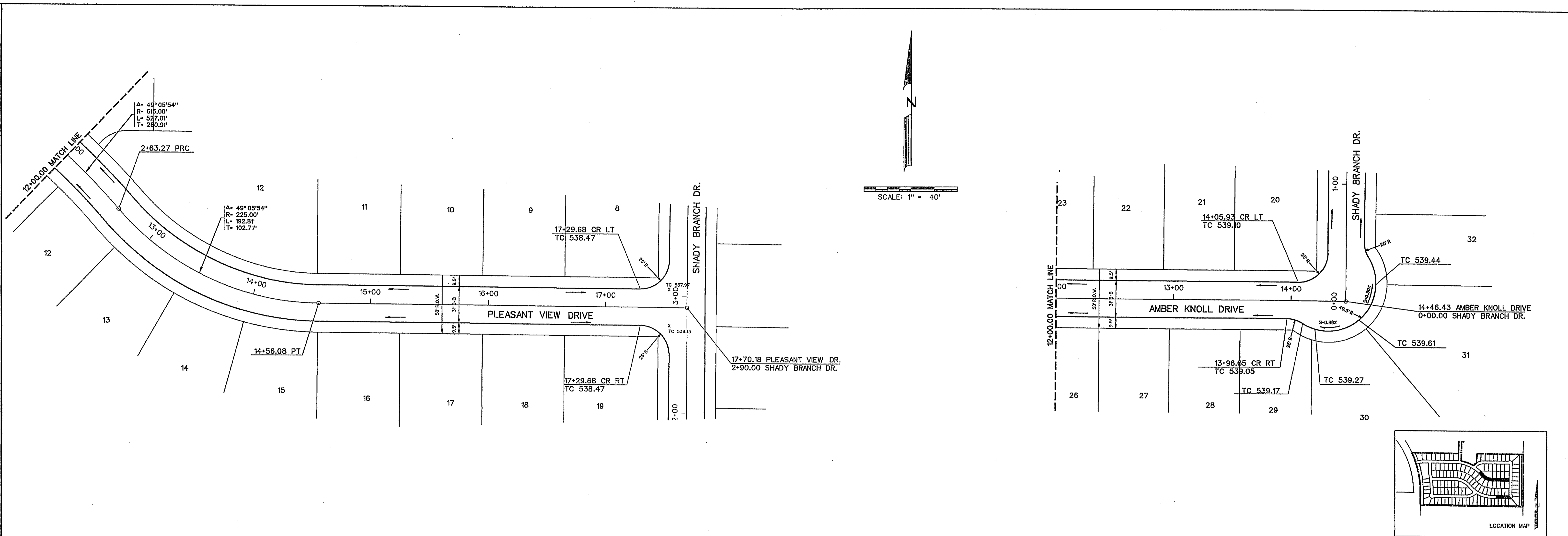


The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on August 19, 2013

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INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)

<p>CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBPE FIRM #5951</p>			
<p>DEVELOPMENT PLANS FOR BREEZY HILL PHASE 2 ROCKWALL, TEXAS</p>			
<p>STORM SEWER CALCULATIONS</p>			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	5 of 25
13022	MAY 2013		





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CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972)396-1200
 TBPE FIRM #5951

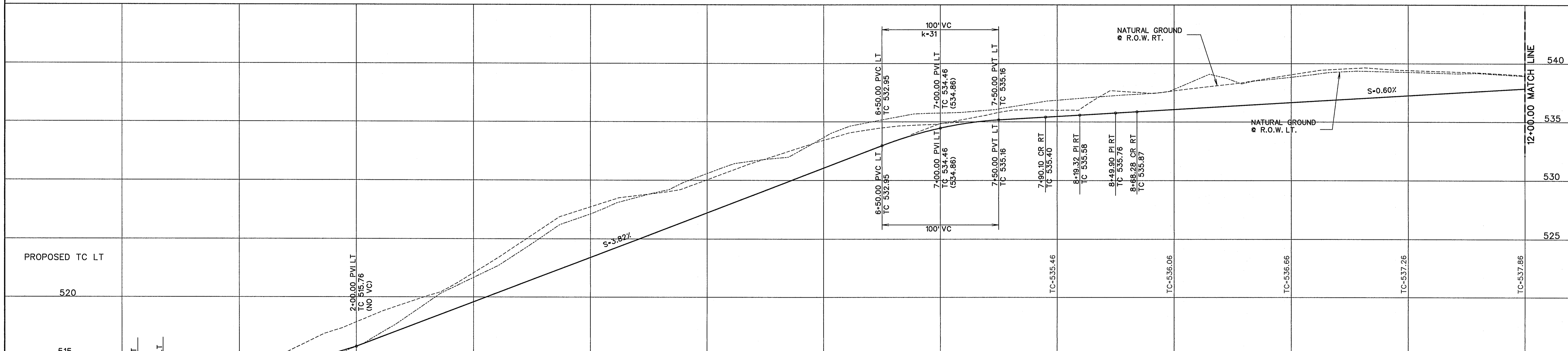
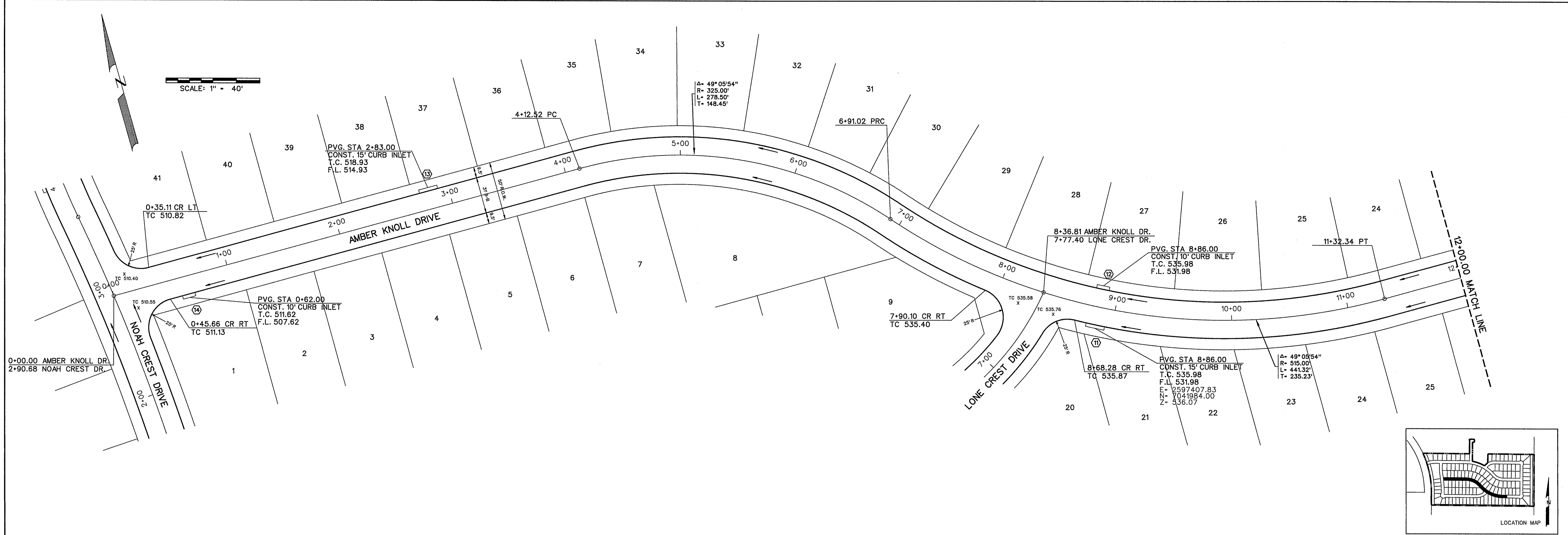
**DEVELOPMENT PLANS FOR
 BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS**

**PLEASANT VIEW DRIVE
 AMBER KNOLL DRIVE**

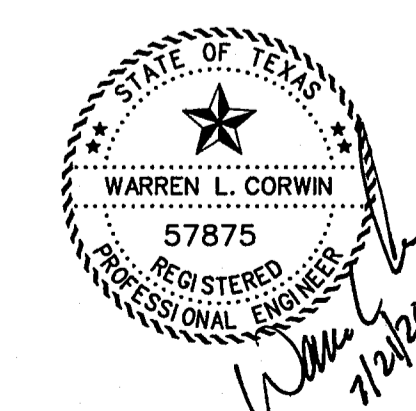
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JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	7 of 25
13022	MAY 2013		

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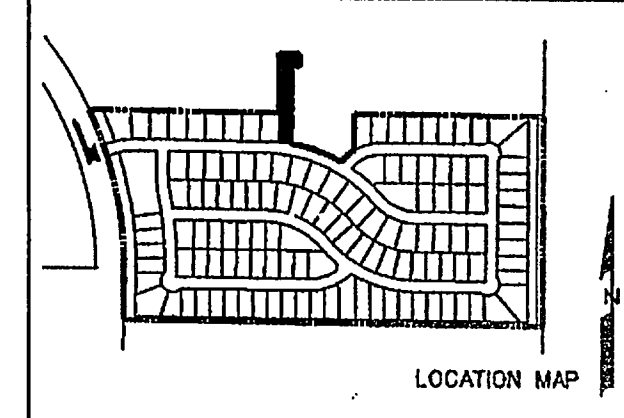
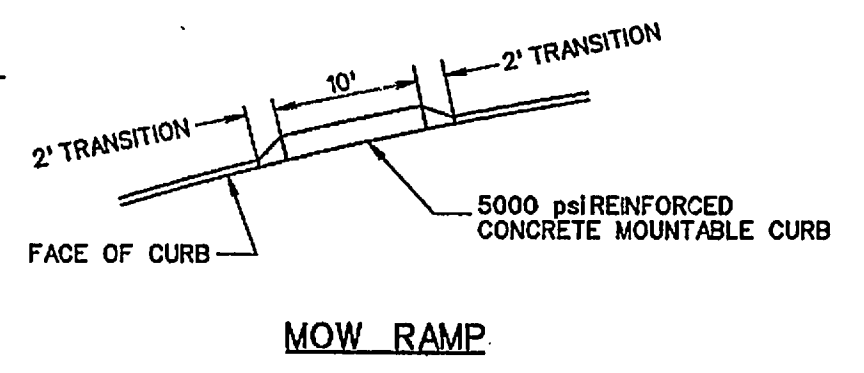
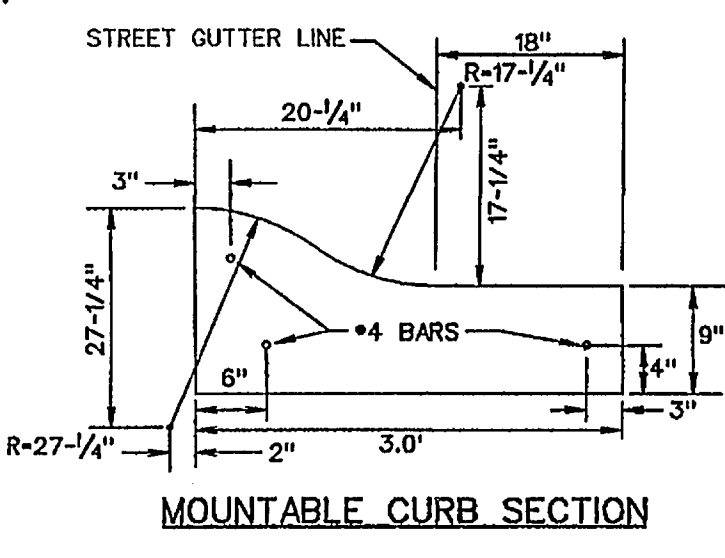
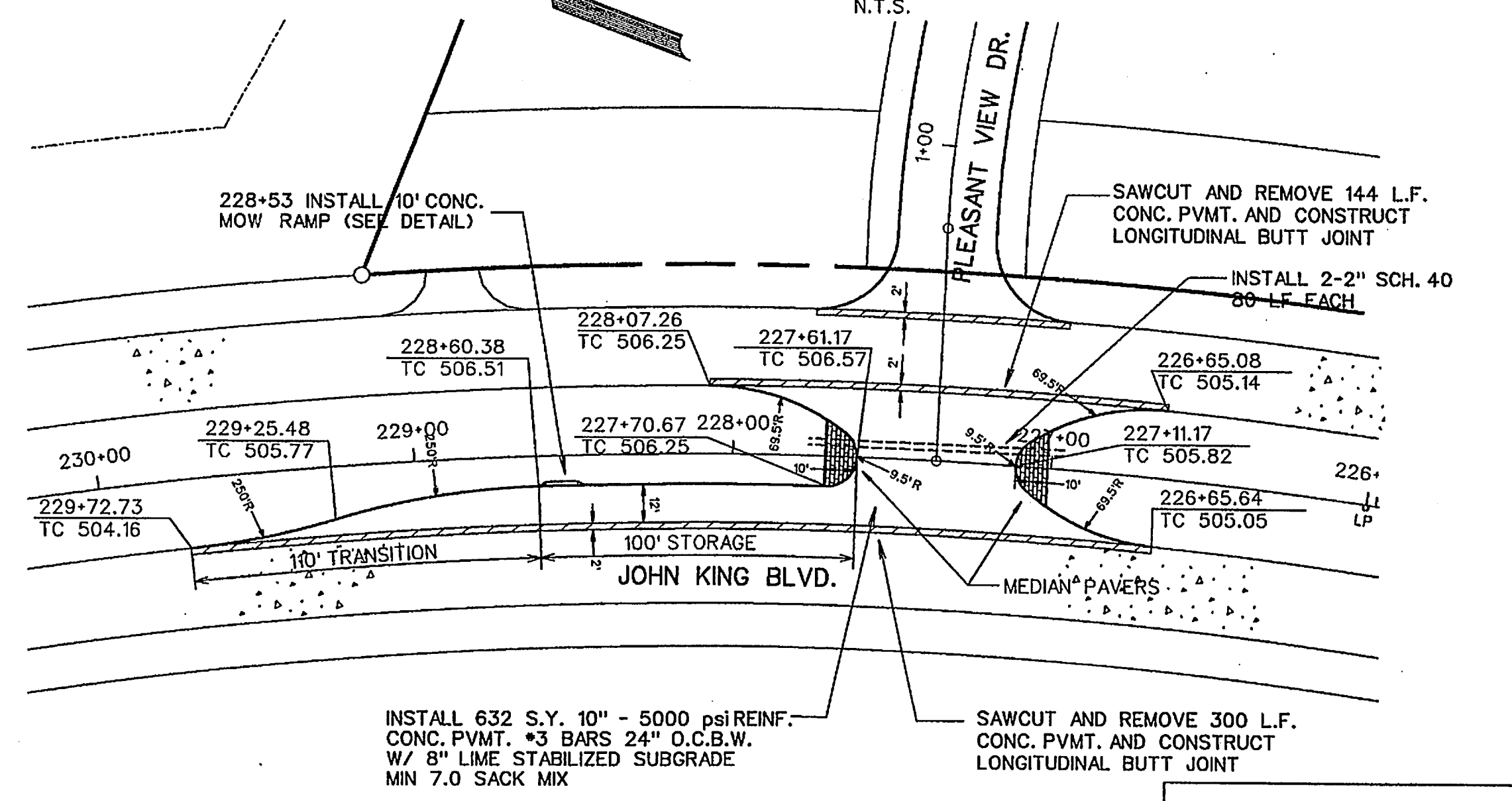
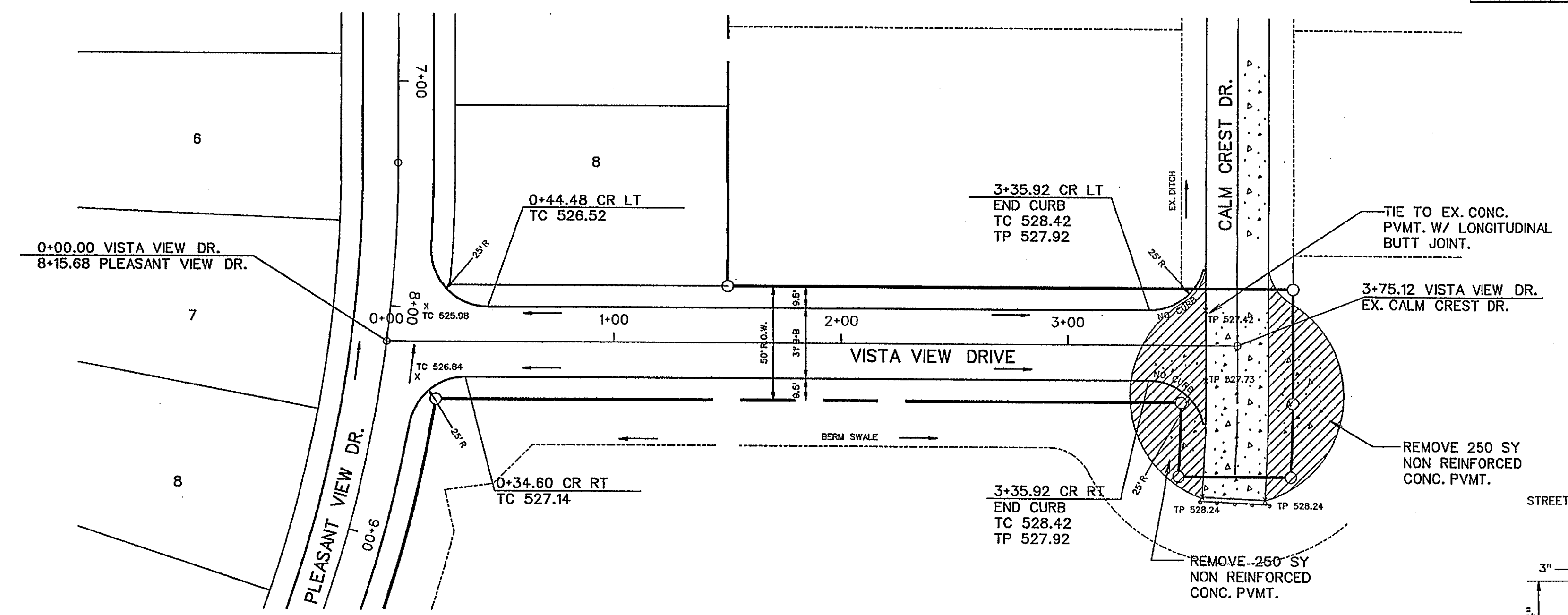
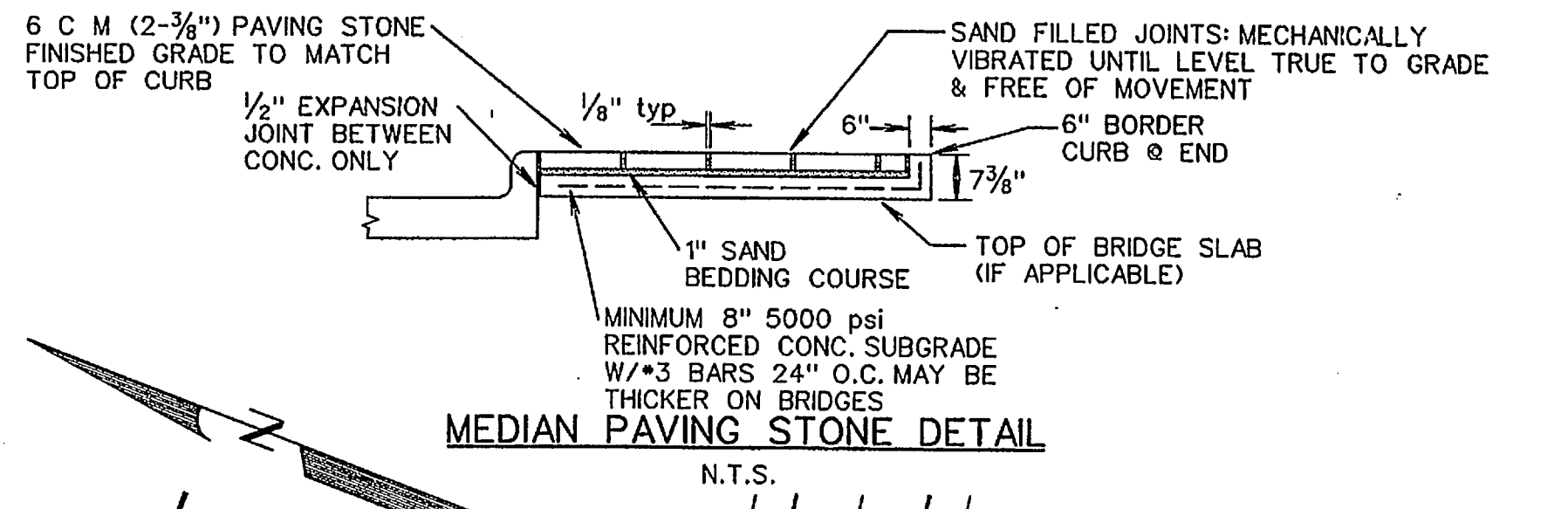
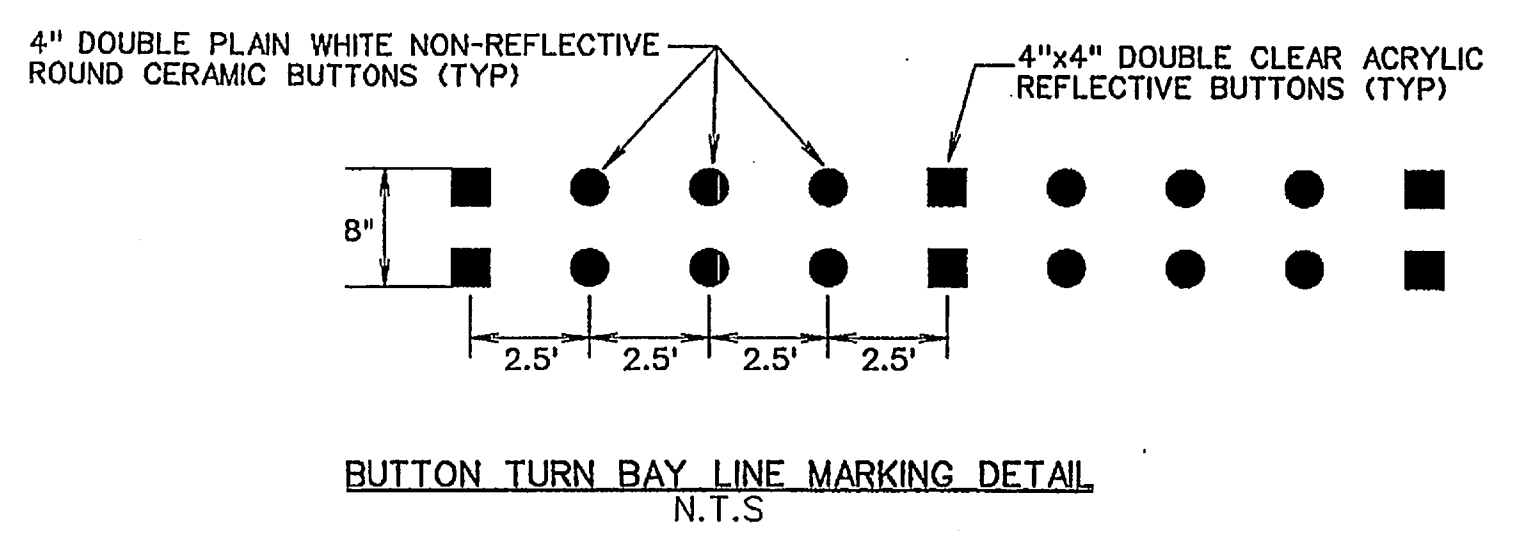
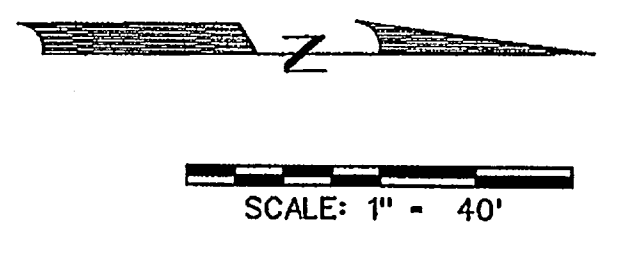
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CORWIN ENGINEERING, INC.
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 TBPE FIRM #5951

