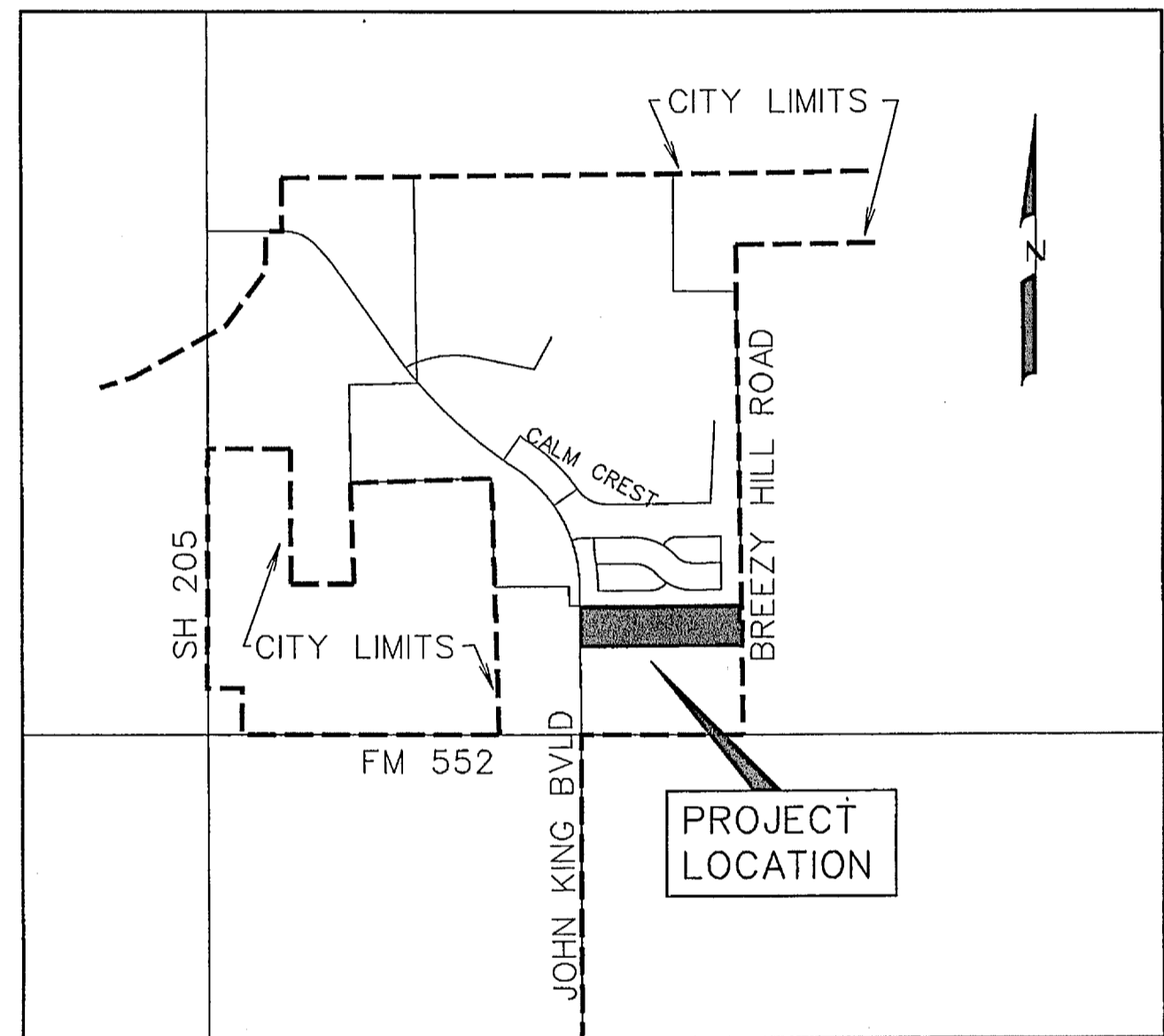


DEVELOPMENT PLANS FOR BREEZY HILL PHASE X CITY OF ROCKWALL, TEXAS

INDEX

1	TITLE
2	PLAT
3	RIDGECROSS DRIVE
4	SOLARO LANE & SENNA HILLS DRIVE
5	HUNTERS CREEK DRIVE
6	HUNTERS CREEK DRIVE & KITTS DRIVE
7	TURNLANE
8	WATER AND SANITARY SEWER PLAN
9	SANITARY SEWER PROFILES
10	SANITARY SEWER PROFILES
11	EXISTING CONDITIONS DRAINAGE AREA MAP
12	PROPOSED DRAINAGE AREA MAP
13	STORM SEWER PLAN AND PROFILE LINES 'D-1', 'D-2' & 'D-4'
14	STORM SEWER PLAN AND PROFILE LINE 'D-3'
15	STORM SEWER PLAN AND PROFILE LINE 'D-5', DRAINAGE CALCULATIONS
16	STORM SEWER PROFILES
17	DETENTION POND PLAN
18	GRADE TO DRAIN
19	GRADING PLAN
20	GRADING PLAN
21	EROSION CONTROL PLAN
22	STREET SIGN PLAN



VICINITY MAP
NOT TO SCALE

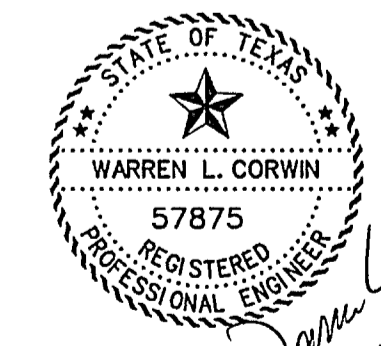
PREPARED FOR
BH 60'S POD, LTD. & BH BALANCE 4, LLC.
8214 WESTCHESTER DRIVE, SUITE 710 DALLAS, TEXAS 75225

CORWIN ENGINEERING, INC. — CONSULTING ENGINEERS
200 W. BELMONT, SUITE E TBPE FIRM #5951 ALLEN, TEXAS 75013

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.

CITY RW DATE 2-26-17

Warren L. Corwin
1-6-17



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

AS-BUILT JULY 2018
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)

NO.	REVISIONS	DATE

MARCH 2017

OWNERS CERTIFICATE

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: COUNTY OF ROCKWALL, STATE OF TEXAS... BREEZY HILL PHASE X...

We understand and do hereby reserve the easement strips shown on this plat for the purposes... 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 all or part of any buildings, fences, trees, shrubs, or other growths or improvements...

3. The City of Rockwall will not be responsible for any claims of any nature resulting from or occasioned 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 controls 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 this addition by the owner or any other person until the developer and/or owner has complied with all requirements of the Subdivision Regulations of the City of Rockwall regarding improvements with respect to the streets, sidewalks, drainage, storm sewer, water, gas, and other utilities, and other improvements...

Until the developer and/or owner files a corporate surety bond with the city secretary in a sum equal to the cost of such improvements for the designated area, guaranteeing the installation thereof within the time stated in the bond, which time shall be fixed by the city council of the City of Rockwall.

We further acknowledge that the dedications and/or easements made herein are proportional to the impact of the Subdivision upon the public services required in order that the development will comport with the present and future growth needs of the City, we, our successors and assigns, shall be liable for any damage, or cause of action that we may have as a result of the dedication of easements made herein.

BH PHASE V, 80's POD, LTD. By: BH PHASE V, 80's Pod GP Corporation, a Texas corporation, its General Partner. Richard M. Skourburg, President. Mortgage or Lien Interest.

STATE OF TEXAS. Before me, the undersigned authority, on this day personally appeared RICHARD M. SKOURBURG, 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. Given upon my hand and seal of office this 27th day of March, 2017.

Notary Public in and for the State of Texas My Commission Expires: [blank]. STATE OF TEXAS. Before me, the undersigned authority, on this day personally appeared [blank], 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 purpose and consideration therein stated. Given upon my hand and seal of office this [blank] day of [blank], 2017.

Notary Public in and for the State of Texas My Commission Expires: [blank]. NOTE: It shall be the policy of the City of Rockwall to withhold issuing building permits until all streets, water, sewer, and storm drainage systems have been accepted by the City. The approval of a plat by the City does not constitute any representation, assurance, or guarantee that any building or other structure erected thereon will conform to applicable codes, ordinances, or other regulatory requirements or that any person responsible for construction or maintenance of such structure will be held liable for any damage, or cause of action that we may have as a result of the dedication of easements made herein.

Recommended for Final Approval Planning & Zoning Commission Date

APPROVED: [blank] City Engineer. I, WARREN L. CORWIN, do hereby certify that the plat shown hereon accurately represents the results of an on-the-ground survey made under my direction and supervision and as shown thereon and there are no encroachments, conflicts, protrusions or visible utilities on the ground except as shown and said plat has been prepared in accordance with the platting rules and regulations of the City Plan Commission of the City of Rockwall, Texas.

WITNESS OUR HANDS, this [blank] day of [blank], 2017.

Warren L. Corwin, Notary Public in and for the State of Texas. City Secretary City Engineer

SURVEYOR CERTIFICATE

I, WARREN L. CORWIN, do hereby certify that the plat shown hereon accurately represents the results of an on-the-ground survey made under my direction and supervision and as shown thereon and there are no encroachments, conflicts, protrusions or visible utilities on the ground except as shown and said plat has been prepared in accordance with the platting rules and regulations of the City Plan Commission of the City of Rockwall, Texas.

DATED the this [blank] day of [blank], 2017.

Warren L. Corwin, Notary Public in and for the State of Texas.

Notary Public in and for the State of Texas.

Before me, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared WARREN L. CORWIN, 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.

WITNESS MY HAND AND SEAL OF OFFICE, this the [blank] day of [blank], 2017.

BREEZY HILL PHASE X OF BREEZY HILL PHASE X

J. STRICKLAND SURVEY, ABSTRACT NO. 187 T.R. BAILEY SURVEY, ABSTRACT NO. 30 J. SIMMONS SURVEY, ABSTRACT NO. 190

CITY OF ROCKWALL ROCKWALL COUNTY, TEXAS OWNERS

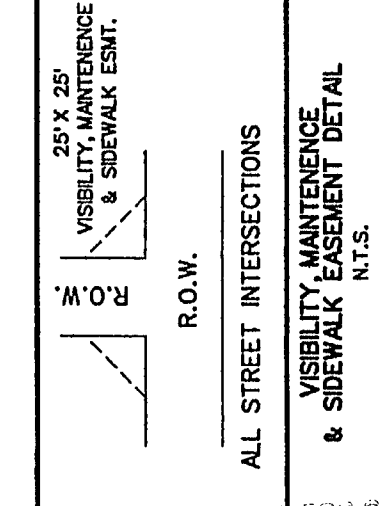
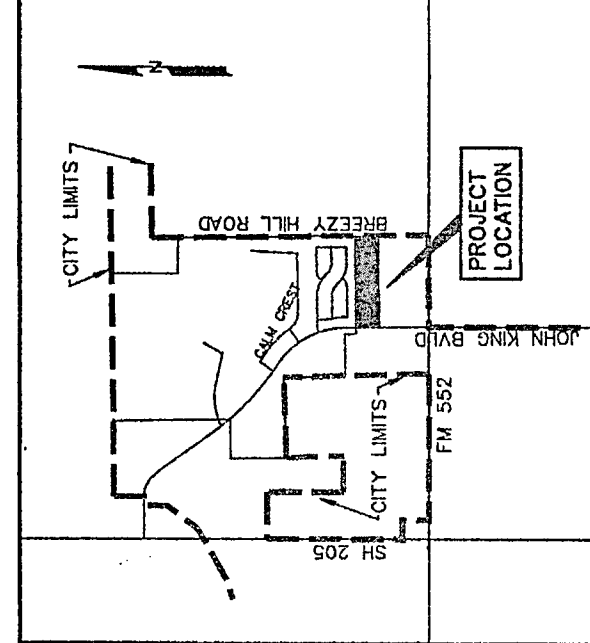
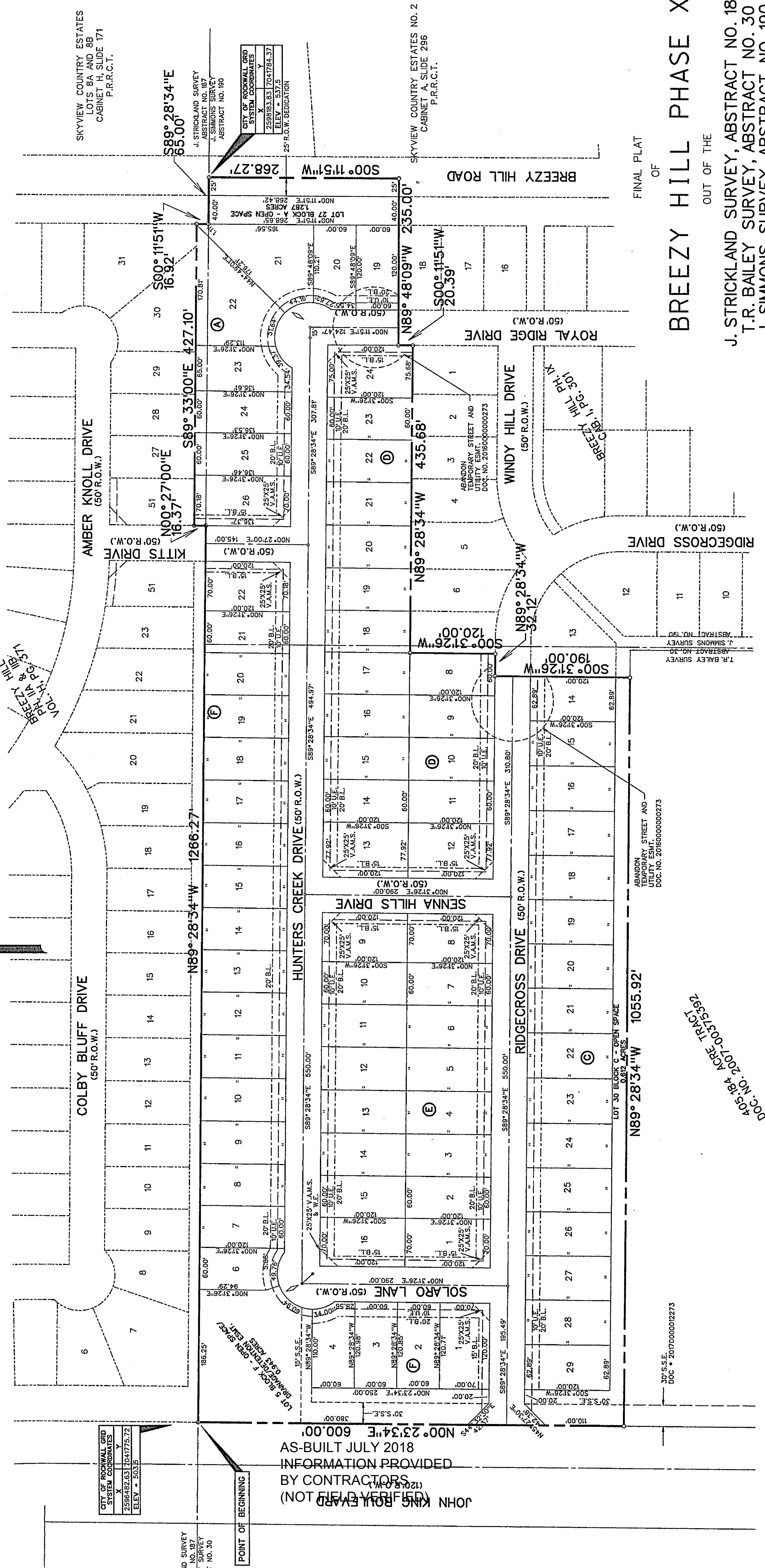
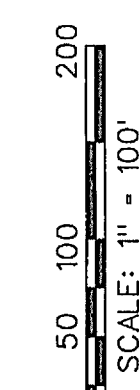
BH 60's POD, LTD. 8214 WESTCHESTER DRIVE, SUITE 710 DALLAS, TEXAS 75225 214-522-4945

BH BALANCE 4, L.L.C. 8214 WESTCHESTER DRIVE, SUITE 710 DALLAS, TEXAS 75225 214-522-4945

PREPARED BY CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75015 972-396-1200

MARCH 2017 SCALE 1" = 100'

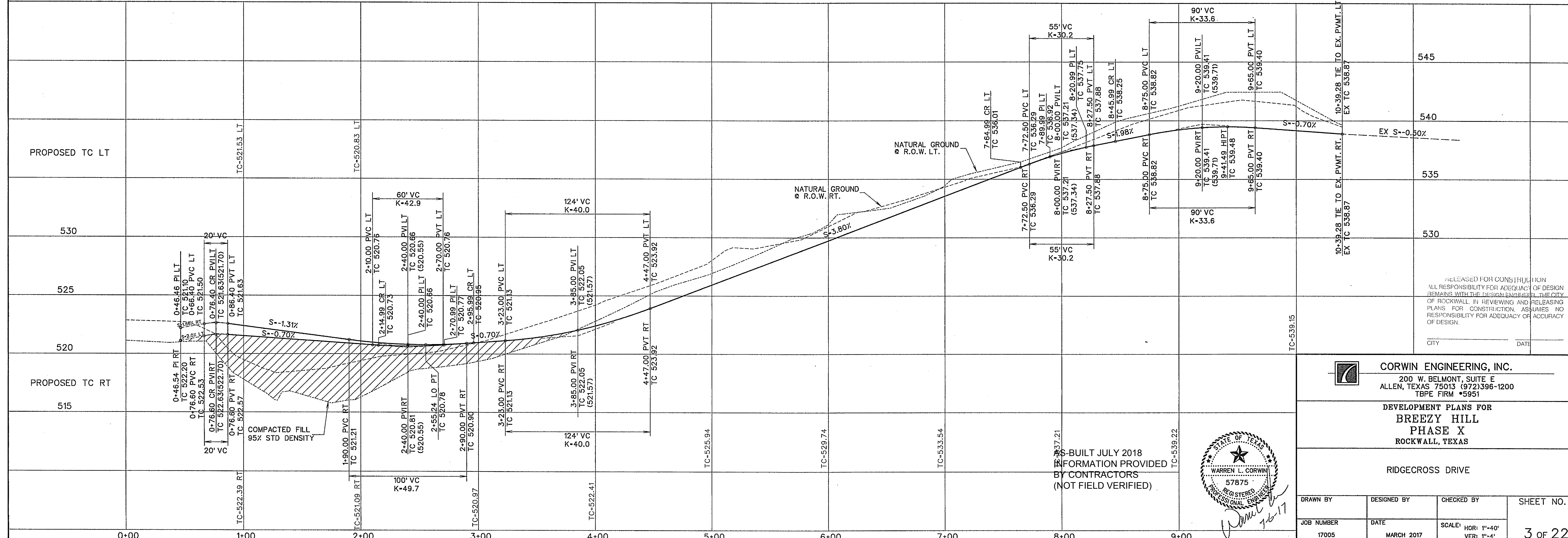
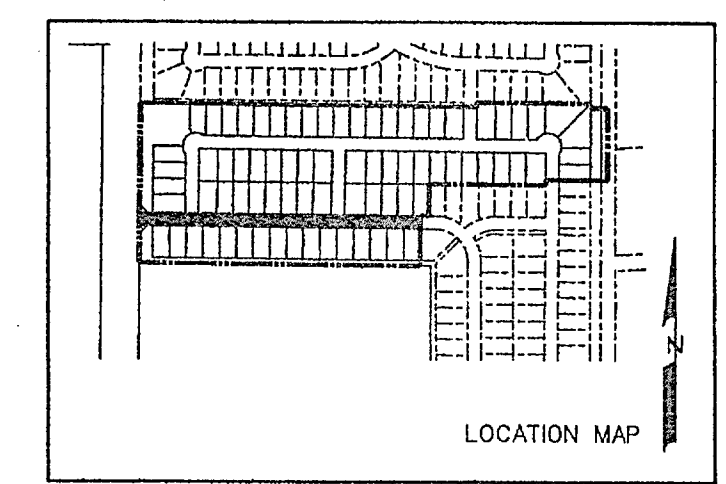
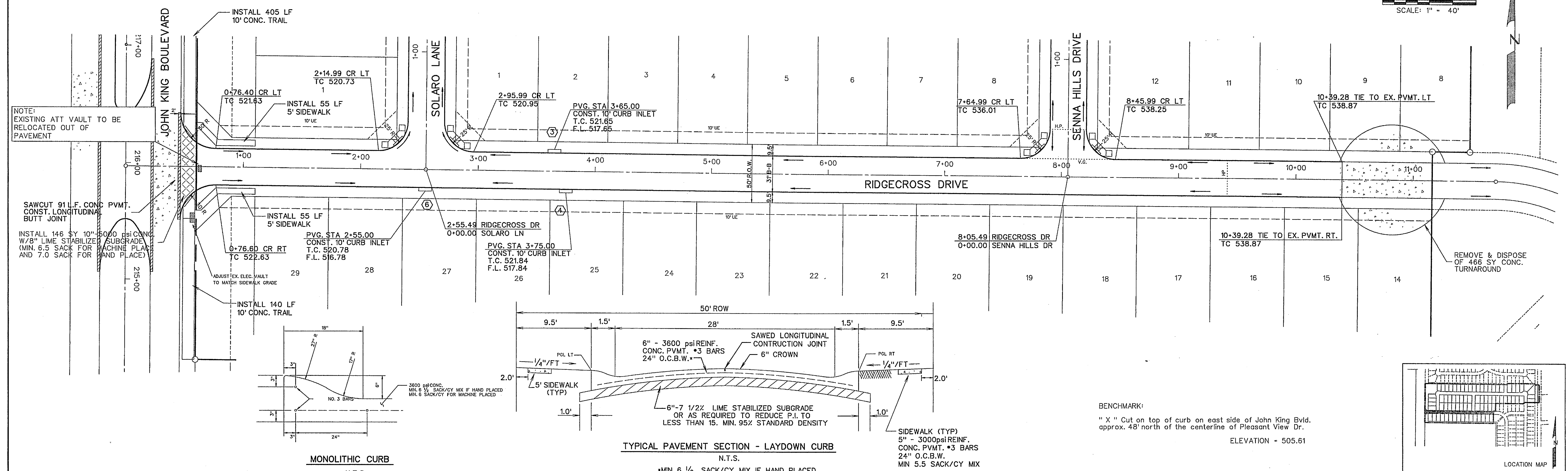
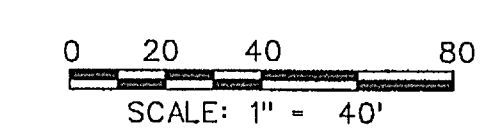
SHEET 2 OF 2



- NOTES: 1. Bearings are referenced to Breezy Hill Phase III, on addition to the Records of Rockwall County, Texas. 2. All lot lines and easements are shown as they exist on the ground. 3. 1/2" in roads with ROCKING EMBANKMENTS are shown with all boundary points of tangency, and angle points in public right-of-way unless otherwise noted. 4. B.L. - Building Line. U.E. - Utility Easements. C.U. - Common Utility Easements. D.E. - Drainage Easement. S.E. - Sewer Easement. V.M.S. - Visibility, Maintenance & Sidewalk Easement. H.O.A. - Homeowners Association. S - Street Name Change. 5. All open spaces, drainage areas and other common areas shall be maintained by the Homeowners Association. 6. No building permits will be issued until all public improvements are accepted by the City.

