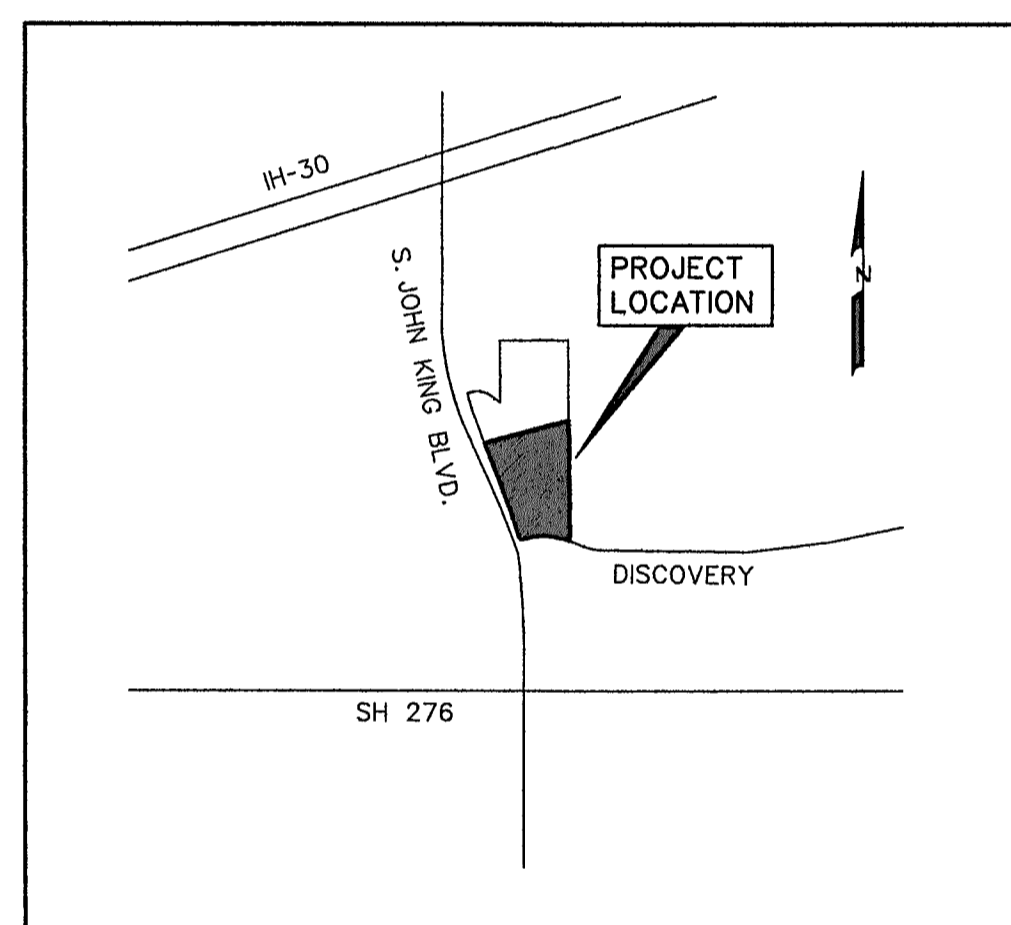


DEVELOPMENT PLANS FOR ROCKWALL DOWNES PHASE 2

CITY OF ROCKWALL, TEXAS

INDEX

1	TITLE
2	PLAT
3	DRAINAGE AREA MAP
4	DERBY DRIVE
5	GALLANT FOX DRIVE
6	WATER AND SANITARY SEWER PLAN
7	SANITARY SEWER PROFILES
8	12" WATERLINE
9	STORM SEWER PLAN AND PROFILE LINE 'D-1'
10	GRADING PLAN
11	EROSION CONTROL PLAN
12	STREET SIGN AND LIGHT PLAN



VICINITY MAP
NOT TO SCALE

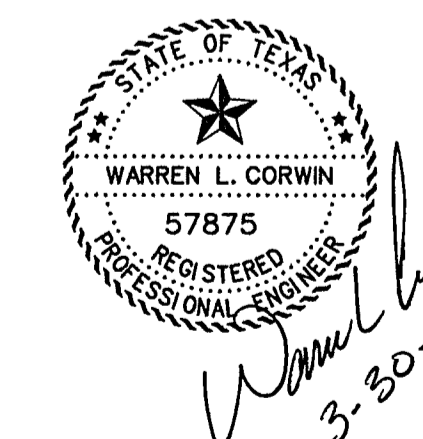
PREPARED FOR
ROCKWALL DOWNES DEVELOPMENT, LLC.
8750 NORTH CENTRAL EXPRESSWAY, SUITE 1735, DALLAS, TEXAS 75231

CORWIN ENGINEERING, INC. — CONSULTING ENGINEERS

200 W. BELMONT, SUITE E

TBPE FIRM #5951

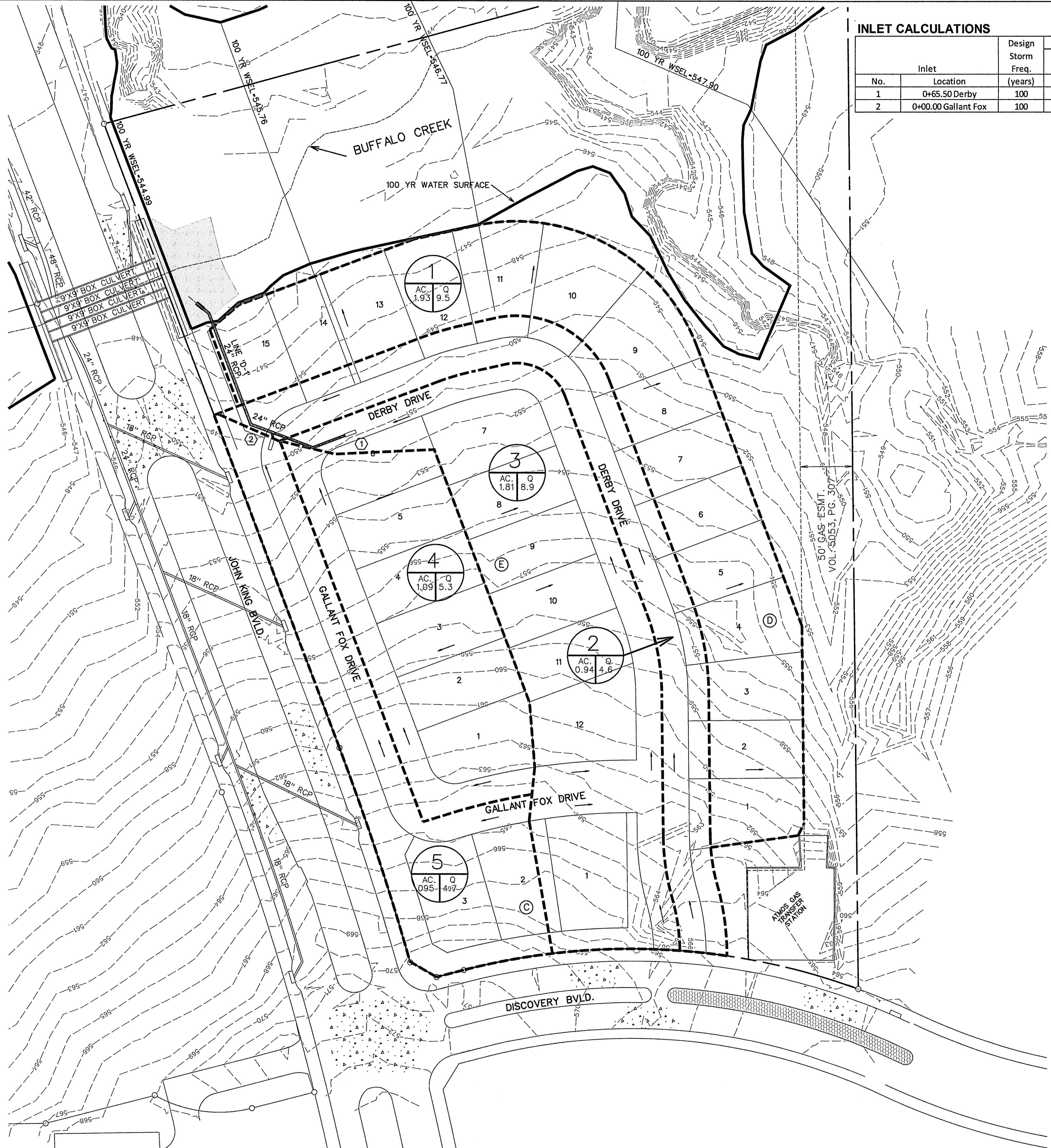
ALLEN, TEXAS 75013



AS-BUILT MARCH 2017
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)

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

NO.	REVISED SHEETS	REVISIONS	DATE
1	4-7, 9-10		3/10/16

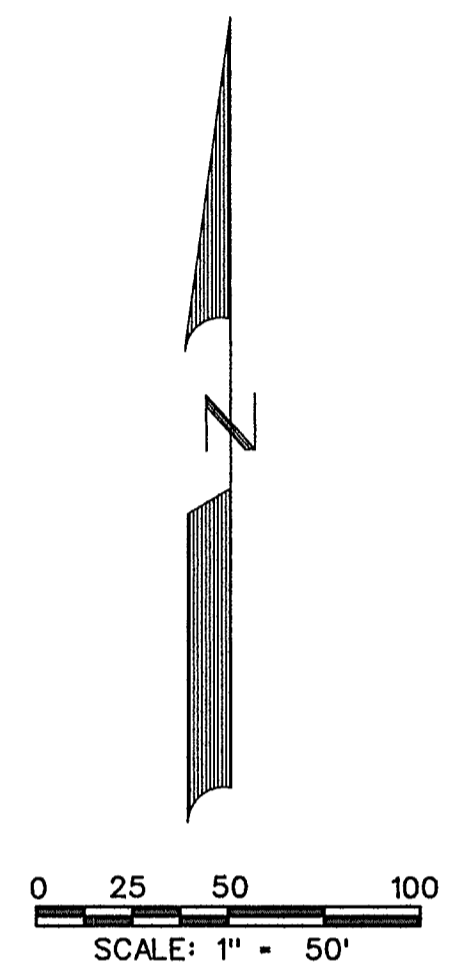


INLET CALCULATIONS

No.	Inlet Location	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)	Gutter Crown	Selected Inlet				
				Intensity "I" (in/hr)	Runoff Coeff. "C"	Area "A" (acres)						Q (cfs)	Inlet Capacity (cfs)	Carry-Over to Downstream Inlet (cfs)		
1	0+65.50 Derby	100	10	9.8	0.5	2.90	14.2	0.0	14.2	Low Pt	Low Pt	6" pbl	10	STD.	21.0	0.0
2	0+00.00 Gallant Fox	100	10	9.8	0.5	1.89	9.3	0.0	9.3	Low Pt	Low Pt	6" pbl	10	STD.	21.0	0.0

RUNOFF COMPUTATIONS

#	Area (sf)	Area (acres)	Runoff Coefficient	CA	Tc (min)	I(100) (in/hr)	Q(100) (cfs)
1	84273	1.93	0.50	0.97	10	9.80	9.5
2	41067	0.94	0.50	0.47	10	9.80	4.6
3	78740	1.81	0.50	0.90	10	9.80	8.9
4	47370	1.09	0.50	0.54	10	9.80	5.3
5	41457	0.95	0.50	0.48	10	9.80	4.7



BENCHMARK #1
 PK NAIL FOUND IN CENTER OF S. JOHN KING BLVD. 20' ± NORTH OF MEDIAN OPENING NEAR NORTHWEST CORNER OF PROPERTY.