DEVELOPMENT PLANS FOR
**BREEZY HILL
 PHASE 2**
 ROCKWALL, TEXAS

AMBER KNOLL DRIVE

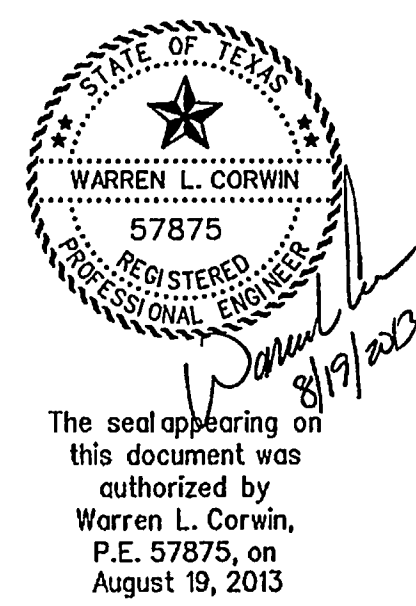
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13022	MAY 2013		



PROPOSED TC LT	535	7+98.50 CR LT TC 525.98	0+44.48 CR LT TC 526.52	1+00.00 PVC LT TC 528.06	1+50.00 PVI RT TC 529.03 (529.45)	2+00.00 PVT LT TC 528.17	NATURAL GROUND @ R.O.W. RT.	3+35.92 CR LT END CURB TC 528.42 TP 527.92	535
530									530
525							NATURAL GROUND @ R.O.W. LT.	3+35.92 CR RT END CURB TC 528.42 TP 527.92	525
520								3+61.10 BIRT TP 527.73	520
PROPOSED TC RT									

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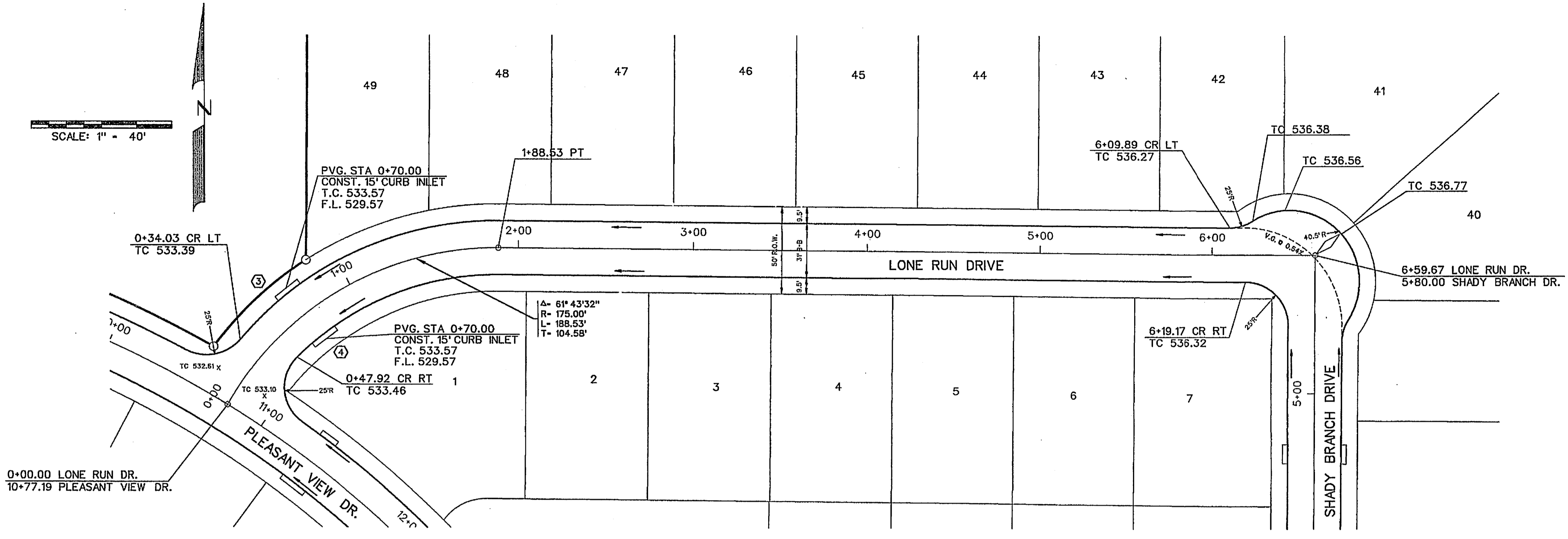
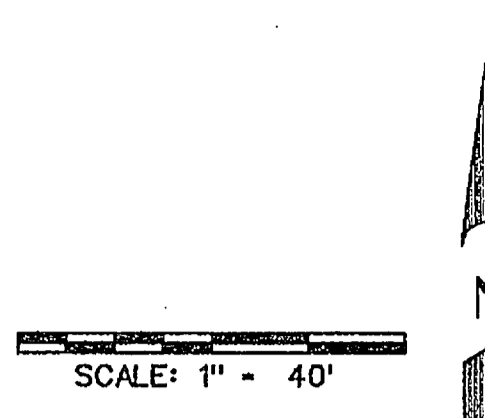
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TBP# FIRM #5951

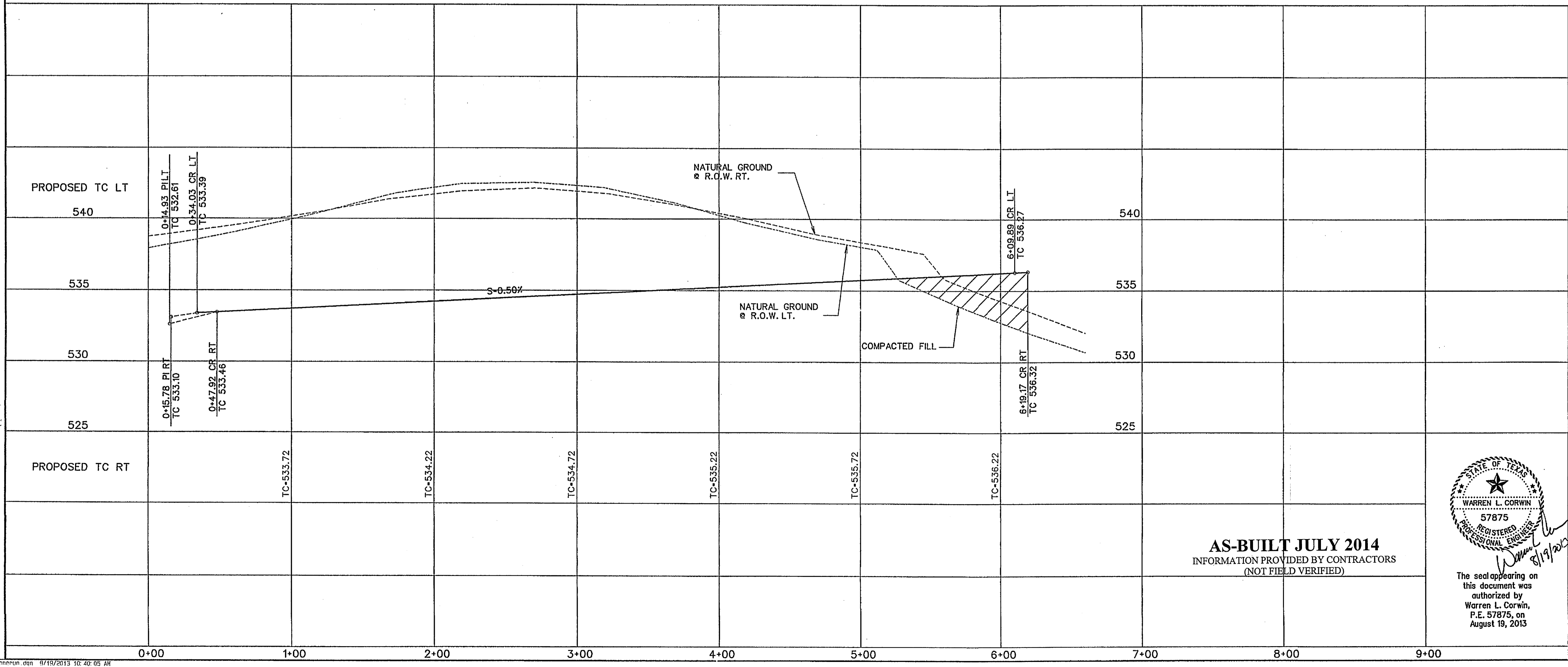
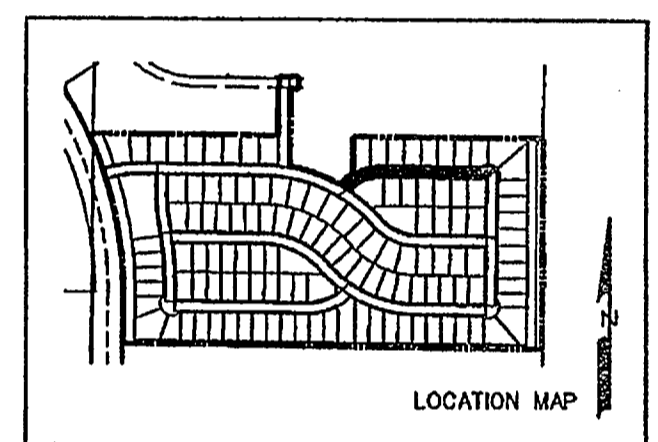
**DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE 2
ROCKWALL, TEXAS**

**VISTA VIEW DRIVE
TURN LANE**

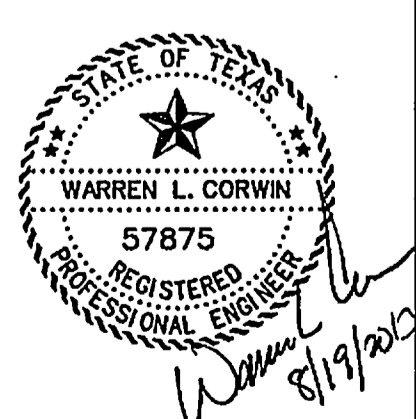
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JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	9 of 25



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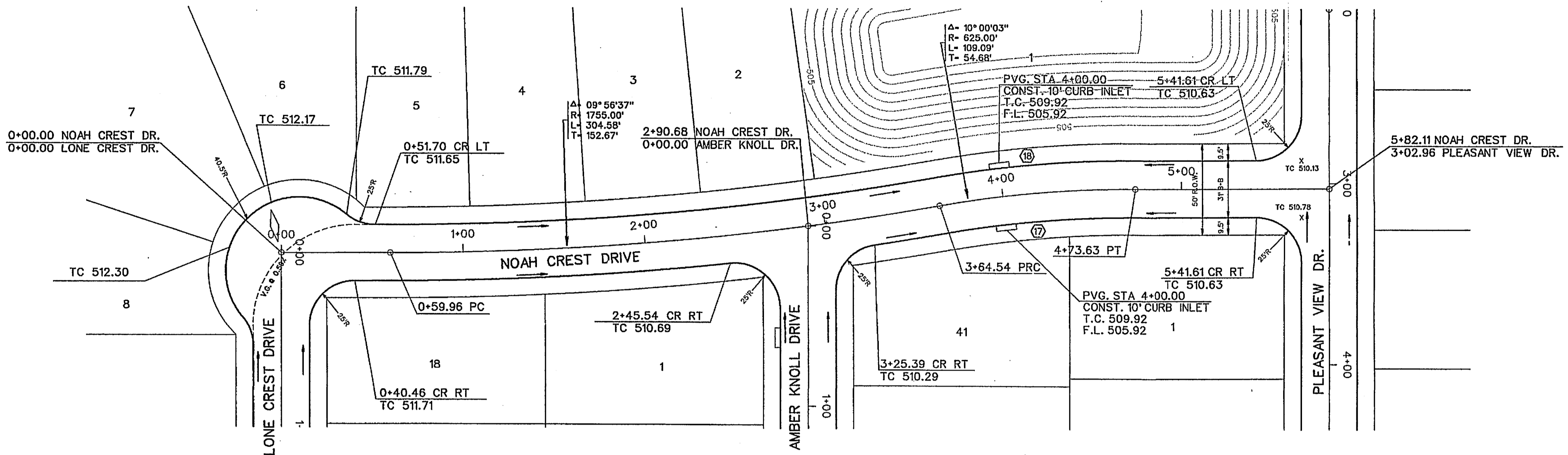
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CORWIN ENGINEERING, INC.
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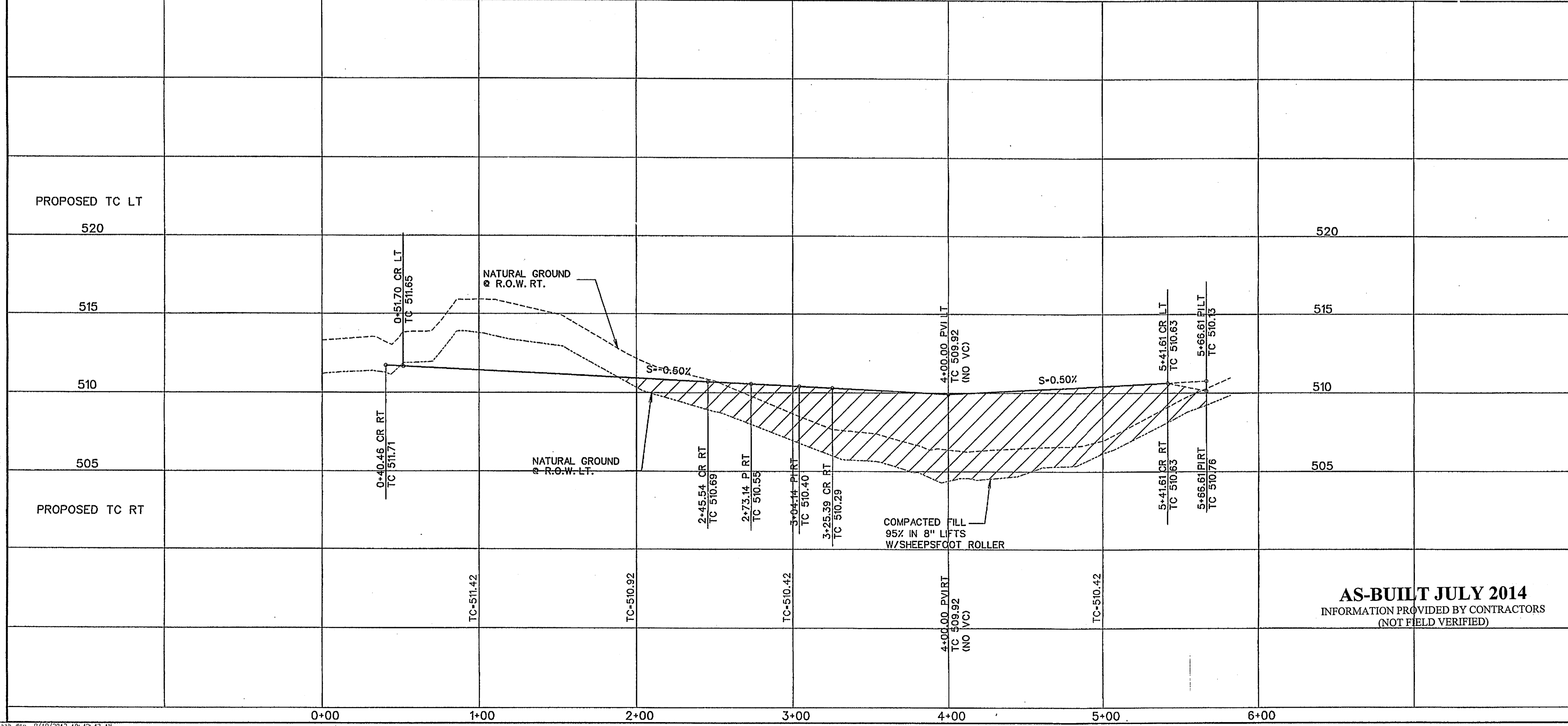
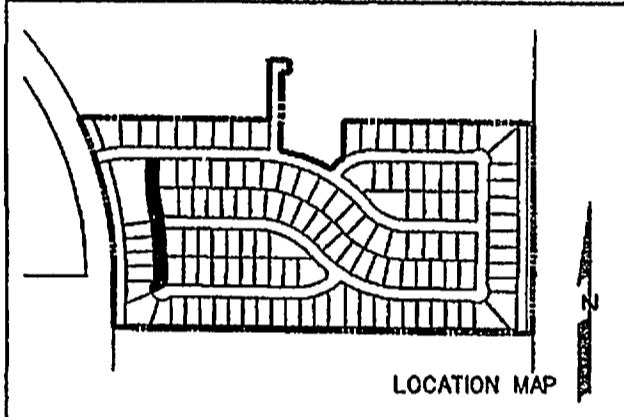
DEVELOPMENT PLANS FOR
BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS

LONE RUN DRIVE

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JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	10 of 25
13022	MAY 2013		

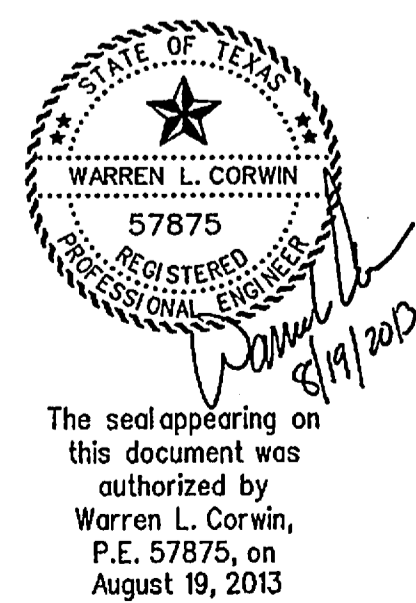


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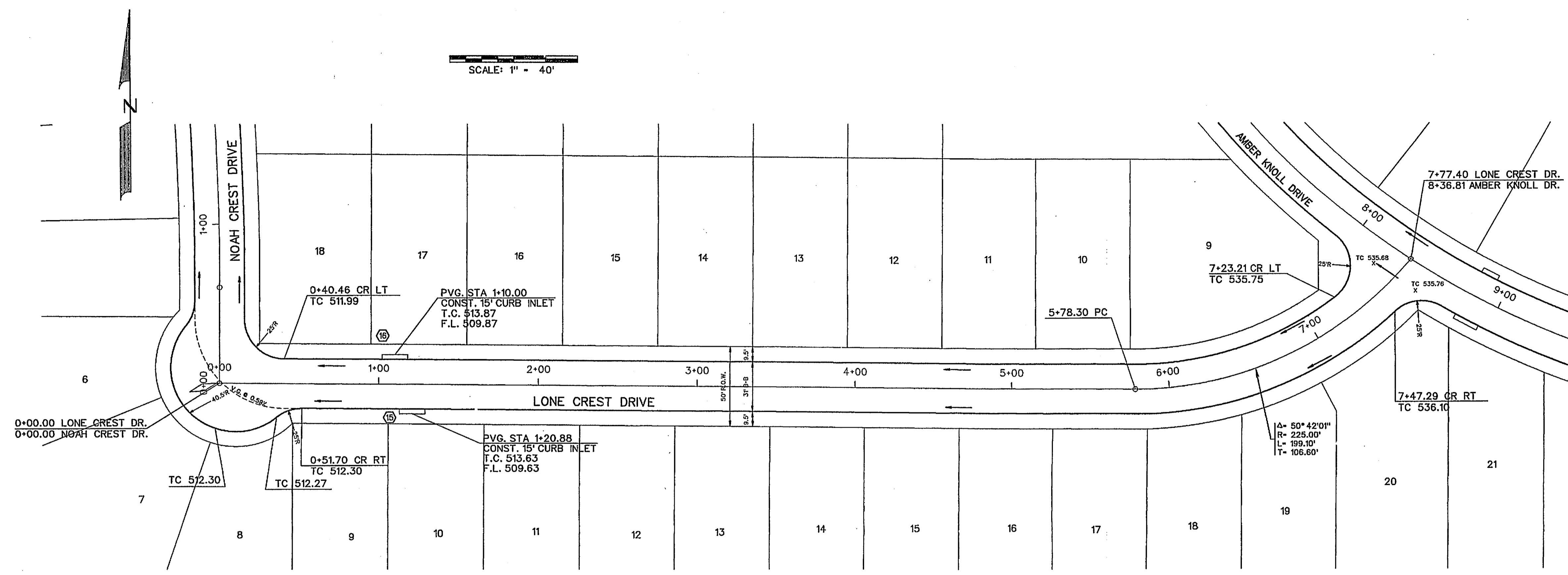
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**DEVELOPMENT PLANS FOR
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 PHASE 2
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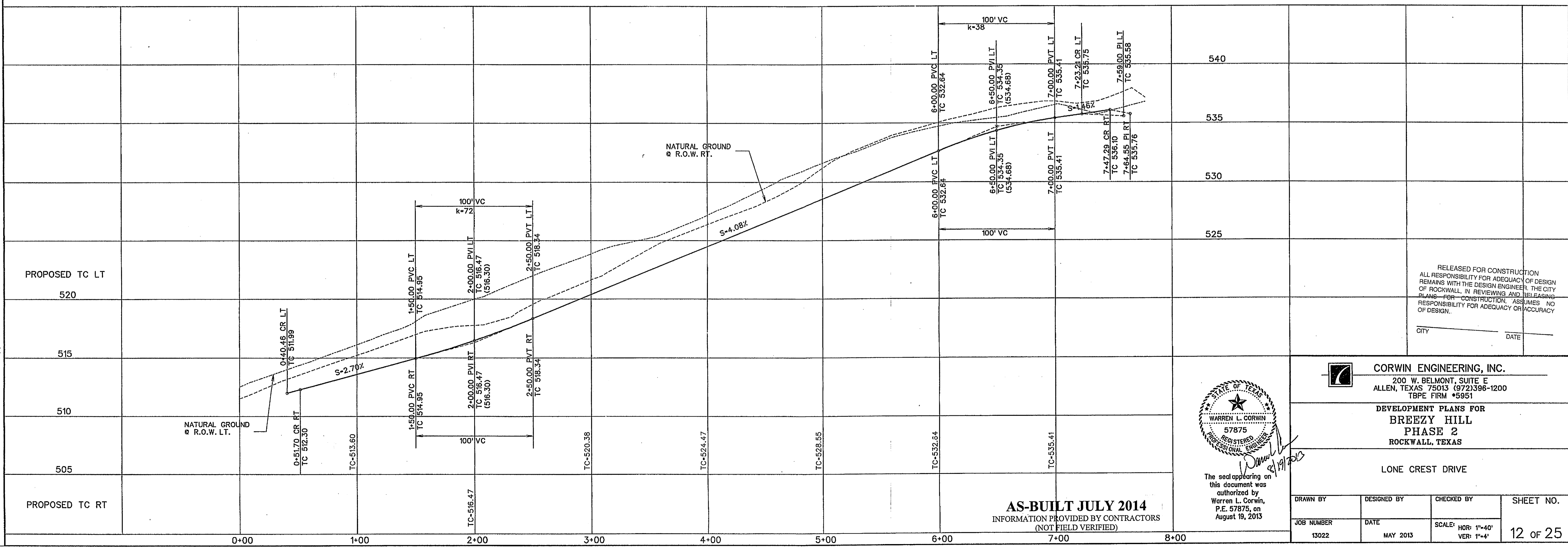
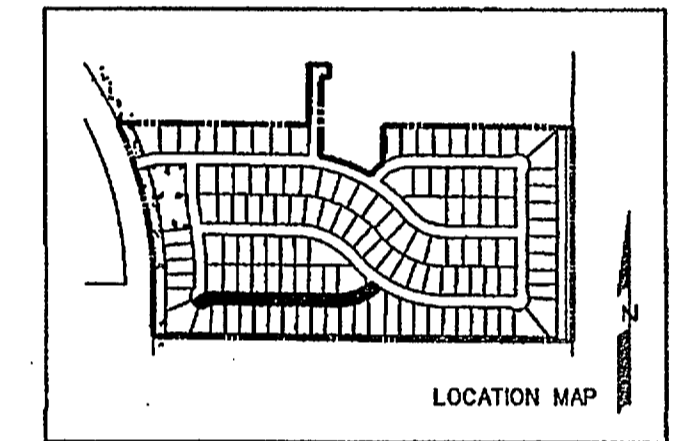
NOAH CREST DRIVE

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JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	11 of 25
13022	MAY 2013		

SCALE: 1" = 40'

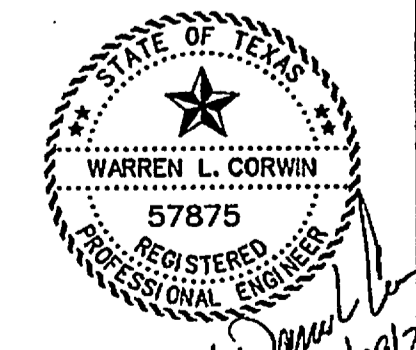


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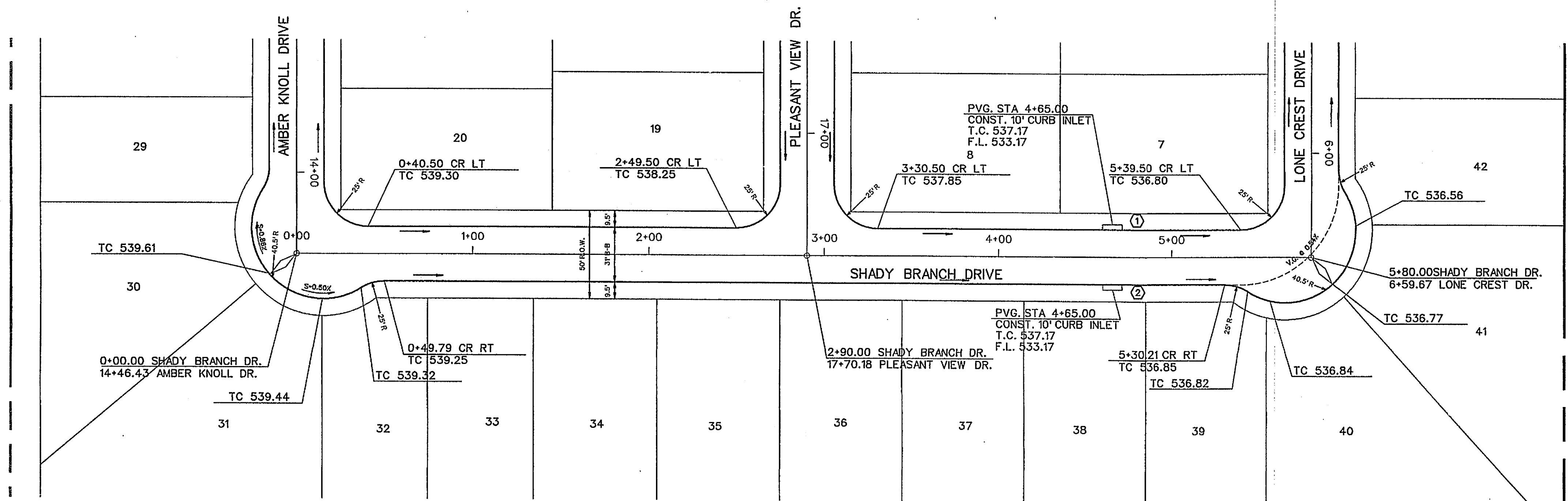
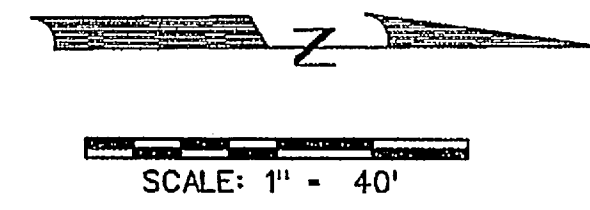
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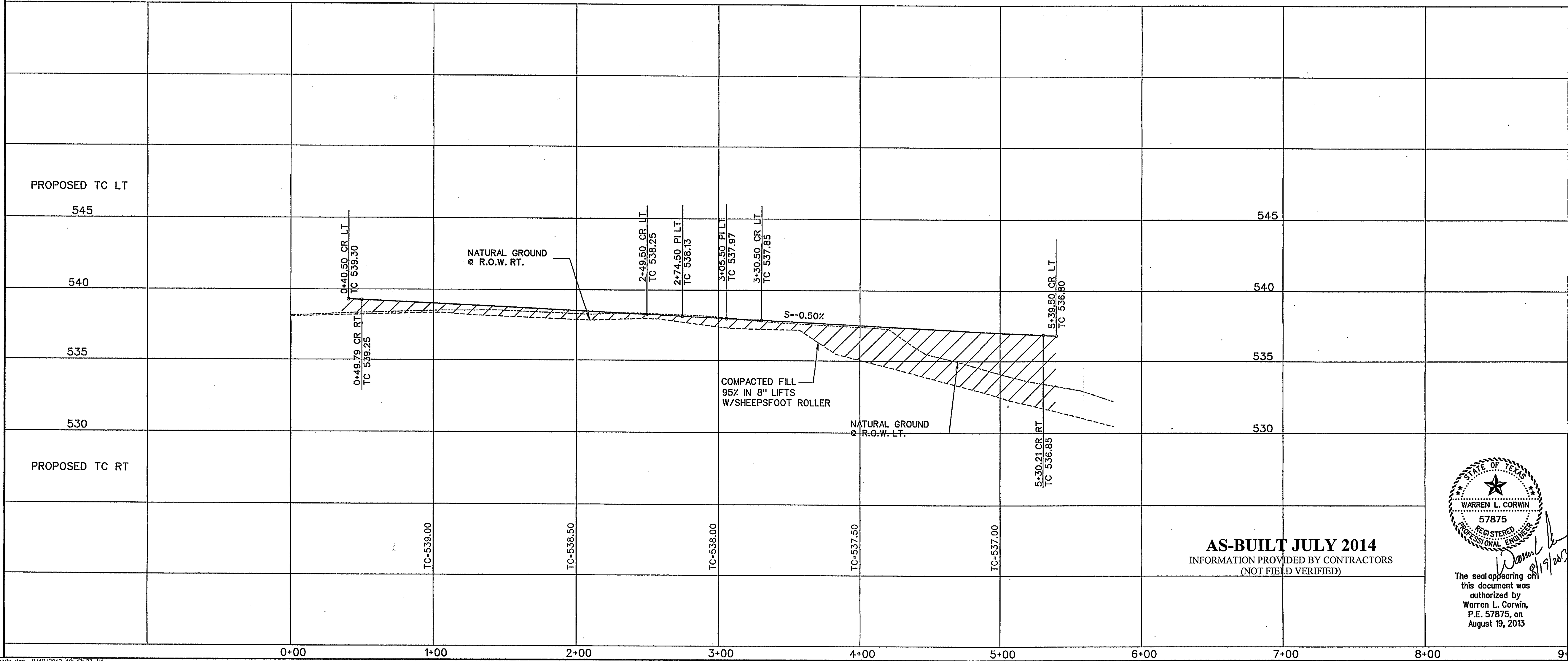
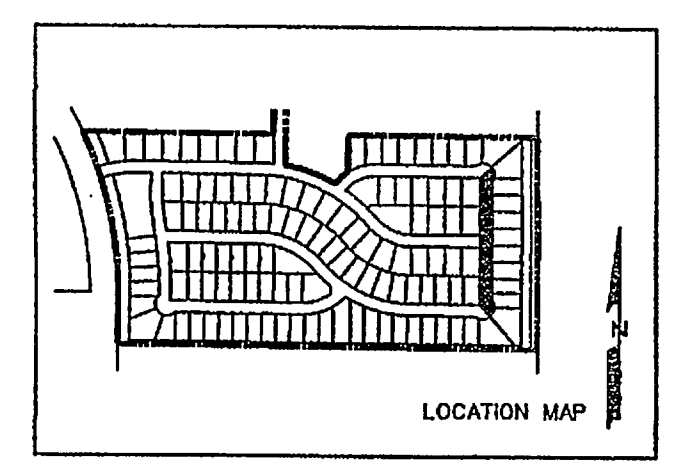
**DEVELOPMENT PLANS FOR
 BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS**

LONE CREST DRIVE

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13022	MAY 2013		

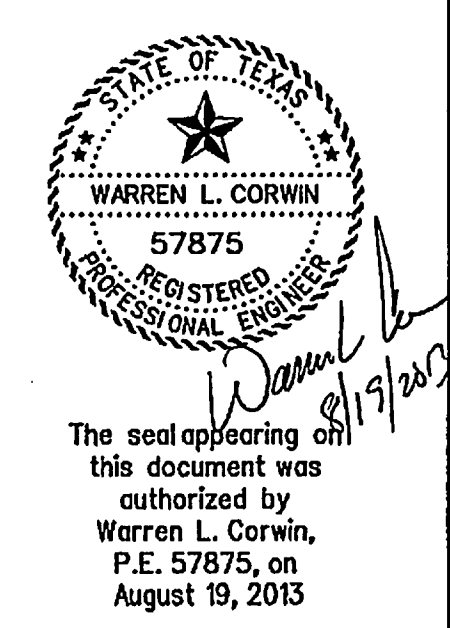


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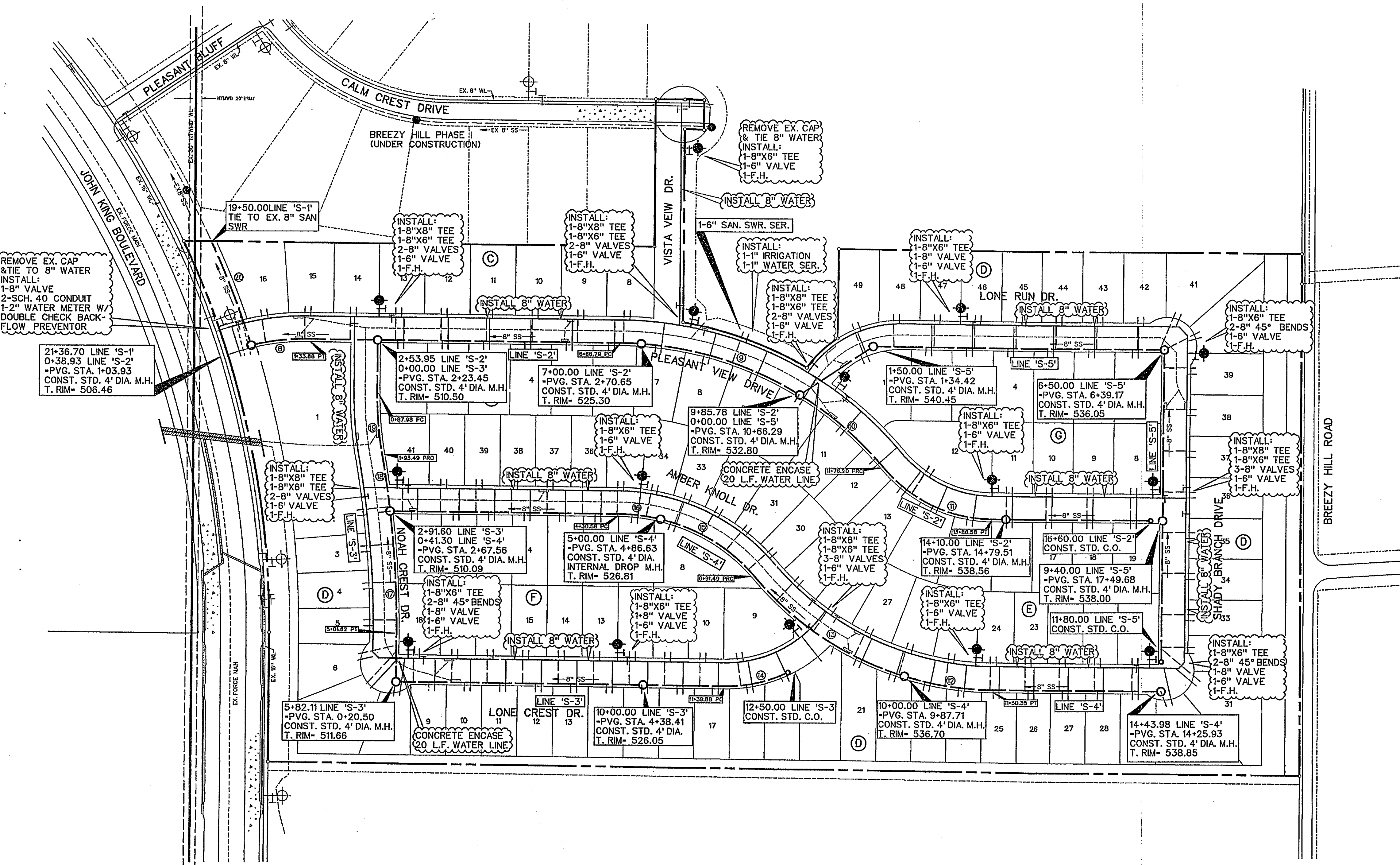
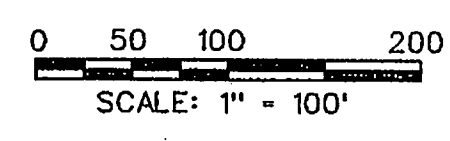
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 ALLEN, TEXAS 75013 (972)396-1200
 TBE FIRM #5951

**DEVELOPMENT PLANS FOR
 BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS**

SHADY BRANCH DRIVE

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	13 OF 25

AS-BUILT JULY 2014
 INFORMATION PROVIDED BY CONTRACTORS
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NOTE:
 ALL WATER LINES TO BE CLASS 200 PIPE SDR 14.
 ALL SANITARY SEWER PIPE TO BE SDR 35 FOR 5'-10" DEEP AND SDR 26 FOR 10' AND GREATER.
 INSTALL BLUE "EMS" DISK ON WATER LINE AT EVERY 250' AND CHANGE IN DIRECTION, VALVE, AND SERVICE.
 INSTALL GREEN "EMS" DISK ON SANITARY SEWER LINE EVERY 250' AND AT EVERY CHANGE IN DIRECTION, MANHOLE, CLEANOUT, AND SERVICE.
 ALL MANHOLES TO BE RAVEN EPOXY LINED AND SEALED.