TOTAL ACRES 19.365 TOTAL RESIDENTIAL LOTS 79

SHEET 1 OF 2



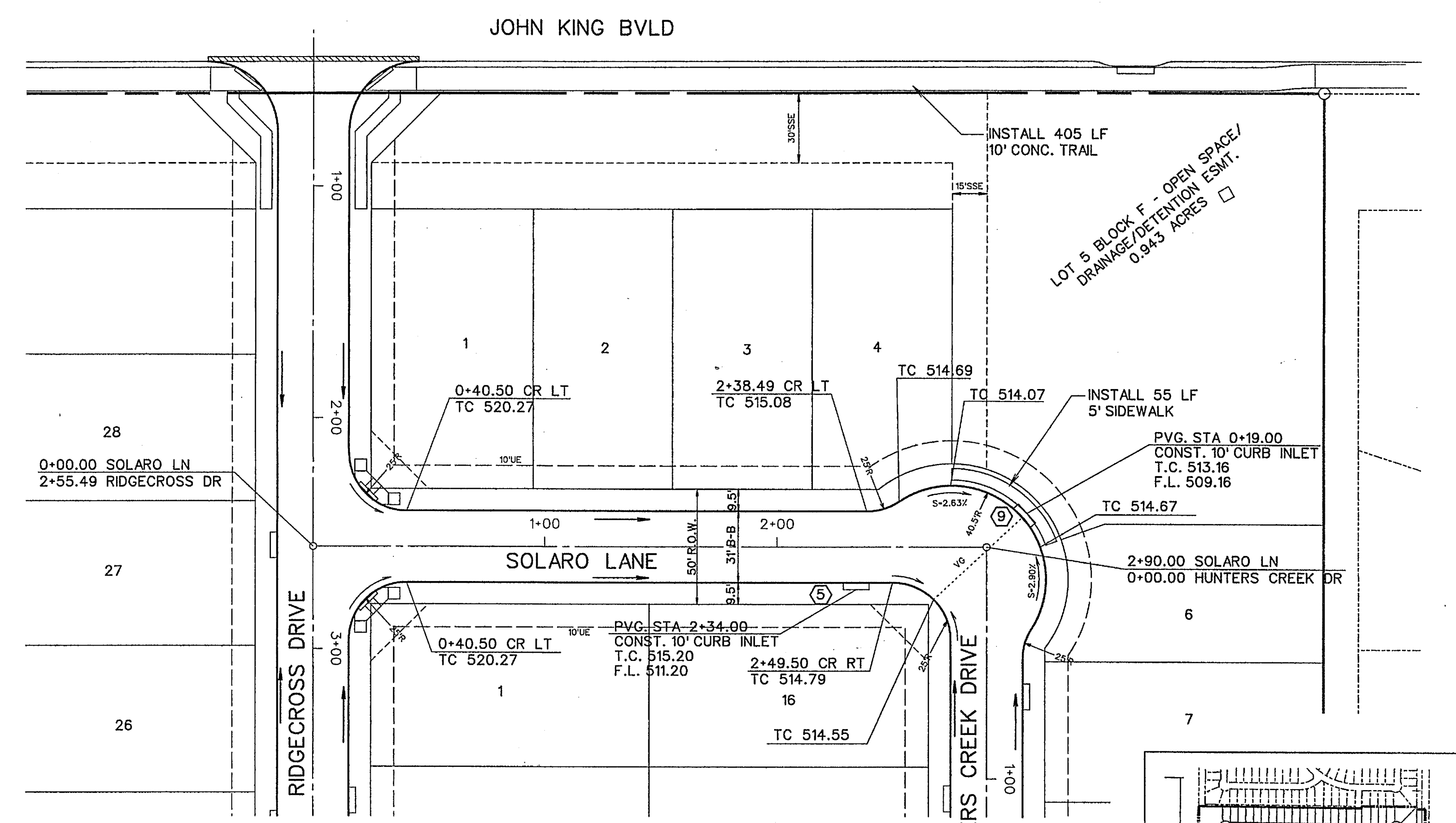
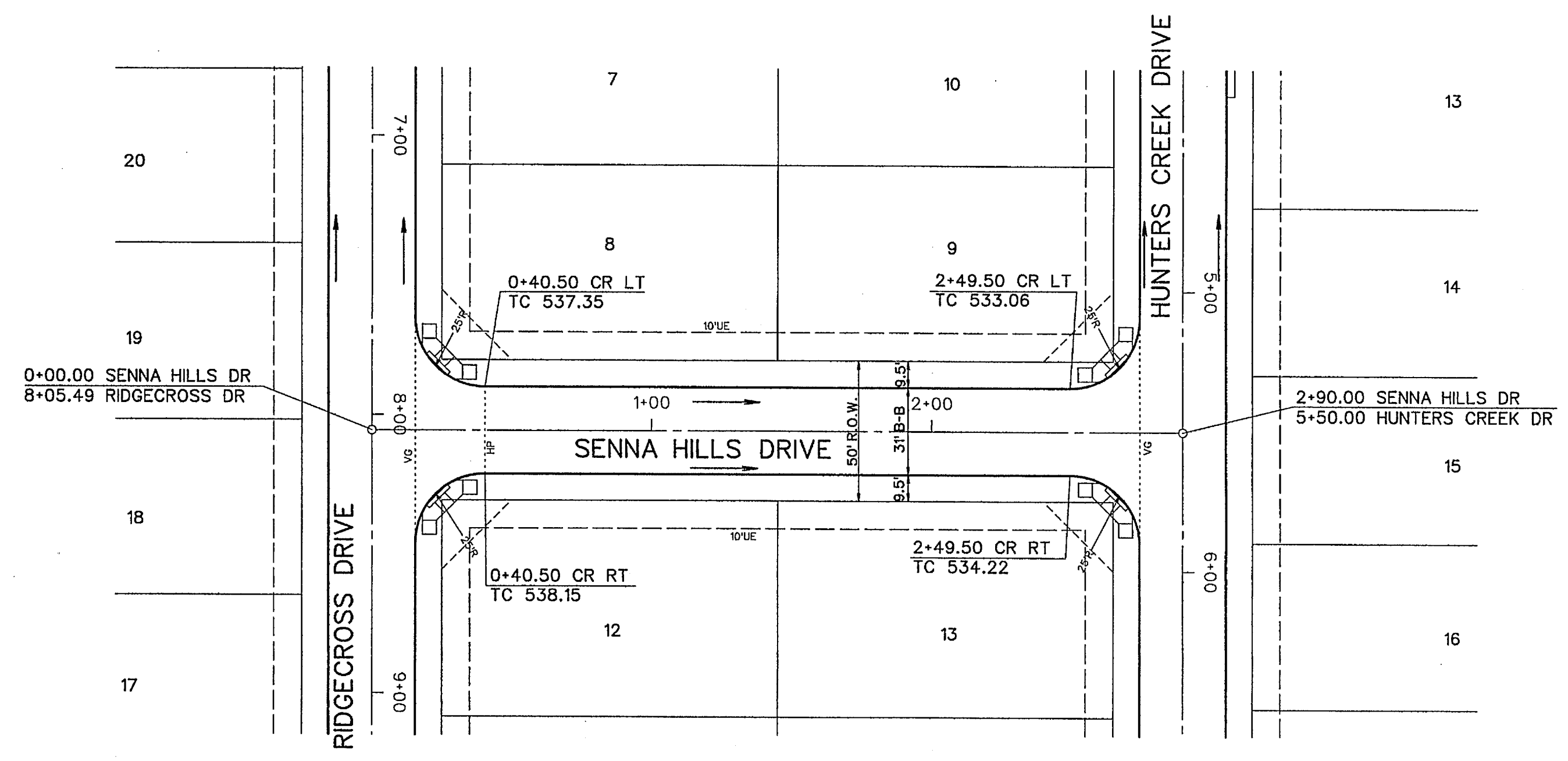
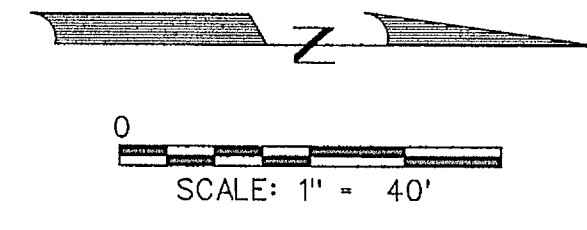
RELEASED FOR CONSTRUCTION
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 REMAINS WITH THE DESIGN ENGINEER. THE CITY
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 OF DESIGN.

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

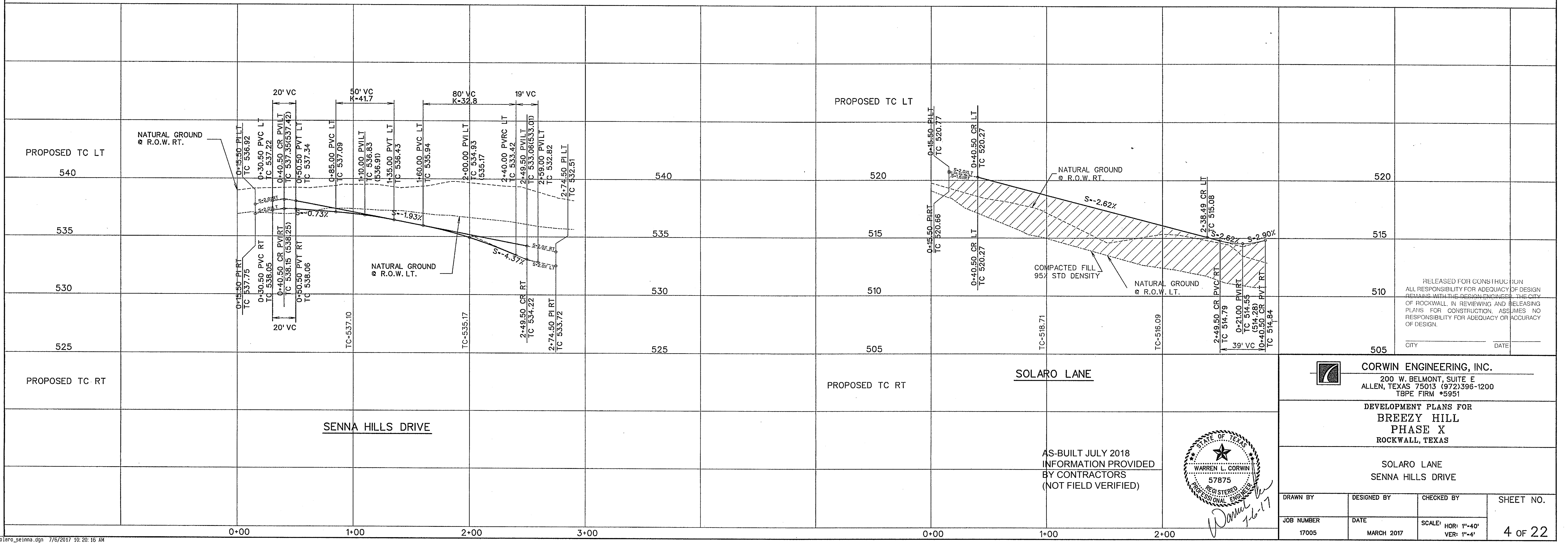
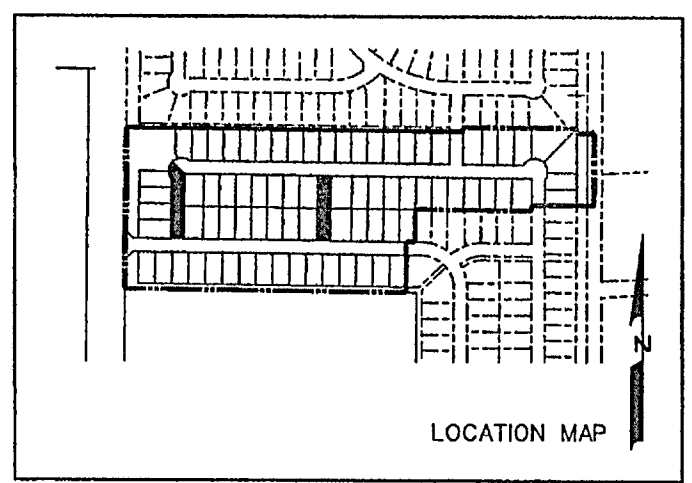
**DEVELOPMENT PLANS FOR
 BREEZY HILL
 PHASE X
 ROCKWALL, TEXAS**

RIDGECROSS DRIVE

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
17005	MARCH 2017	SCALE: HOR: 1"=40' VER: 1"=4'	3 OF 22



BENCHMARK:
 " X " Cut on top of curb on east side of John King Blvd.
 approx. 48' north of the centerline of Pleasant View Dr.
 ELEVATION = 505.61

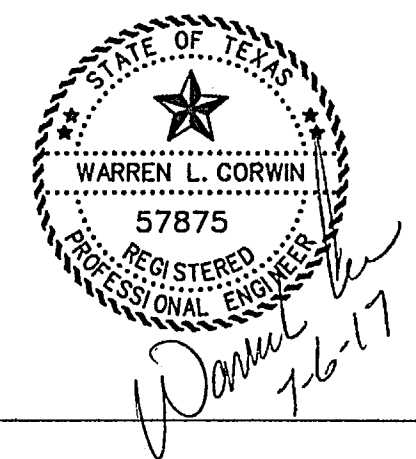


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 CITY _____ DATE _____

CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972)396-1200
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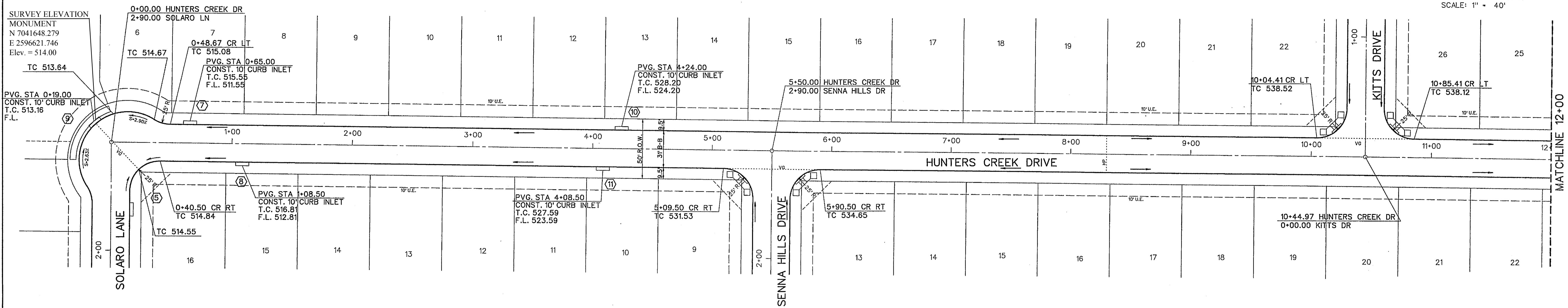
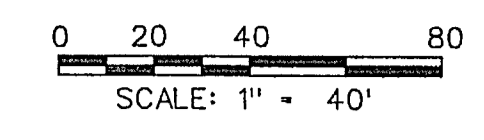
DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE X
 ROCKWALL, TEXAS

SOLARO LANE
 SENNA HILLS DRIVE

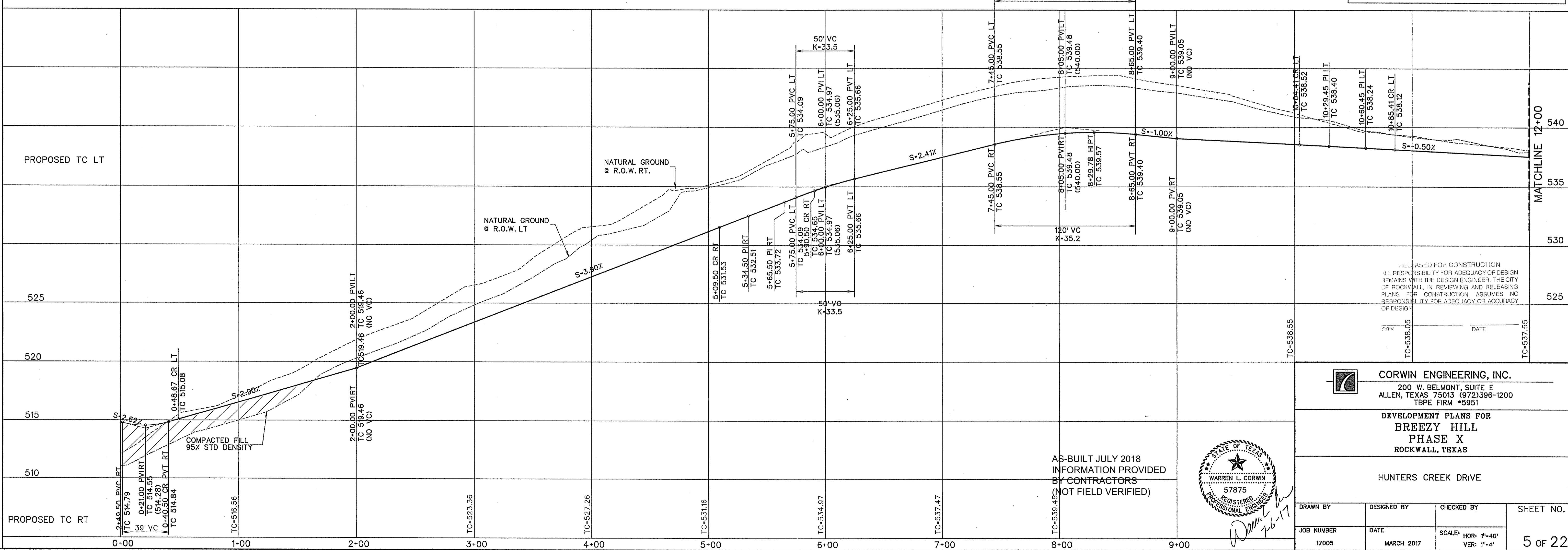
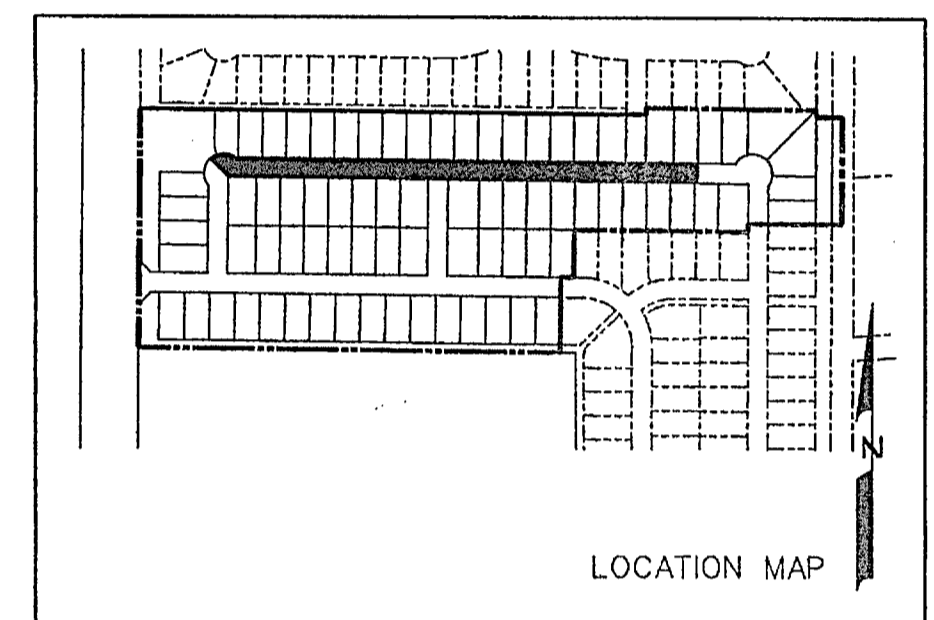


DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	4 OF 22
17005	MARCH 2017		

SURVEY ELEVATION
MONUMENT
N 7041648.279
E 2596621.746
Elev. = 514.00



BENCHMARK:
" X " Cut on top of curb on east side of John King Blvd.
approx. 48' north of the centerline of Pleasant View Dr.
ELEVATION - 505.61



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OF DESIGN

CITY _____ DATE _____
TC-538.55 TC-537.55

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

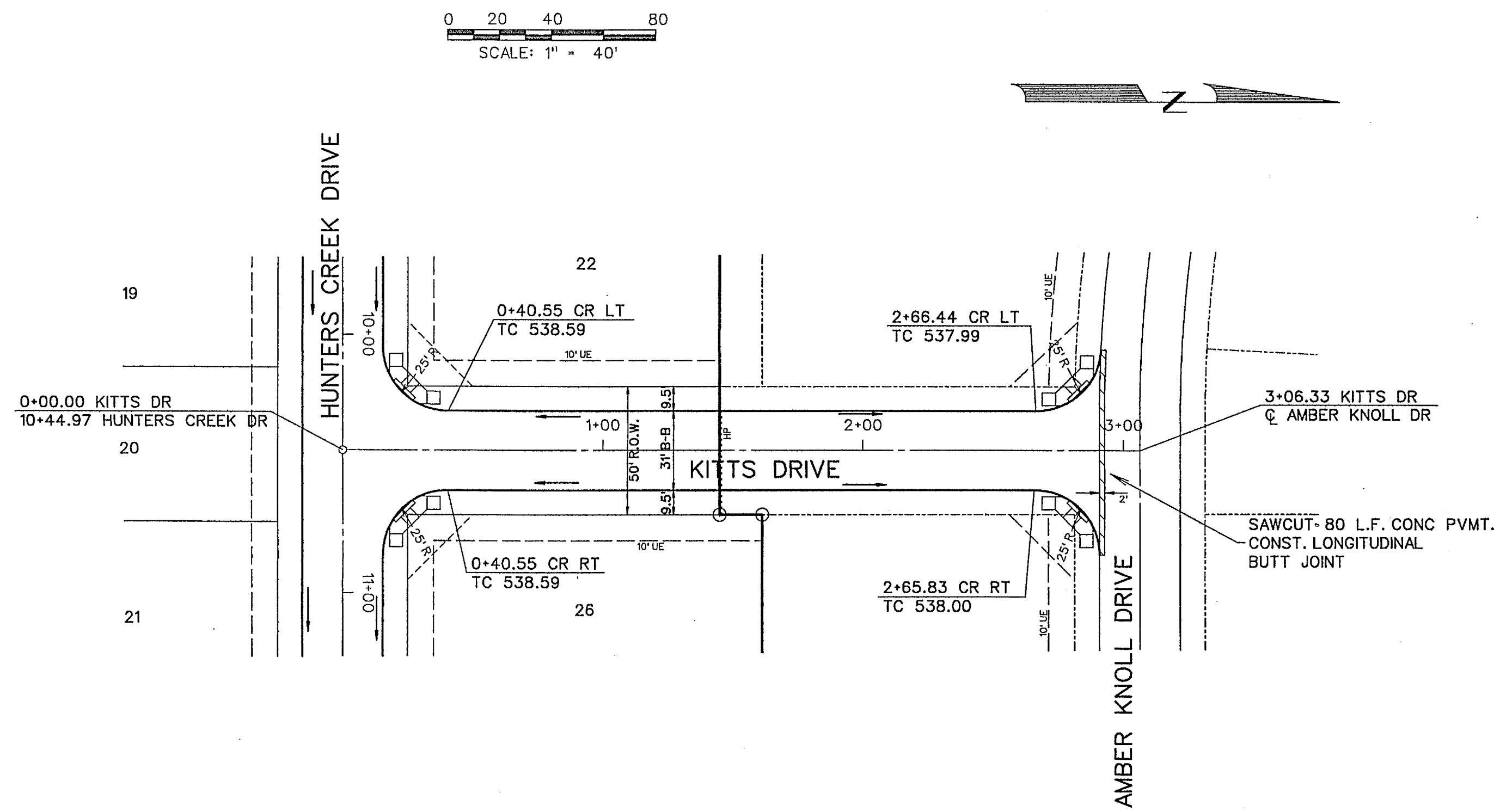
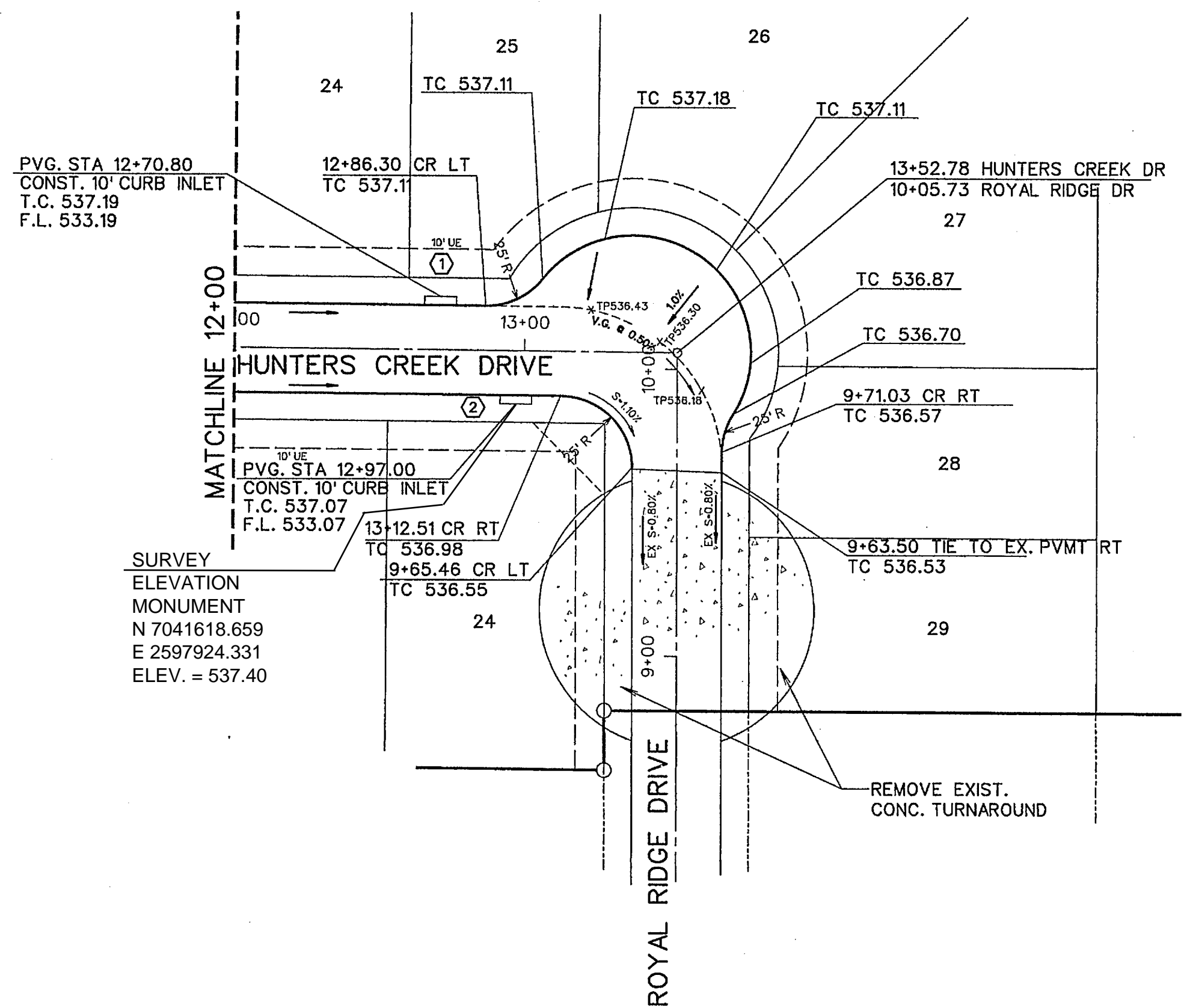
DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE X
ROCKWALL, TEXAS