ELEV.-564.12
 N. 7021747.513
 E. 2602779.713

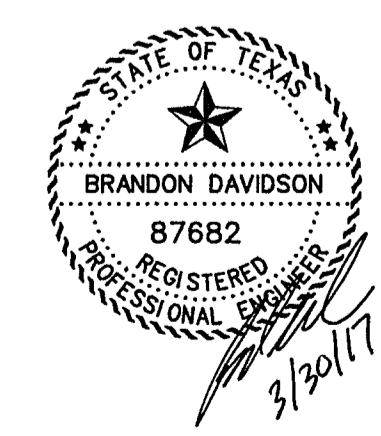
BENCHMARK #2
 "X" FOUND ON NORTH END OF TOP OF HEADWALL ON WEST SIDE OF S. JOHN KING BLVD. AT BUFFALO CREEK.

ELEV.-550.82
 N. 7020725.306
 E. 2602982.310

LEGEND

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

AS-BUILT MARCH 2017
 INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)

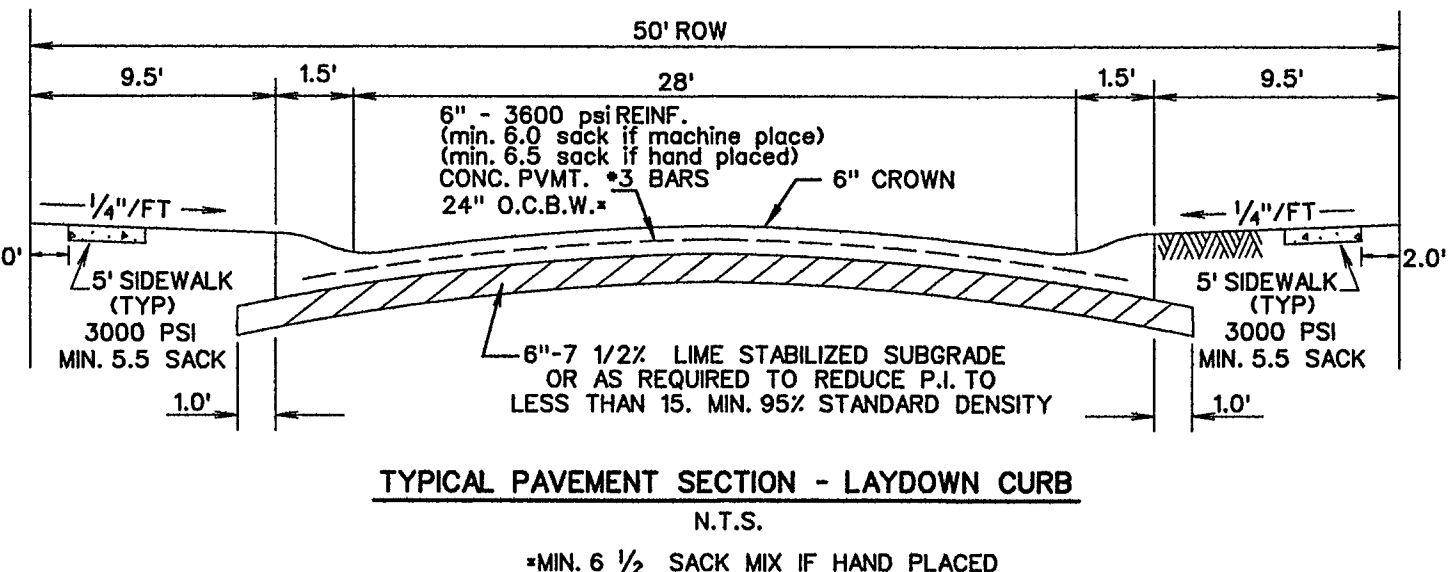
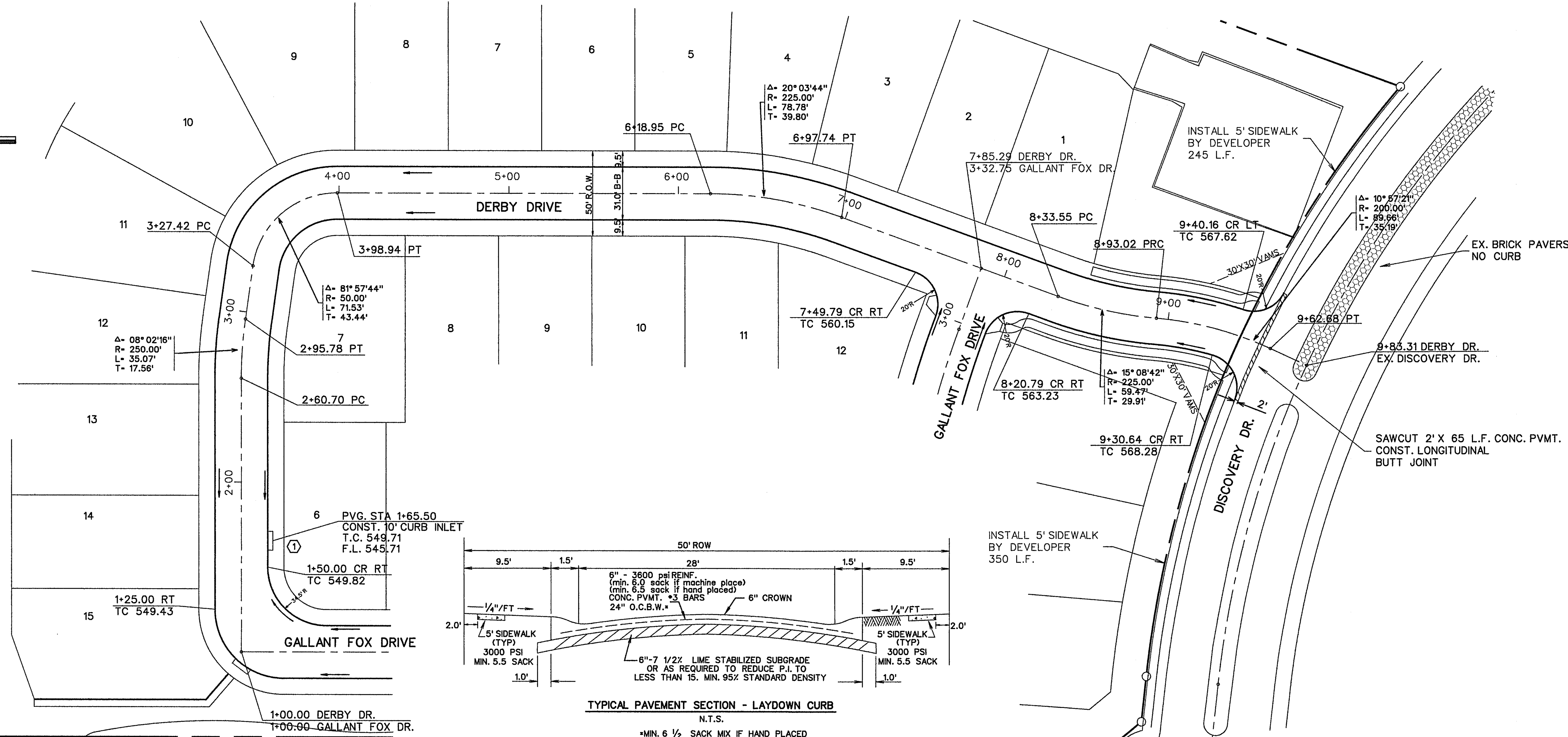
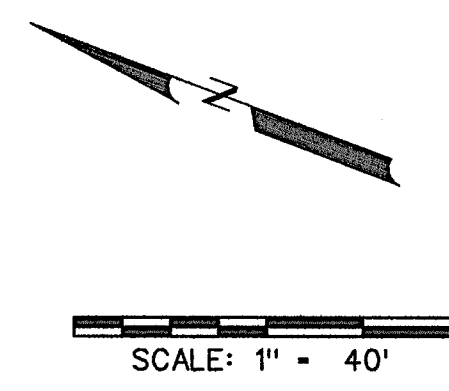


CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972)396-1200
 TBPE FIRM #5951

DEVELOPMENT PLANS FOR ROCKWALL DOWNES PHASE 2
 ROCKWALL, TEXAS

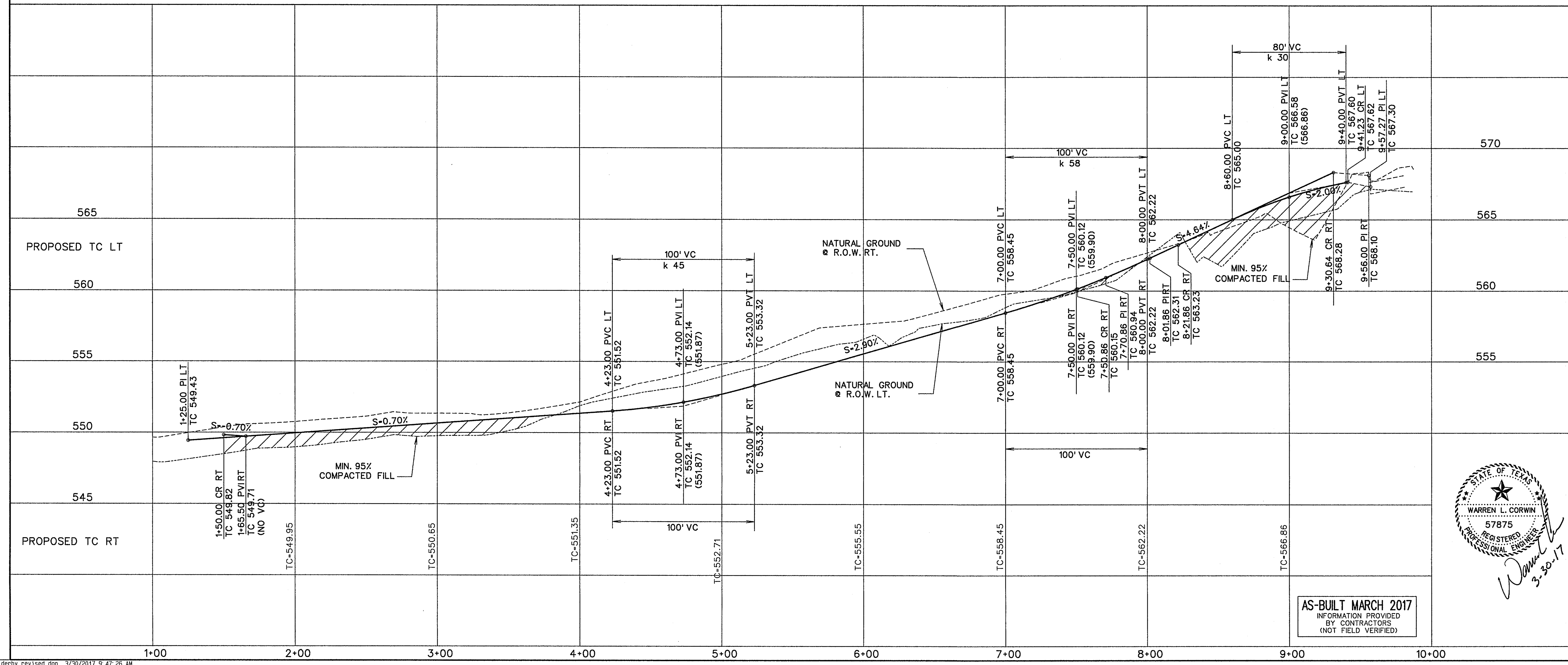
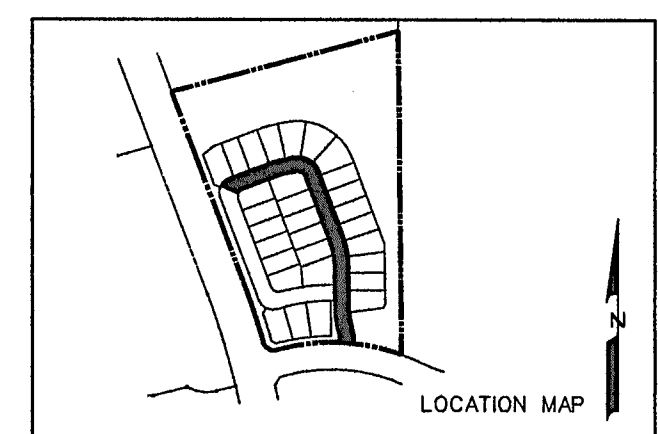
DRAINAGE AREA MAP