LEGEND

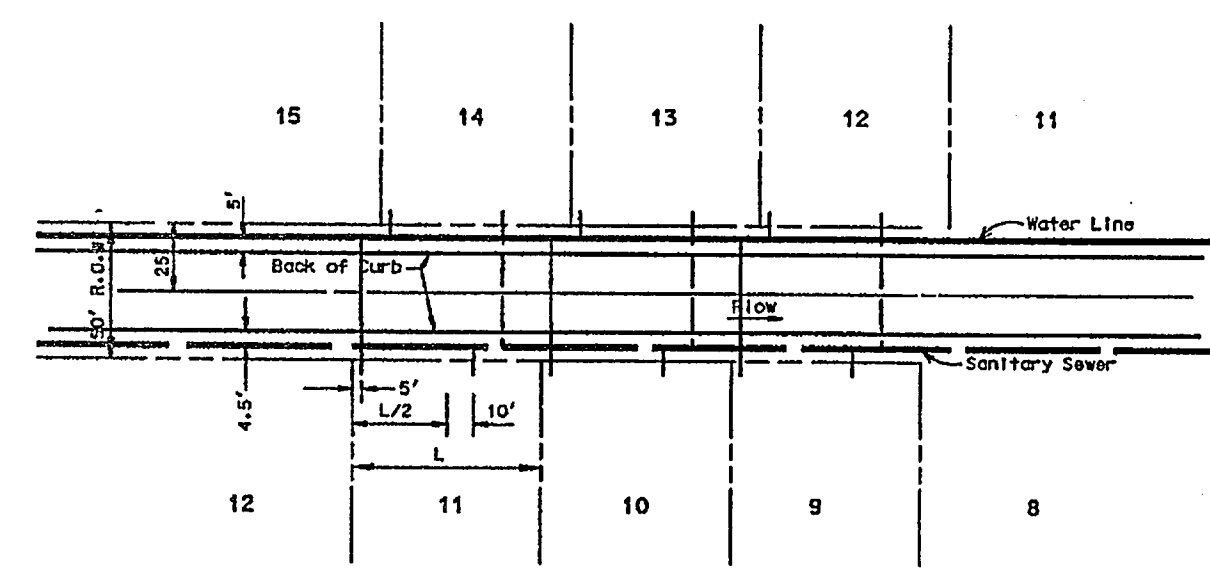
- PROP. WATER LINE
- PROP. FIRE HYDRANT AND VALVE
- PROP. GATE VALVE
- PROP. FLUSH VALVE
- EXIST. WATER LINE
- EXIST. FIRE HYDRANT AND VALVE
- PROP. SANITARY SEWER
- PROP. MANHOLE
- PROP. CLEANOUT
- EXIST. SANITARY SEWER
- EXIST. MANHOLE
- PROP. STORM SEWER
- PROP. STORM SEWER (RELEASED FOR CONSTRUCTION)
- PROP. CURBED SIDEWALK
- PROP. CONC. MEDIAN WALL

SANITARY SEWER CURVE TABLE

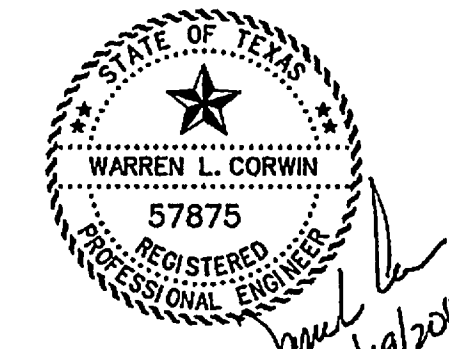
CURVE NO.	DELTA	RADIUS	LENGTH	TANGENT
1.	08°56'34"	4937.00'	770.58'	386.08'
2.	02°48'29"	1563.00'	76.61'	38.31'
3.	22°32'30"	250.00'	98.36'	49.82'
4.	03°01'53"	1585.00'	83.86'	41.94'
5.	19°58'05"	250.00'	87.13'	44.01'
6.	14°33'50"	250.00'	63.55'	31.95'
7.	23°49'49"	1563.00'	650.06'	329.81'
8.	14°14'48"	379.50'	94.36'	47.43'
9.	30°44'48"	594.50'	319.03'	163.45'
10.	18°21'07"	594.50'	190.42'	96.03'
11.	49°05'54"	245.50'	210.38'	112.14'
12.	16°05'23"	535.50'	150.38'	75.69'
13.	33°00'31"	535.50'	308.51'	158.67'
14.	24°41'57"	245.50'	110.12'	56.00'
15.	36°01'55"	304.50'	191.49'	99.03'
16.	13°03'59"	304.50'	69.44'	34.87'
17.	06°46'39"	1775.50'	210.02'	105.13'
18.	03°09'58"	1775.50'	98.11'	49.07'
19.	10°00'03"	604.50'	105.51'	52.89'
20.	06°40'31"	1602.50'	186.70'	93.46'

SERVICE SCHEDULE

TYPE	SIZE	NO.
SANITARY	4"	128
WATER	1"	128



TYPICAL WATER & SEWER SERVICE LAYOUT
N.T.S.



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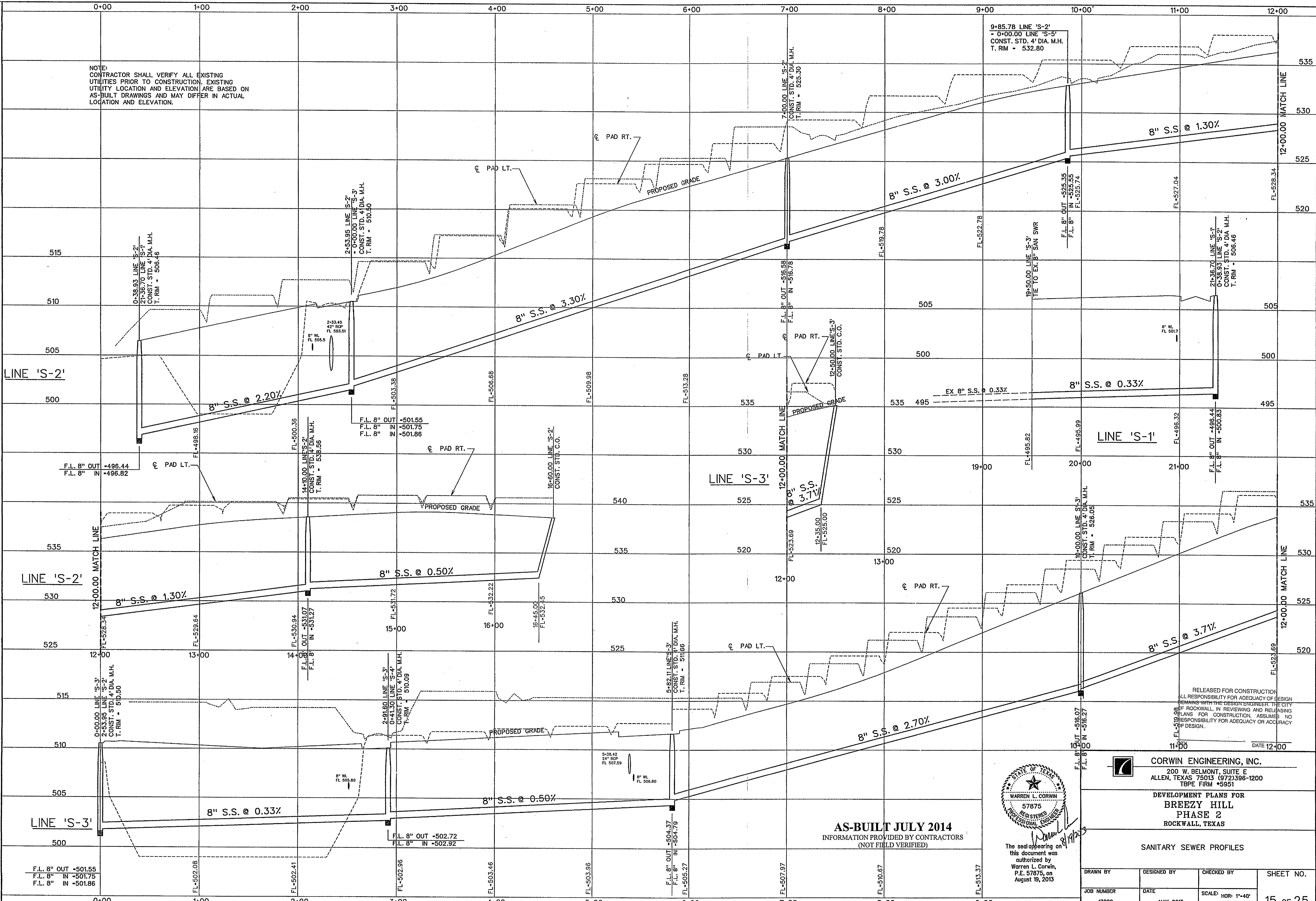
NO.	REVISIONS	BY	DATE

CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972) 396-1200
 TPE FIRM #5951

DEVELOPMENT PLANS FOR
BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS

WATER AND SANITARY SEWER PLAN

DRAWN BY CMF	DESIGNED BY WLC	CHECKED BY WLC	SHEET NO. 14 of 25
JOB NUMBER 13022	DATE MAY 2013	SCALE 1"=100'	



NOTE:
CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING UTILITY LOCATION AND ELEVATION ARE BASED ON AS-BUILT DRAWINGS AND MAY DIFFER IN ACTUAL LOCATION AND ELEVATION.

9+85.78 LINE 'S-2'
- 0+00.00 LINE 'S-5'
CONST. STD. 4' DIA. M.H.
T. RIM = 532.80

8" S.S. @ 1.30%

8" S.S. @ 3.00%

8" S.S. @ 3.30%

8" S.S. @ 2.20%

8" S.S. @ 0.33%

LINE 'S-3'

LINE 'S-1'

8" S.S. @ 3.71%

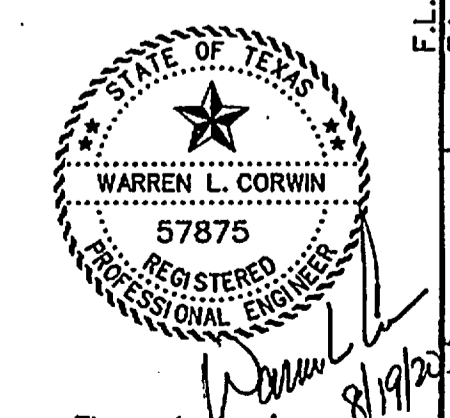
8" S.S. @ 2.70%

8" S.S. @ 0.33%

8" S.S. @ 0.50%

AS-BUILT JULY 2014
INFORMATION PROVIDED BY CONTRACTORS
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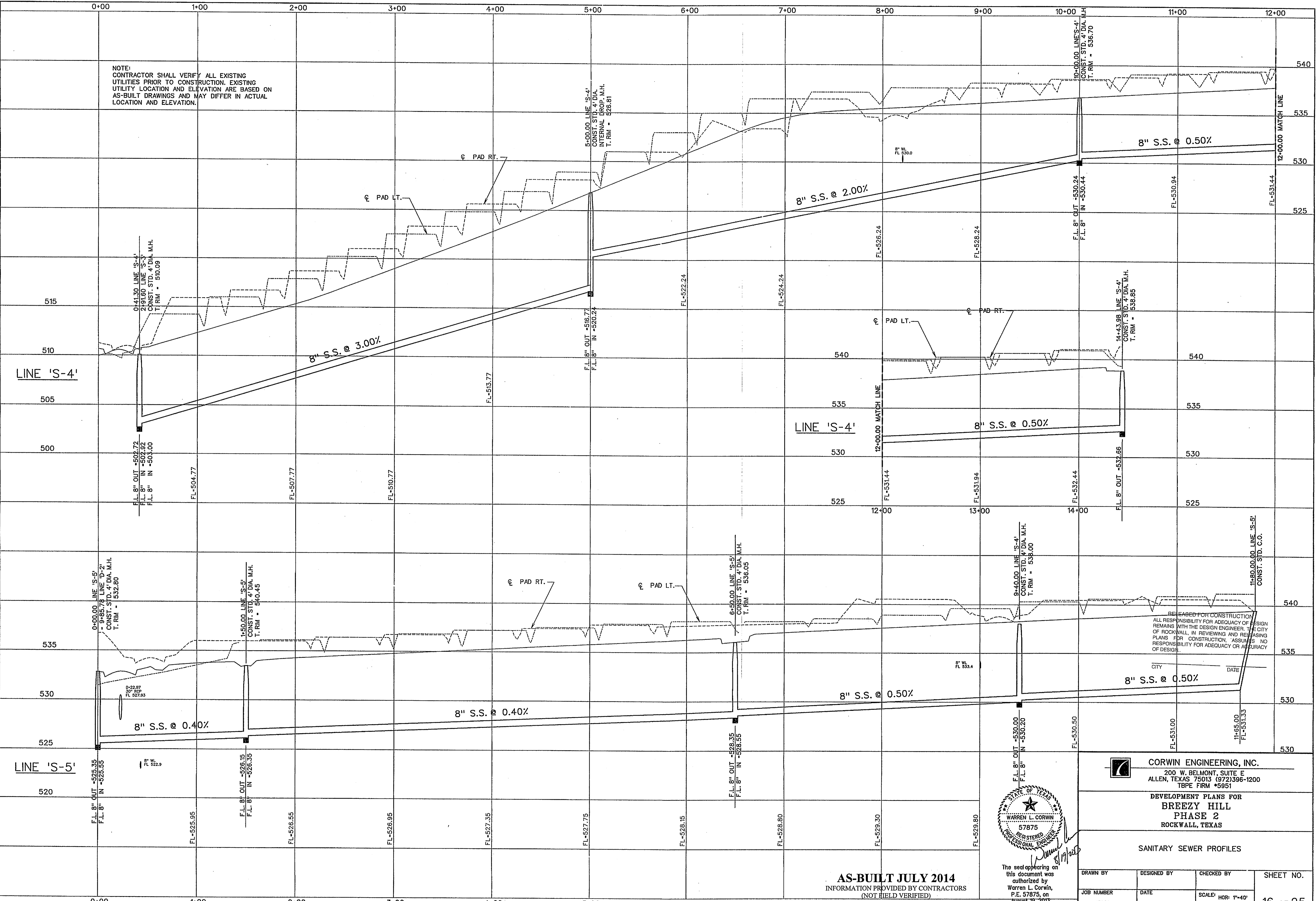
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TBP FIRM #5951

DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE 2
ROCKWALL, TEXAS

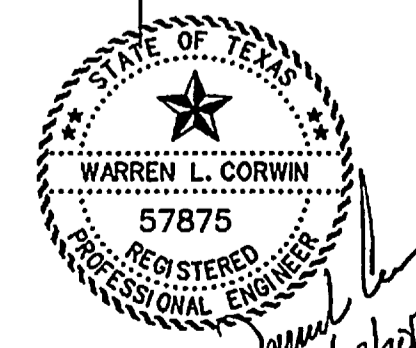
SANITARY SEWER PROFILES

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
J3022	MAY 2013		15 OF 25



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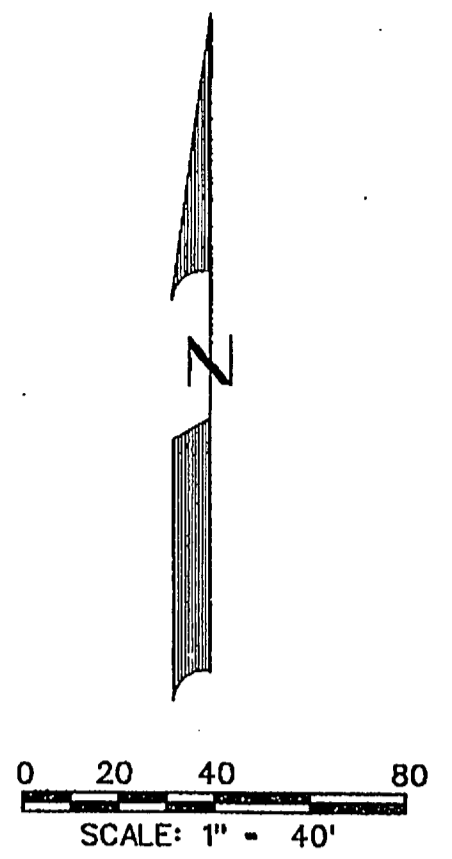
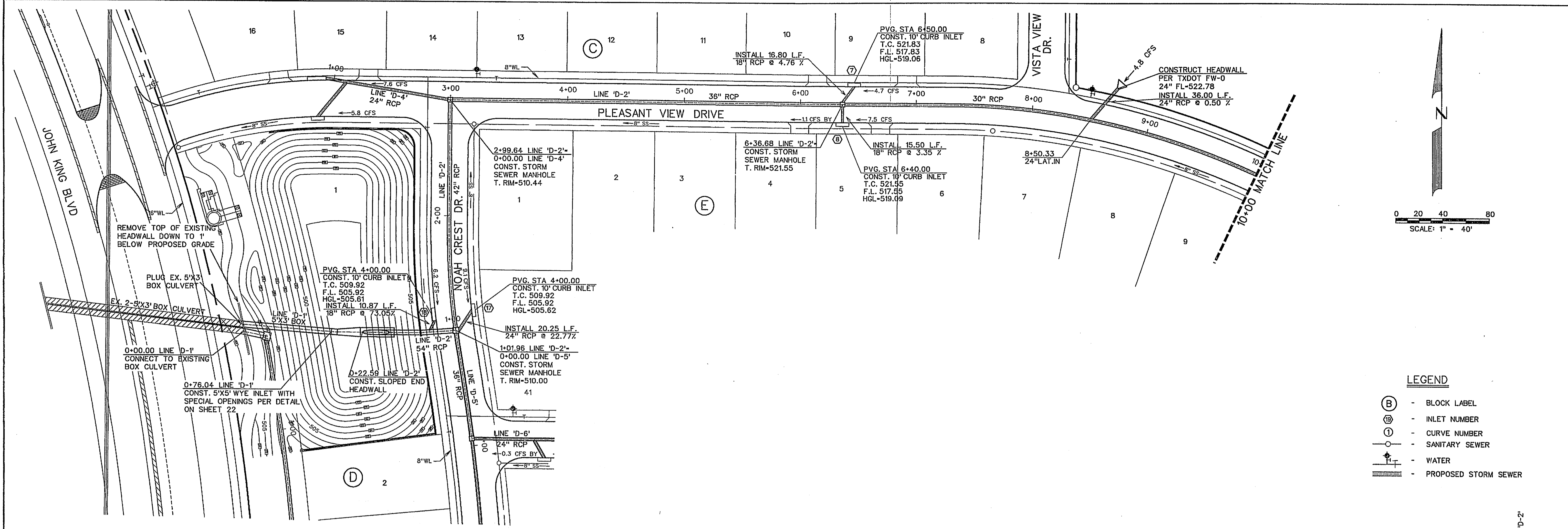
AS-BUILT JULY 2014
INFORMATION PROVIDED BY CONTRACTORS
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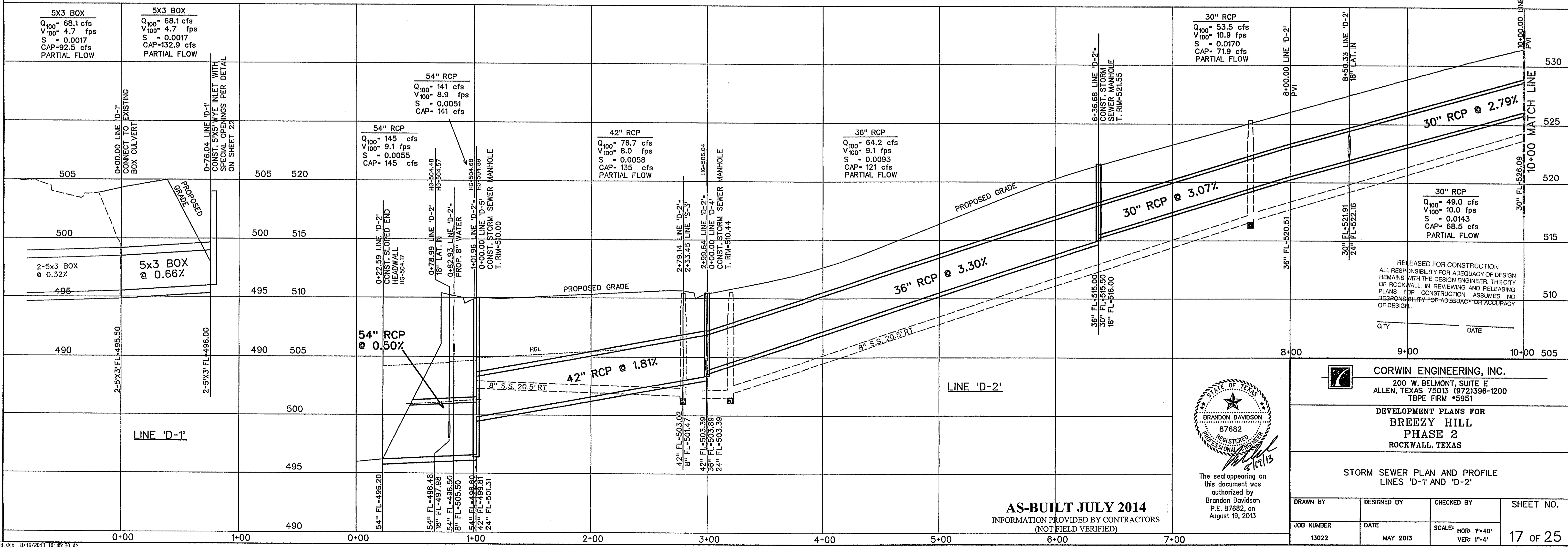
DEVELOPMENT PLANS FOR
BREZY HILL
PHASE 2
ROCKWALL, TEXAS

SANITARY SEWER PROFILES

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	16 OF 25
13022	MAY 2013		

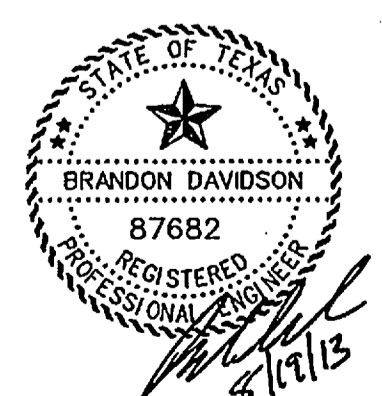


- LEGEND**
- (B) - BLOCK LABEL
 - (I) - INLET NUMBER
 - (C) - CURVE NUMBER
 - - SANITARY SEWER
 - ⊕ - WATER
 - ▬ - PROPOSED STORM SEWER



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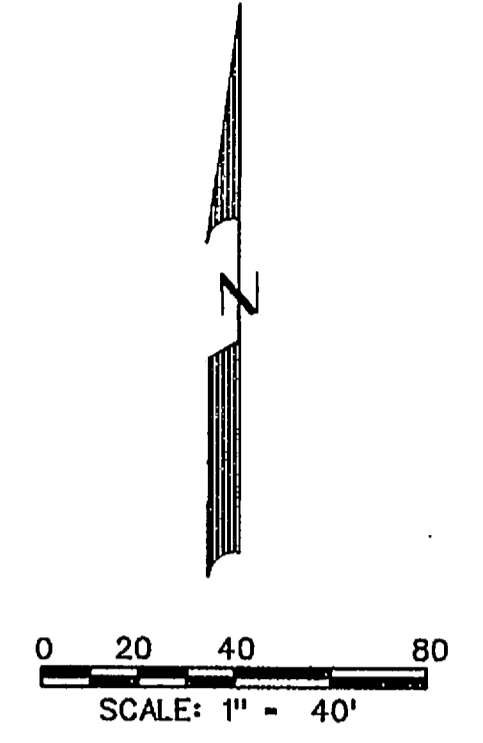
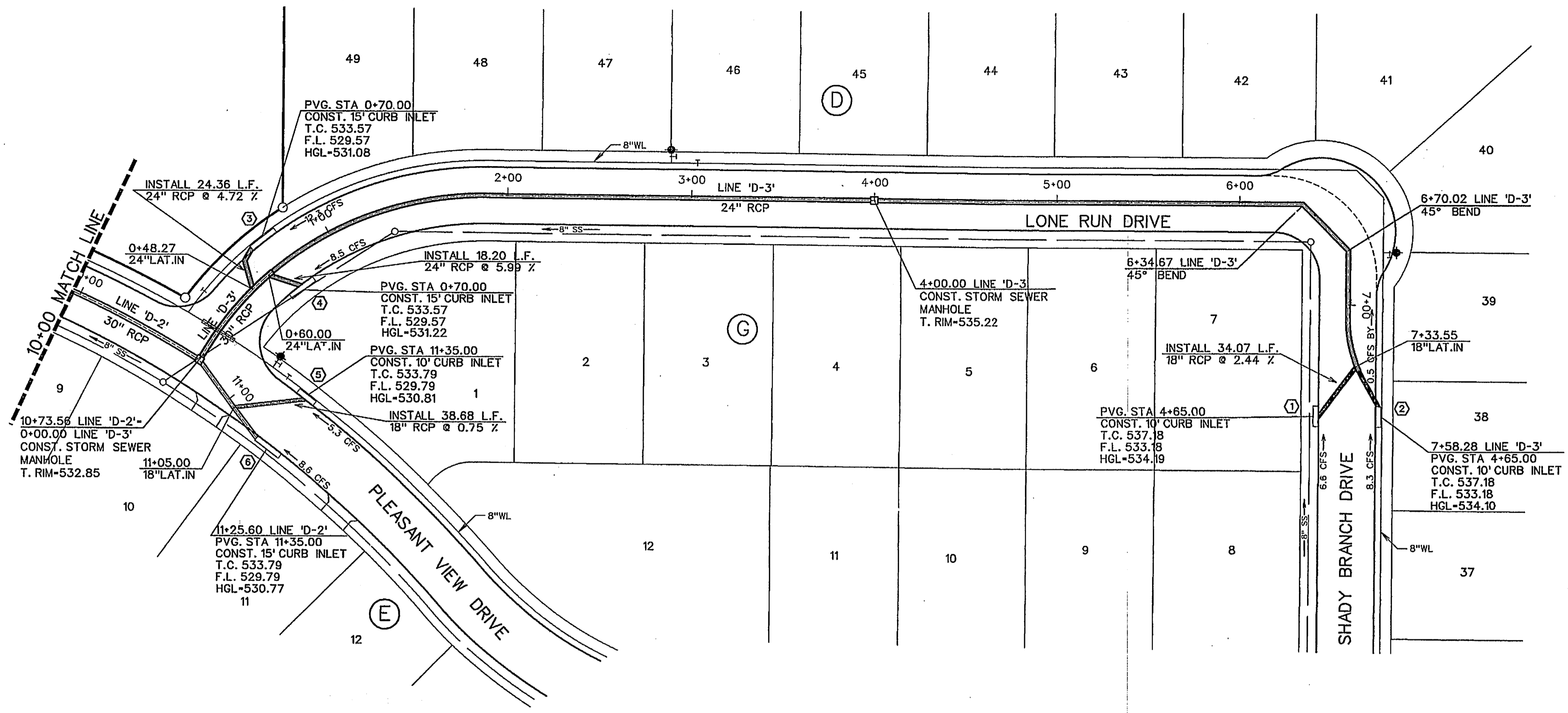
AS-BUILT JULY 2014
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 (NOT FIELD VERIFIED)

CORWIN ENGINEERING, INC.
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**DEVELOPMENT PLANS FOR
 BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS**

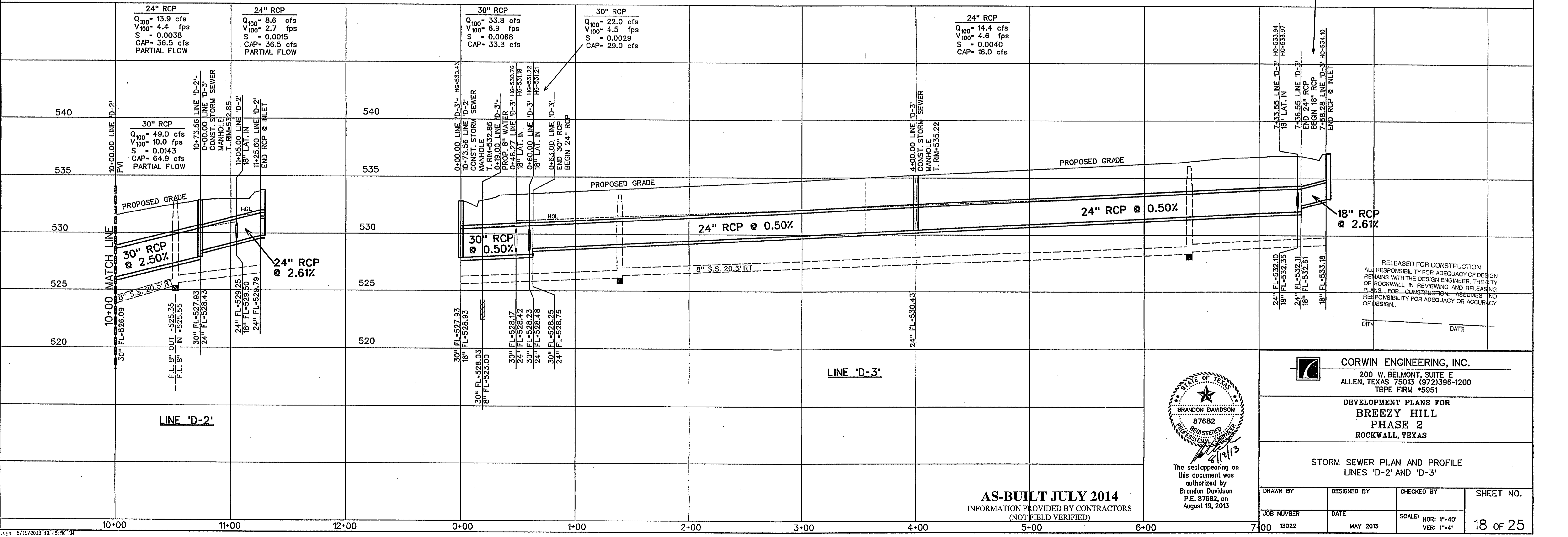
**STORM SEWER PLAN AND PROFILE
 LINES 'D-1' AND 'D-2'**

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	17 OF 25
13022	MAY 2013		



- LEGEND**
- (B) - BLOCK LABEL
 - (IN) - INLET NUMBER
 - (C) - CURVE NUMBER
 - - SANITARY SEWER
 - ⊕ - WATER
 - ▬ - PROPOSED STORM SEWER

18" RCP
 Q₁₀₀ = 7.8 cfs
 V₁₀₀ = 4.4 fps
 S = 0.0056
 CAP = 17.0 cfs
 PARTIAL FLOW



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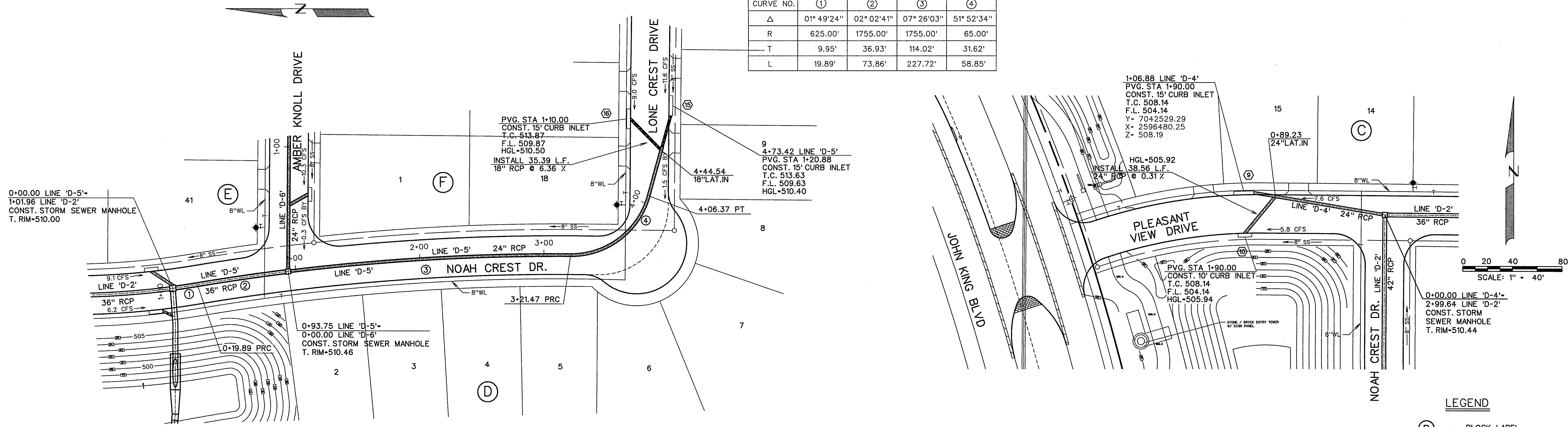
CORWIN ENGINEERING, INC.
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DEVELOPMENT PLANS FOR
BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS

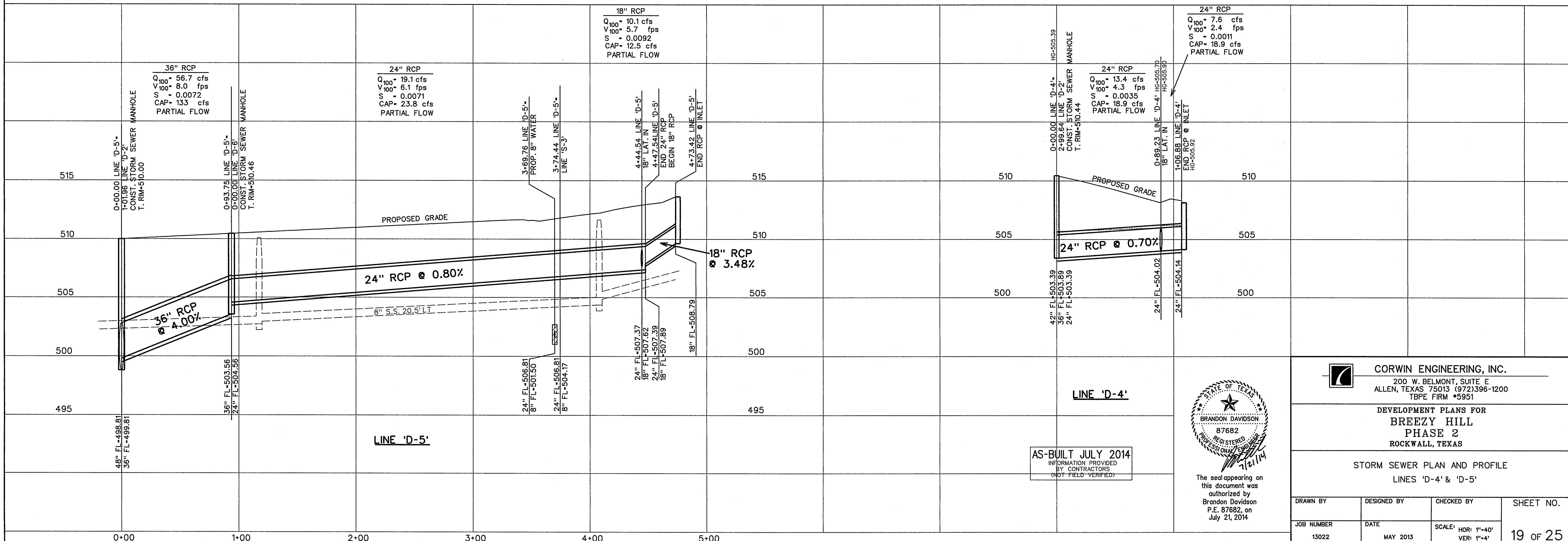
STORM SEWER PLAN AND PROFILE
 LINES 'D-2' AND 'D-3'

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	18 of 25
13022	MAY 2013		

CURVE DATA				
CURVE NO.	①	②	③	④
Δ	01° 49' 24"	02° 02' 41"	07° 26' 03"	51° 52' 34"
R	625.00'	1755.00'	1755.00'	65.00'
T	9.95'	36.93'	114.02'	31.62'
L	19.89'	73.86'	227.72'	58.85'



- LEGEND**
- Ⓟ - BLOCK LABEL
 - Ⓢ - INLET NUMBER
 - ① - CURVE NUMBER
 - - SANITARY SEWER
 - ⊕ - WATER
 - ▬ - PROPOSED STORM SEWER