HUNTERS CREEK DRIVE

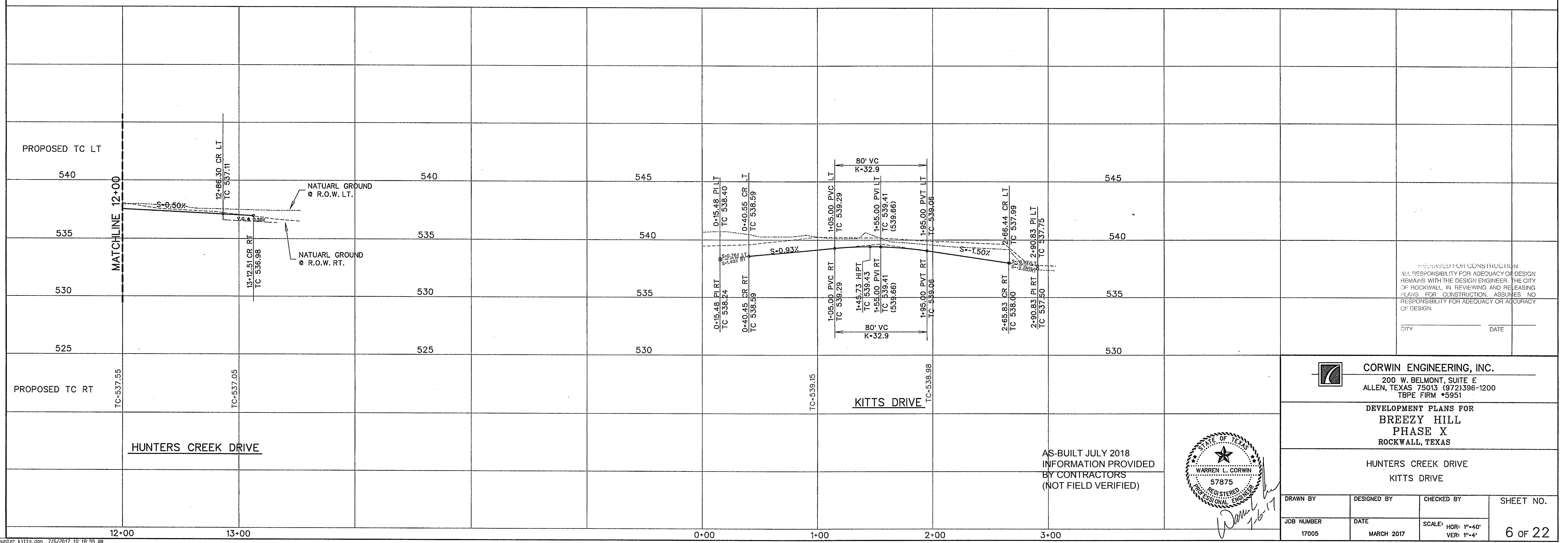
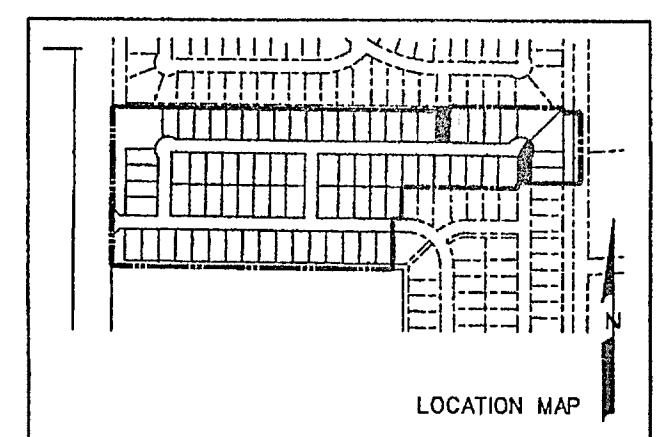
AS-BUILT JULY 2018
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)



DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4"	5 OF 22
17005	MARCH 2017		



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 approx. 48' north of the centerline of Pleasant View Dr.
 ELEVATION = 505.61

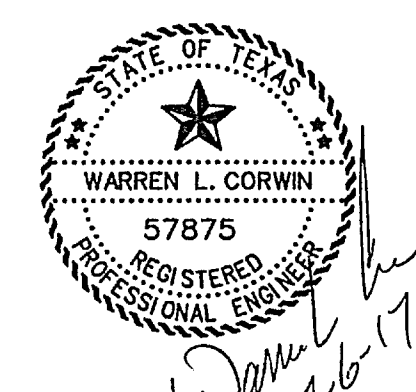


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 ALLEN, TEXAS 75013 (972)396-1200
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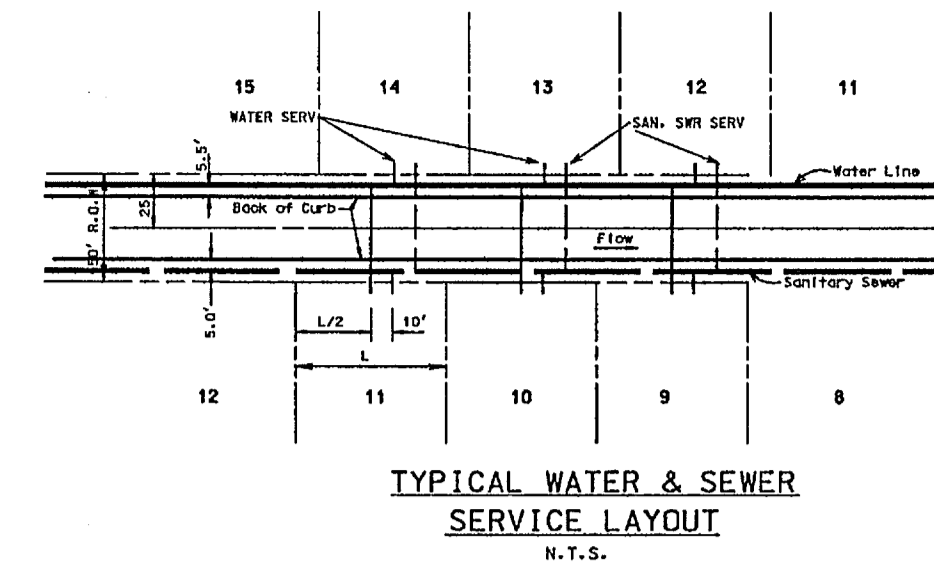
DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE X
 ROCKWALL, TEXAS

HUNTERS CREEK DRIVE
 KITTS DRIVE



DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	6 of 22
17005	MARCH 2017		

BENCHMARK:
 " X " Cut on top of curb on east side of John King Blvd.
 approx. 48' north of the centerline of Pleasant View Dr.
 ELEVATION = 505.61



- 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. CURB INLETS
 - △— PROP. CONC. HEADWALL

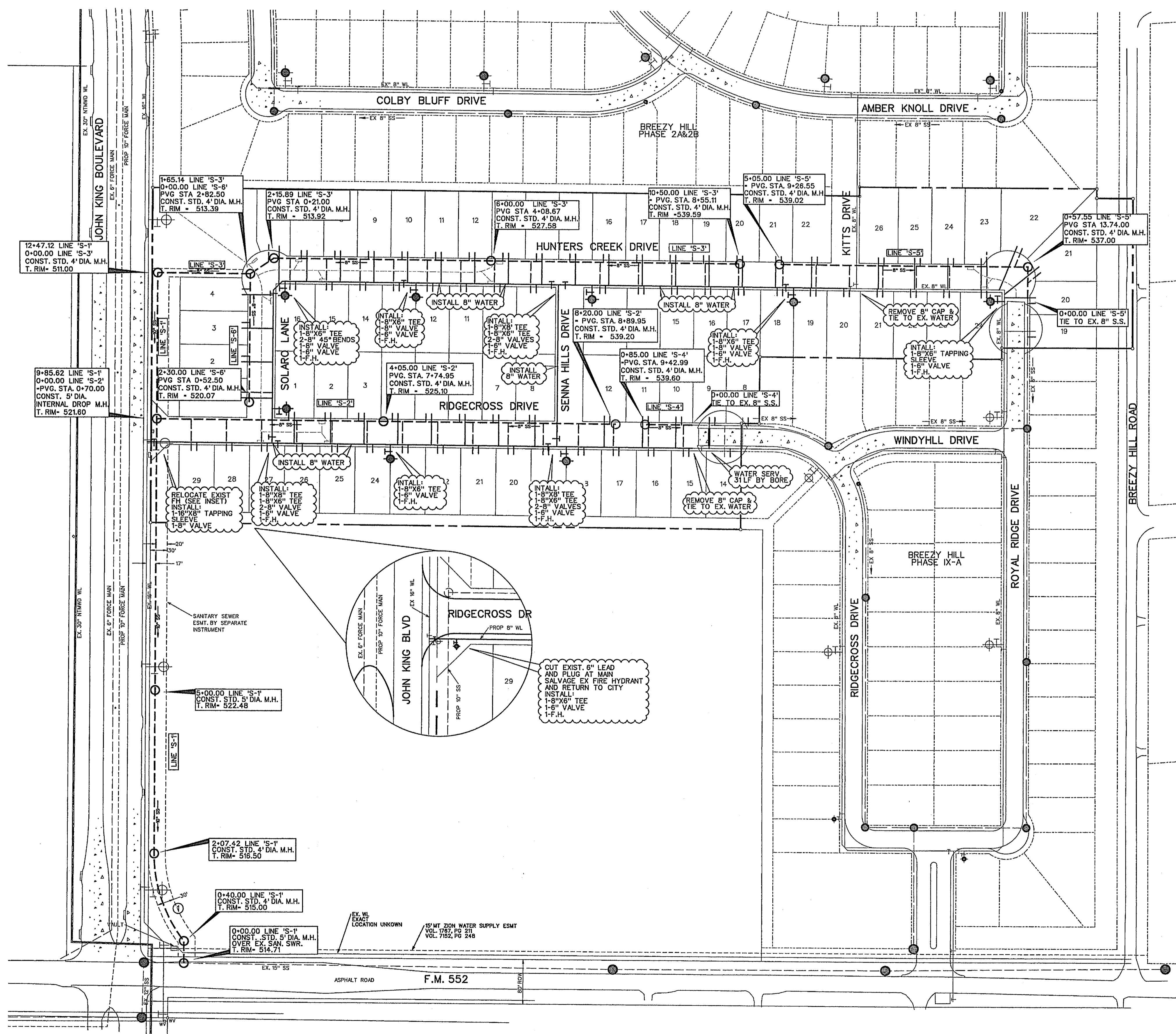
SCALE: 1" = 100'

CURVE DATA			
CURVE NO.	①	②	③
Δ	38° 22' 09"	"	"
R	250.00'	"	"
T	86.98'	"	"
L	167.42'	"	"

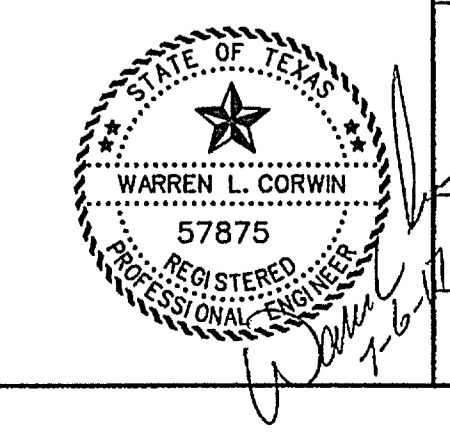
NOTE:
 ALL WATER LINES TO BE CLASS 200 PIPE DR-14 C-900.
 ALL SANITARY SEWER PIPE TO BE SDR 35 FOR 3'-10" DEEP AND SDR 26 FOR 10' AND GREATER.
 INSTALL BLUE "EMS" DISK ON WATER LINE AT EVERY 250' AND CHANGE IN DIRECTION, VALVE, AND SERVICE.
 INSTALL GREEN "EMS" DISK ON SANITARY SEWER LINE EVERY 250' AND AT EVERY CHANGE IN DIRECTION, MANHOLE, CLEANOUT, AND SERVICE.
 ALL MANHOLES TO BE RAVEN EPOXY LINED AND SEALED OR APPROVED EQUAL. TO BE SPARK AND PRESSURE TESTED.

NOTE:
 THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES FOR LOCATION AND ELEVATION PRIOR TO CONSTRUCTION. ALL UNDERGROUND UTILITIES SHOWN ARE FROM AS-BUILT PLANS AND NOT FIELD VERIFIED.

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.
 CITY _____ DATE _____



AS-BUILT JULY 2018
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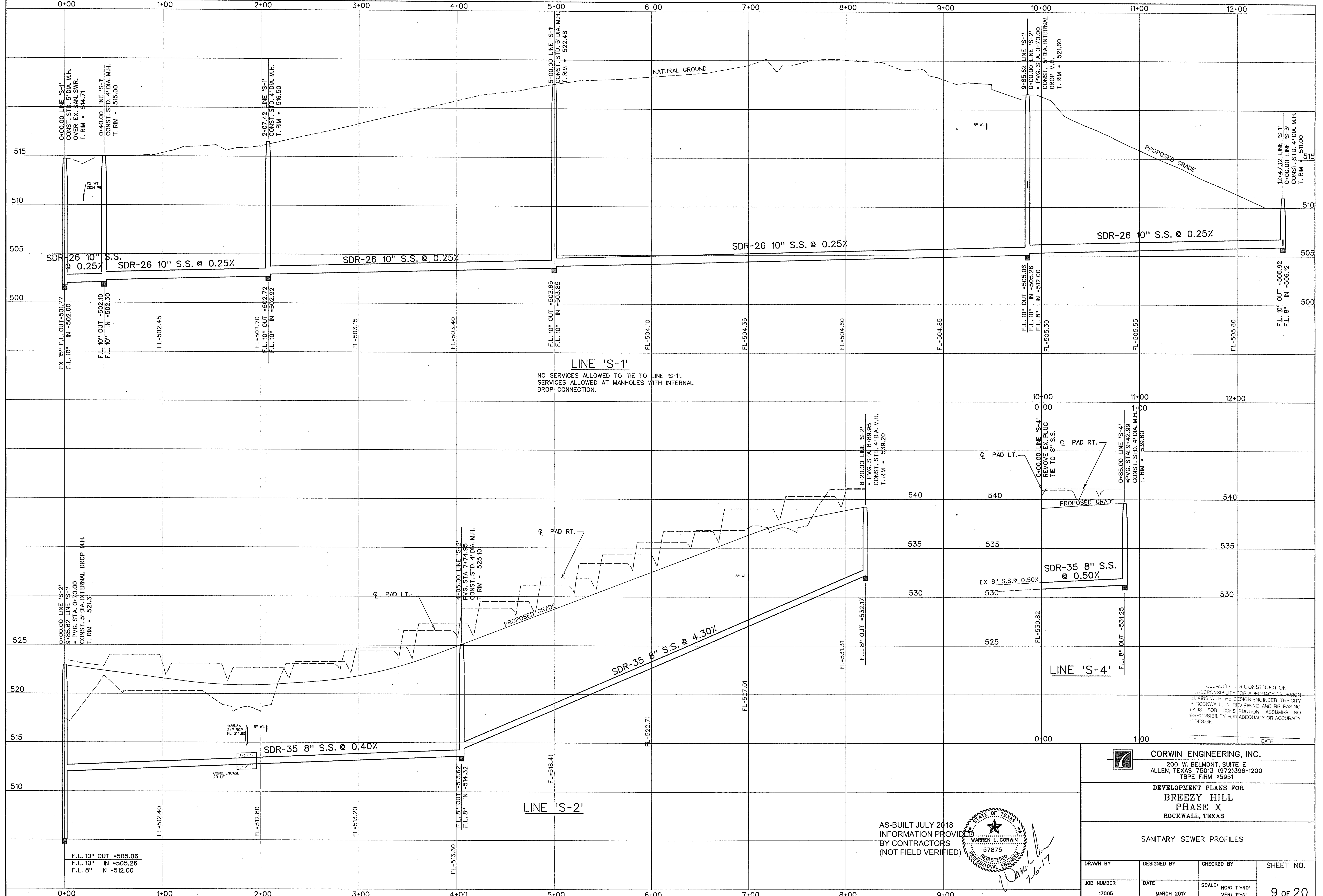


CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972) 396-1200
 TBPE FIRM #5951

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

WATER AND SANITARY SEWER PLAN

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	8 of 22
17005	MARCH 2017	1"=100'	



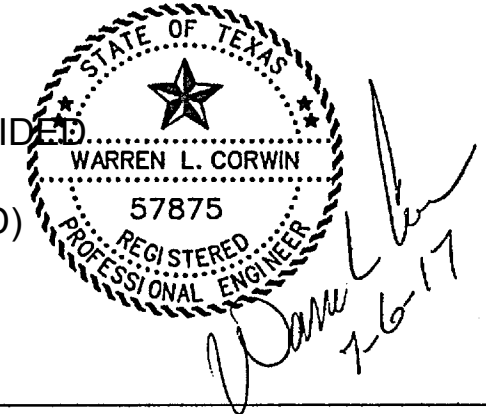
LINE 'S-1'
 NO SERVICES ALLOWED TO TIE TO LINE 'S-1'.
 SERVICES ALLOWED AT MANHOLES WITH INTERNAL
 DROP CONNECTION.