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE:	3 OF 12
14071	APRIL 2016	1"=50'	

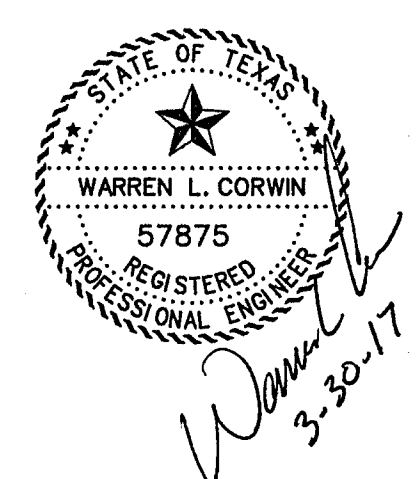


BENCHMARK #1
 PK NAIL FOUND IN CENTER OF S. JOHN KING BLVD.
 20' ± NORTH OF MEDIAN OPENING NEAR ROCKWALL
 DOWNES PHASE 1
 ELEV. -564.12
 N. 702174.7513
 E. 2602779.713

BENCHMARK #2
 "X" FOUND ON NORTH END OF TOP OF HEADWALL ON
 WEST SIDE OF S. JOHN KING BLVD. AT BUFFALO CREEK.
 ELEV. -550.82
 N. 7020725.306
 E. 2602982.310



NO.	REVISIONS	DATE
1	REVISED STREET GRADE STA. 1+25 TO 5+23	3/10/16



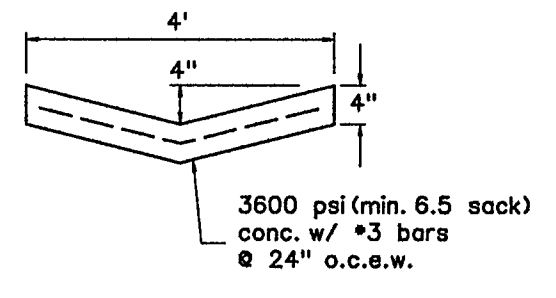
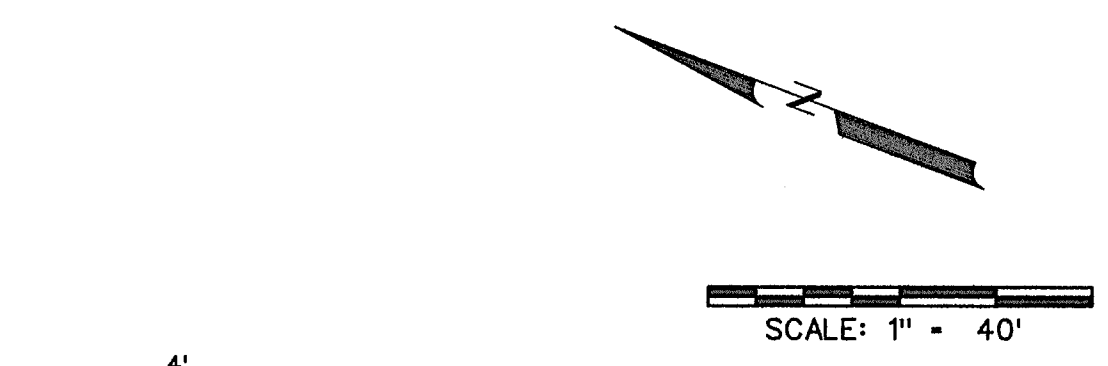
CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972)396-1200
 TBPE FIRM #5951

DEVELOPMENT PLANS FOR
ROCKWALL DOWNES
 PHASE 2
 ROCKWALL, TEXAS

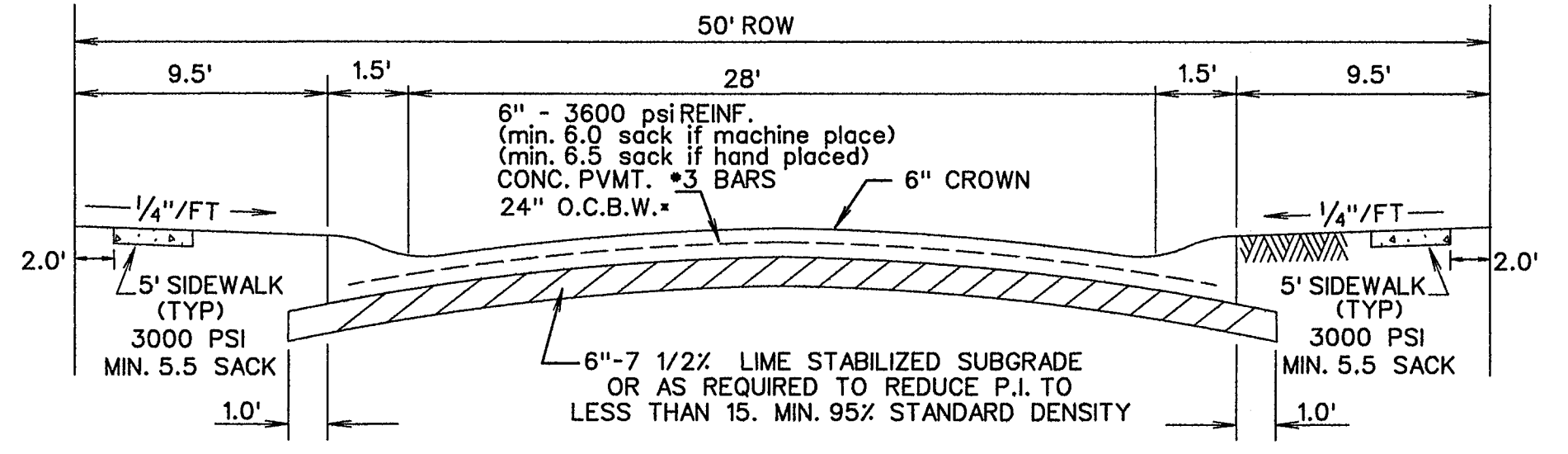
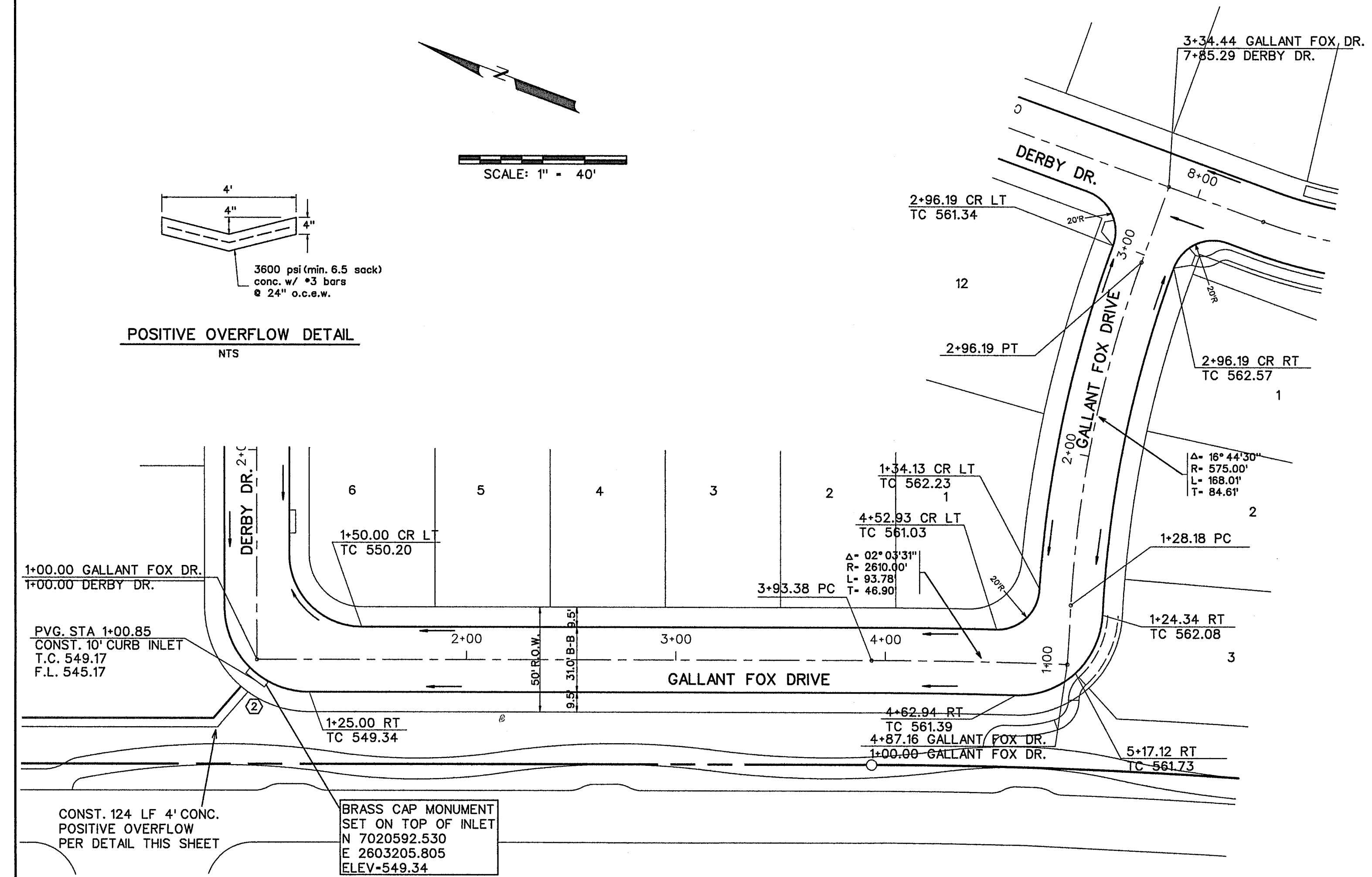
DERBY DRIVE

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	4 OF 12
14071	NOVEMBER 2015		