AS-BUILT JULY 2014
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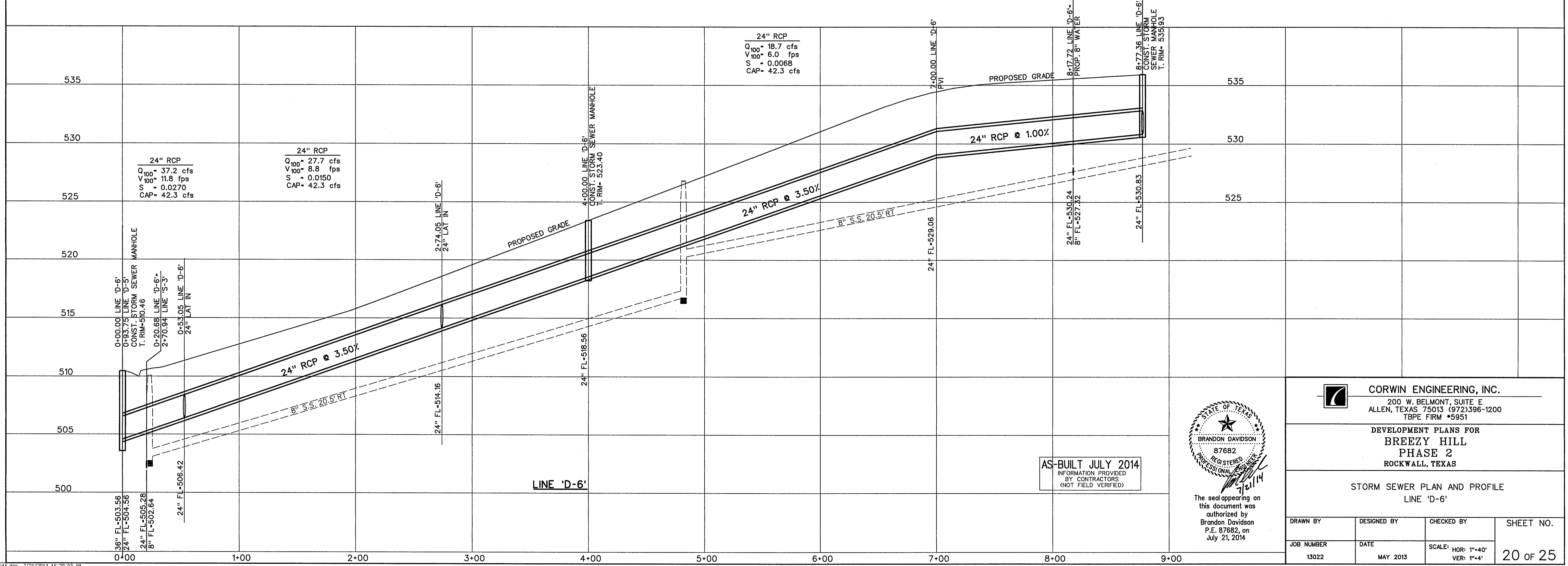
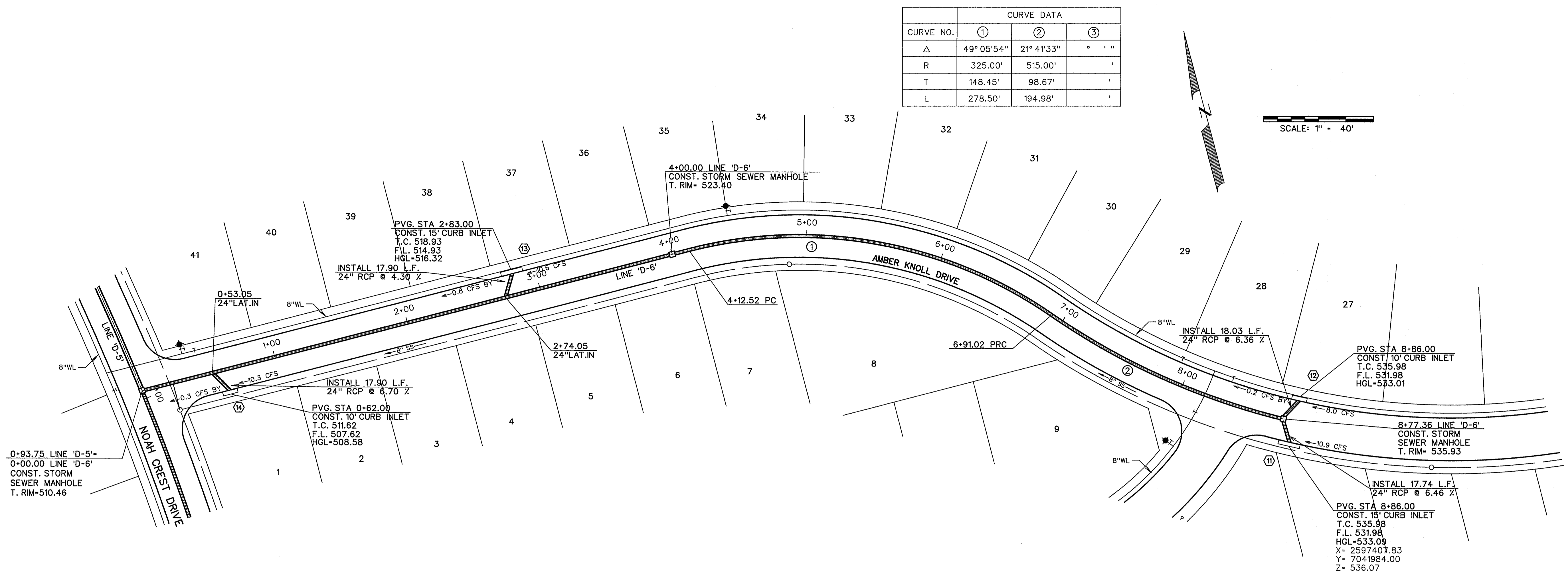
DEVELOPMENT PLANS FOR
BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS

STORM SEWER PLAN AND PROFILE
 LINES 'D-4' & 'D-5'

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	19 OF 25
13022	MAY 2013		

CURVE DATA			
CURVE NO.	①	②	③
Δ	49° 05' 54"	21° 41' 33"	0° 11'
R	325.00'	515.00'	'
T	148.45'	98.67'	'
L	278.50'	194.98'	'

SCALE: 1" = 40'



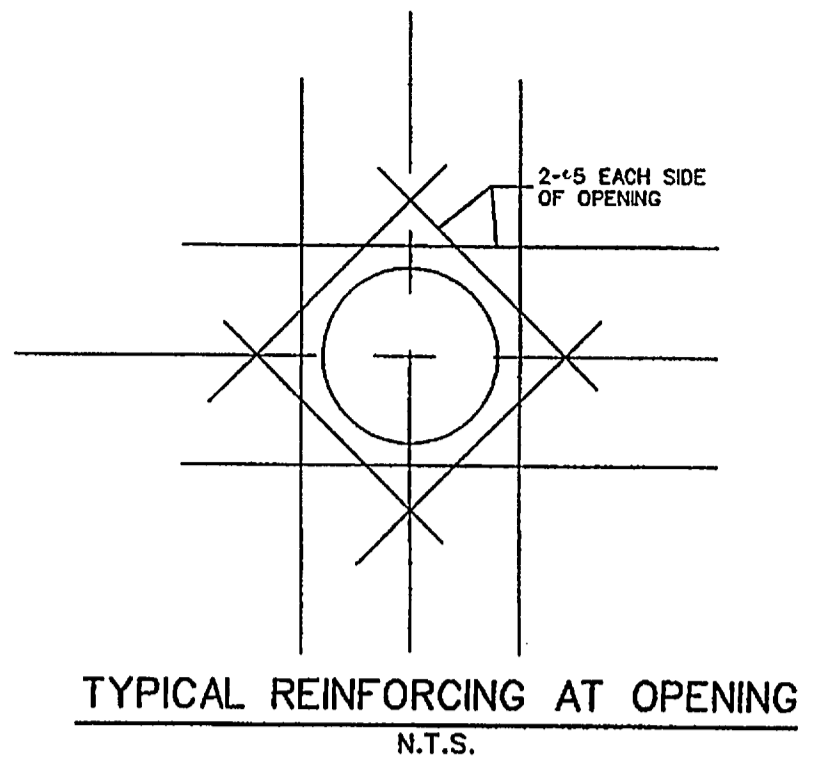
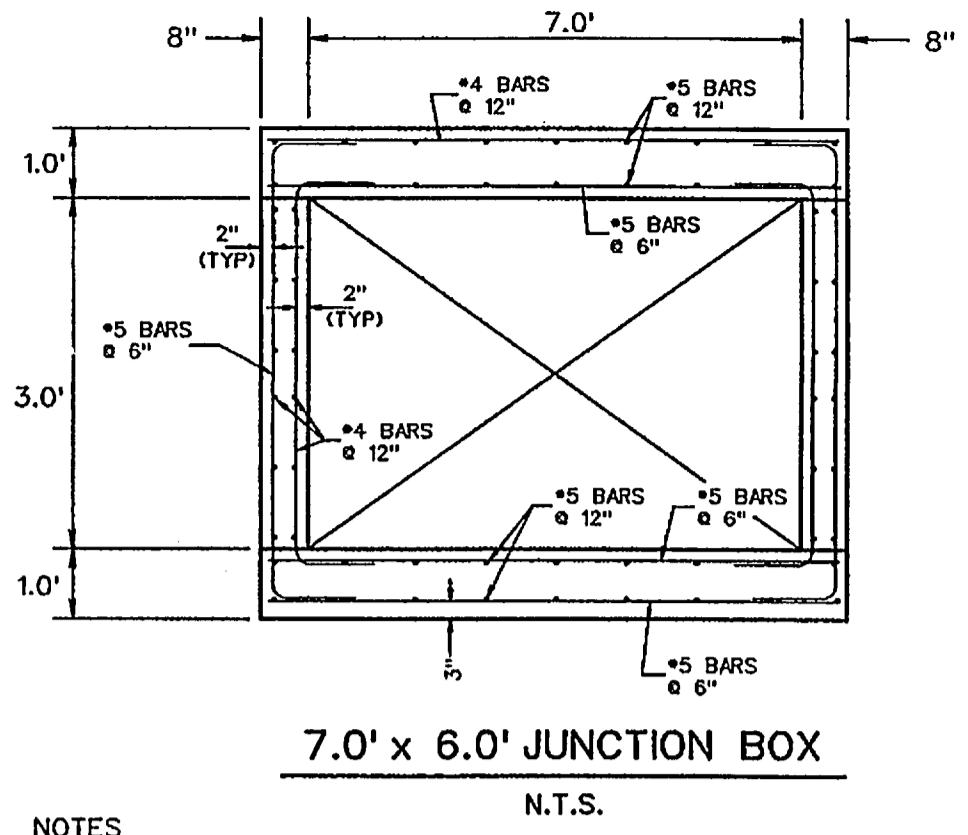
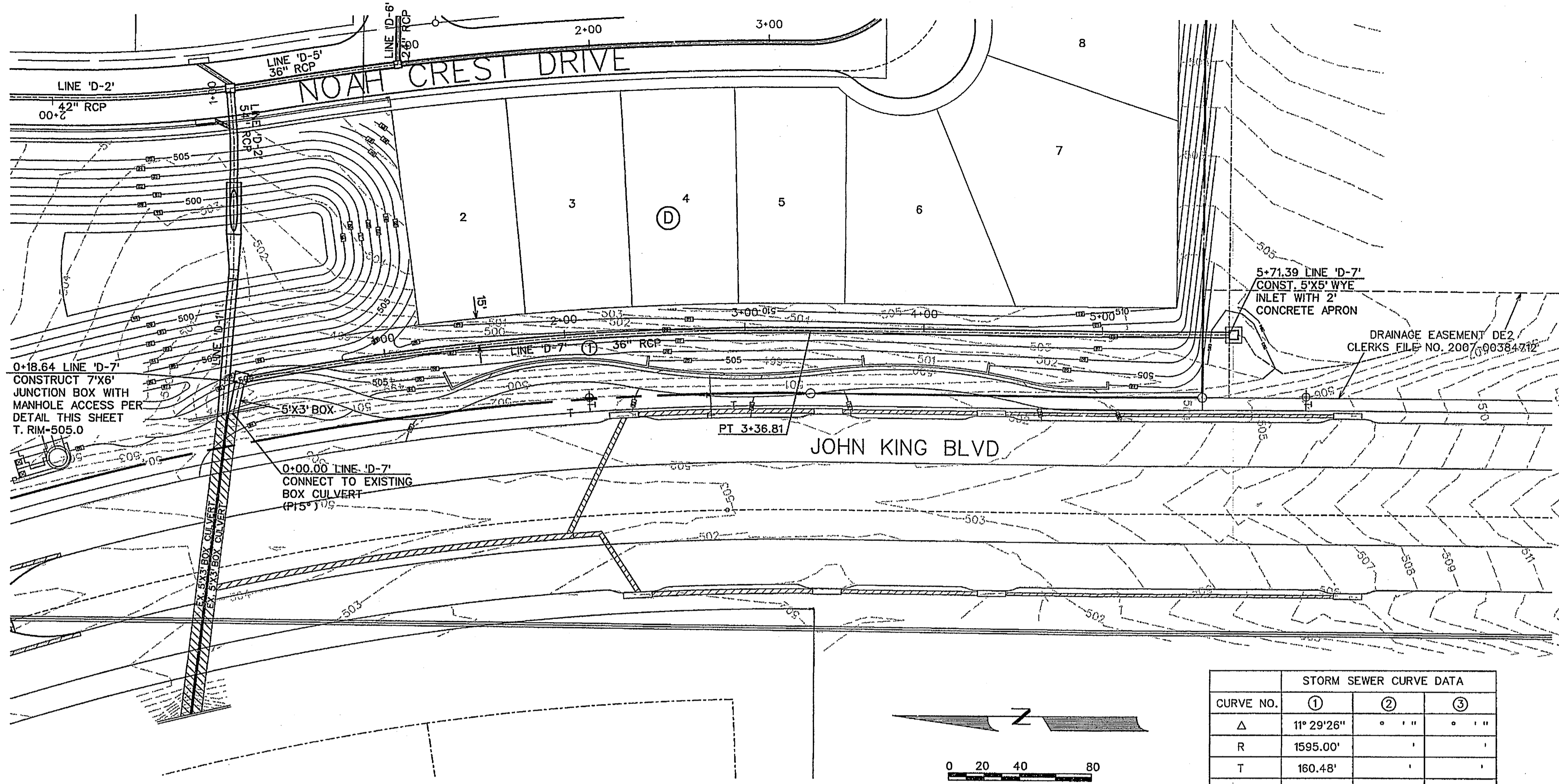
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DEVELOPMENT PLANS FOR
BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS

STORM SEWER PLAN AND PROFILE
 LINE 'D-6'

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	20 OF 25
13022	MAY 2013		



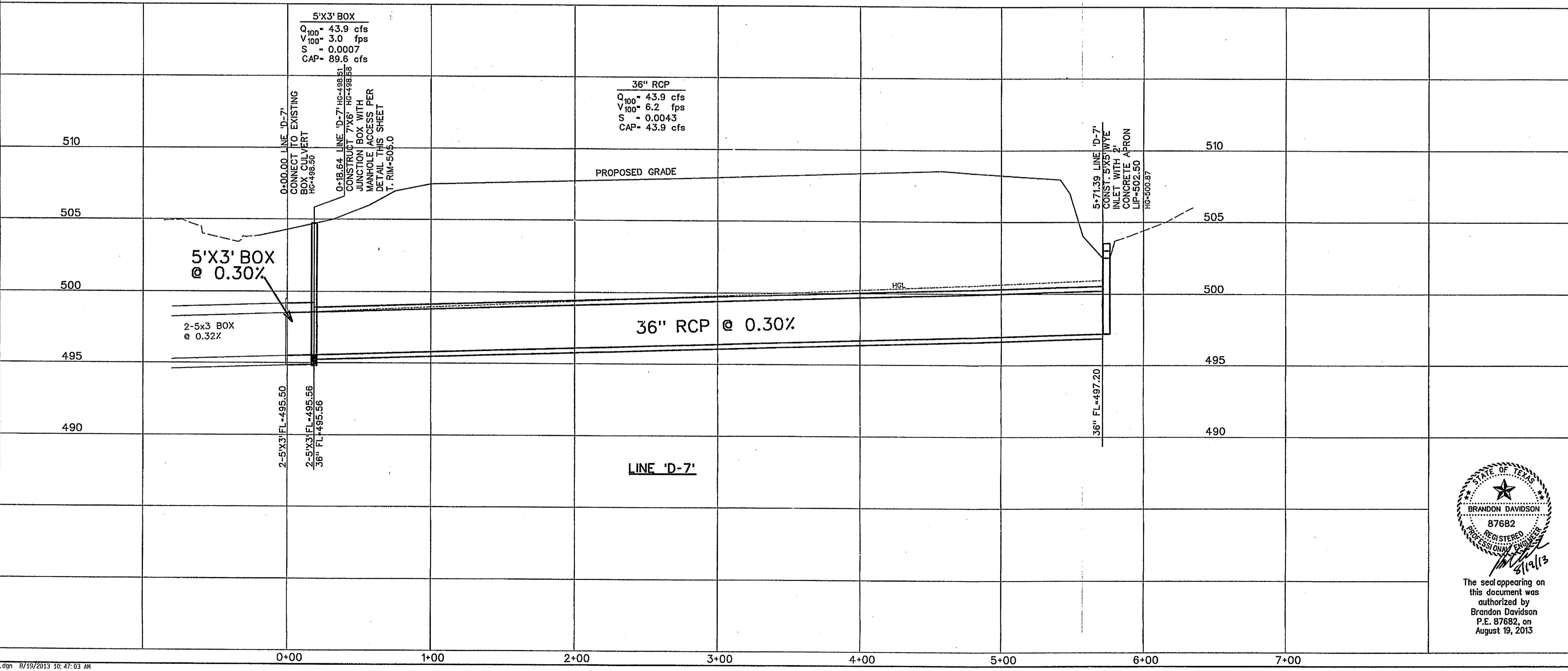
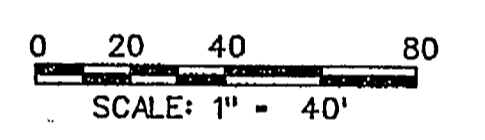
NOTES

- ALL CONCRETE SHALL BE LABORATORY DESIGNED AND CONTROLLED AND SHALL MEET THE REQUIREMENTS OF "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318). CONCRETE SHALL ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:
 COMPRESSIVE STRENGTH @ 28 DAYS - 4,200 PSI, 6.5 SACK (7.0 SACK IF HAND POURED)
 TYPE AGGREGATE + AIR ENTRAINMENT - HARD-ROCK + AIR
 USAGE - ALL CONCRETE
 AN AIR-ENTRAINING AGENT SHALL BE ADDED TO THE NOTED CONCRETE TO PROVIDE 3 TO 5 PERCENT AIR BY VOLUME.
- ALL REINFORCING SHALL BE DOMESTIC, NEW BILLET STEEL ASTM A615-GRADE 60. REINFORCING SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315). CULVERTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TEXAS DEPARTMENT OF TRANSPORTATION STANDARDS FOR SINGLE BOX CULVERTS, CAST-IN-PLACE.
- GALVANIZE ALL STRUCTURAL STEEL EXPOSED TO WEATHER.
- DESIGN CRITERIA:
 A. BUILDING CODE - 2000 INTERNATIONAL BUILDING CODE
 B. DESIGN LIVE LOAD: HS20 HIGHWAY LOADING

LEGEND

- Ⓟ - BLOCK LABEL
- Ⓢ - INLET NUMBER
- ① - CURVE NUMBER
- - SANITARY SEWER
- ⊕ - WATER
- ▬ - PROPOSED STORM SEWER

CURVE NO.	STORM SEWER CURVE DATA		
	①	②	③
Δ	11° 29' 26"	•	•
R	1595.00'	'	'
T	160.48'	'	'
L	318.17'	'	'



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 CITY _____ DATE _____



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**DEVELOPMENT PLANS FOR
 BREEZY HILL
 PHASE 2
 ROCKWALL, TEXAS**

**STORM SEWER PLAN AND PROFILE
 LINE 'D-7'**

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	21 of 25
13022	MAY 2013		



Breezy Hill Phases 2A and 2B Detention Pond
2-Year Storm

Pre-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
EX1	1220877	28.03	0.35	20	3.9	38.3
22	30430	0.70	0.5	10	5.3	1.8
23	24951	0.57	0.5	10	5.3	1.5
24	16081	0.37	0.5	10	5.3	1.0
25	30365	0.70	0.5	10	5.3	1.8
26	10006	0.23	0.5	10	5.3	0.6
Allowed Release=						31.5

Post-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)
41295	141143	32.40	0.5	10	5.3	85.8
Allowed Release=						85.8

10-Year Storm

Pre-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
1	141143	28.03	0.35	20	6.9	67.9
22	30430	0.70	0.5	10	7.1	2.5
23	24951	0.57	0.5	10	7.1	2.0
24	16081	0.37	0.5	10	7.1	1.3
25	30365	0.70	0.5	10	7.1	2.5
26	10006	0.23	0.5	10	7.1	0.8
Allowed Release=						48.8

Post-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)
1	141143	32.4	0.5	10	7.1	115.0
Allowed Release=						115.0