LINE 'S-4'

LINE 'S-2'

RELEASED FOR CONSTRUCTION
 RESPONSIBILITY FOR ADEQUACY OF DESIGN
 REMAINS WITH THE DESIGN ENGINEER. THE CITY
 ENGINEER'S REVIEW AND RELEASING
 OF THESE PLANS FOR CONSTRUCTION ASSUMES NO
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AS-BUILT JULY 2018
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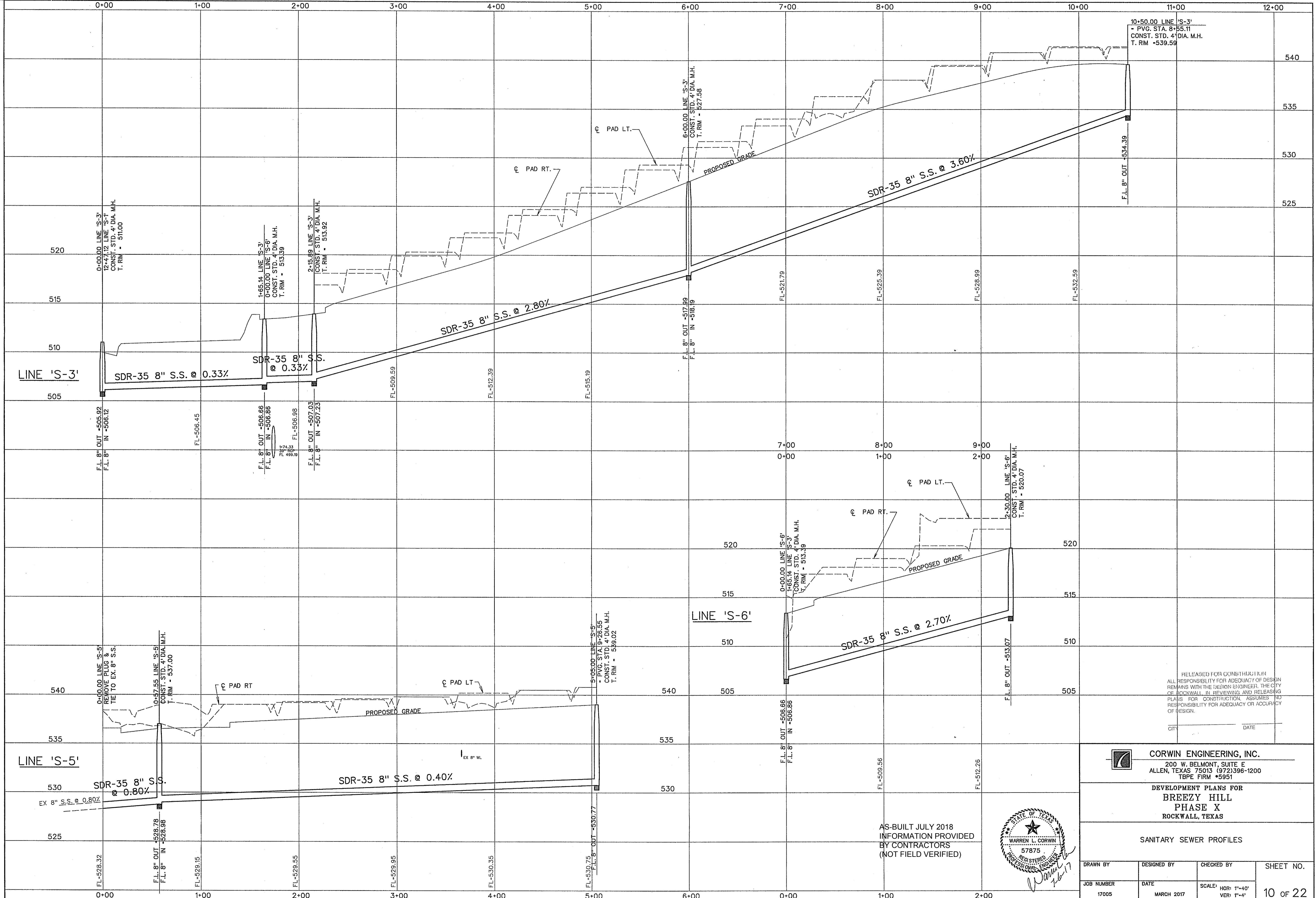


CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972) 396-1200
 TYPE FIRM #5951

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

SANITARY SEWER PROFILES

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	9 OF 20
17005	MARCH 2017		



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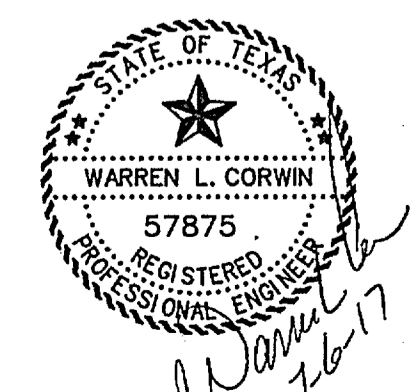
CITY _____ DATE _____

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 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972) 396-1200
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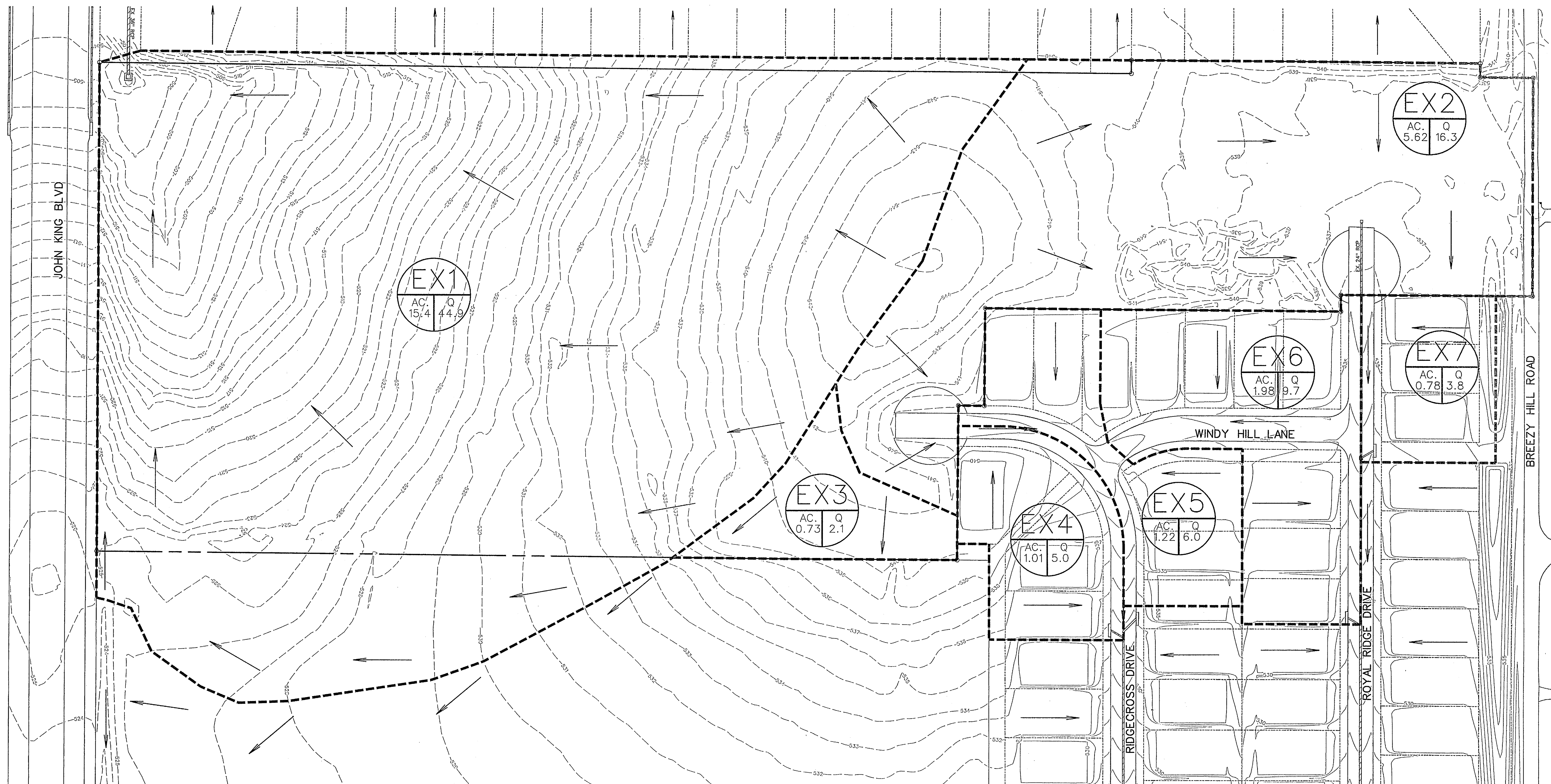
DEVELOPMENT PLANS FOR
BREZY HILL
PHASE X
 ROCKWALL, TEXAS

SANITARY SEWER PROFILES

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JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	10 OF 22
17005	MARCH 2017		



EX2
AC. Q
5.62 16.3

EX1
AC. Q
15.4 44.9

EX6
AC. Q
1.98 9.7

EX7
AC. Q
0.78 3.8

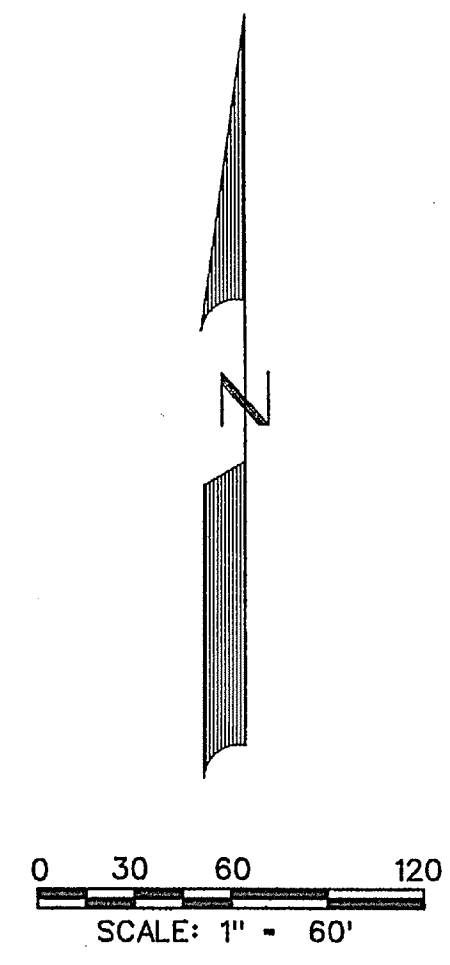
EX3
AC. Q
0.73 2.1

EX4
AC. Q
1.01 5.0

EX5
AC. Q
1.22 6.0

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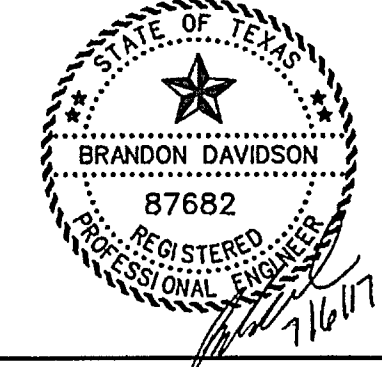
EXISTING CONDITIONS RUNOFF COMPUTATIONS

#	Area (ft)	Area (acres)	Runoff Coefficient	CA (min)	Tc (min)	Q(100) (cfs)	Drains To
EX1	672829	15.4	0.35	5.41	20	8.30	John King
EX2	244900	5.62	0.35	1.97	20	8.30	Royal Ridge
EX3	31800	0.73	0.35	0.26	20	8.30	South
EX4	44107	1.01	0.50	0.51	10	9.80	Phase 9A Inlet 3
EX5	53209	1.22	0.50	0.61	10	9.80	Phase 9A Inlet 4
EX6	86283	1.98	0.50	0.99	10	9.80	Phase 9A Inlet 6
EX7	33825	0.78	0.50	0.39	10	9.80	Phase 9A Inlet 7

LEGEND

- PROP. STORM SEWER
- PROP. CURB INLETS
- PROP. CONC. HEADWALL
- EXIST. STORM SEWER
- DRAINAGE AREA DIVIDE
- FLOW ARROW
- DRAINAGE AREA NO. (NOT FIELD VERIFIED)

AS-BUILT JULY 2018
INFORMATION PROVIDED
BY CONTRACTORS

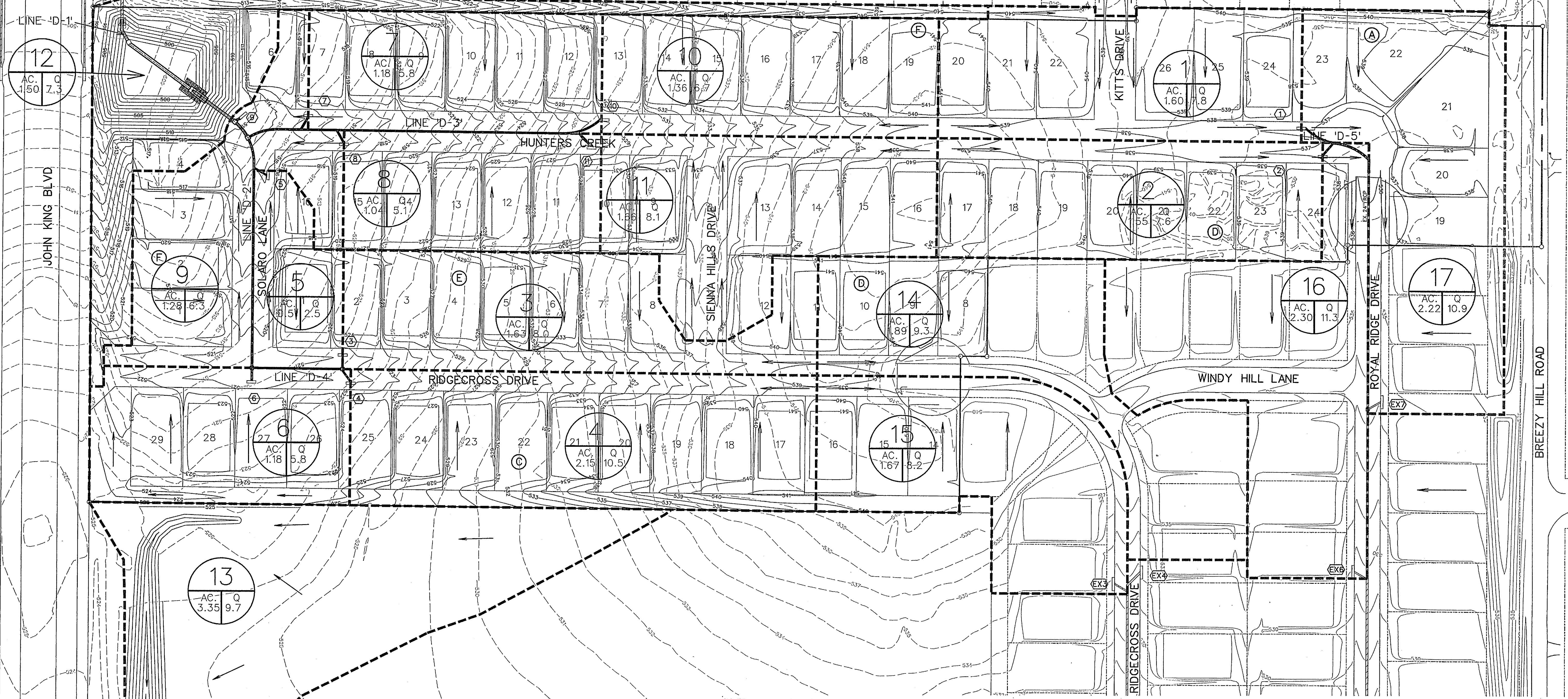


CORWIN ENGINEERING, INC.
200 W. BELMONT, SUITE E
ALLEN, TEXAS 75013 (972)396-1200
TBP# FIRM #5951

DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE X
ROCKWALL, TEXAS

EXISTING CONDITIONS DRAINAGE AREA MAP

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: 1"=60'	11 OF 22
17005	MARCH 2017		



INLET CALCULATIONS

Inlet No.	Station	Offset	Street	Design Storm Freq. (years)	Tc (min)	Area Runoff: Q=CIA			Carry-Over from Upstream (cfs)	Total Gutter Flow (cfs)	Gutter Capacity (cfs)	Gutter Slope (ft/100 ft)	Crown Type	Maximum Allowable Ponding Depth (ft)	Actual Ponding Depth (ft)	Maximum Allowable Spread (ft)	Actual Spread (ft)	Selected Inlet					
						Intensity "I" (in/hr)	Coef. "C"	Area "A" (acres)										Q (cfs)	Length (ft)	Type	Capacity (cfs)	Carry-Over to Downstream (cfs)	Carry-Over to Inlet No.
EX3	4467.32	0+15.50	LT Ridgecross	100	10	9.8	0.50	12	1.67	8.2	0.0	8.2	22.1	2.55%	6" pbl	0.5	0.19	15	5.6	15	STD.	9.8	0.0
EX4	4481.61	0+15.50	RT Ridgecross	100	10	9.8	0.50	11	1.89	9.3	0.0	9.3	22.1	2.55%	6" pbl	0.5	0.21	15	6.3	15	STD.	9.8	0.0
EX6	4484.05	0+15.50	LT Royal Ridge	100	10	9.8	0.50	13	2.16	10.6	0.0	10.6	24.4	1.75%	6" pbl	0.5	0.22	15	6.5	15	STD.	10.2	0.4
EX7	4480.26	0+15.50	RT Royal Ridge	100	10	9.8	0.50	14	2.15	10.6	0.0	10.6	24.4	1.75%	6" pbl	0.5	0.22	15	6.5	15	STD.	10.2	0.4
1	12470.80	0+15.50	LT Hunters Creek	100	10	9.8	0.50	1	1.60	7.8	0.0	7.8	13.8	0.50%	6" pbl	0.5	0.28	15	8.5	10	STD.	7.8	0.0
2	12497.00	0+15.50	RT Hunters Creek	100	10	9.8	0.50	2	1.55	7.6	0.0	7.7	13.8	0.50%	6" pbl	0.5	0.28	15	8.3	10	STD.	7.8	0.0
3	3465.00	0+15.50	LT Ridgecross	100	10	9.8	0.50	3	1.68	8.0	0.0	8.0	11.6	0.70%	6" pbl	0.5	0.34	15	10.3	10	STD.	7.4	0.6
4	3475.00	0+15.50	RT Ridgecross	100	10	9.8	0.50	4	2.15	10.5	0.0	10.5	11.6	0.70%	6" pbl	0.5	0.45	15	13.6	10	STD.	7.4	3.1
5	2434.00	0+15.50	RT Solaro	100	10	9.8	0.50	5	0.51	2.5	0.6	3.1	22.4	2.62%	6" pbl	0.5	0.07	15	2.0	10	STD.	6.3	0.0
6	2455.00	0+15.50	RT Ridgecross	100	10	9.8	0.50	6	1.18	5.8	3.1	8.9	11.6	Low Pt	6" pbl	0.5	0.39	15	11.6	10	STD.	21.0	0.0
7	0465.00	0+15.50	LT Hunters Creek	100	10	9.8	0.50	7	1.18	5.8	0.9	6.7	23.5	2.90%	6" pbl	0.5	0.14	15	4.3	10	STD.	6.0	0.7
8	1408.50	0+15.50	RT Hunters Creek	100	10	9.8	0.50	8	1.04	5.1	2.3	7.4	23.5	2.90%	6" pbl	0.5	0.16	15	4.7	10	STD.	6.0	1.4
9	0419.00	0+15.50	RT Hunters Creek	100	10	9.8	0.50	9	1.28	6.3	2.1	8.4	23.5	Low Pt	6" pbl	0.5	0.18	15	5.3	10	STD.	21.0	0.0
10	4424.00	0+15.50	LT Hunters Creek	100	10	9.8	0.50	10	1.36	6.7	0.0	6.7	27.3	3.90%	6" pbl	0.5	0.12	15	3.7	10	STD.	5.8	0.9
11	4408.50	0+15.50	RT Hunters Creek	100	10	9.8	0.50	11	1.66	8.1	0.0	8.1	27.3	3.90%	6" pbl	0.5	0.15	15	4.5	10	STD.	5.8	2.3

RUNOFF COMPUTATIONS

Area #	Area (sq ft)	Area (acres)	Runoff Coefficient	CA	Tc (min)	I(100) (in/hr)	Q(100) (cfs)	Drains To:
1	69840	1.60	0.50	0.80	10	9.80	7.8	Inlet 1
2	67716	1.55	0.50	0.78	10	9.60	7.6	Inlet 2
3	70874	1.63	0.50	0.81	10	9.80	8.0	Inlet 3
4	33473	2.15	0.50	1.07	10	9.80	10.5	Inlet 4
5	22340	0.51	0.50	0.25	10	9.80	2.5	Inlet 5
6	51534	1.18	0.50	0.59	10	9.80	5.8	Inlet 6
7	51512	1.18	0.50	0.59	10	9.80	5.8	Inlet 7
8	45204	1.04	0.50	0.52	10	9.80	5.1	Inlet 8
9	55532	1.28	0.50	0.64	10	9.80	6.3	Inlet 9
10	59413	1.36	0.50	0.68	10	9.80	6.7	Inlet 10
11	72131	1.66	0.50	0.83	10	9.80	8.1	Inlet 11
12	66234	1.50	0.50	0.75	10	9.80	7.3	Detention Pond
13	145723	3.35	0.50	1.67	10	9.80	9.7	EX 3
14	82408	1.89	0.50	0.95	10	9.80	8.3	BH 9A Inlet 1
15	72848	1.67	0.50	0.84	10	9.80	8.2	BH 9A Inlet 2
16	93917	2.16	0.50	1.08	10	9.80	10.6	BH 9A Inlet 6
17	93830	2.15	0.50	1.08	10	9.80	10.6	BH 9A Inlet 7

LEGEND

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

SCALE: 1" = 60'

AS-BUILT JULY 2018

FOR INFORMATION PROVIDED BY CONTRACTORS (FIELD VERIFIED)

RELEASED FOR CONSTRUCTION
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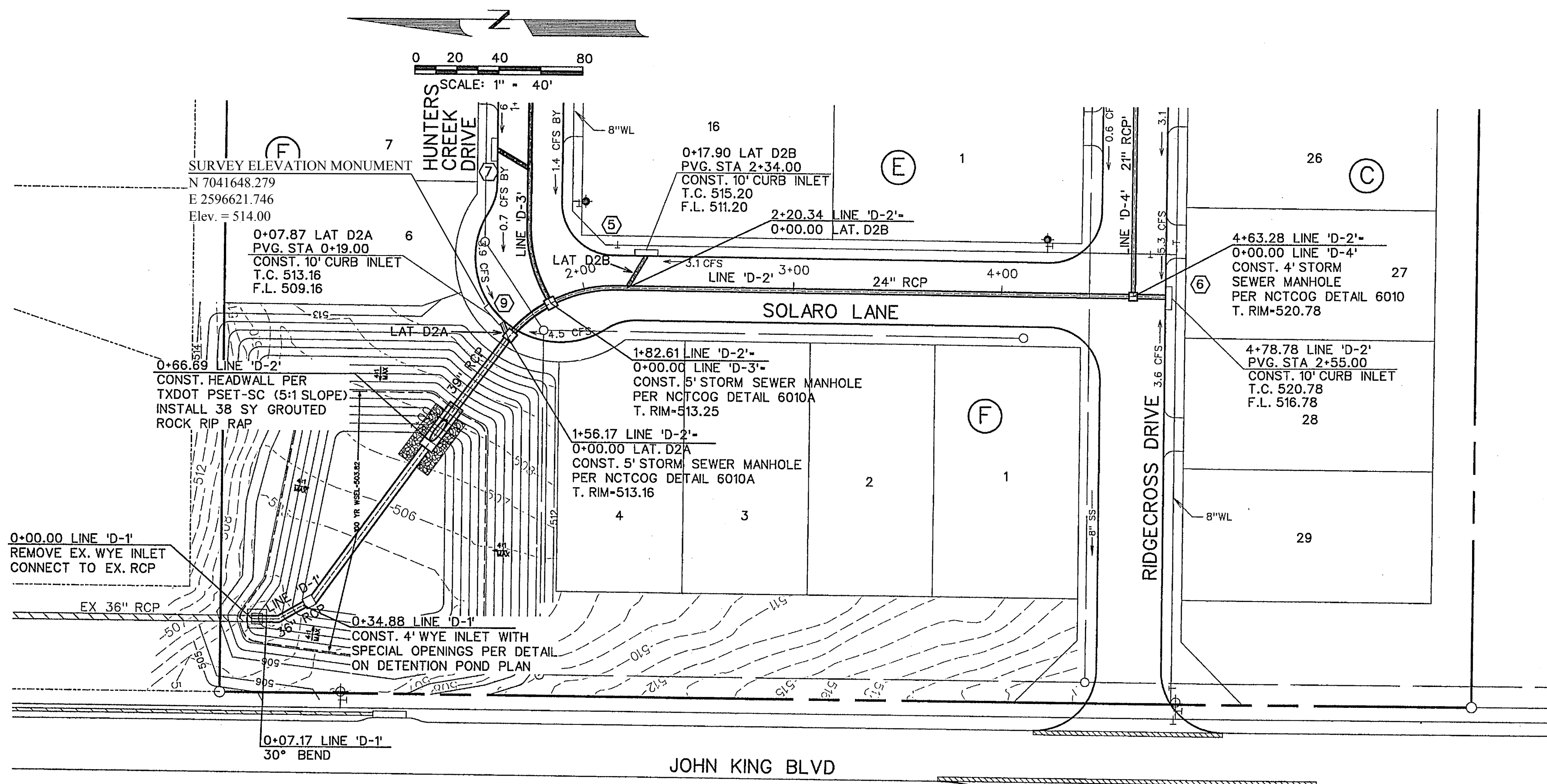