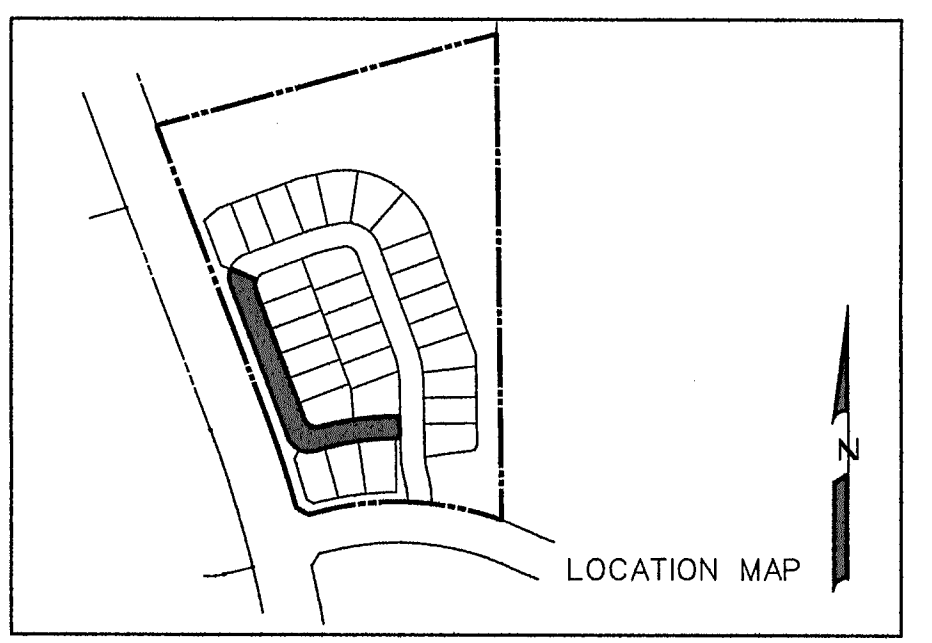
AS-BUILT MARCH 2017
 INFORMATION PROVIDED
 BY CONTRACTORS
 (NOT FIELD VERIFIED)



POSITIVE OVERFLOW DETAIL
NTS



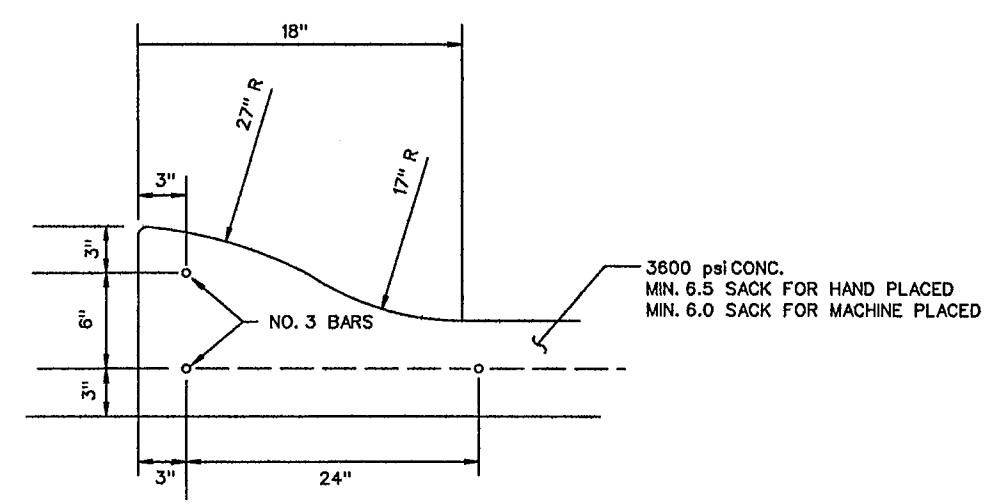
TYPICAL PAVEMENT SECTION - LAYDOWN CURB
N.T.S.
*MIN. 6 1/2 SACK MIX IF HAND PLACED



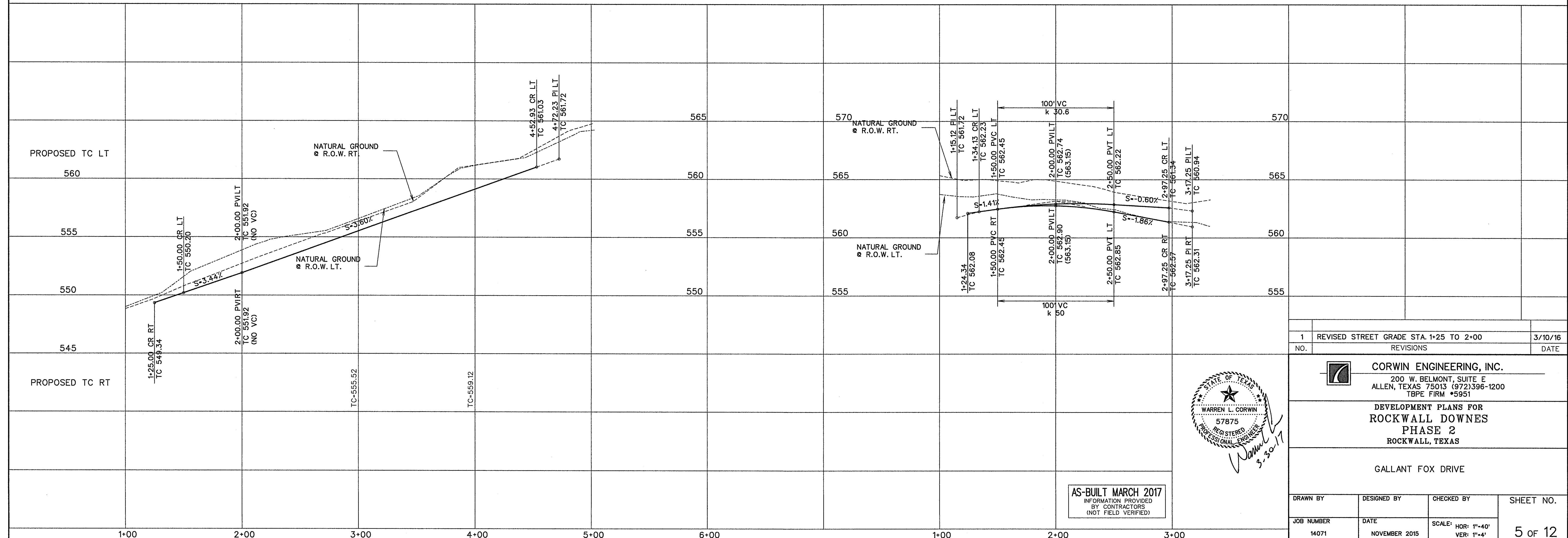
LOCATION MAP

BENCHMARK *1
PK NAIL FOUND IN CENTER OF S. JOHN KING BLVD.
20' ± NORTH OF MEDIAN OPENING NEAR ROCKWALL
DOWNES PHASE 1
ELEV.-564.12
N. 7021747.513
E. 2602779.713

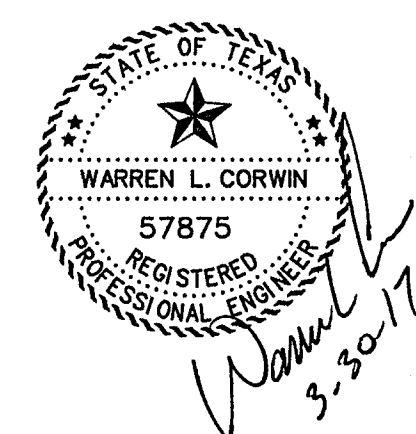
BENCHMARK *2
"X" FOUND ON NORTH END OF TOP OF HEADWALL ON
WEST SIDE OF S. JOHN KING BLVD. AT BUFFALO CREEK.
ELEV.-550.82
N. 7020725.306
E. 2602982.310



MONOLITHIC CURB
N.T.S.



1	REVISED STREET GRADE STA. 1+25 TO 2+00	3/10/16
NO.	REVISIONS	DATE



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

DEVELOPMENT PLANS FOR
ROCKWALL DOWNES
PHASE 2
ROCKWALL, TEXAS

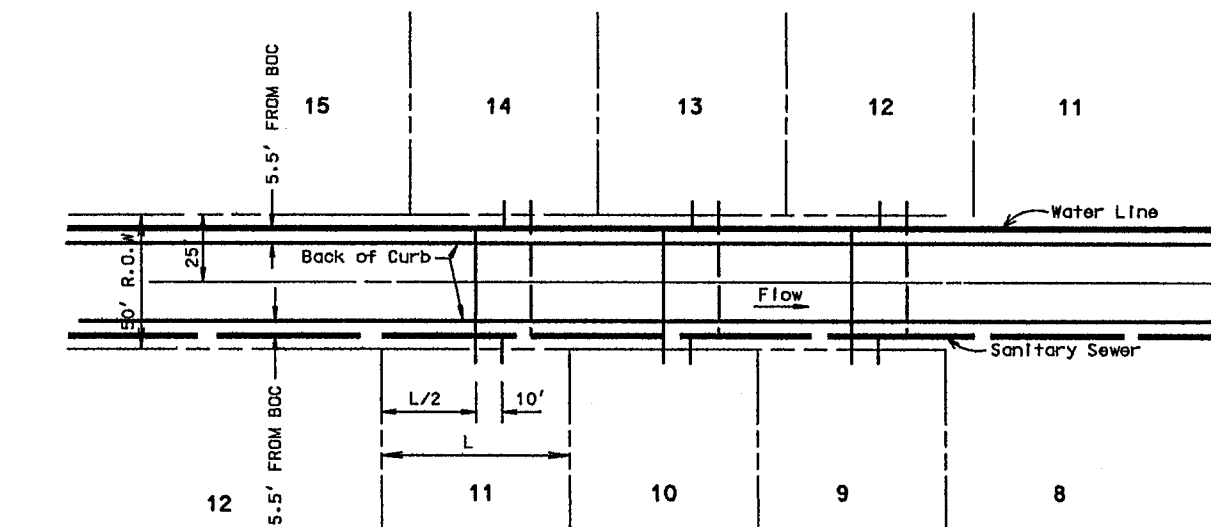
GALLANT FOX DRIVE

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4"	5 OF 12
14071	NOVEMBER 2015		

AS-BUILT MARCH 2017
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)

CURVE NO.	SANITARY SEWER CURVE DATA		
	①	②	③
Δ	13° 16' 42"	08° 02' 16"	20° 03' 44"
R	554.00'	250.00'	204.00'
T	64.48'	17.56'	36.08'
L	128.39'	35.07'	781.43'

SERVICE SCHEDULE		
TYPE	SIZE	NO.
SANITARY	4"	30
WATER	1"	30



TYPICAL WATER & SEWER SERVICE LAYOUT

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. 10" SANITARY SEWER TO BE SDR 26.
- INSTALL BLUE "EMS" DISK ON WATER LINE AT EVERY CHANGE IN DIRECTION, VALVE, AND SERVICE.
- INSTALL GREEN "EMS" DISK ON SANITARY SEWER LINE AT EVERY CHANGE IN DIRECTION, MANHOLE, CLEANOUT, AND SERVICE.
- ALL MANHOLES TO BE RAVEN EPOXY LINED (OR APPROVED EQUAL) AND SEALED IF LOCATED IN STREET PAVEMENT.
- ALL HOMES TO BE SPRINKLERED

BENCHMARK #1

PK NAIL FOUND IN CENTER OF S. JOHN KING BLVD. 20' ± NORTH OF MEDIAN OPENING NEAR NORTHWEST CORNER OF PROPERTY.

ELEV. -564.12
N. 7021747.513
E. 2602779.713

BENCHMARK #2

"X" FOUND ON NORTH END OF TOP OF HEADWALL ON WEST SIDE OF S. JOHN KING BLVD. AT BUFFALO CREEK.