25-Year Storm

Pre-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
1	141143	28.03	0.35	20	8.6	84.4
22	30430	0.70	0.5	10	8.3	2.9
23	24951	0.57	0.5	10	8.3	2.4
24	16081	0.37	0.5	10	8.3	1.5
25	30365	0.70	0.5	10	8.3	2.9
26	10006	0.23	0.5	10	8.3	1.0
Allowed Release=						64.1

Post-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)
1	141143	32.4	0.5	10	8.3	134.4
Allowed Release=						134.4

50-Year Storm

Pre-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
1	141143	28.03	0.35	20	7.5	73.8
22	30430	0.70	0.5	10	9	3.1
23	24951	0.57	0.5	10	9	2.6
24	16081	0.37	0.5	10	9	1.7
25	30365	0.70	0.5	10	9	3.1
26	10006	0.23	0.5	10	9	1.0
Allowed Release=						82.0

Post-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)
1	141143	32.4	0.5	10	9	145.8
Allowed Release=						145.8

100-Year Storm

Pre-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
1	141143	28.03	0.35	20	8.3	81.4
22	30430	0.70	0.5	10	9.8	3.4
23	24951	0.57	0.5	10	9.8	2.8
24	16081	0.37	0.5	10	9.8	1.8
25	30365	0.70	0.5	10	9.8	3.4
26	10006	0.23	0.5	10	9.8	1.1
Allowed Release=						88.8

Post-Project Runoff Calculations						
Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)
1	141143	32.4	0.5	10	9.8	158.7
Allowed Release=						158.7

Elevation Calculations

Event	Maximum Release Rate	Storage Requirement	Occurs at Elevation
2-year	31.5	56069	501.40
10-year	48.8	79068	502.56
25-year	64.1	83884	503.29
50-year	82.0	104558	503.75
100-year	88.8	117318	504.17

Elevation-Storage Table

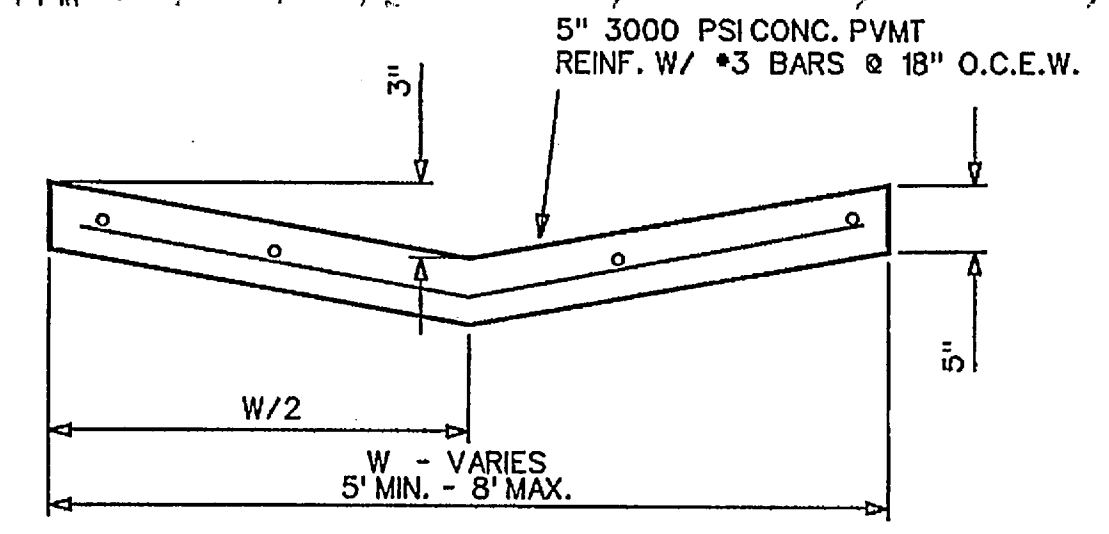
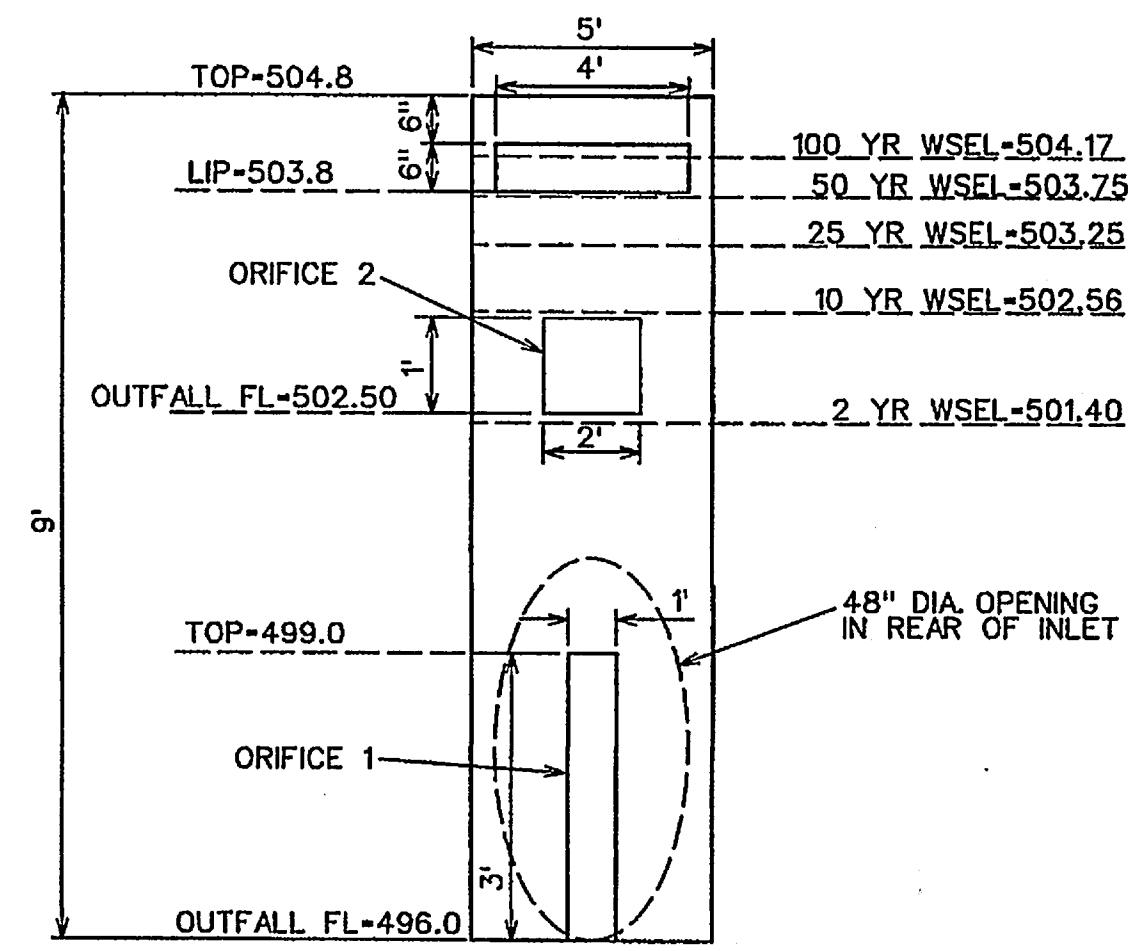
Elevation (ft)	Volume
496	0
497	2634
498	9685
499	20080
500	33017
501	48632
502	67069
503	88527
504	113121
505	141022

Stage-Discharge Table

Stage	Office 1			Office 2			Weir Length	Depth of Flow Over Weir	Weir Discharge	Total Discharge	Allowable Discharge	Above (Below)
	H	Area	Discharge	H	Area	Discharge						
496.00	0	0	0	-	-	-	16.0	0.0	0.0	0.0		
497.00	0.50	1.00	3.4	-	-	-	16.0	0.0	0.0	3.4		
498.00	1.00	2.00	9.6	-	-	-	16.0	0.0	0.0	9.6		
499.00	1.50	3.00	17.7	-	-	-	16.0	0.0	0.0	17.7		
500.00	2.50	3.00	22.8	-	-	-	16.0	0.0	0.0	22.8		
501.40	3.50	3.00	28.5	-	-	-	16.0	0.0	0.0	28.5	31.5	(2.92)
502.56	5.06	3.00	32.5	0.56	3.0	10.8	16.0	0.0	0.0	43.3	48.8	(5.48)
503.29	5.75	3.00	34.6	1.25	3.0	16.1	16.0	0.0	0.0	50.8	54.1	(3.30)
503.75	6.25	3.00	36.1	1.75	3.0	19.1	16.0	0.0	0.0	55.3	62.0	(6.77)
504.17	6.67	3.00	37.3	2.17	3.0	21.3	16.0	0.4	9.5	68.1	68.8	(0.75)
504.50	7.00	3.00	38.2	2.50	3.0	22.8	16.0	0.7	24.8	65.7		

RELEASED FOR CONSTRUCTION
ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN
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OF ROCKWALL, IN REVIEWING AND RELEASING
PLANS FOR CONSTRUCTION, ASSUMES NO
RESPONSIBILITY FOR ADEQUACY OR ACCURACY
OF DESIGN.

CITY _____ DATE _____



AS-BUILT JULY 2014
INFORMATION PROVIDED BY CONTRACTORS
(NOT FIELD VERIFIED)

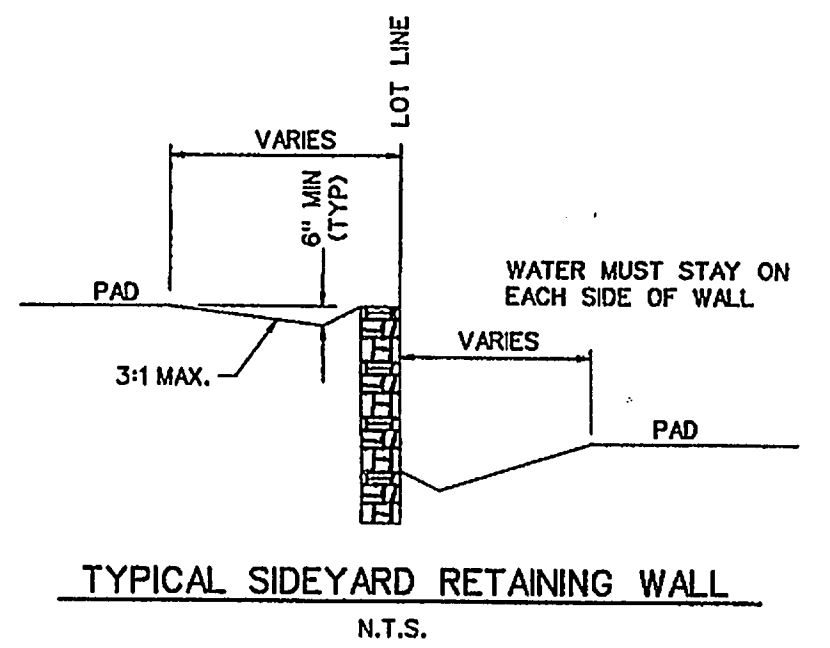
STATE OF TEXAS
REGISTERED PROFESSIONAL ENGINEER
BRANDON DAVIDSON
87682
The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on August 19, 2013

CORWIN ENGINEERING, INC.
200 W. BELMONT, SUITE E
ALLEN, TEXAS 75013 (972)396-1200
TPE FIRM #5951

DEVELOPMENT PLANS FOR BREEZY HILL PHASE 2 ROCKWALL, TEXAS

DETENTION POND PLAN

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE	
13022	MAY 2013	1"=20'	22 OF 25



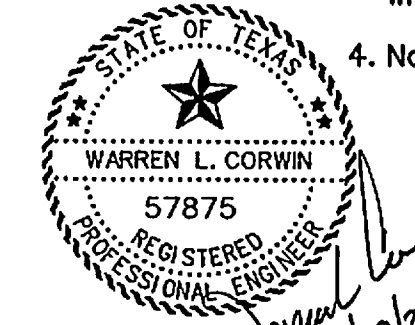
0 25 50 100
SCALE: 1" = 50'

Note:
Each lot will need a detailed grading plan with building permit submittal. This is a general grading plan for site work only.
All driveways to be J-Swing.

- Wall Notes:**
- No part of the wall (footing, tie back etc. shall be const. offsite, in an easement or in the R.O.W. Walls must be on one property.
 - All walls 4' or taller shall require a signed/sealed set of engineered drawings. Wall engineer shall submit signed/sealed letter prior to acceptance stating that the walls were constructed per drawings.
 - All fill to be compacted to 95% std. density using a sheep's foot roller.

AS-BUILT JULY 2014
INFORMATION PROVIDED BY CONTRACTORS
(NOT FIELD VERIFIED)
⊗ Driveway must be located on noted side.

- NOTES:**
- Finish Floor Elevation to be 0.70 Feet above Finished Pad (FP)
 - Additional Erosion Control to be installed in Parkways as determined by the City Inspector.
 - Finished Pad Elevations are within ± 0.3 Feet.
 - No lot to lot drainage allowed.

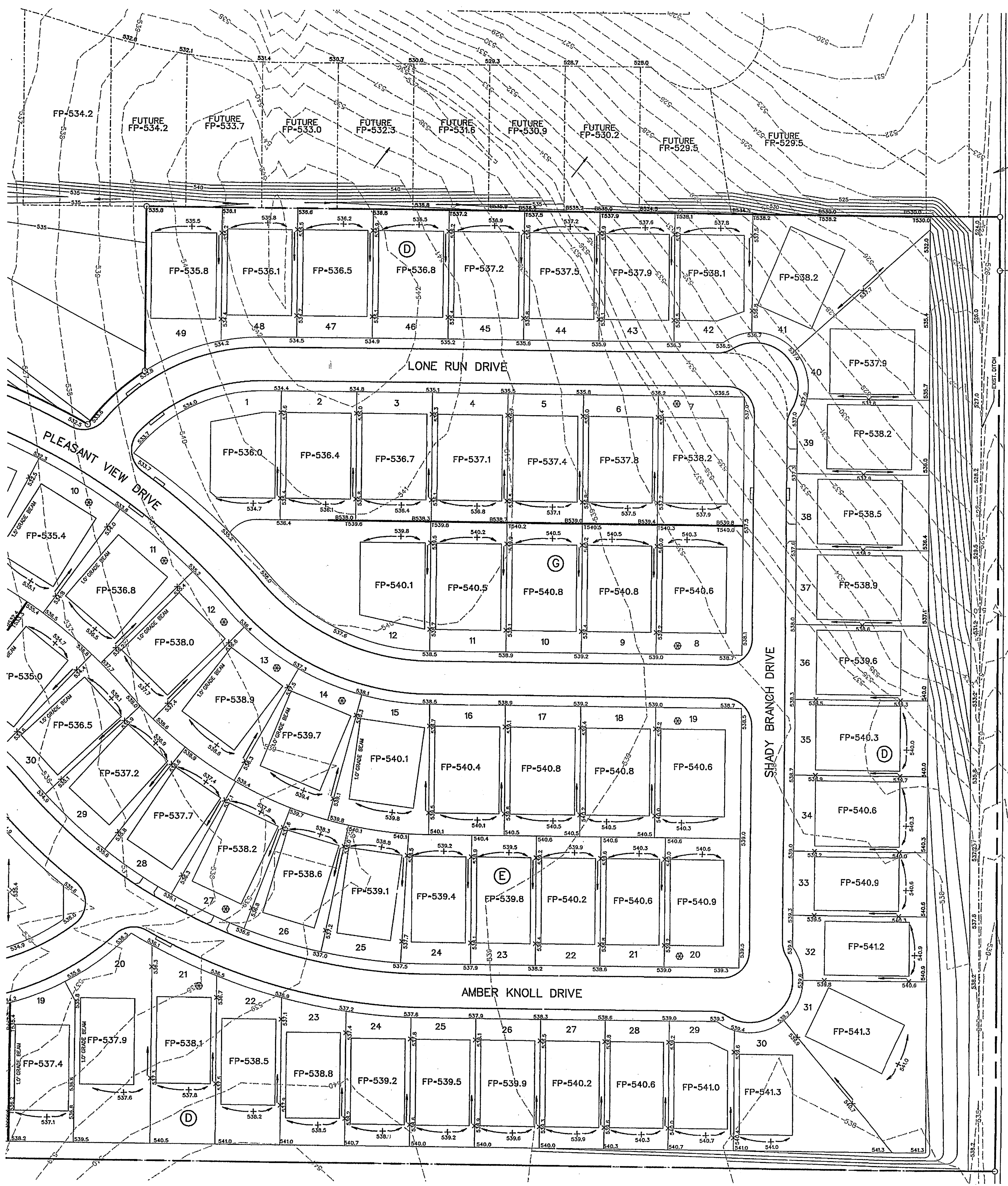


The seal appearing on this document was authorized by Warren L. Corwin, P.E. 57875, on August 19, 2013

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CITY _____ DATE _____

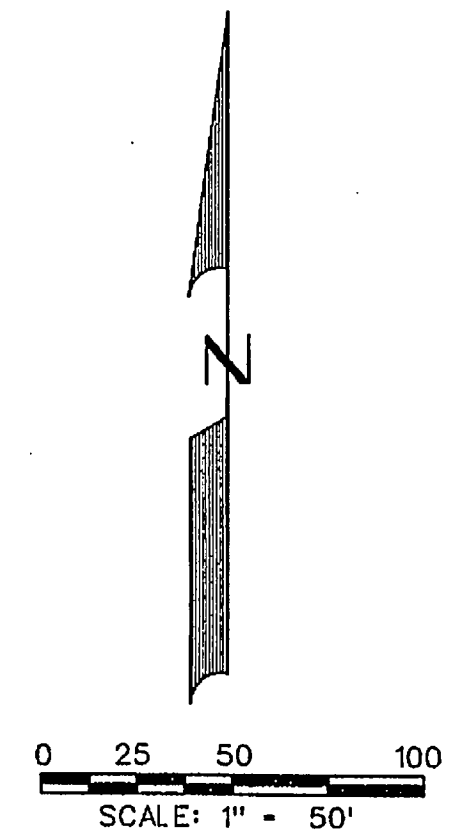
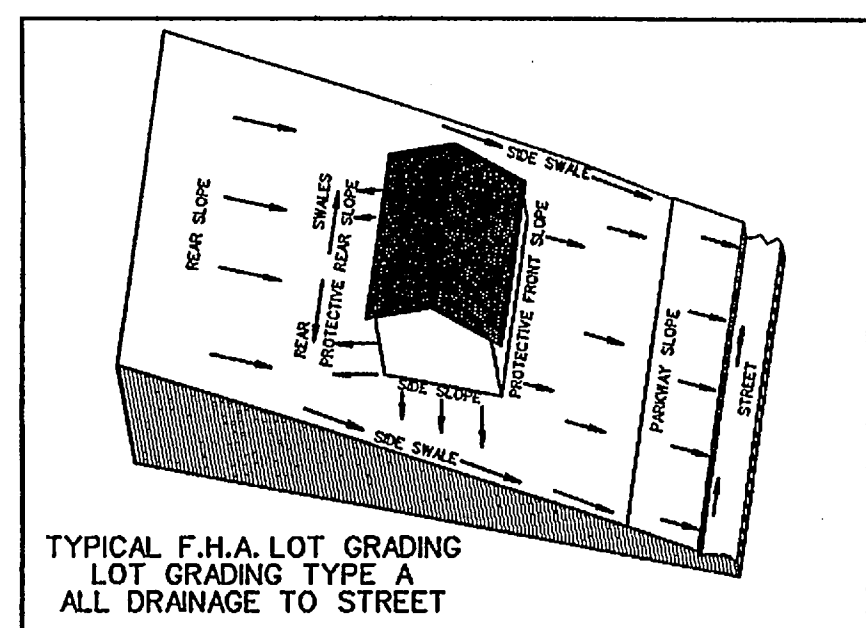
<p>CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBP# FIRM #5951</p>			
<p>DEVELOPMENT PLANS FOR BREEZY HILL PHASE 2 ROCKWALL, TEXAS</p>			
<p>GRADING PLAN</p>			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	23 OF 25
13022	MAY 2013	1"=50'	



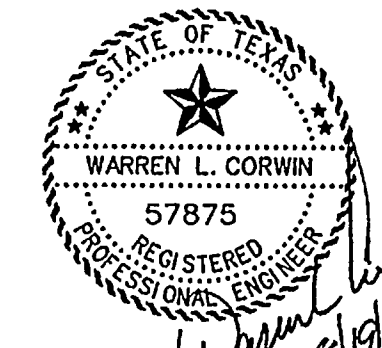
DRAINAGE TO DITCH
BREEZY HILL RD

EXIST. CONDITIONS
8.86 AC.
25.7cfs

PROPOSED
1.48 AC. (AREA 20)
0.70 AC (EX ROAD AND DITCH)
10.6 cfs TOTAL



⊗ Driveway must be located on noted side.