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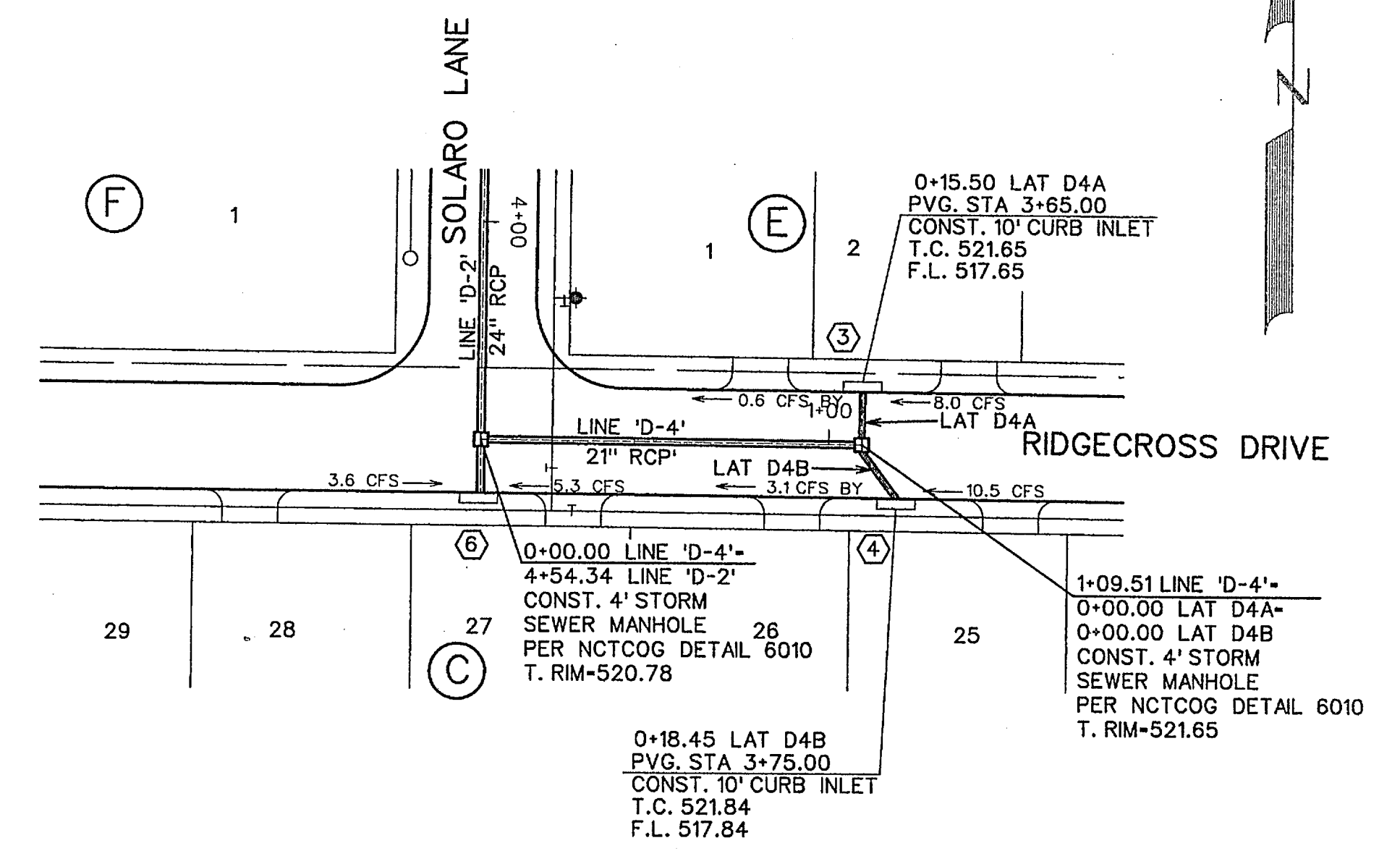
**DEVELOPMENT PLANS FOR
 BREZY HILL
 PHASE X
 ROCKWALL, TEXAS**

PROPOSED DRAINAGE AREA MAP

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: 1"=60'	12 OF 22
17005	MARCH 2017		

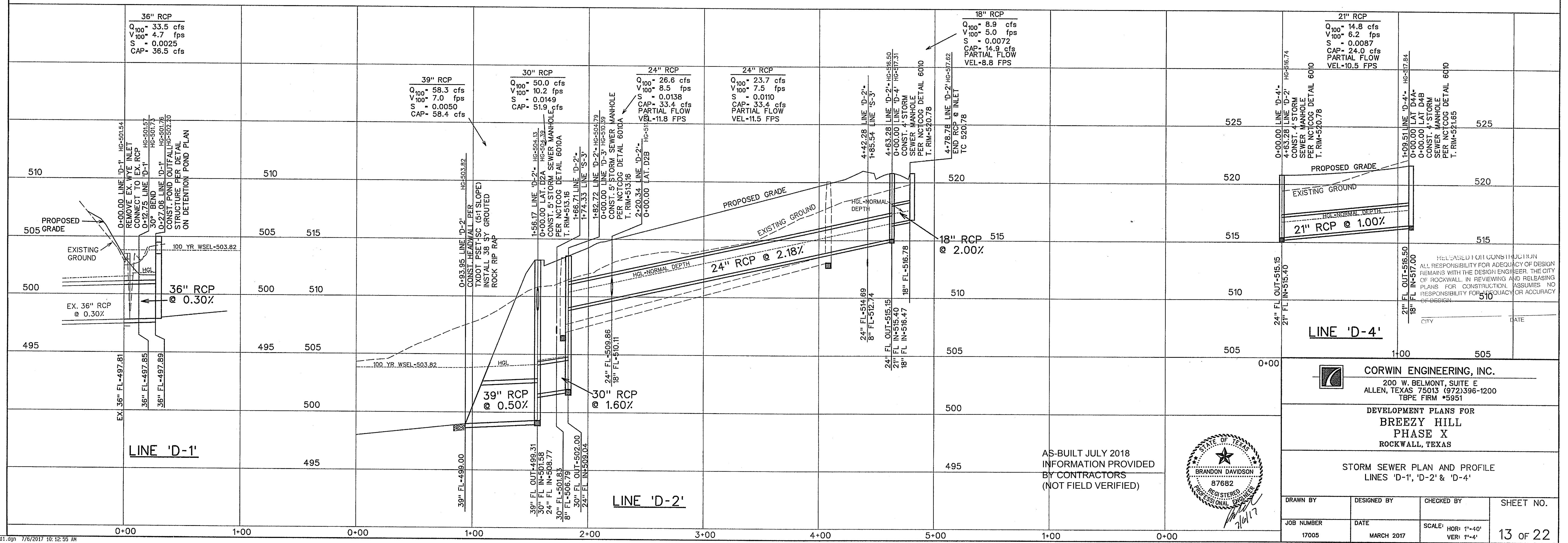


LINES 'D-1' & 'D-2'

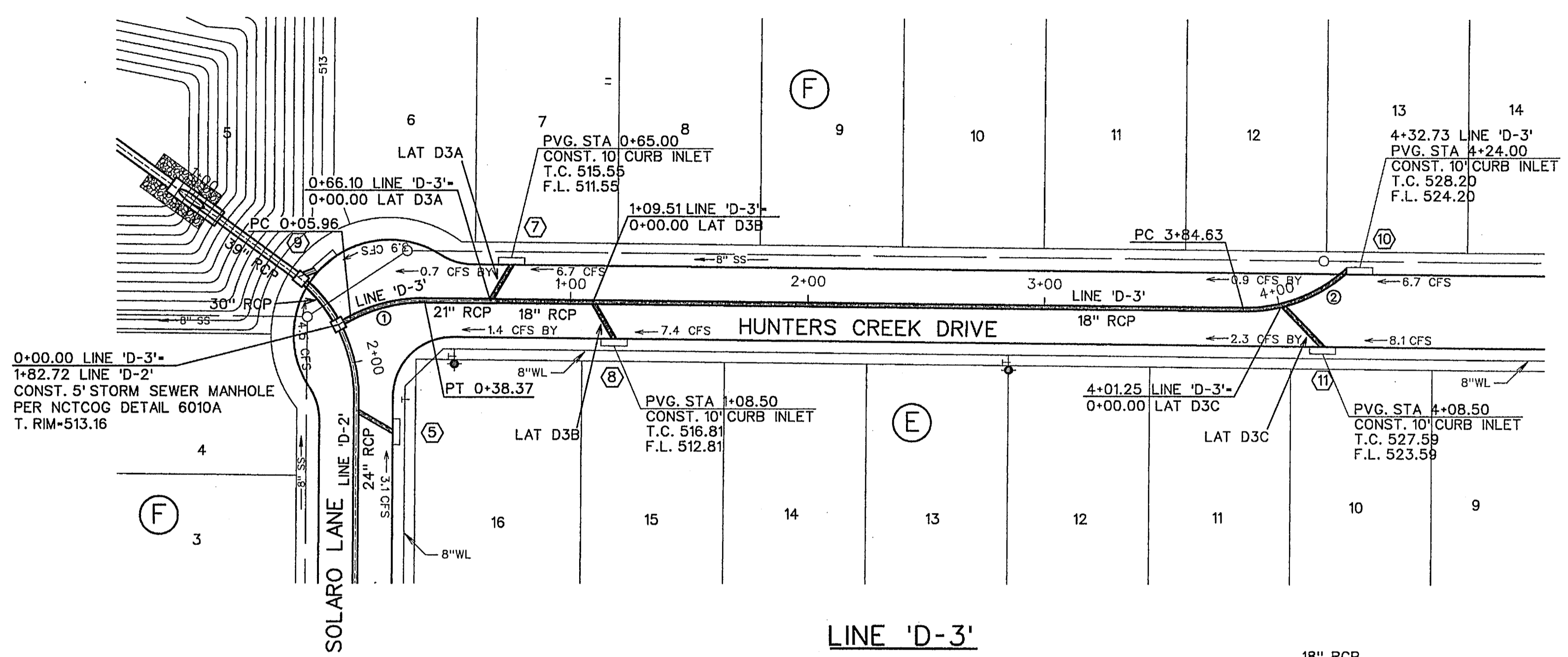
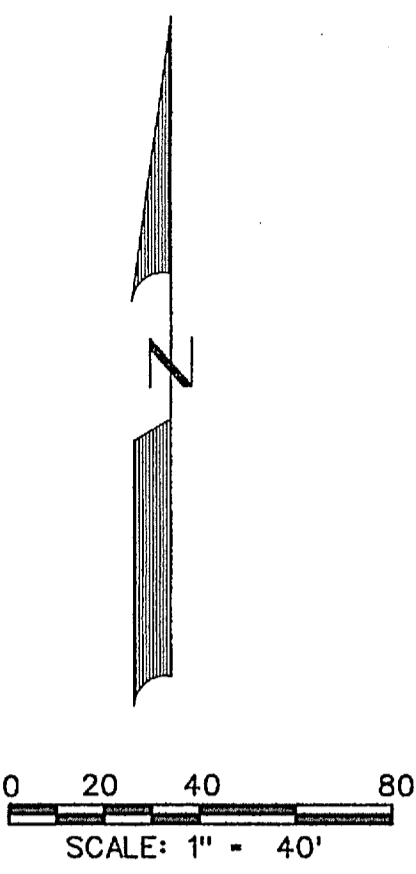


LINE 'D-4'

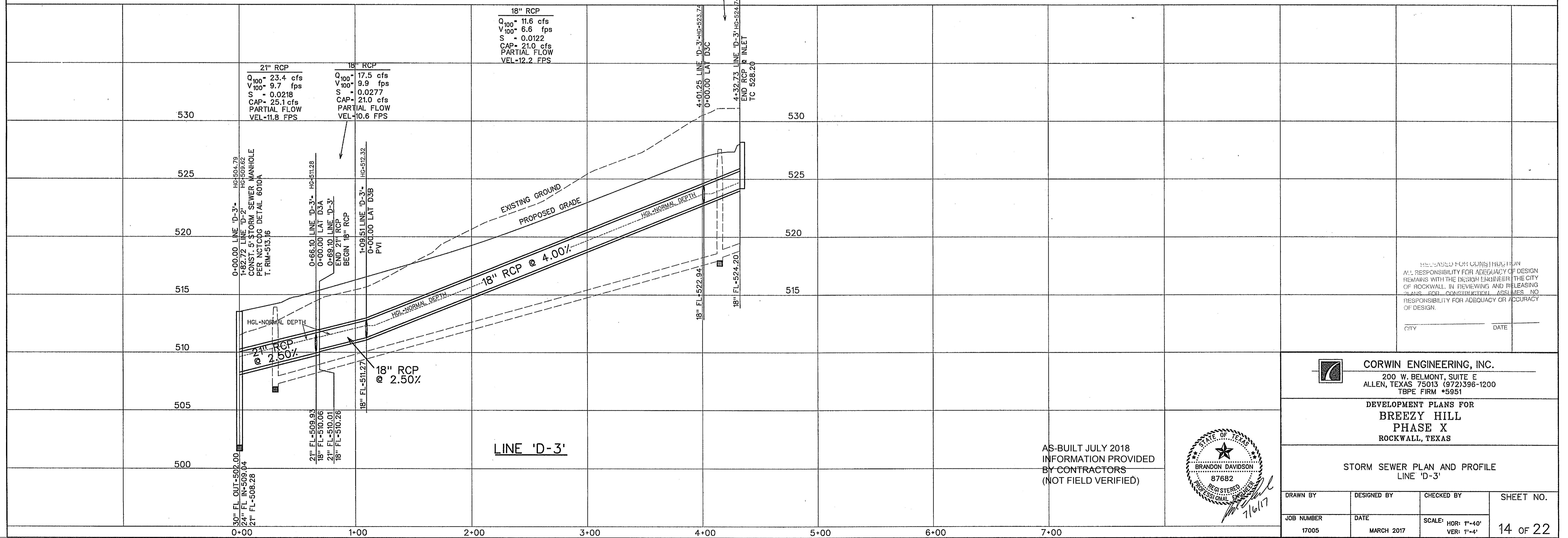
- LEGEND**
- (B) - BLOCK LABEL
 - (I) - INLET NUMBER
 - (C) - CURVE NUMBER
 - - SANITARY SEWER
 - ⊕ - WATER
 - ▬ - PROPOSED STORM SEWER
 - ▬▬ - EXISTING STORM SEWER



STORM SEWER CURVE DATA		
CURVE NO.	①	②
Δ	28°33'49"	42°23'58"
R	65.00'	65.00'
T	16.55'	25.21'
L	32.40'	48.10'



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



RELEASED FROM CLAIMS
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 OF ROCKWALL, IN REVIEWING AND RELEASING
 THESE PLANS FOR CONSTRUCTION, ASSUMES NO
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 OF DESIGN.

CITY _____ DATE _____

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

DEVELOPMENT PLANS FOR
BREEZY HILL
 PHASE X
 ROCKWALL, TEXAS

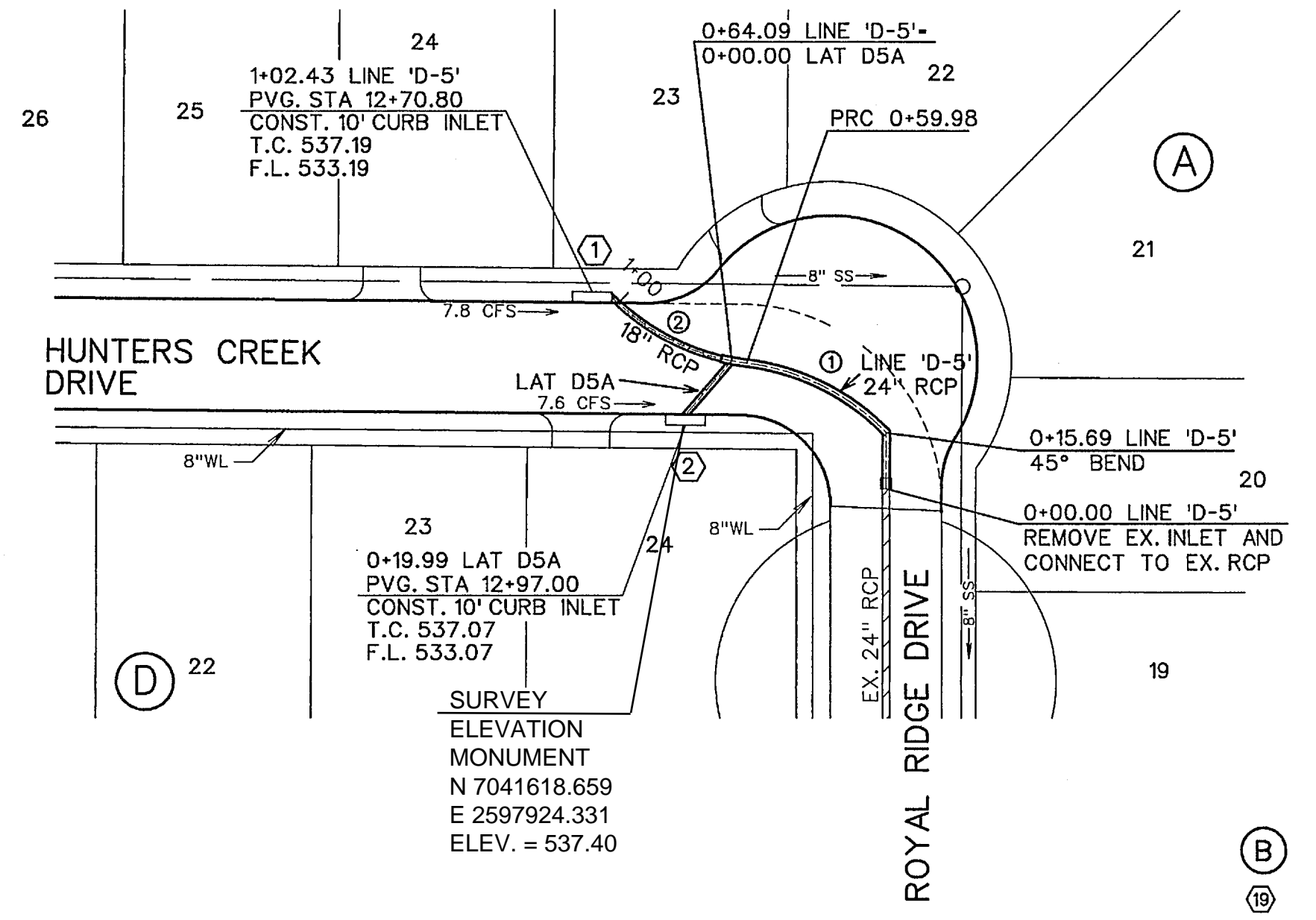
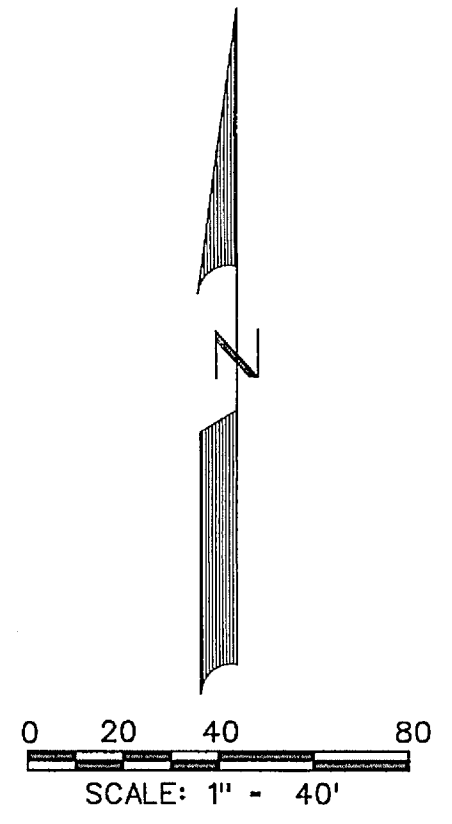
STORM SEWER PLAN AND PROFILE
 LINE 'D-3'

AS-BUILT JULY 2018
 INFORMATION PROVIDED
 BY CONTRACTORS
 (NOT FIELD VERIFIED)



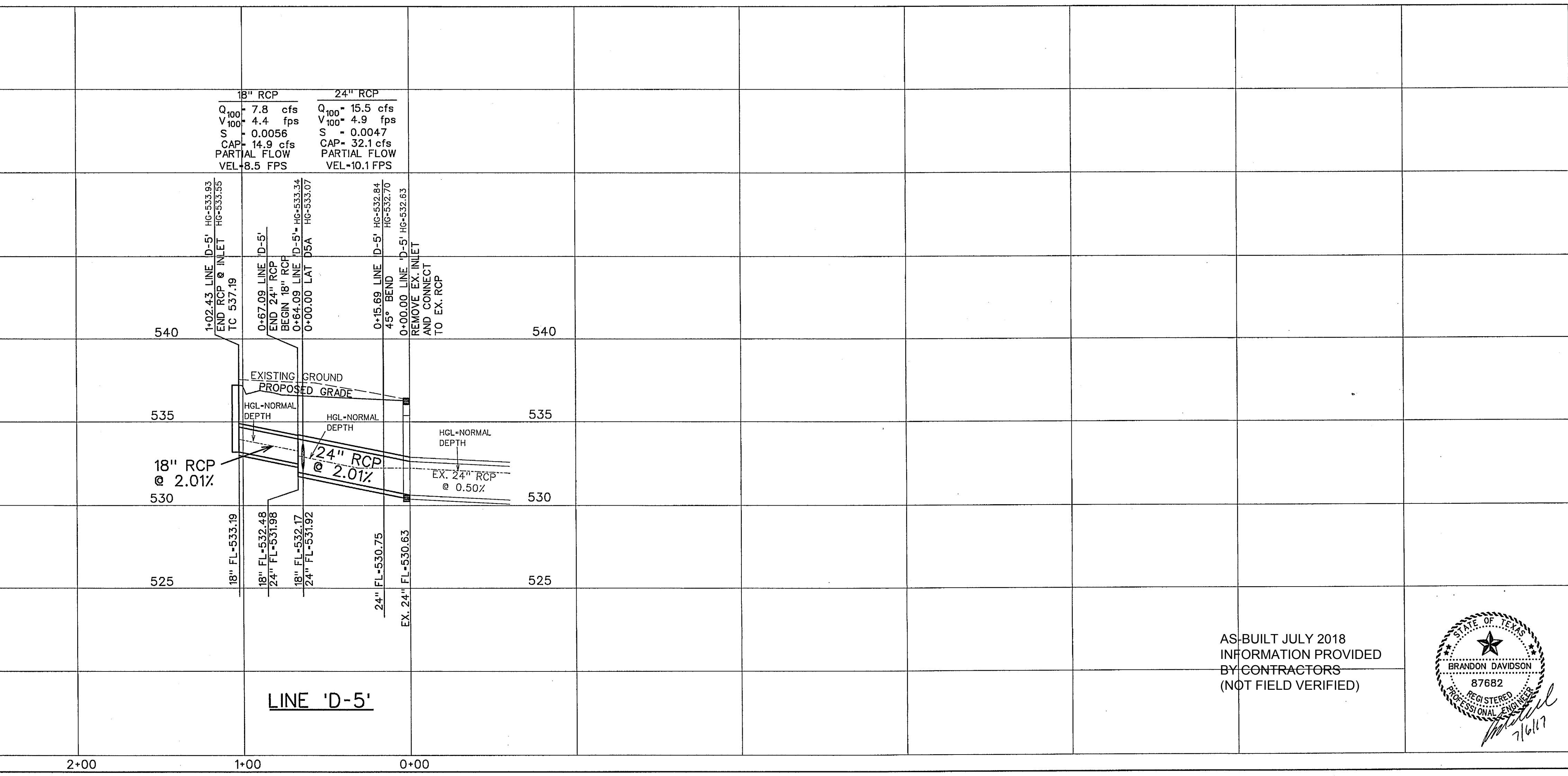
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	14 OF 22
17005	MARCH 2017		

STORM SEWER CURVE DATA		
CURVE NO.	①	②
Δ	39° 02' 41"	37° 25' 11"
R	65.00'	65.00'
T	23.05'	22.01'
L	44.29'	42.45'