ELEV. -550.82
N. 7020725.306
E. 2602982.310

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

NO.	REVISIONS	DATE
2	ADDED IRRIGATION SERVICE ALONG JOHN KING BLVD	2/17/17
1	REVISED SAN. SWR RIM ELEVATION(3+91.16 LINE 'S-1')	3/10/16

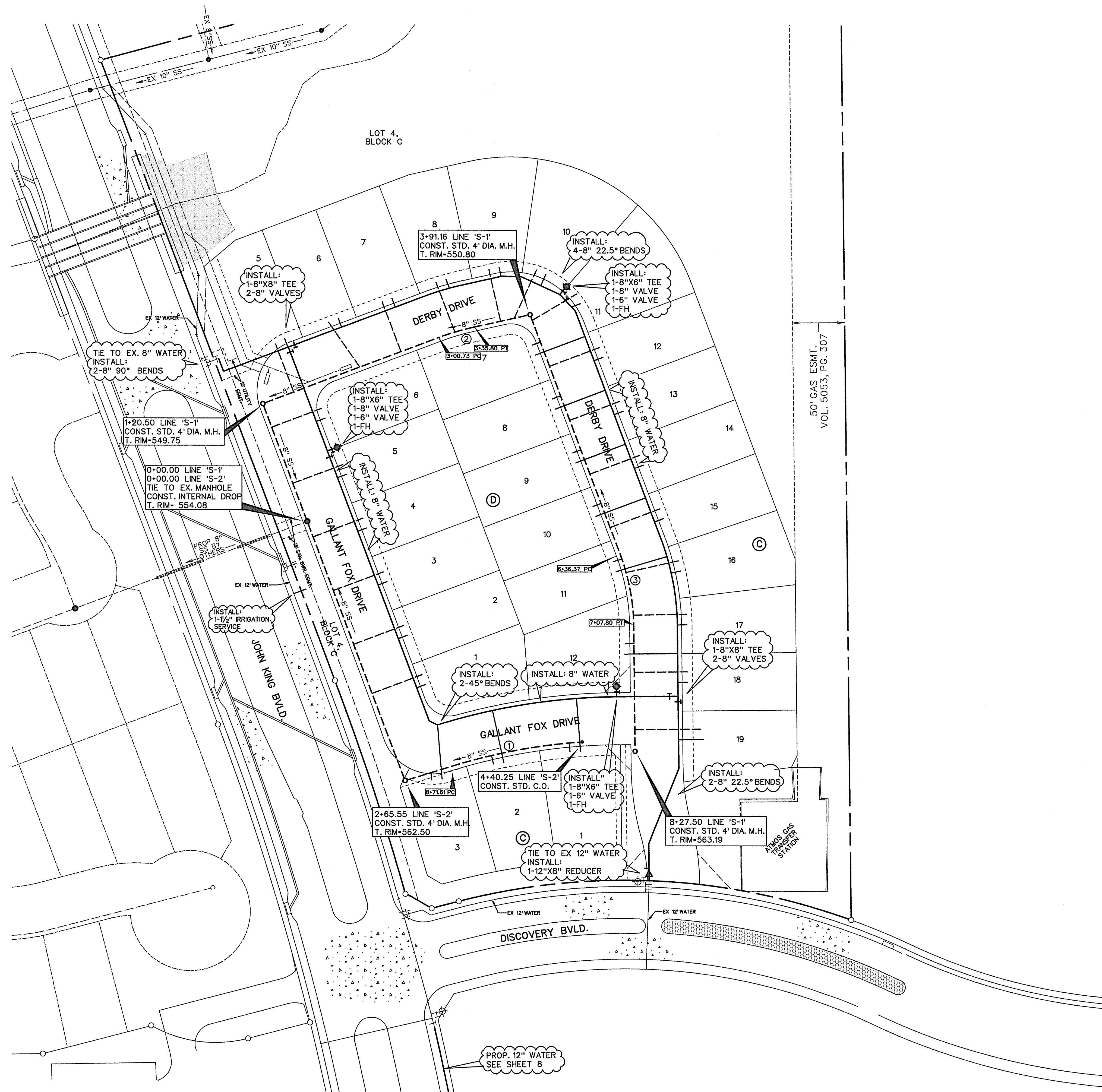
CORWIN ENGINEERING, INC.
200 W. BELMONT, SUITE E
ALLEN, TEXAS 75013 (972)396-1200
TBPE FIRM #5951

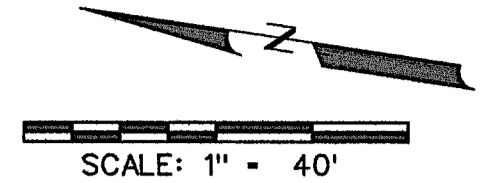
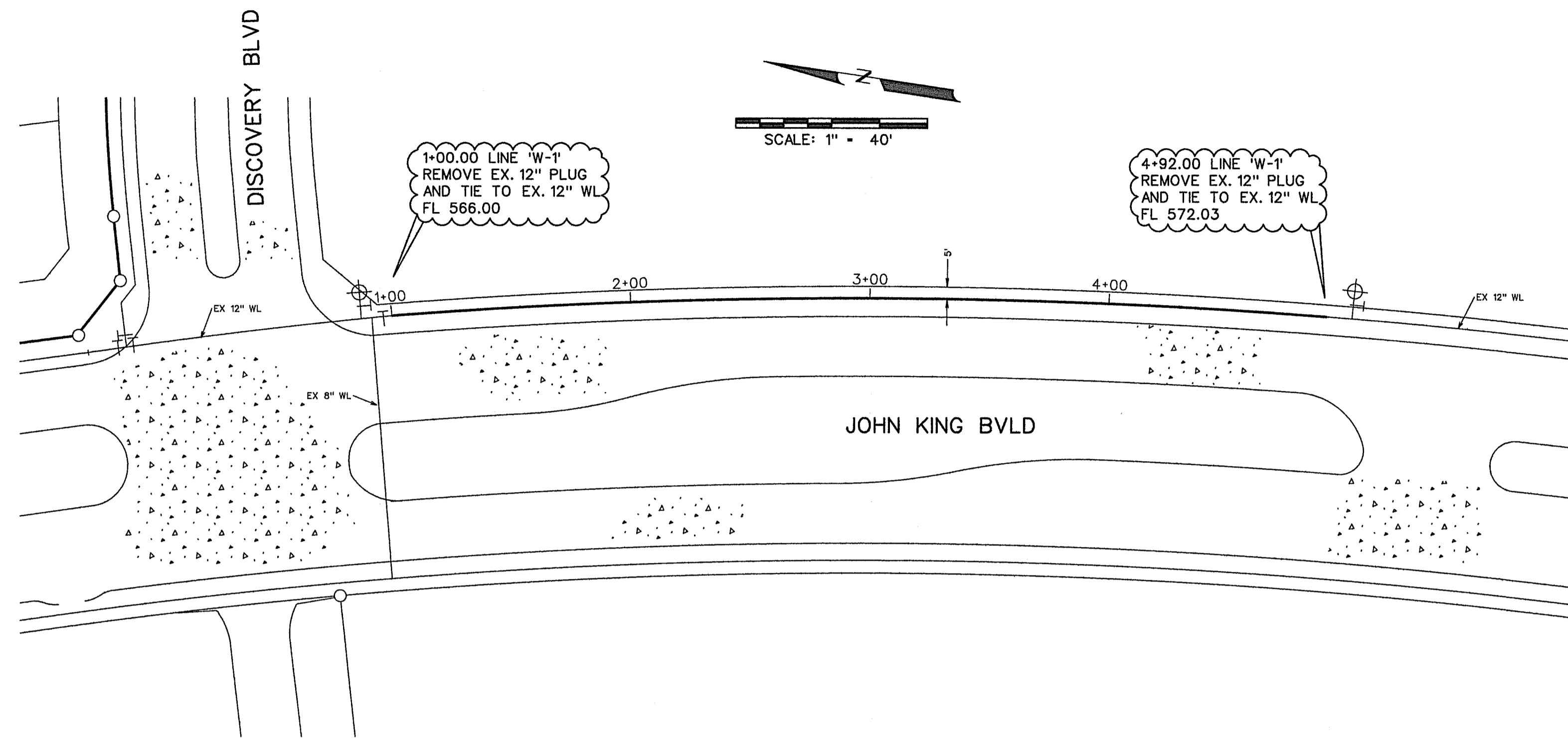
DEVELOPMENT PLANS FOR
ROCKWALL DOWNS
PHASE 2
ROCKWALL, TEXAS

WATER AND SANITARY SEWER PLAN

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
14071	APRIL 2016	SCALE: 1"=50'	6 OF 12

AS-BUILT MARCH 2017
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)

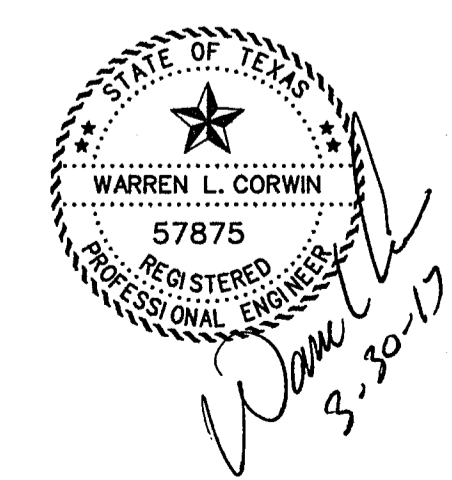
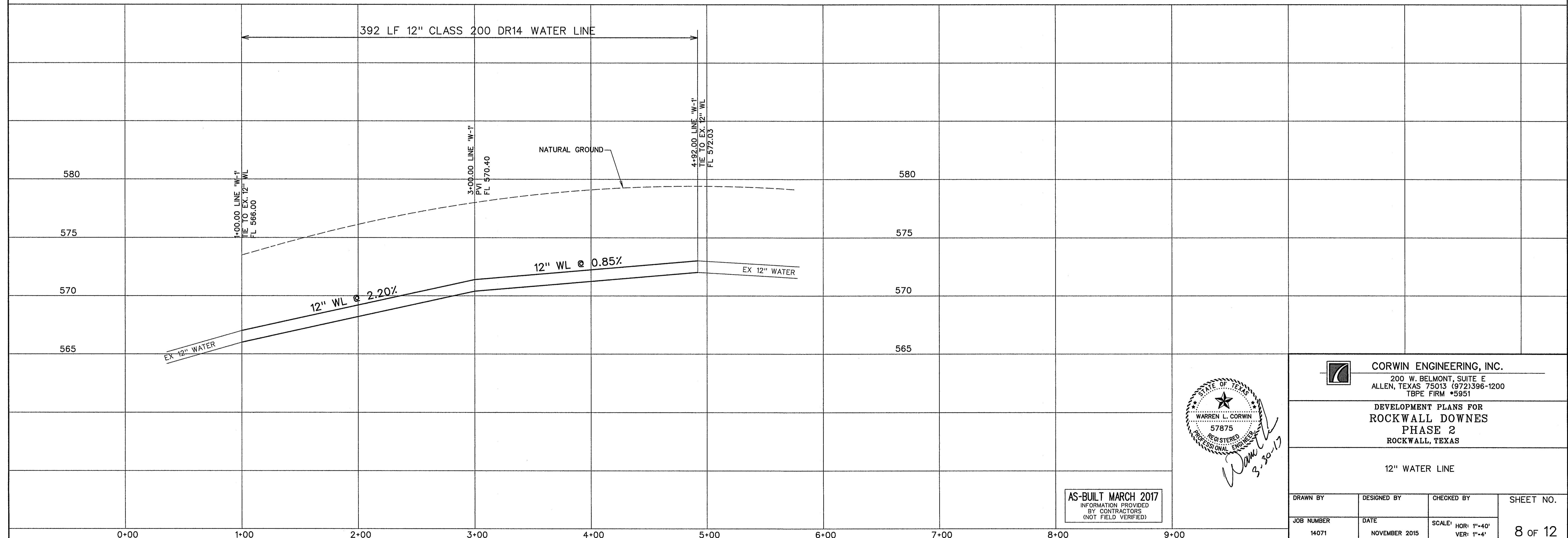




NOTE:
 CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING UTILITY LOCATION AND ELEVATION ARE BASED ON AS-BUILT DRAWINGS AND MAY DIFFER IN ACTUAL LOCATION AND ELEVATION.