RELEASED FOR CONSTRUCTION
The seal appearing hereon is the responsibility of the DESIGNER OF DESIGN
this document REMAINS WITH THE DESIGN ENGINEER, THE CITY
authorized by ROCKWALL, IN REVIEWING AND RELEASING
Warren L. Corwin PLANS FOR CONSTRUCTION, ASSUMES NO
P.E. 57875, OF RESPONSIBILITY FOR ADEQUACY OR ACCURACY
August 19, 2013

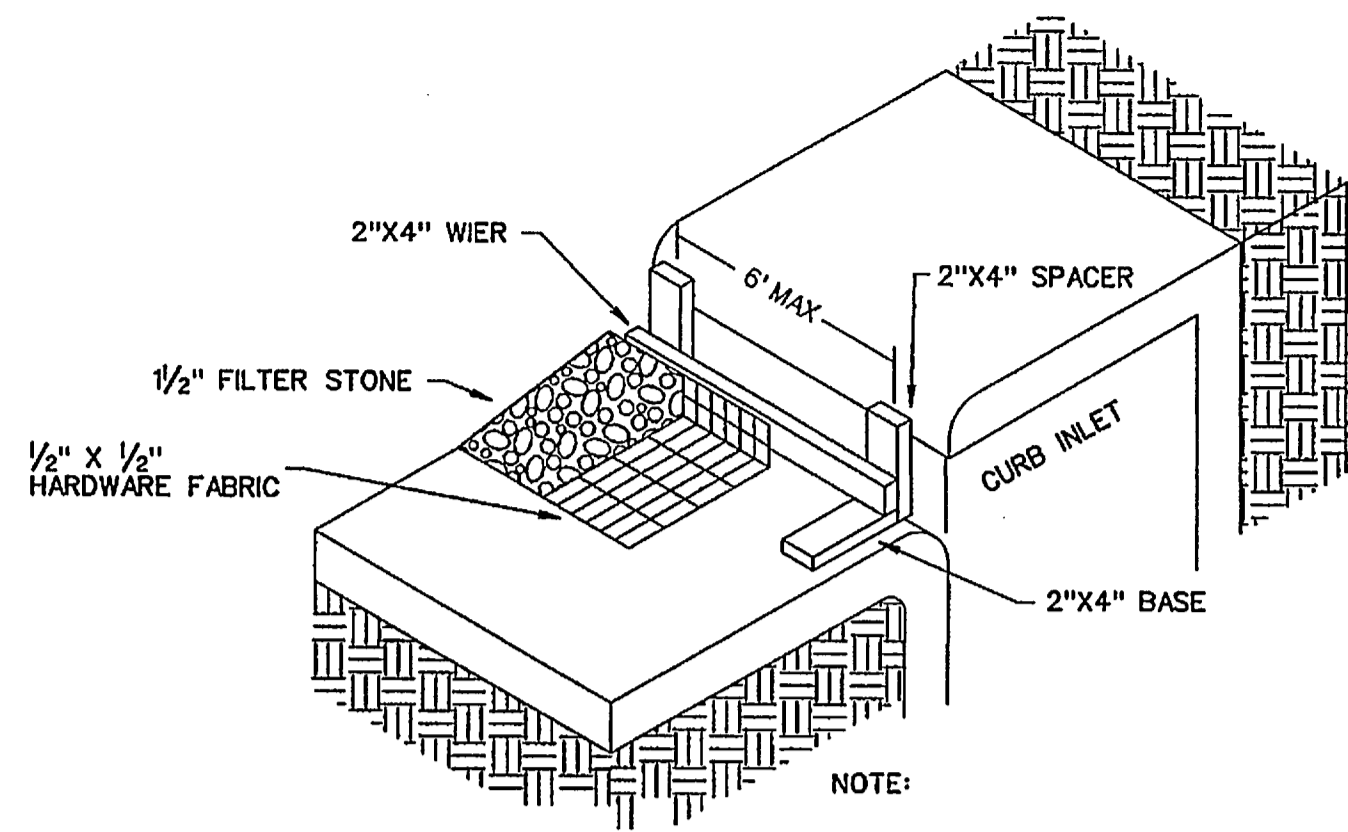
CITY _____ DATE _____

CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBPE FIRM #5951			
DEVELOPMENT PLANS FOR BREEZY HILL PHASE 2 ROCKWALL, TEXAS			
GRADING PLAN			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	24 OF 25
13022	MAY 2013	1"=50'	

AS-BUILT JULY 2014
 INFORMATION PROVIDED BY CONTRACTORS
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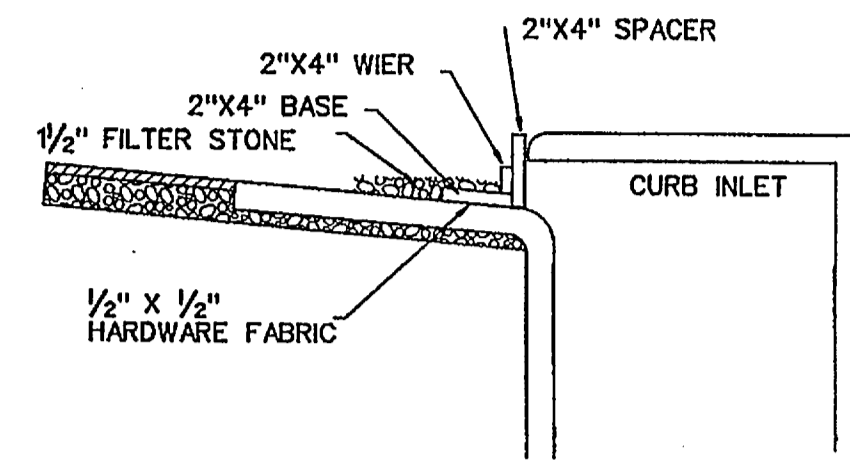
CONSTRUCTION SEQUENCE

1. GRADING CONTRACTOR TO INSTALL TEMPORARY STABILIZED ENTRANCE.
2. INSTALL SILT FENCE AS SHOWN, (TS-600 POLY FELT) PER C.O.G. SPECIFICATIONS.
3. PERFORM GRADING AND UTILITY CONSTRUCTION.
4. AFTER THE INLET BOTTOMS ARE CONSTRUCTED, THE INLETS SHALL BE FILLED WITH STONE AND COVERED WITH A FILTER FABRIC (TS-600 POLY FELT OR EQUIVALENT) BY UTILITY CONTRACTOR.
5. PRIOR TO CITY RELEASING PAVING, SOD OR SEEDED CURLEX SHALL BE INSTALLED ON SIDES AND BOTTOM OF ALL DETENTION PONDS.
6. AFTER PAVING AND COMPLETION OF INLETS, INLET FILTERS SHALL BE INSTALLED IN ALL INLETS AND MAINTAINED UNTIL RE-VEGETATION HAS BEEN COMPLETED BY PAVING CONTRACTOR.
7. SILT FENCE SHALL REMAIN IN PLACE UNTIL RE-VEGETATION HAS BEEN COMPLETED.
8. PAVING CONTRACTOR SHALL REMOVE TEMPORARY STABILIZED ENTRANCE.
9. PRIOR TO CITY ACCEPTANCE THE PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY MUD OR SILT WHICH COLLECTS ON THE EXISTING AND NEW PAVEMENT.

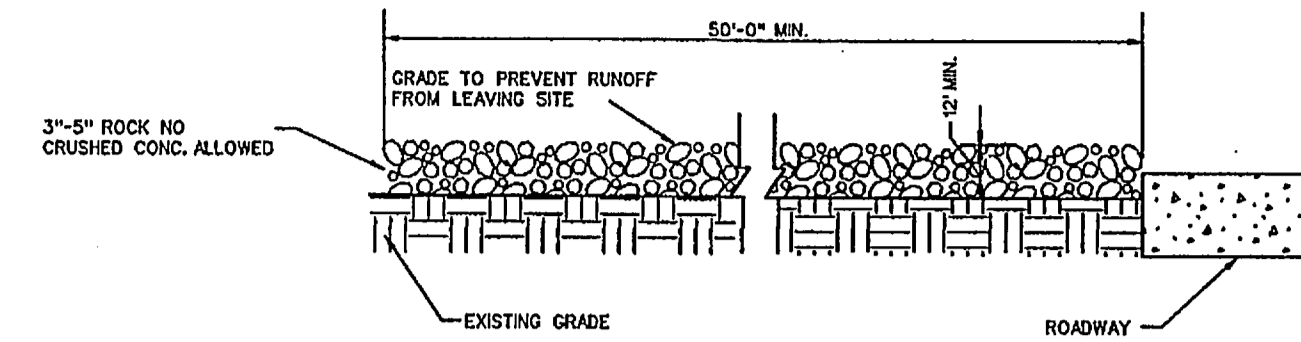
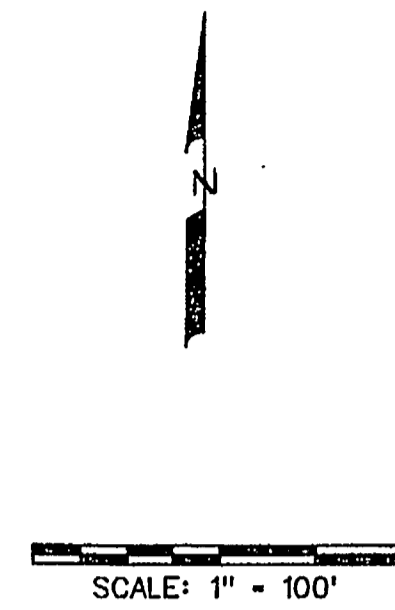


NOTE:
EXTEND FABRIC, FRAME AND FILTER STONE 12' BEYOND END OF INLET ON BOTH ENDS.

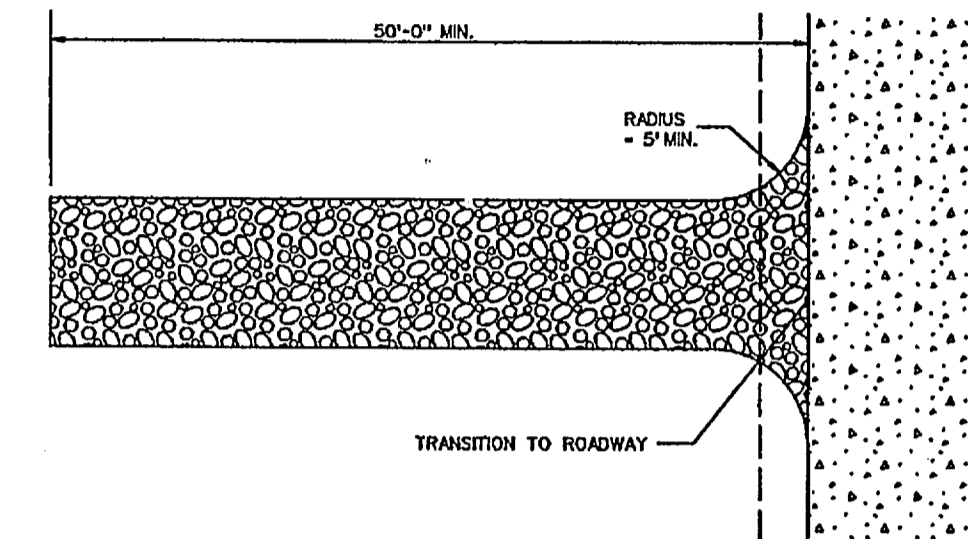
TYPE B CURB INLET PROTECTION



INLET SECTION

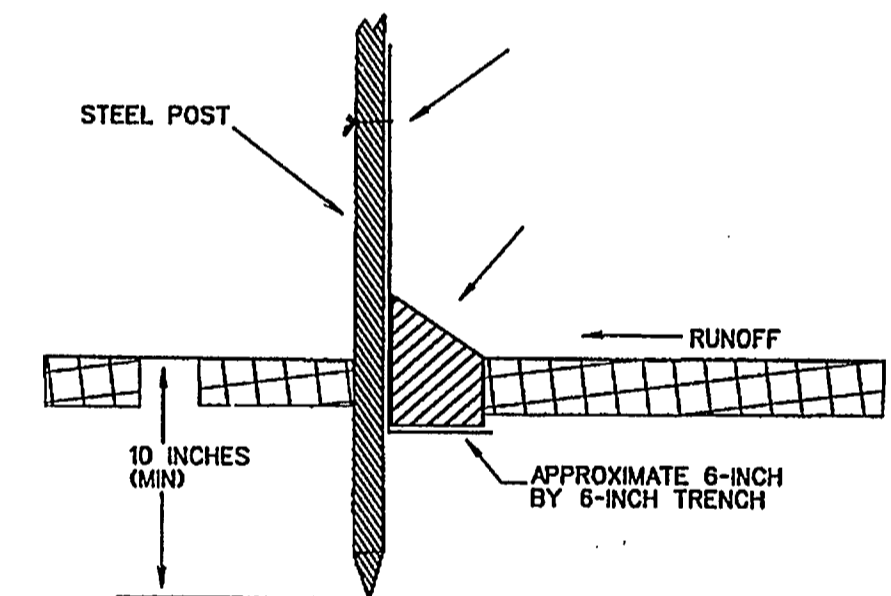
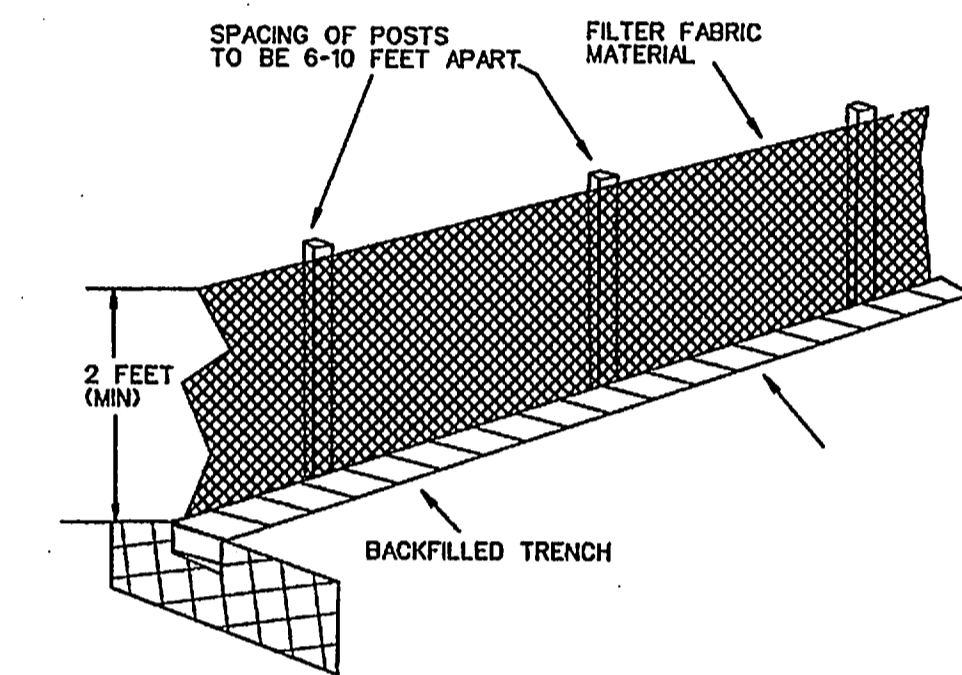


PROFILE

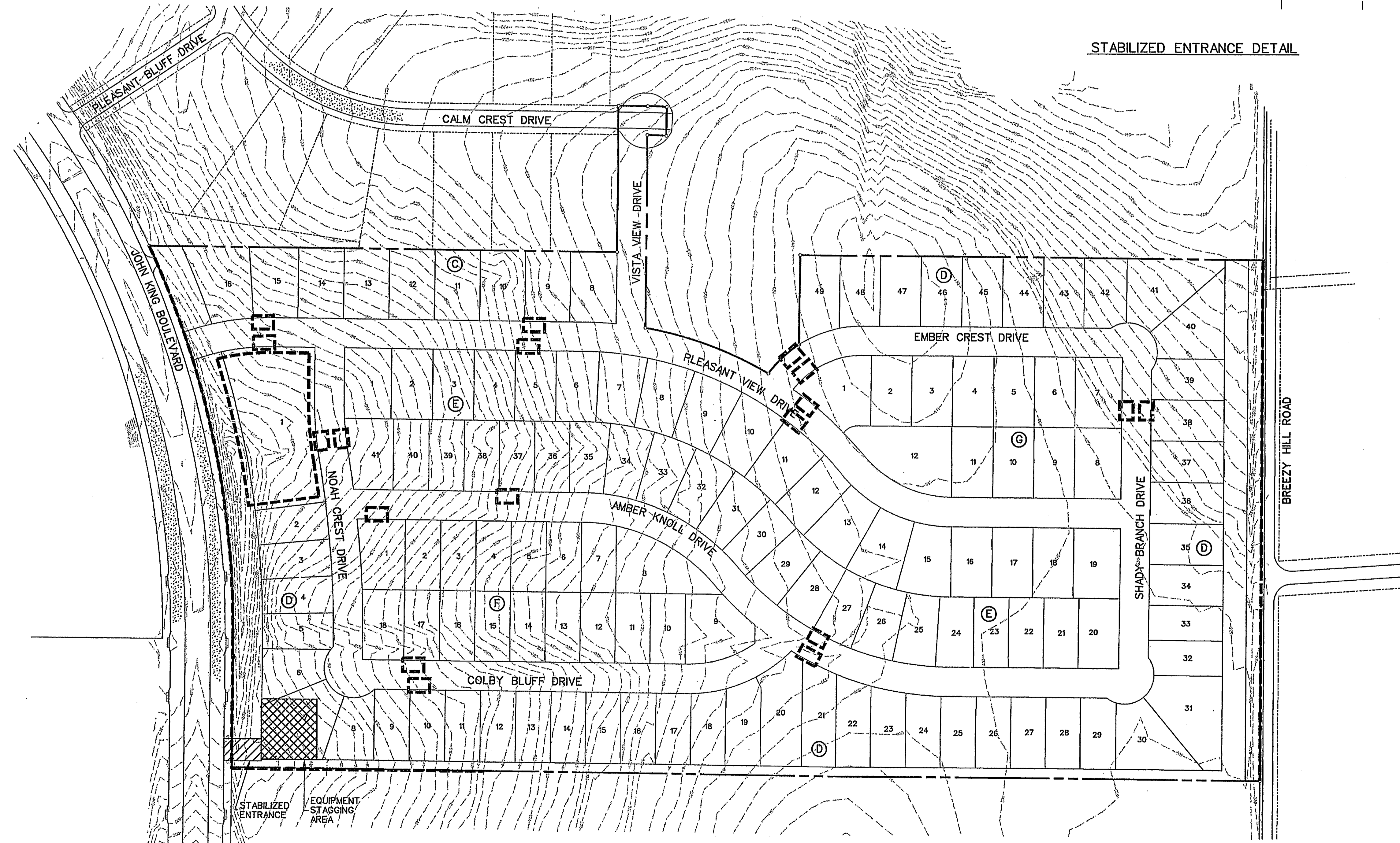


PLAN VIEW

STABILIZED ENTRANCE DETAIL



FILTER FABRIC FENCE DETAIL



LEGEND

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CITY _____ DATE _____

CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBPE FIRM #5951			
DEVELOPMENT PLANS FOR BREEZY HILL PHASE 2 ROCKWALL, TEXAS			
EROSION CONTROL PLAN			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE	25 of 25
13022	MAY 2013	1"=100'	

AS-BUILT JULY 2014
INFORMATION PROVIDED BY CONTRACTORS
(NOT FIELD VERIFIED)