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

Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	GA	Accumulated CA	Tc (Mn)	Design Storm (Years)	I (in/hr)	Q (CFS)	S (ft/ft)	Pipe Size (in)	Partial Flow?	Velocity (fps)	Flow Time (Mn)	Velocity Head (ft)	Junction Type	K	Time at DS (Mn)	Minor Losses (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream	
Line D1	0+27.06	0+12.75	14.31																						
	0+12.75	0+00.00	12.75																						
	0+00.00																								
Line D2	4+78.78	4+63.28	15.50	6	1.18	1.92	0.50	0.91	0.91	10.00	100	9.80	8.9	0.0072	18	Yes	8.8	0.03	1.20	Inlet	1.25	10.03	1.50	511.95	510.45
	4+63.28	2+20.34	242.94	D4	3.77	3.02	0.50	1.51	2.42	10.03	100	9.80	23.7	0.0110	24	Yes	11.5	0.35	2.05	Manhole	0.25	10.38	0.51	510.34	509.82
	2+20.34	1+82.72	37.62	D2B	0.51	0.62	0.50	0.31	2.73	10.38	100	9.74	26.6	0.0139	24	Yes	11.8	0.05	2.16	60" Vye	0.35	10.43	1.44	507.16	505.71
	1+82.72	1+56.17	26.55	D3	5.08	4.82	0.50	2.41	5.14	10.43	100	9.73	50.0	0.0149	30	No	10.2	0.04	1.61	Manhole	0.25	10.48	0.40	505.19	504.79
	1+56.17	0+93.95	62.22	D2A	1.28	1.71	0.50	0.85	5.39	10.48	100	9.73	58.3	0.0050	39		7.0	0.15	0.77	Manhole	0.35	10.53	0.27	504.39	504.13
	0+93.95																								
Lat D2A	0+07.87	0+00.00	7.87	9	1.28	1.71	0.50	0.85	0.85	10.00	100	9.80	8.4	0.0014	24	Yes	2.7	0.05	0.11	Inlet	1.25	10.05	0.14	505.00	504.86
	0+00.00																								
Lat D2B	0+27.84	0+00.00	17.90	5	0.51	0.62	0.50	0.31	0.31	10.00	100	9.80	3.1	0.0002	24	Yes	1.0	0.31	0.01	Inlet	1.25	10.31	0.02	509.40	509.38
	0+00.00																								
Line D3	4+32.73	4+01.25	31.48	10	1.36	1.18	0.50	0.59	0.59	10.00	100	9.80	5.8	0.0030	18	Yes	10.2	0.05	1.62	Inlet	1.25	10.05	2.02	516.80	514.78
	4+01.25	1+09.51	291.74	D3C	1.50	1.18	0.50	0.59	1.18	10.05	100	9.79	11.6	0.0122	18	Yes	12.2	0.40	2.31	60" Vye	0.35	10.45	1.75	514.69	512.94
	1+09.51	0+56.10	42.41	D3B	1.04	1.22	0.50	0.61	1.00	10.45	100	9.73	17.5	0.0277	18	Yes	10.6	0.07	1.74	60" Vye	0.35	10.52	0.00	509.39	509.39
	0+56.10	0+00.00	66.10	D3A	1.18	1.22	0.50	0.61	2.41	10.52	100	9.72	23.4	0.0219	21	Yes	11.8	0.09	2.16	60" Vye	0.35	10.61	1.55	508.19	506.64
	0+00.00																								
Lat D3A	0+17.90	0+00.00	17.90	7	1.18	1.22	0.50	0.61	0.61	10.00	100	9.80	6.0	0.0033	18	Yes	10.9	0.03	1.84	Inlet	1.25	10.03	2.31	519.42	517.11
	0+00.00																								
Lat D3B	0+00.00	0+00.00	17.90	8	1.04	1.22	0.50	0.61	0.61	10.00	100	9.80	6.0	0.0033	18	Yes	10.9	0.03	1.84	Inlet	1.25	10.03	2.21	519.42	517.11
	0+00.00																								
Lat D3C	0+24.75	0+00.00	24.75	11	1.50	1.18	0.50	0.59	0.59	10.00	100	9.80	5.8	0.0030	18	Yes	10.9	0.04	1.84	Inlet	1.25	10.04	2.31	519.42	517.11
	0+00.00																								
Line D4	1+09.51	0+00.00	109.51	D4A, D4B	3.77	3.02	0.50	1.51	1.51	10.00	100	9.80	14.8	0.0087	21	Yes	10.5	0.17	1.71	Manhole	0.25	10.17	0.43	511.72	511.29
	0+00.00																								
Lat D4A	0+15.50	0+00.00	15.50	3	1.63	1.51	0.50	0.76	0.76	10.00	100	9.80	7.4	0.0050	18	Yes	7.9	0.03	0.97	Inlet	1.25	10.03	1.21	511.80	511.80
	0+00.00																								
Lat D4B	0+18.45	0+00.00	18.45	4	2.15	1.51	0.50	0.76	0.76	10.00	100	9.80	7.4	0.0050	18	Yes	8.1	0.04	1.02	Inlet	1.25	10.04	1.27	513.08	511.81
	0+00.00																								
Line D5	1+02.43	0+64.09	38.34	1	1.60	1.60	0.50	0.80	0.80	10.00	100	9.80	7.9	0.0056	18	No	4.4	0.14	0.31	Inlet	1.25	10.14	0.29	533.93	533.55
	0+64.09	0+15.69	48.40	DSA	1.55	1.55	0.50	0.78	1.58	10.00	100	9.80	15.5	0.0047	24	No	4.9	0.16	0.38	60" Vye	0.35	10.16	0.27	533.34	533.07
	0+15.69	0+00.00	15.69	Bend	0.00	0.00	0.50	0.00	1.58	10.16	100	9.78	15.4	0.0046	24	No	4.9	0.05	0.37	45" Bend	0.37	10.22	0.14	532.84	532.70
	0+00.00	-2+32.00	232.00	Bend	0.00	0.00	0.50	0.00	1.58	10.22	100	9.77	15.4	0.0046	24	No	4.9	0.79	0.37		0.00	11.01	0.00	532.63	532.55
	-2+32.00																								
Lat D5A	0+17.90	0+00.00	17.90	2	1.55	1.55	0.50	0.78	0.78	10.00	100	9.80	7.6	0.0052	18	No	4.3	0.07	0.29	Inlet	1.25	10.07	0.36	533.65	533.29
	0+00.00																								



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.

CITY _____ DATE _____

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

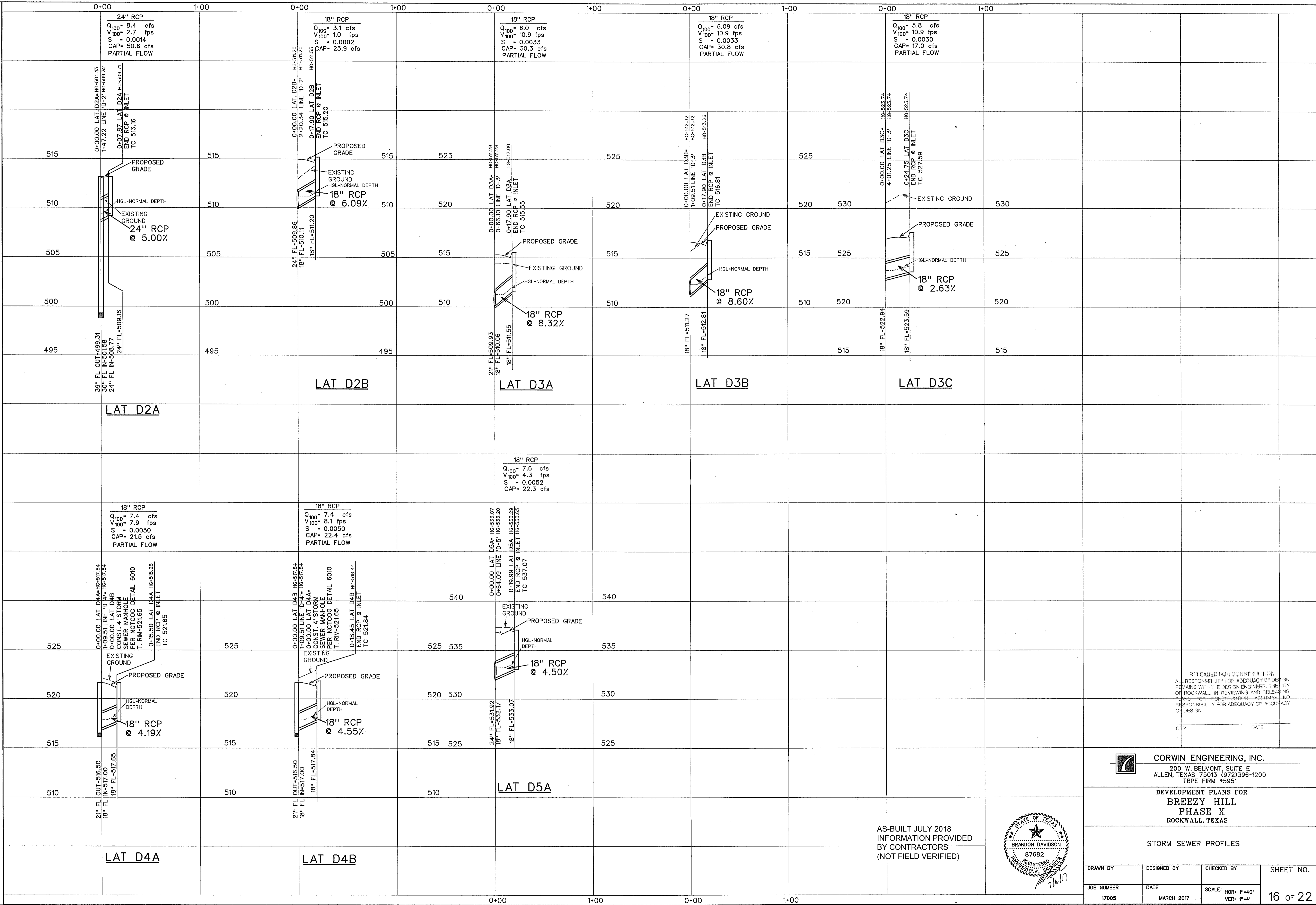
DEVELOPMENT PLANS FOR
**BREEZY HILL
PHASE X**
ROCKWALL, TEXAS

STORM SEWER PLAN AND PROFILE
LINE 'D-5'
DRAINAGE CALCULATIONS

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO. 15 OF 22
JOB NUMBER 17005	DATE MARCH 2017	SCALE: HOR: 1"=40' VER: 1"=4'	

AS-BUILT JULY 2018
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)





RELEASED FOR CONSTRUCTION
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CITY _____ DATE _____

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

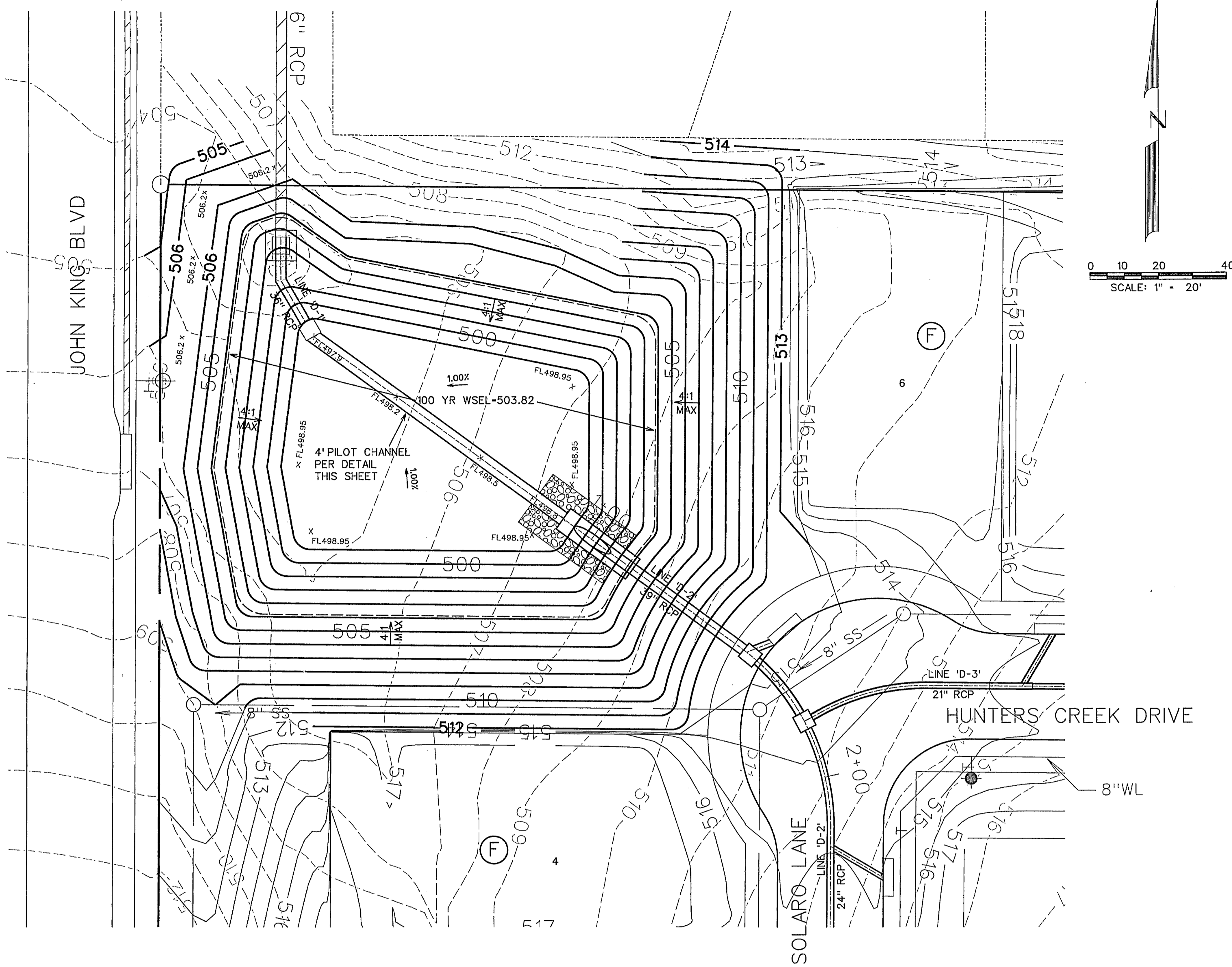
DEVELOPMENT PLANS FOR
**BREEZY HILL
 PHASE X**
 ROCKWALL, TEXAS

STORM SEWER PROFILES

AS-BUILT JULY 2018
 INFORMATION PROVIDED
 BY CONTRACTORS
 (NOT FIELD VERIFIED)



DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
17005	MARCH 2017	SCALE: HOR: 1"=40' VER: 1"=4'	16 OF 22



5-Year Storm

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
Phase 2	636396	14.61	0.35	20	4.9	25.1
Allowed Release=						25.1

Post-Project Runoff Calculations

Area #	Area (sf)	Area (acres)	Proposed Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
3-12	587247	13.48	0.50	10	6.1	41.1	16.1
Allowed Release=						41.1	

10-Year Storm

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
EX1	636396	14.61	0.35	20	5.9	30.2
Allowed Release=						30.2

Post-Project Runoff Calculations

Area #	Area (sf)	Area (acres)	Proposed Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
3-12	587247	13.48	0.50	10	7.1	47.9	17.7
Allowed Release=						47.9	

25-Year Storm

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
EX1	636396	14.61	0.35	20	6.6	33.7
Allowed Release=						33.7

Post-Project Runoff Calculations

Area #	Area (sf)	Area (acres)	Proposed Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
3-12	587247	13.48	0.50	10	8.3	55.9	22.2
Allowed Release=						55.9	

100-Year Storm

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
EX1	636396	14.61	0.35	20	8.4	42.4
Allowed Release=						42.4

Post-Project Runoff Calculations

Area #	Area (sf)	Area (acres)	Proposed Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
3-12	587247	13.48	0.50	10	9.8	66.1	23.6
Allowed Release=						66.1	

DETENTION STORAGE CALCULATIONS - 5 Year

Storm Duration	Outflow Duration	Area (AC)	Future "C"	Future "K"	Future "CA"	Rainfall Intensity	Inflow (cfs)	Inflow Volume (cubic ft.)	Outflow Volume (cubic ft.)	Volume (cubic ft.)	Volume (acre-ft.)	Outflow (cfs)
10	20	13.48	0.50	1.00	6.74	6.10	41.1	24671	13337	11334	0.26	22.2
20	30	13.48	0.50	1.00	6.74	4.30	39.6	39535	20006	19529	0.45	22.2
30	40	13.48	0.50	1.00	6.74	4.10	27.6	49746	26674	23072	0.53	22.2
40	50	13.48	0.50	1.00	6.74	3.40	22.9	55004	33343	21661	0.50	22.2
50	60	13.48	0.50	1.00	6.74	2.80	18.9	56622	40011	16610	0.38	22.2
60	70	13.48	0.50	1.00	6.74	2.60	17.5	63093	46680	16413	0.39	22.2
70	80	13.48	0.50	1.00	6.74	2.40	16.2	67948	53349	14597	0.34	22.2
80	90	13.48	0.50	1.00	6.74	2.30	15.5	74417	60017	14400	0.33	22.2
90	100	13.48	0.50	1.00	6.74	2.10	14.2	76439	66686	9753	0.22	22.2
100	110	13.48	0.50	1.00	6.74	1.90	12.8	78844	73354	3489	0.08	22.2
110	120	13.48	0.50	1.00	6.74	1.80	12.1	80079	80023	56	0.00	22.2

DETENTION STORAGE CALCULATIONS - 10 Year

Storm Duration	Outflow Duration	Area (AC)	Future "C"	Future "K"	Future "CA"	Rainfall Intensity	Inflow (cfs)	Inflow Volume (cubic ft.)	Outflow Volume (cubic ft.)	Volume (cubic ft.)	Volume (acre-ft.)	Outflow (cfs)
10	20	13.48	0.50	1.00	6.74	7.10	47.9	28715	14480	14225	0.33	24.1
20	30	13.48	0.50	1.00	6.74	5.30	47.24	21735	21735	2589	0.60	24.1
30	40	13.48	0.50	1.00	6.74	4.80	32.4	58259	28580	29259	0.67	24.1
40	50	13.48	0.50	1.00	6.74	4.00	27.0	64710	36225	28485	0.65	24.1
50	60	13.48	0.50	1.00	6.74	3.50	23.6	70777	43470	27307	0.63	24.1
60	70	13.48	0.50	1.00	6.74	3.00	20.2	72799	50715	22084	0.51	24.1
70	80	13.48	0.50	1.00	6.74	2.80	18.9	79270	57960	21310	0.49	24.1
80	90	13.48	0.50	1.00	6.74	2.60	17.5	84124	65205	18919	0.43	24.1
90	100	13.48	0.50	1.00	6.74	2.50	16.9	90999	72450	18549	0.43	24.1
100	110	13.48	0.50	1.00	6.74	2.40	16.2	97066	79695	17371	0.40	24.1
110	120	13.48	0.50	1.00	6.74	2.30	15.5	102323	86940	15383	0.35	24.1

DETENTION STORAGE CALCULATIONS - 25 Year

Storm Duration	Outflow Duration	Area (AC)	Future "C"	Future "K"	Future "CA"	Rainfall Intensity	Inflow (cfs)	Inflow Volume (cubic ft.)	Outflow Volume (cubic ft.)	Volume (cubic ft.)	Volume (acre-ft.)	Outflow (cfs)
10	20	13.48	0.50	1.00	6.74	8.30	55.9	33569	15549	18019	0.41	25.9
20	30	13.48	0.50	1.00	6.74	6.80	44.5	53386	23324	30662	0.69	25.9
30	40	13.48	0.50	1.00	6.74	5.50	37.1	66733	31099	35634	0.82	25.9
40	50	13.48	0.50	1.00	6.74	4.50	31.0	74417	38973	35644	0.82	25.9
50	60	13.48	0.50	1.00	6.74	4.00	27.0	80989	46948	34249	0.78	25.9
60	70	13.48	0.50	1.00	6.74	3.50	23.6	84932	54422	30910	0.70	25.9
70	80	13.48	0.50	1.00	6.74	3.30	22.2	93426	62197	31229	0.72	25.9
80	90	13.48	0.50	1.00	6.74	3.10	20.9	100201	69972	30329	0.70	25.9
90	100	13.48	0.50	1.00	6.74	2.80	19.5	105559	77748	27812	0.64	25.9
100	110	13.48	0.50	1.00	6.74	2.70	18.2	109189	85521	23678	0.54	25.9
110	120	13.48	0.50	1.00	6.74	2.50	16.9	111221	93296	17925	0.41	25.9

DETENTION STORAGE CALCULATIONS - 100 Year

Storm Duration	Outflow Duration	Area (AC)	Future "C"	Future "K"	Future "CA"	Rainfall Intensity	Inflow (cfs)	Inflow Volume (cubic ft.)	Outflow Volume (cubic ft.)	Volume (cubic ft.)	Volume (acre-ft.)	Outflow (cfs)
10	20	13.48	0.50	1.00	6.74	9.80	66.1	39635	20388	19549	0.45	33.5
20	30	13.48	0.50	1.00	6.74	8.30	55.9	67137	30130	37007	0.85	33.5
30	40	13.48	0.50	1.00	6.74	6.80	46.5	83719	40173	43546	1.00	33.5
40	50	13.48	0.50	1.00	6.74	5.80	39.1	93830	50216	43614	1.00	33.5
50	60	13.48	0.50	1.00	6.74	5.00	33.7	101110	60259	40851	0.94	33.5
60	70	13.48	0.50	1.00	6.74	4.50	30.3	109199	70303	38996	0.89	33.5
70	80	13.48	0.50	1.00	6.74	4.10	27.0	119293	80346	32897	0.76	33.5
80	90	13.48	0.50	1.00	6.74	3.70	24.9	119714	90389	28325	0.67	33.5
90	100	13.48	0.50	1.00	6.74	3.50	23.6	127399	100432	26966	0.62	33.5
100	110	13.48	0.50	1.00	6.74	3.40	22.9	137510	110476	27934	0.62	33.5
110	120	13.48	0.50	1.00	6.74	3.20	21.8	142363	120519	21844	0.50	33.5

Stage-Discharge Table

Stage	H	Area	Discharge	Length	Depth of Flow	Weir Discharge	Total Discharge	Allowable	Above
498.00	0	2.50	0			0.0	0.0		
499.00	0.50	2.50	8.5			0.0	8.5		
500.00	1.50	2.50	14.7			0.0	14.7		
501.00	2.50	2.50	19.0			0.0	19.0		
501.91	3.41	2.50	22.2			0.0	22.2	25.1	(2.83) 5-year
502.00	3.50	2.50	22.5			0.0	22.5		
502.53	4.02	2.50	24.1			0.0	24.1	30.2	(6.02) 10-year
503.00	4.50	2.50	25.5			0.0	25.5		
503.14	4.63	2.50	25.9			0.0	25.9	33.7	(7.83) 25-year
503.82	5.32	2.50	27.8	12.0	0.3	5.7	33.5	42.4	(8.96) 100-year
504.00	5.50	2.50	28.2	12.0	0.5	11.2	39.4		
505.00	6.50	2.50	30.7	12.0	1.5	58.0	88.7		
506.00	7.50	2.50	33.0	12.0	2.5	124.8	157.7		