BENCHMARK *1
 PK NAIL FOUND IN CENTER OF S. JOHN KING BLVD. 20' ± NORTH OF MEDIAN OPENING NEAR NORTHWEST CORNER OF PROPERTY.
 ELEV.=564.12
 N. 7021747.513
 E. 2602779.713

BENCHMARK *2
 "X" FOUND ON NORTH END OF TOP OF HEADWALL ON WEST SIDE OF S. JOHN KING BLVD. AT BUFFALO CREEK.
 ELEV.=550.82
 N. 7020725.306
 E. 2602982.310



AS-BUILT MARCH 2017
 INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)

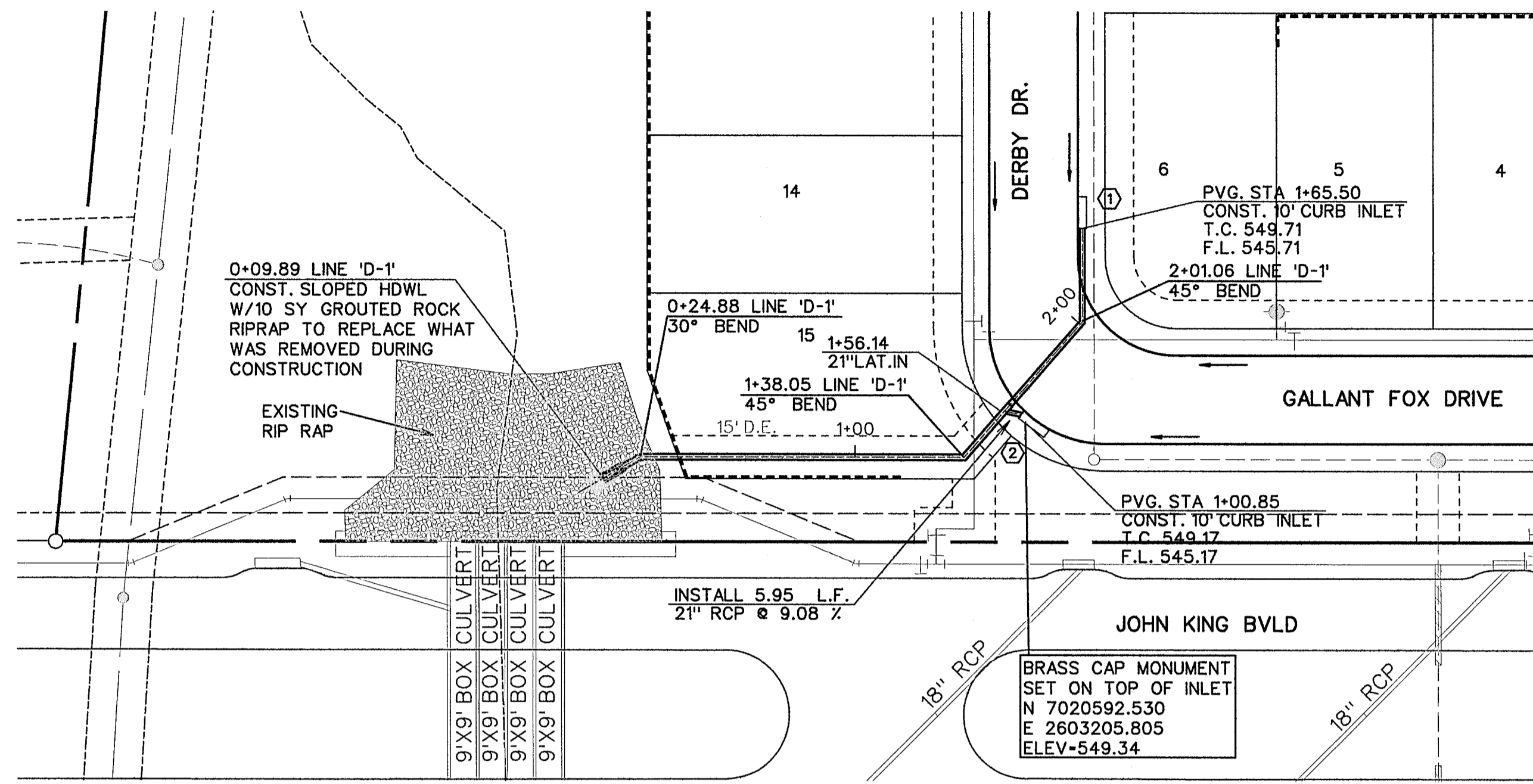
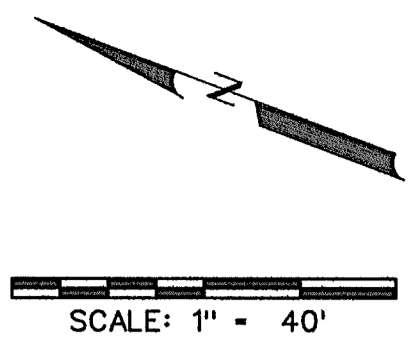
CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972)396-1200
 TBPE FIRM #5951

DEVELOPMENT PLANS FOR
ROCKWALL DOWNES
 PHASE 2
 ROCKWALL, TEXAS

12" WATER LINE

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE: HOR: 1"=40' VER: 1"=4'	8 of 12
14071	NOVEMBER 2015		

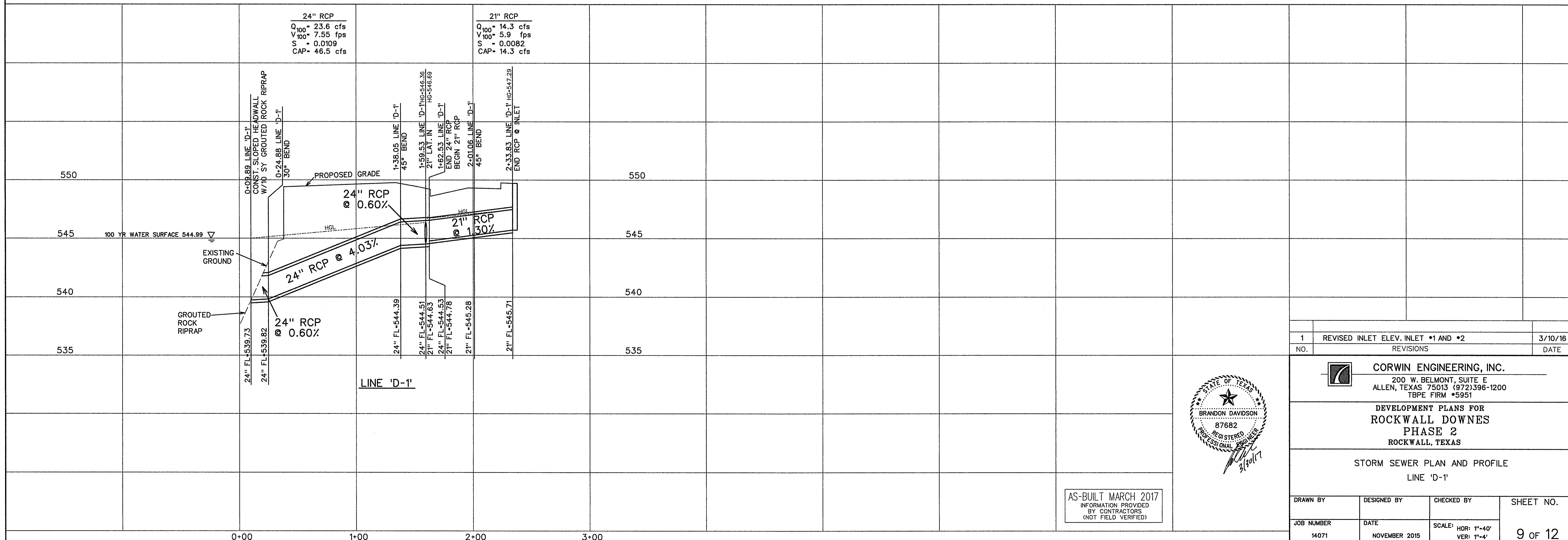
Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	CA	Accumulated CA	Tc (Min)	Design Storm (Years)	I (in/hr)	Q (CFS)	S (ft/ft)	Pipe Size (in)	Velocity (fps)	Head Loss (ft)	Flow Time (Min)	Time at D/S (Min)	Δ Velocity Head (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream	Proposed Grade
Line D1																						
2+33.83	1+59.53	74.30	3,4	0.00	2.90	0.50	1.45	1.45	10.00	100	9.80	14.2	0.0080	21	5.9	0.54	0.21	10.21	0.54	547.83	547.29	549.71
1+59.53	0+32.95	126.58	2,5	0.00	1.89	0.50	0.95	2.40	10.00	100	9.80	23.5	0.0108	24	7.5	0.87	0.28	10.28	0.33	546.69	546.36	549.17
0+32.95			0	0.00	0.00	0.50	0.00	2.40	10.00	100	9.80	23.5	0.0108	24	7.5	0.87	0.00	10.00	0.00	544.99	0.00	0.00



BENCHMARK *1
 PK NAIL FOUND IN CENTER OF S. JOHN KING BLVD.
 20' ± NORTH OF MEDIAN OPENING NEAR ROCKWALL
 DOWNES PHASE 1
 ELEV.-564.12
 N. 7021747.513
 E. 2602779.713

BENCHMARK *2
 "X" FOUND ON NORTH END OF TOP OF HEADWALL ON
 WEST SIDE OF S. JOHN KING BLVD. AT BUFFALO CREEK.
 ELEV.-550.82
 N. 7020725.306
 E. 2602982.310

- LEGEND**
- (B) - BLOCK LABEL
 - (18) - INLET NUMBER
 - (1) - CURVE NUMBER
 - - SANITARY SEWER
 - ⊕ - WATER
 - ==== - PROPOSED STORM SEWER