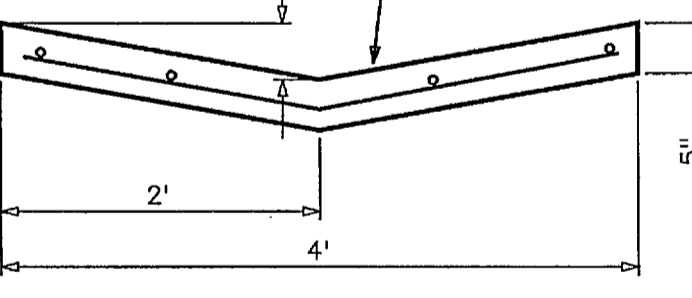
Pond Storage Table

Elevation	Area	Incremental Volume	Cumulative Volume
488	0	0	0
489	5200	2600	2600
500	6405	5802.5	8403
501	7730	7067.5	15470
502	9269	8499.5	23970
503	10875	10072	34042
504	12589	11732	45774
505	14796	13692.5	59466
506	16880	15838	75304

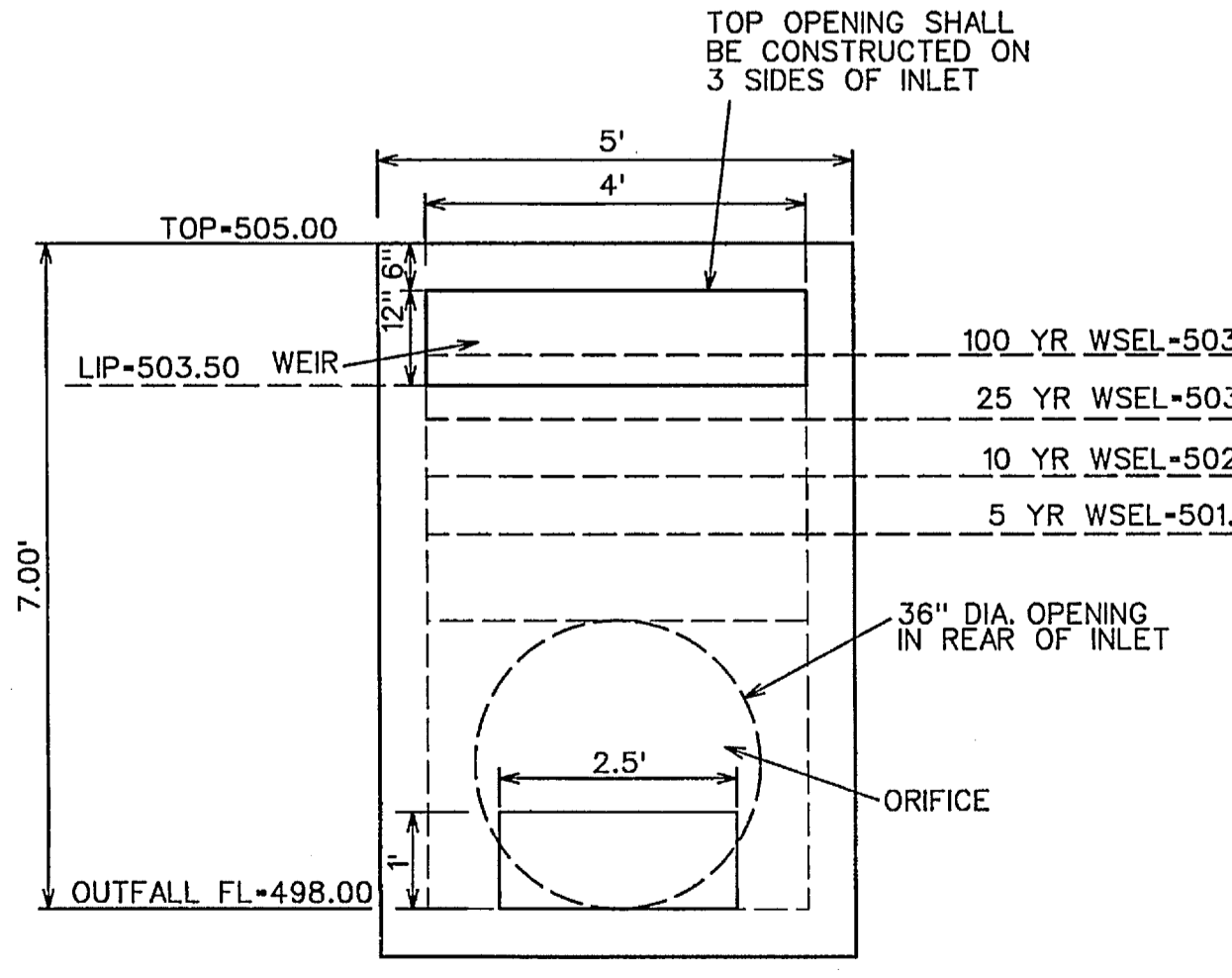
Elevation Calculations

Event	Maximum Release Rate	Storage Requirement	Occurs at Elevation
5-year	22.2	23072	501.91
10-year	24.1	29259	502.53
25-year	25.9	35634	503.14
100-year	33.5	43614	503.82

5" 3600 PSICONG. PYMT (MIN. 6.5 SACK)
REINF. W/ #3 BARS @ 18" O.C.E.W.



PILOT CHANNEL DETAIL



SPECIAL INLET OPENINGS DETAIL
N.T.S.

AS-BUILT JULY 2018
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)



HELPPED 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.

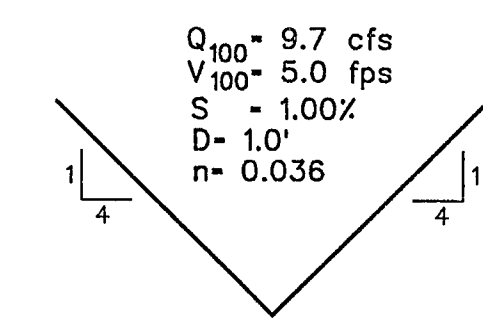
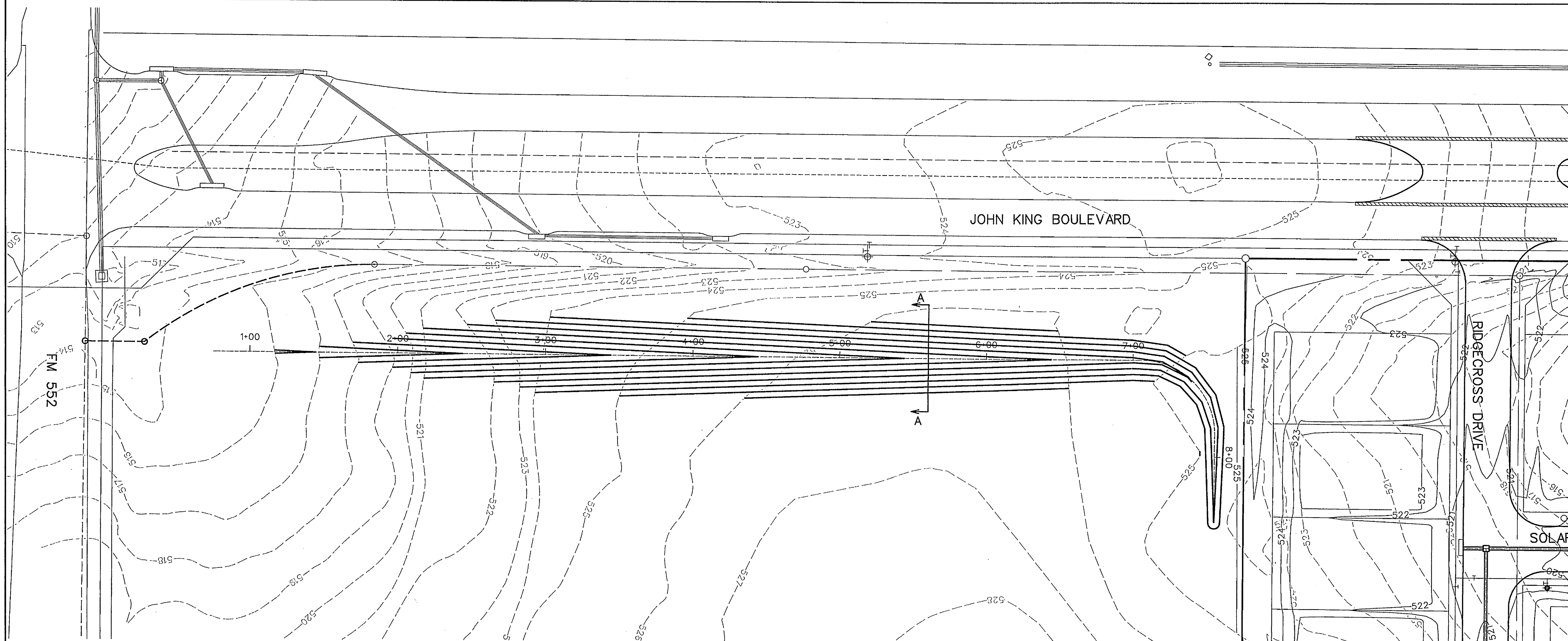
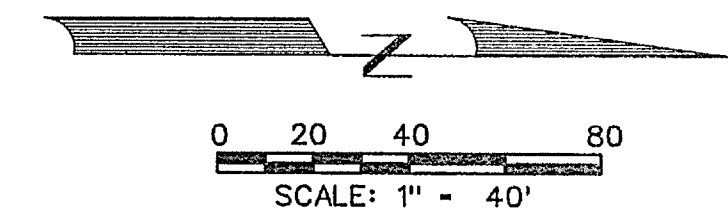
CITY _____ DATE _____

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

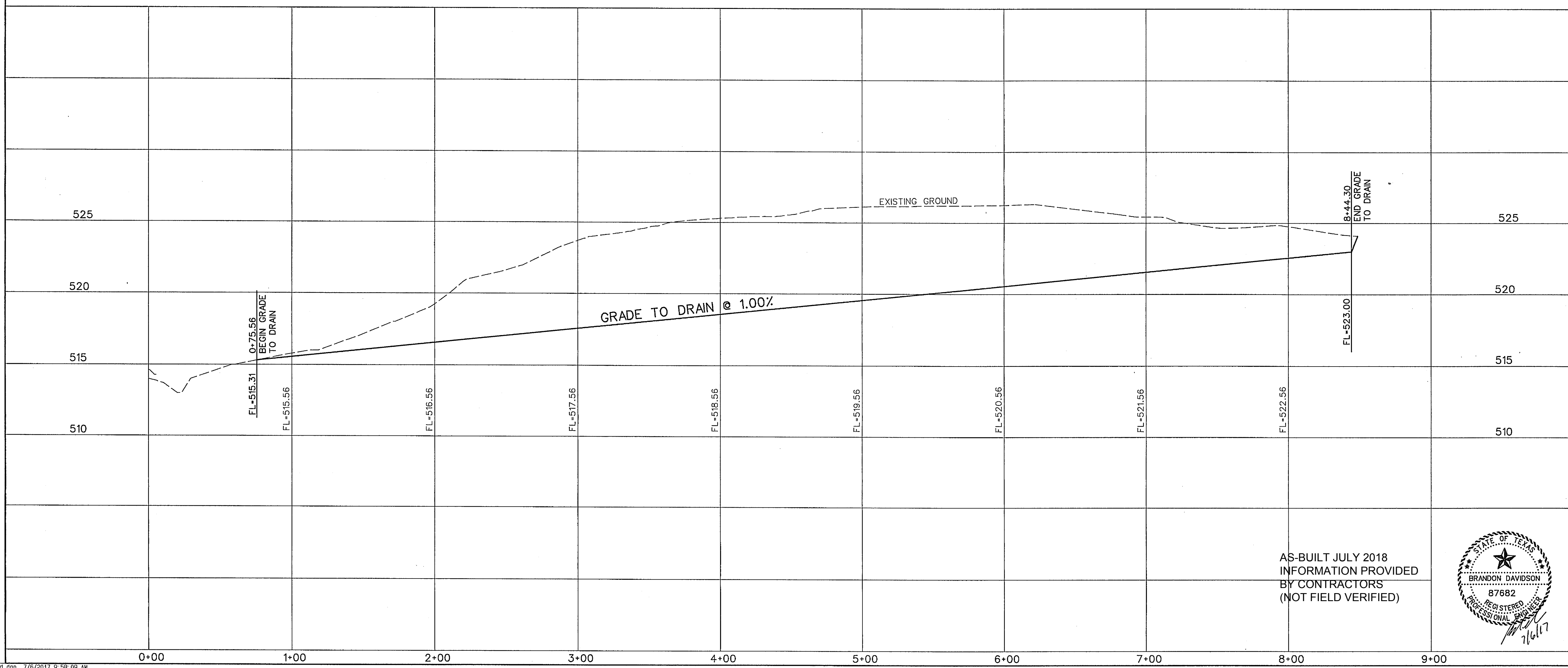
**DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE X
ROCKWALL, TEXAS**

DETENTION POND PLAN

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE	
17005	MARCH 2017	1"=20'	17 OF 22

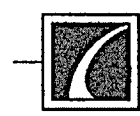


SECTION A-A
N.T.S.



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.

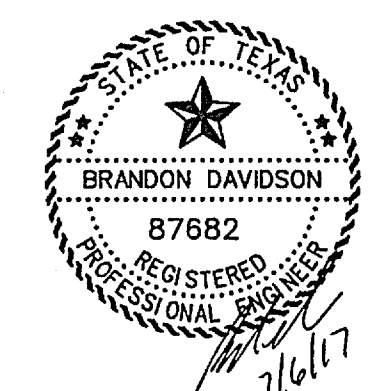
CITY _____ DATE _____

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

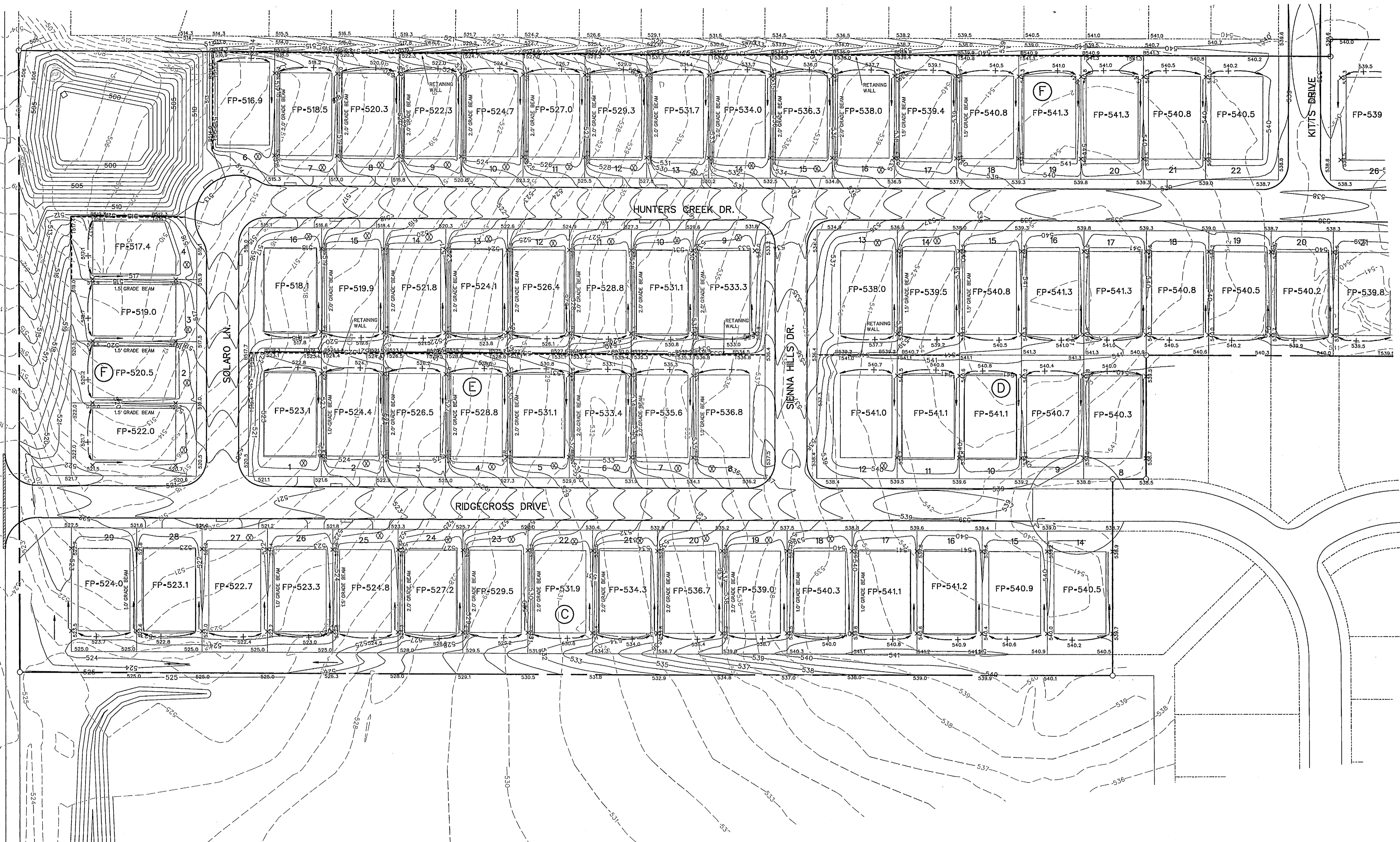
DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE X
ROCKWALL, TEXAS

GRADE TO DRAIN

AS-BUILT JULY 2018
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)



DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	18 OF 22
17005	MARCH 2017		



SCALE: 1" = 50'

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 ASSURES NO
 RESPONSIBILITY FOR ADEQUACY OR ACCURACY
 OF DESIGN.

CITY _____ DATE _____

LEGEND

SPOT ELEVATION ———

EXIST. CONTOUR ———

PROP. CONTOUR ———

RETAINING WALL - - - - -

NOTE:
 RETAINING WALLS 3' IN HEIGHT AND OVER
 NEED AN ENGINEER SEALED PLAN.
 (PLANS TO BE SUBMITTED PRIOR
 TO ENGINEERING APPROVAL)

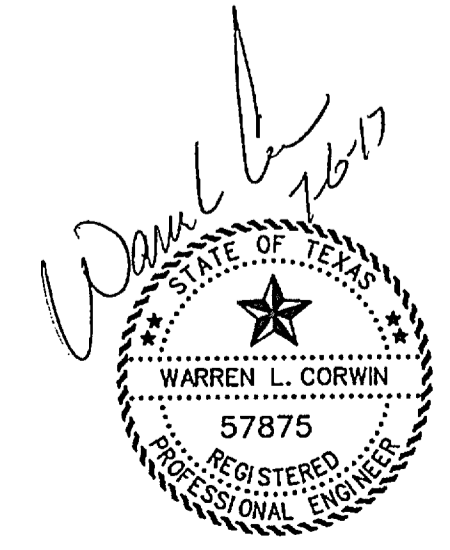
BENCHMARK:
 CITY OF ROCKWALL SURVEY MONUMENT ON AN INLET
 AT THE NORTHWEST CORNER OF FEATHERSTONE DR. AND
 HARVARD DR.
 ELEV. - 525.31

DRIVEWAY LOCATION SO MAXIMUM 14%
 SLOPE OR UNDER IS MAINTAINED, OR AS TO
 AVOID INLET OR MIN. DISTANCE FROM INTER-
 SECTION
 (DRIVEWAY MAY BE PLACED AT ALTERNATE
 LOCATION WITH USE OF A DROP GARAGE AS
 LONG AS MAXIMUM SLOPE IS 14% OR UNDER)

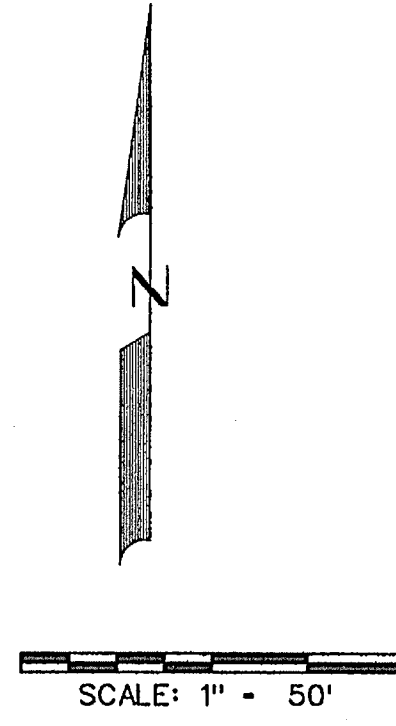
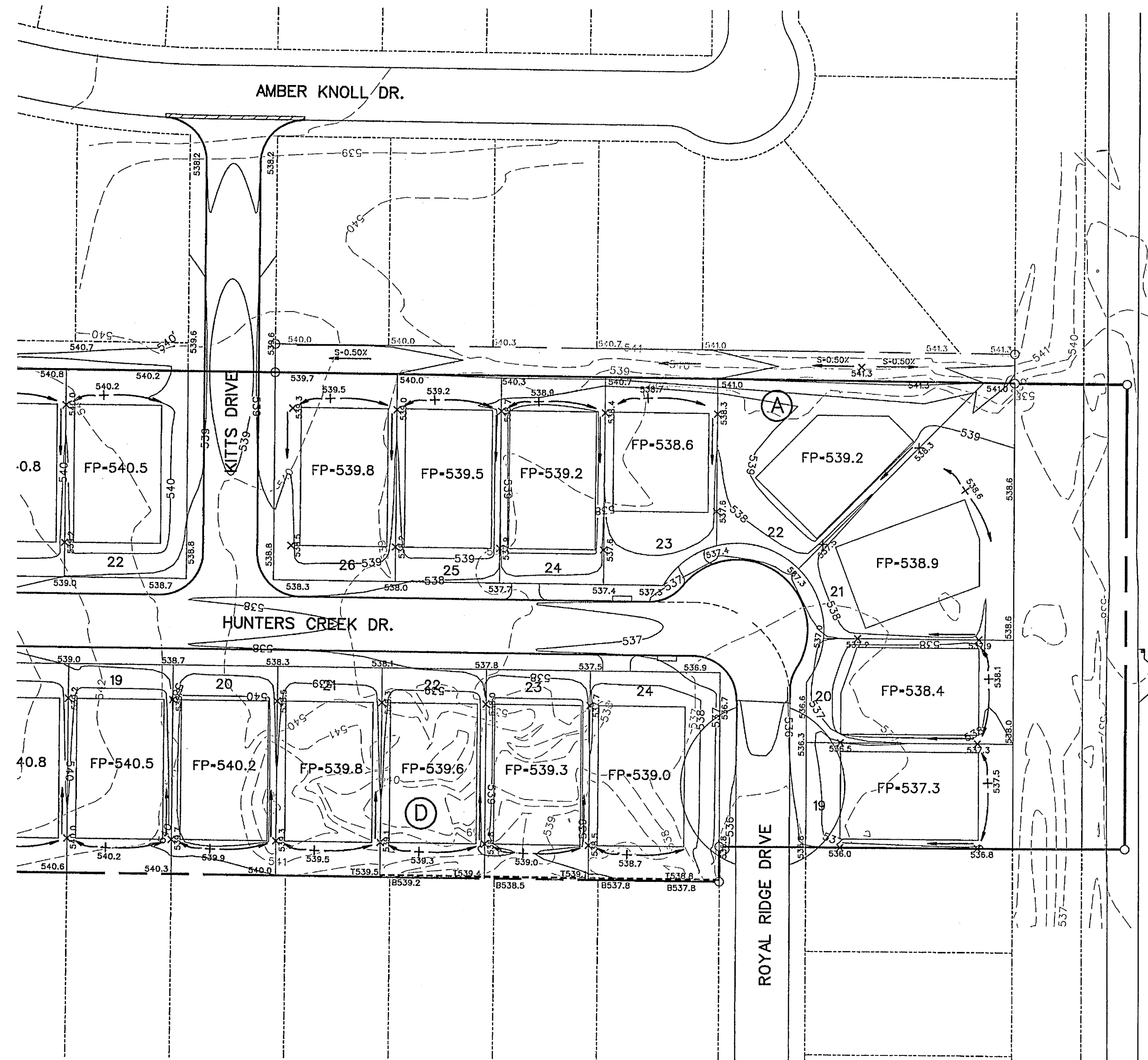
Note:
 Each lot will need a detailed grading plan
 with building permit submittal. This is a
 general grading plan for site work only.

- NOTES:**
1. Finish Floor Elevation to be 0.70 Feet above Finished Pad.(FP)
 2. Additional Erosion Control to be installed in Parkways as determined by the City Inspector.
 3. Finished Pad Elevations are within ± 0.3 Feet.
 4. All fill compacted to min 95% std. density using sheeps foot roller.
 5. All portions of the wall to be on one lot. Do not install on property line or in easements or right of way.

AS-BUILT JULY 2018
 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 X ROCKWALL, TEXAS</p>			
<p>GRADING PLAN</p>			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	19 OF 22
17005	MARCH 2017	1"=50'	



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

CITY _____ DATE _____

LEGEND

SPOT ELEVATION — 700 —

EXIST. CONTOUR — 704 —

PROP. CONTOUR — 704 —

RETAINING WALL - - - - -

NOTE:
 RETAINING WALLS 3' IN HEIGHT AND OVER
 NEED AN ENGINEER SEALED PLAN.
 (PLANS TO BE SUBMITTED PRIOR
 TO ENGINEERING APPROVAL)

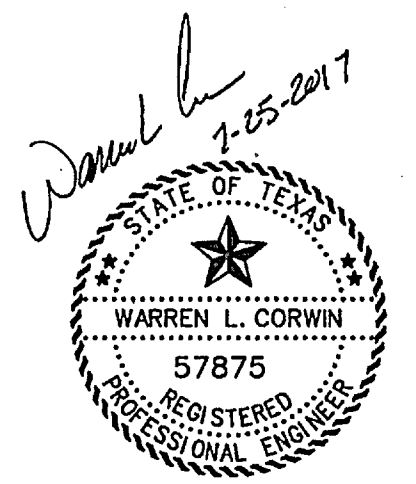
BENCHMARK:
 CITY OF ROCKWALL SURVEY MONUMENT ON AN INLET
 AT THE NORTHWEST CORNER OF FEATHERSTONE DR. AND
 HARVARD DR.
 ELEV. = 525.31

⊗ DRIVEWAY LOCATION SO MAXIMUM 14%
 SLOPE OR UNDER IS MAINTAINED, OR AS TO
 AVOID INLET OR MIN. DISTANCE FROM INTER-
 SECTION
 (DRIVEWAY MAY BE PLACED AT ALTERNATE
 LOCATION WITH USE OF A DROP GARAGE AS
 LONG AS MAXIMUM SLOPE IS 14% OR UNDER)

Note:
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 general grading plan for site work only.

- NOTES:**
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 2. Additional Erosion Control to be installed in Parkways as determined by the City Inspector.
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 4. All fill compacted to min 95% std. density using sheeps foot roller.
 5. All portions of the wall to be on one lot. Do not install on property line or in easements or right of way.

AS-BUILT JULY 2018
 INFORMATION PROVIDED
 BY CONTRACTORS
 (NOT FIELD VERIFIED)



<p>CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE F ALLEN, TEXAS 75013 (972) 396-1200 TBPE FIRM #5951</p>			
<p>DEVELOPMENT PLANS FOR BREEZY HILL PHASE X ROCKWALL, TEXAS</p>			
<p>GRADING PLAN</p>			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	20 OF 22
17005	MARCH 2017	1"=50'	

CONSTRUCTION SEQUENCE

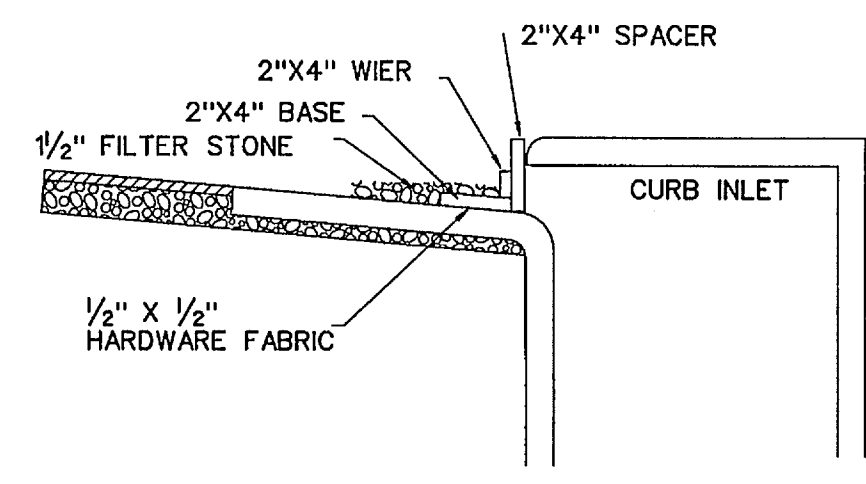
1. GRADING CONTRACTOR TO INSTALL TEMPORARY STABILIZED ENTRANCE.
2. INSTALL SILT FENCE AS SHOWN, (TS-600 POLY FELT) PER C.O.G. SPECIFICATIONS.
3. CONSTRUCT SEDIMENT BASIN
4. PERFORM GRADING AND UTILITY CONSTRUCTION.
5. AFTER THE INLET BOTTOMS ARE CONSTRUCTED, THE INLETS SHALL BE FILLED WITH STONE AND COVERED WITH A FILTER FABRIC (TS-600 POLY FELT OR EQUIVALENT) BY UTILITY CONTRACTOR.
6. PRIOR TO CITY RELEASING PAVING, SOD OR SEEDED CURLEX SHALL BE INSTALLED ON SIDES AND BOTTOM OF ALL DETENTION PONDS AND ALL DETENTION PONDS MUST BE FUNCTIONING.
7. 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.
8. SILT FENCE SHALL REMAIN IN PLACE UNTIL RE-VEGETATION HAS BEEN COMPLETED.
9. PAVING CONTRACTOR SHALL REMOVE TEMPORARY STABILIZED ENTRANCE.
10. PRIOR TO CITY ACCEPTANCE THE PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY MUD OR SILT WHICH COLLECTS ON THE EXISTING AND NEW PAVEMENT AND INSTALLING SILT FENCE AT BACK OF CURB THROUGHOUT THE ENTIRE SITE.
11. 75%-80% OF ALL DISTURBED AREA TO HAVE A MINIMUM 1" STAND OF GRASS PRIOR TO ENGINEERING ACCEPTANCE.

SCALE: 1" = 100'

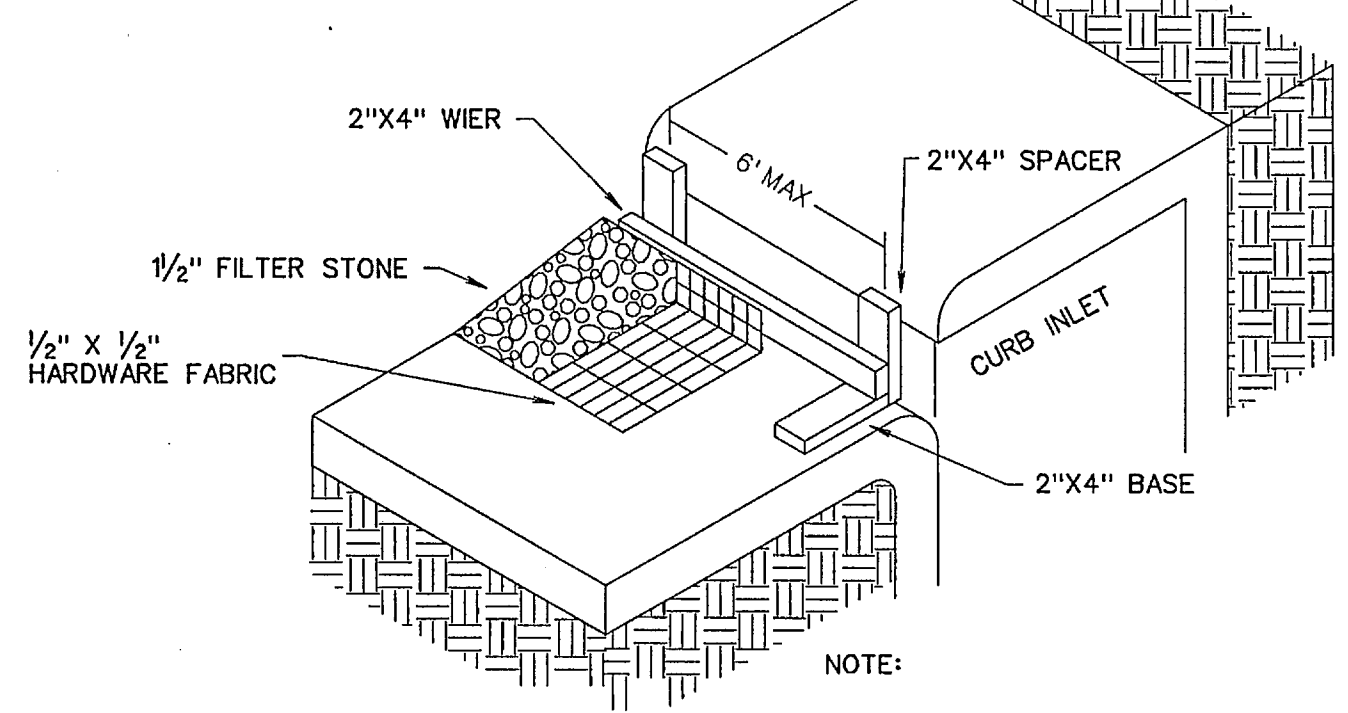


STABILIZED ENTRANCE

EQUIPMENT STAGING AREA
CONCRETE WASHOUT

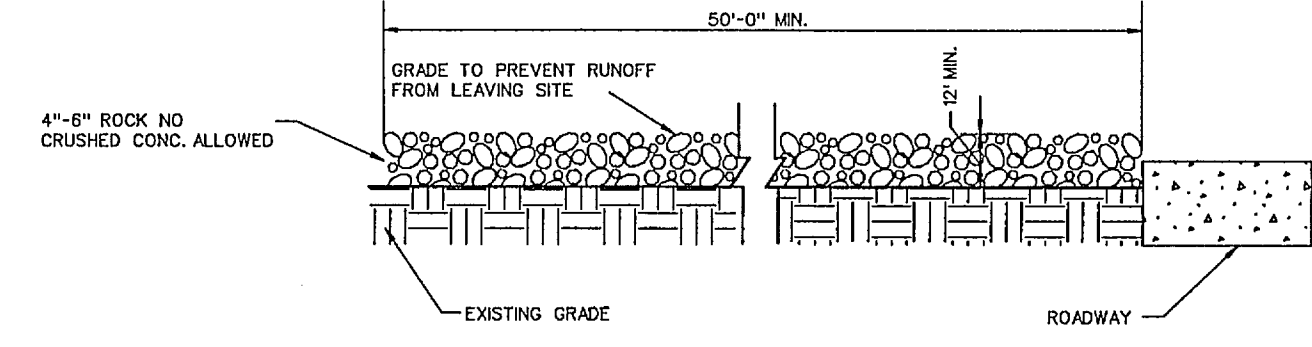


INLET SECTION

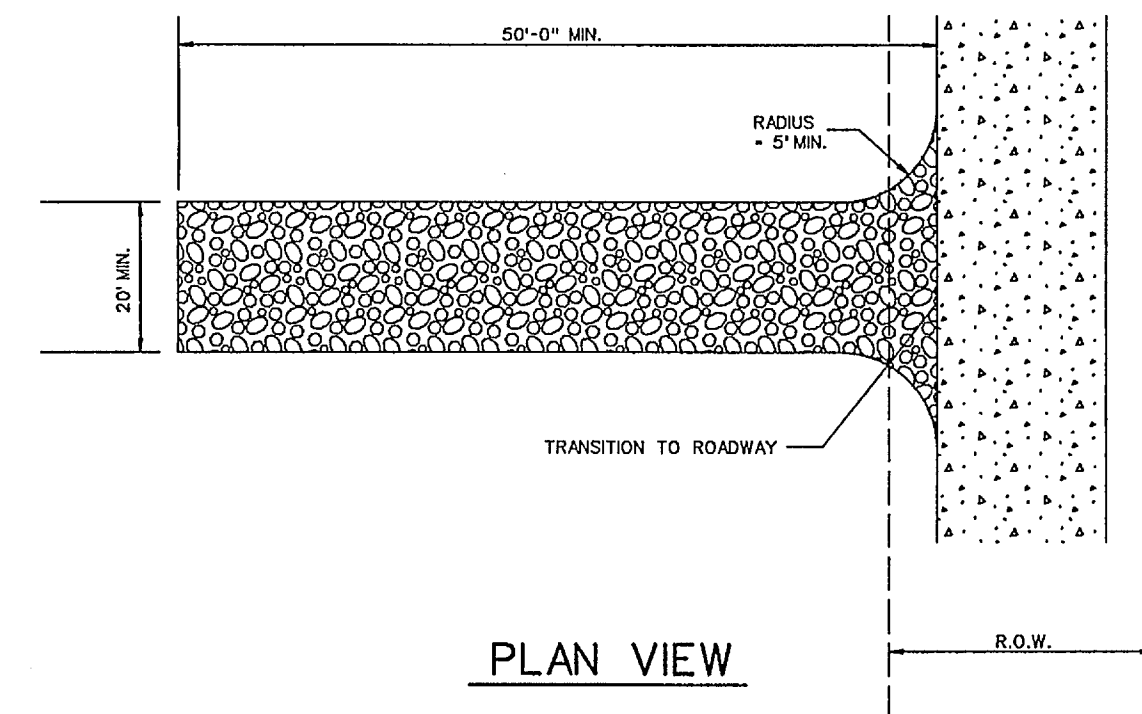


NOTE:
EXTEND FABRIC, FRAME AND FILTER STONE 12' BEYOND END OF INLET ON BOTH ENDS.

TYPE B CURB INLET PROTECTION

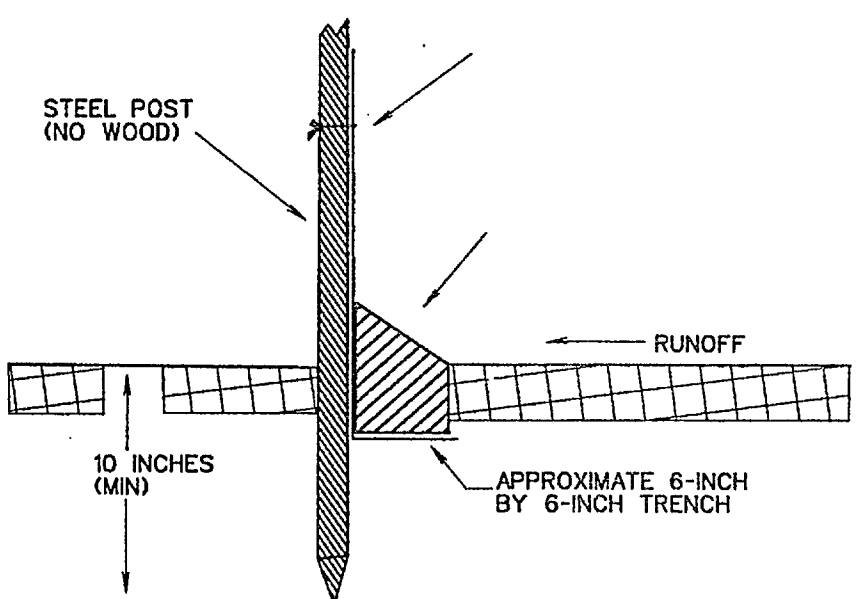
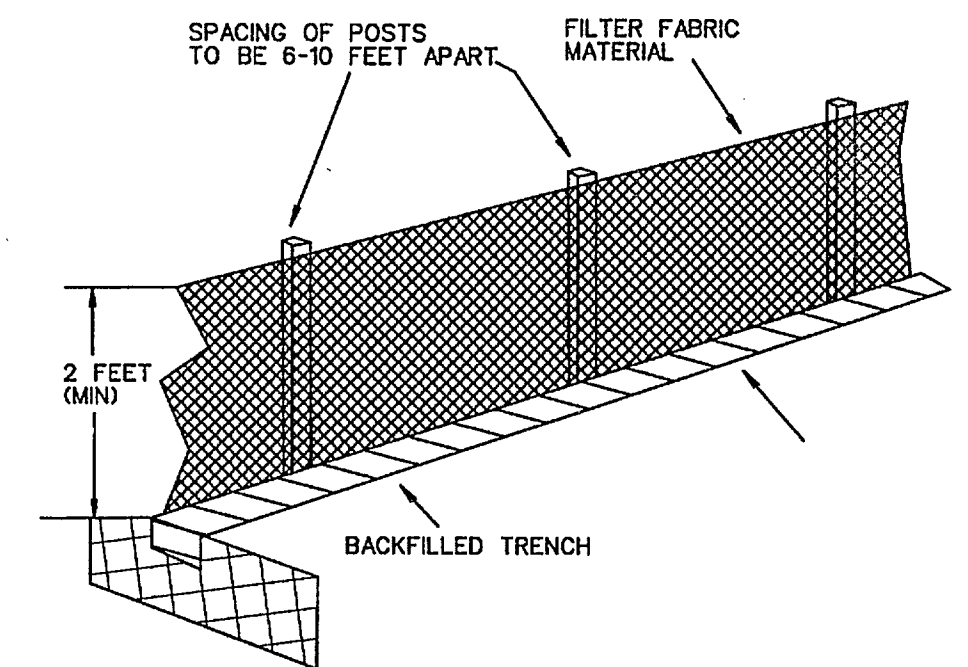


PROFILE



PLAN VIEW

AREA DISTURBED 19.8 AC



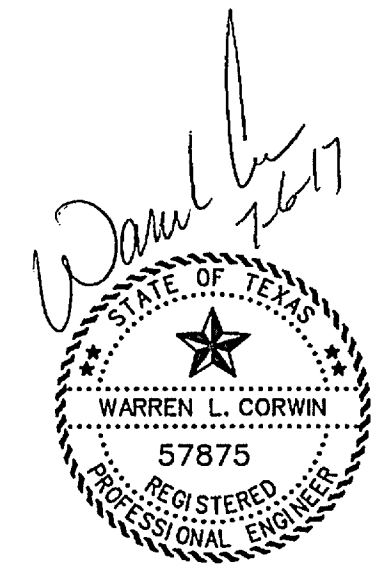
FILTER FABRIC FENCE DETAIL

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.

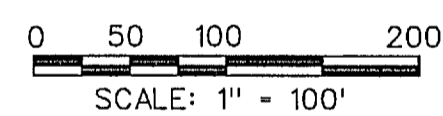
LEGEND

- SILT FENCE (BEFORE CONSTRUCTION)
- INLET PROTECTION

AS-BUILT JULY 2018
STABILIZED ENTRANCE DETAILS
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)



<p>CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBE FIRM #5951</p>			
<p>DEVELOPMENT PLANS FOR BREEZY HILL PHASE X ROCKWALL, TEXAS</p>			
<p>EROSION CONTROL PLAN</p>			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	
17005	MARCH 2017	1"=100'	21 OF 22



Regulatory signs should be used only where justified by engineering judgment. All signage plans shall be reviewed and approved by the City of Rockwall Engineering Division and be designed in accordance with the principles described in the current Texas Manual on Uniform Traffic Control Devices (TMUTCD).

All street and regulatory signage shall be installed, inspected and approved, prior to final acceptance of the project. This inspection typically takes place as part of the Engineering Division's final walkthrough. Any sign related issue/issues will be noted on the project's final punch list.

A. A detailed street and regulatory signage plan is to be submitted to the City of Rockwall Engineering Division. All signs shall be shown in the engineering plans for review and approval. The signage plan shall be shown on a separate signage & pavement marking layout sheet or as a part of the plan & profile sheet. The plan shall identify the specific sign designation, size and location for each sign. Sign standards shall also be included in the engineering plans.

B. All signage installed shall comply with the current Texas Manual on Uniform Traffic Control Devices and the Standard Highway Sign Designs for Texas. The sign layout drawings shall show the color and dimensions

of all sign face legend components including background color, legend color, borders, symbols, letter size and style.

C. The developer shall be responsible for furnishing and installing all regulatory signage, warning signage and street name signage along with all necessary sign mounts in accordance with the approved engineering plans. A sample production sign shall be submitted to the Traffic Signs & Pavement Markings Supervisor for review and approval. The sample shall be directed to the City of Rockwall Service Center located at 1600 Airport Road, Rockwall Texas 75087. The sample sign must be submitted at least 10 days prior to the scheduled installation date.

D. For a street with a cul-de-sac end, a standard W 14-2a shall be mounted over the street name blade, if the cul-de-sac is not clearly visible from the adjoining roadway, or is located in excess of 400 linear feet from the adjoining roadway.

E. Sign posts shall be 2 3/4 O.D. galvanized steel tube sign post with a galvanized finish.

F. Sign clamps and brackets shall be high strength aluminum.

A. Street name sign blades shall be double-sided with rounded corners.

B. Street Name Blades shall be nine-inch (9") tall flat aluminum. The blades shall be 0.080 inches thick and be a minimum of 36" long.

C. The lettering for the street signs shall be 3M 3930 high intensity prismatic material sheeting for street, regulatory and warning signs and shall be high intensity diamond grade type III prismatic. The street sign background shall be green and the legend shall be white.

D. The street sign blade must incorporate the current City of Rockwall logo. The logo shall consist of white Scotchlite Series 3930 high intensity prismatic material. (Product Code 3930).

E. Block Numbers are required on all street name blades and shall be located on the top right corner of the street blade.

F. The lettering for the street blades shall be composed of a combination of lower-case letters with initial upper-case letters. The Clearview TCAD-1W font shall be used. The lettering shall be composed of initial upper-case letters of at least 8 inches in height and lower case letters of at least 4.5 inches in height. For supplementary lettering to indicate the type of street

(such as Street, Avenue or Road) shall be composed of initial upper-case letters at least 3-inches in height and lower-case letters at least 2.25 inches in height. Abbreviations may be used (for example St., Ave., or Rd) except the street name itself. The supplementary lettering shall be located at the lower right corner of the street blade, under the block number.

G. The street blade sign shall consist of green Scotchlite 3930 high intensity prismatic material background (product code 3937) and white Scotchlite 3930 high intensity prismatic material for the lettering (product code 3930). The background sheeting shall be white 3M 3990 high intensity prismatic material. The background material shall be applied to the full width and height of the sign blank leaving no metal exposed. The background material shall be one continuous piece of material. Patching of background material is not allowed and any sign with patching material of any type will be rejected by the City.

Alternative Option:

As an alternative, the foreground color may be green transparent Scotchlite ElectroCut1177 film (E.C. film). Lettering shall be cut out and removed producing a single continuous piece of green transparent film material.

Street address markers shall be installed for each lot in the subdivision. The markers shall be located at the center of the lot on the face of the curbs. The address markers shall have a deep green background with reflective white numbers. The number size shall be four (4) inches in height. The background of the address marker shall be eighteen (18) inches in length and from the top of curb to the gutter flow line. The address marker shall show the full numerical portion of the address of the lot.

All signage for multifamily, commercial, retail and industrial developments are required to have a separate signage department. Signs, including any overhangs, are not allowed in any right-of-ways and/or easements. Lettering shall be approved on engineering plans.

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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.

CITY _____ DATE _____

LEGEND

☼ - STREET LIGHT

○ - STOP SIGN

— - STREET NAME BLADE



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

DEVELOPMENT PLANS FOR
BREEZY HILL
PHASE X
 ROCKWALL, TEXAS

SIGN AND LIGHT PLAN

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