1	REVISED INLET ELEV. INLET #1 AND #2	3/10/16
NO.	REVISIONS	DATE



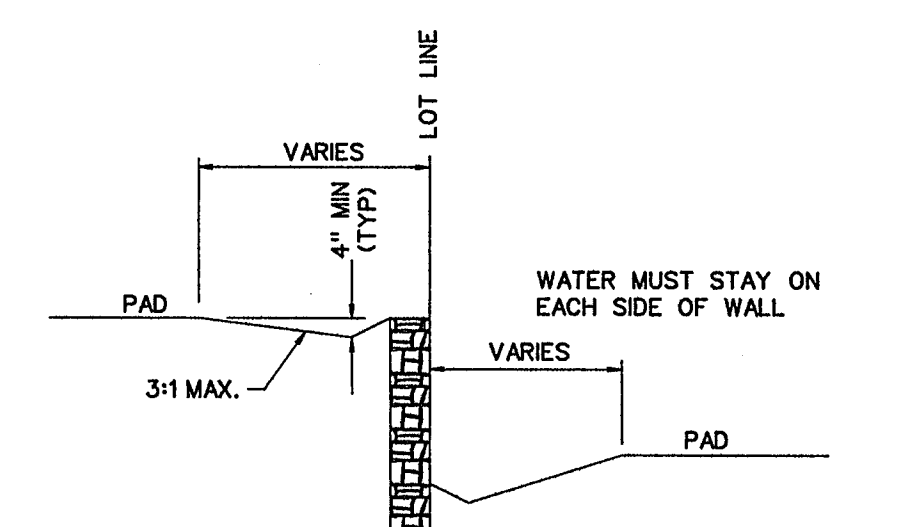
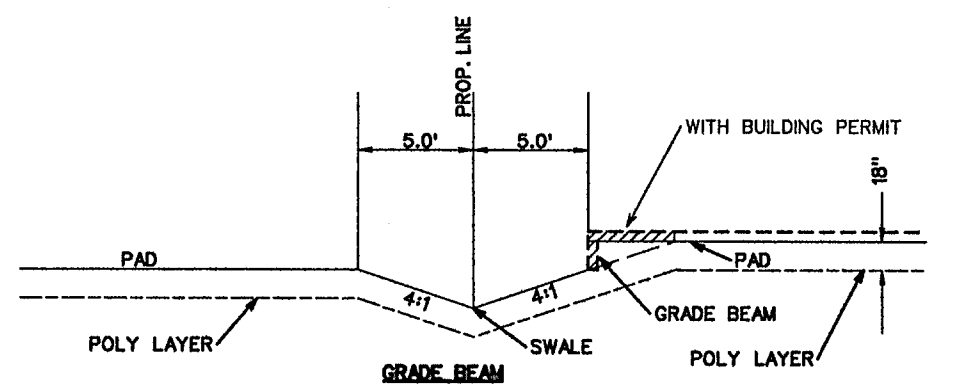
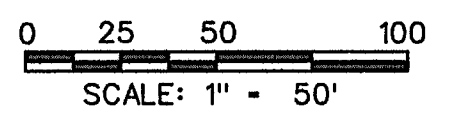
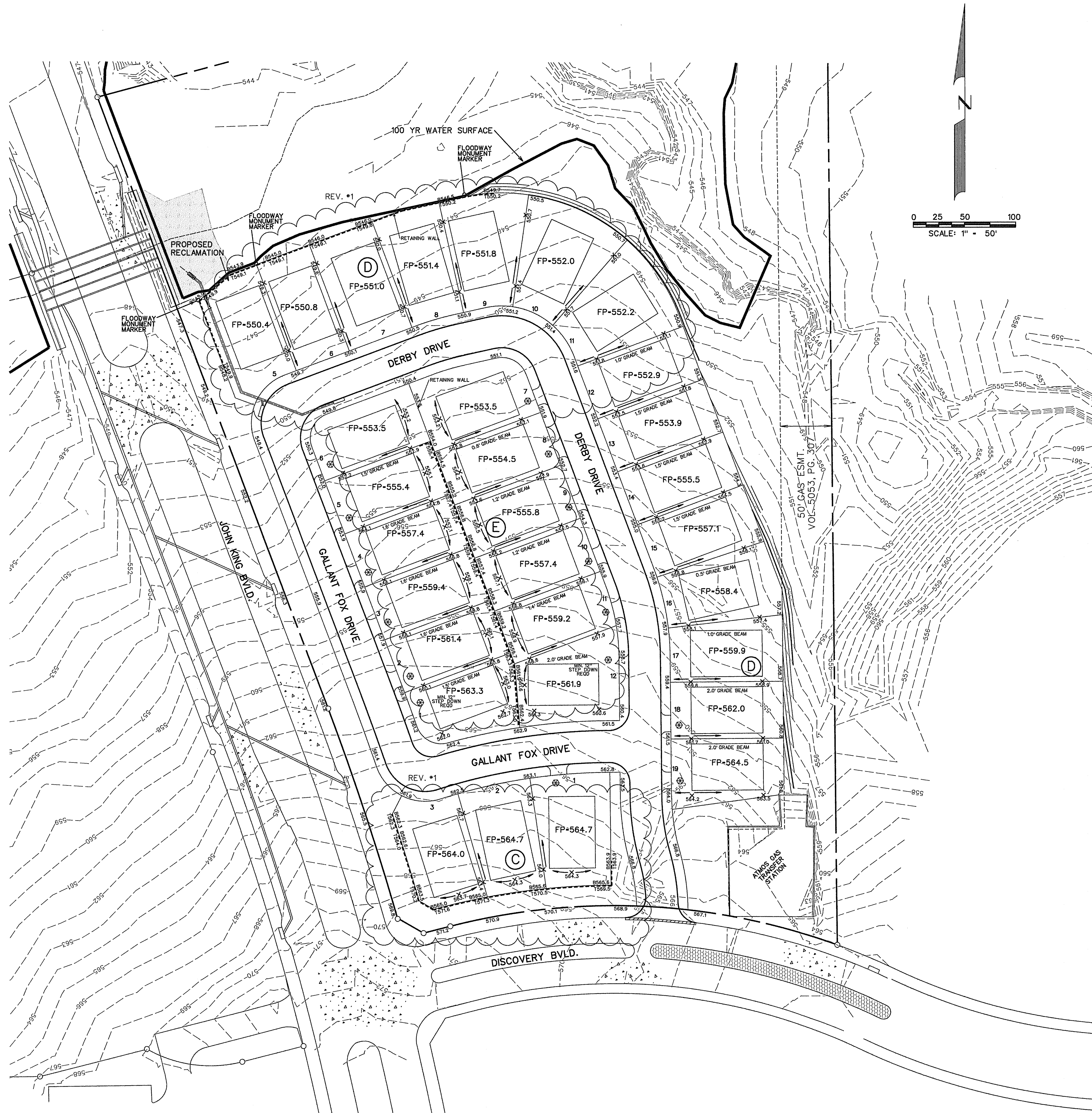
CORWIN ENGINEERING, INC.
 200 W. BELMONT, SUITE E
 ALLEN, TEXAS 75013 (972)396-1200
 TBPE FIRM #5951

DEVELOPMENT PLANS FOR
ROCKWALL DOWNES
 PHASE 2
 ROCKWALL, TEXAS

STORM SEWER PLAN AND PROFILE
 LINE 'D-1'

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
14071	NOVEMBER 2015		9 OF 12

AS-BUILT MARCH 2017
 INFORMATION PROVIDED
 BY CONTRACTORS
 (NOT FIELD VERIFIED)



TYPICAL SIDYARD RETAINING WALL
N.T.S.

Notes:

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

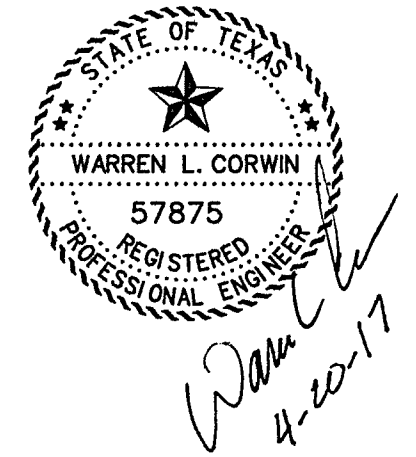
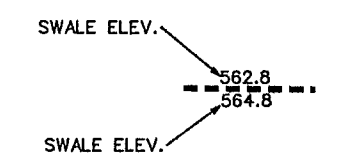
⊗ Driveway must be located on noted side.

Wall Notes:

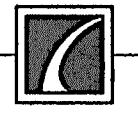
1. No part of the wall (footing, tie back etc. shall be const. offsite, in an easement or in the R.O.W. Walls must be on one property.

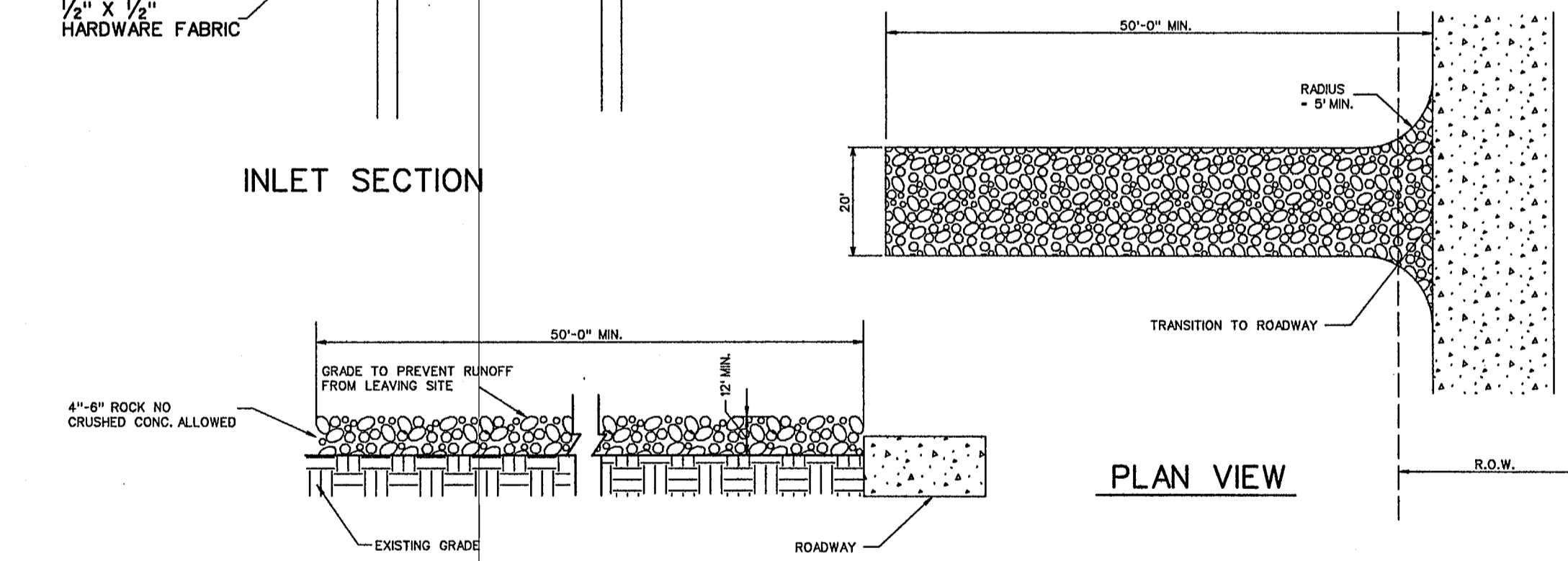
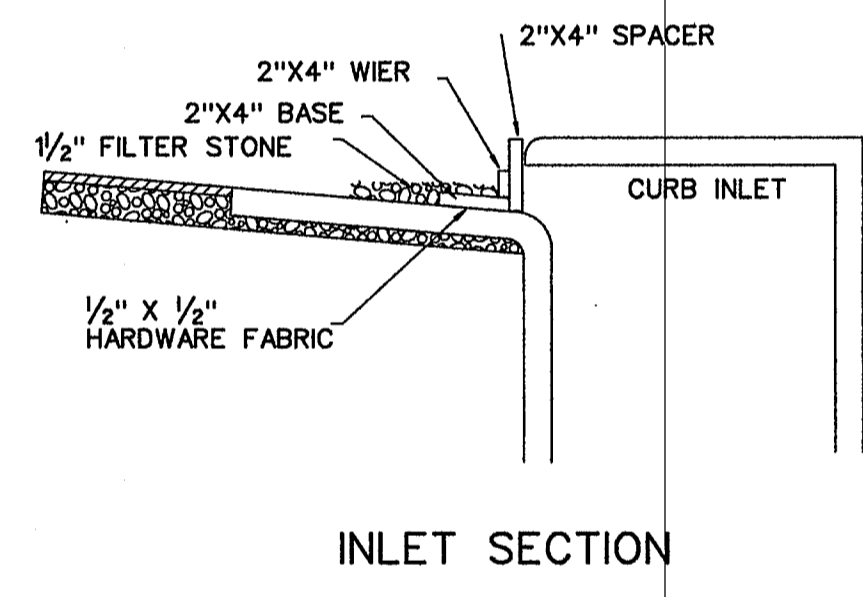
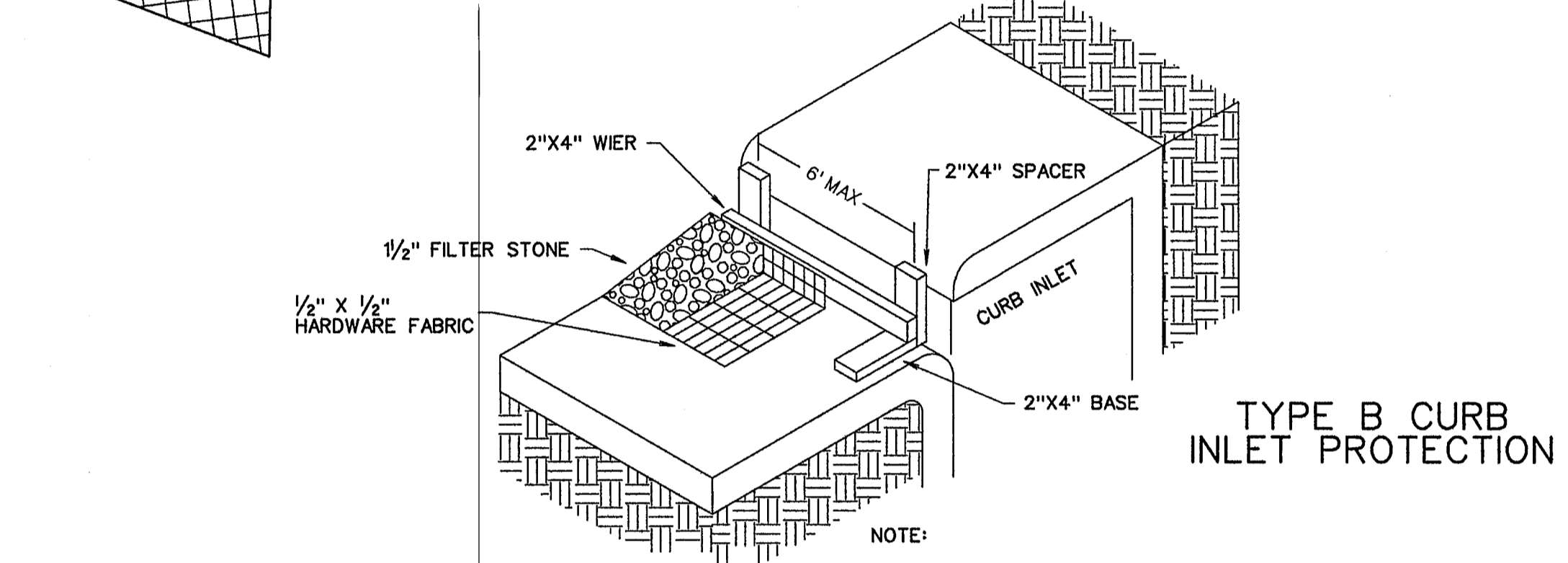
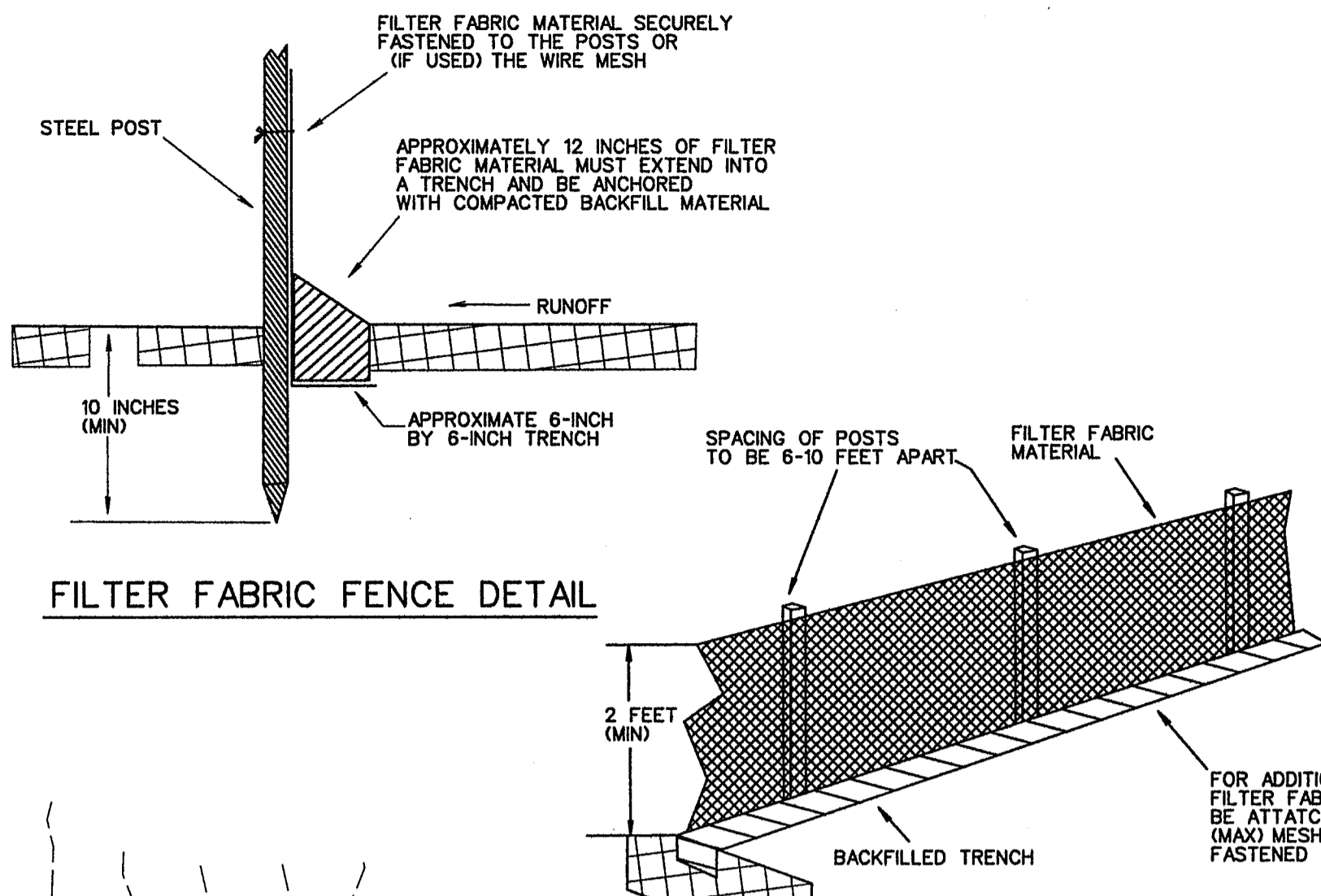
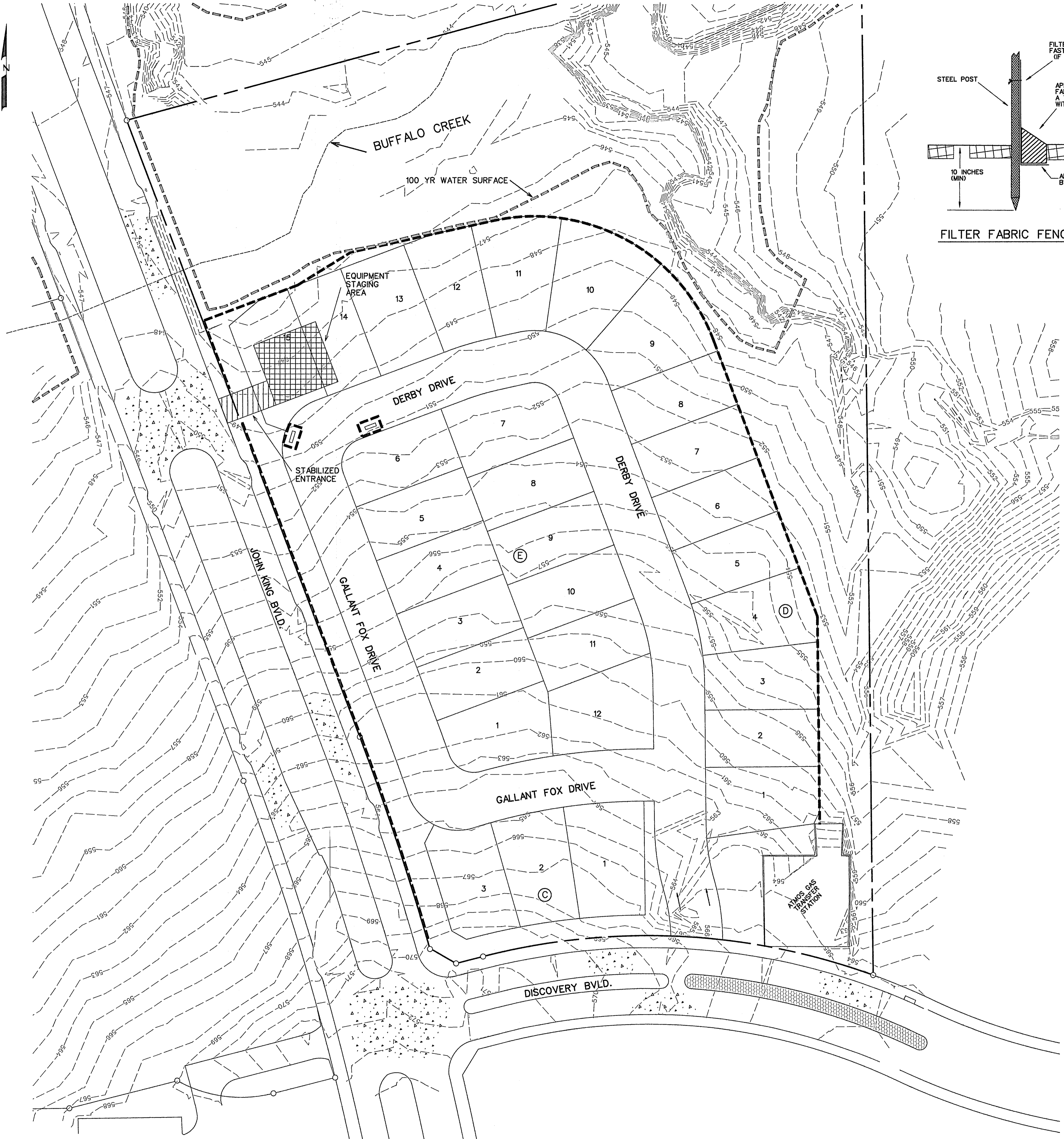
2. All walls 3' or taller shall require a signed/sealed set of engineered drawings. Wall engineer shall submit signed/sealed letter prior to acceptance stating that the walls were constructed per drawings.

3. All fill to be compacted to 95% std. density using a sheep's foot roller.



AS-BUILT MARCH 2017
INFORMATION PROVIDED
BY CONTRACTORS
(NOT FIELD VERIFIED)

1	REVISED PAD GRADES, GRADE BEAMS, ADDED WALL BLK C	3/10/16
NO.	REVISIONS	DATE
 CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBPE FIRM #5951		
DEVELOPMENT PLANS FOR ROCKWALL DOWNES PHASE 2 ROCKWALL, TEXAS		
GRADING PLAN		
DRAWN BY	DESIGNED BY	CHECKED BY
JOB NUMBER	DATE	SCALE:
14071	APRIL 2016	1"=50'
		SHEET NO.
		10 OF 12



- 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. 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.
 6. SILT FENCE SHALL REMAIN IN PLACE UNTIL RE-VEGETATION HAS BEEN COMPLETED.
 7. PAVING CONTRACTOR SHALL REMOVE TEMPORARY STABILIZED ENTRANCE.
 8. PRIOR TO CITY ACCEPTANCE THE PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY MUD OR SILT WHICH COLLECTS ON THE EXISTING AND NEW PAVEMENT.
 9. 75%-80% OF ALL DISTURBED AREA TO HAVE 1" TALL GRASS ESTABLISHED PRIOR TO CITY ACCEPTANCE.

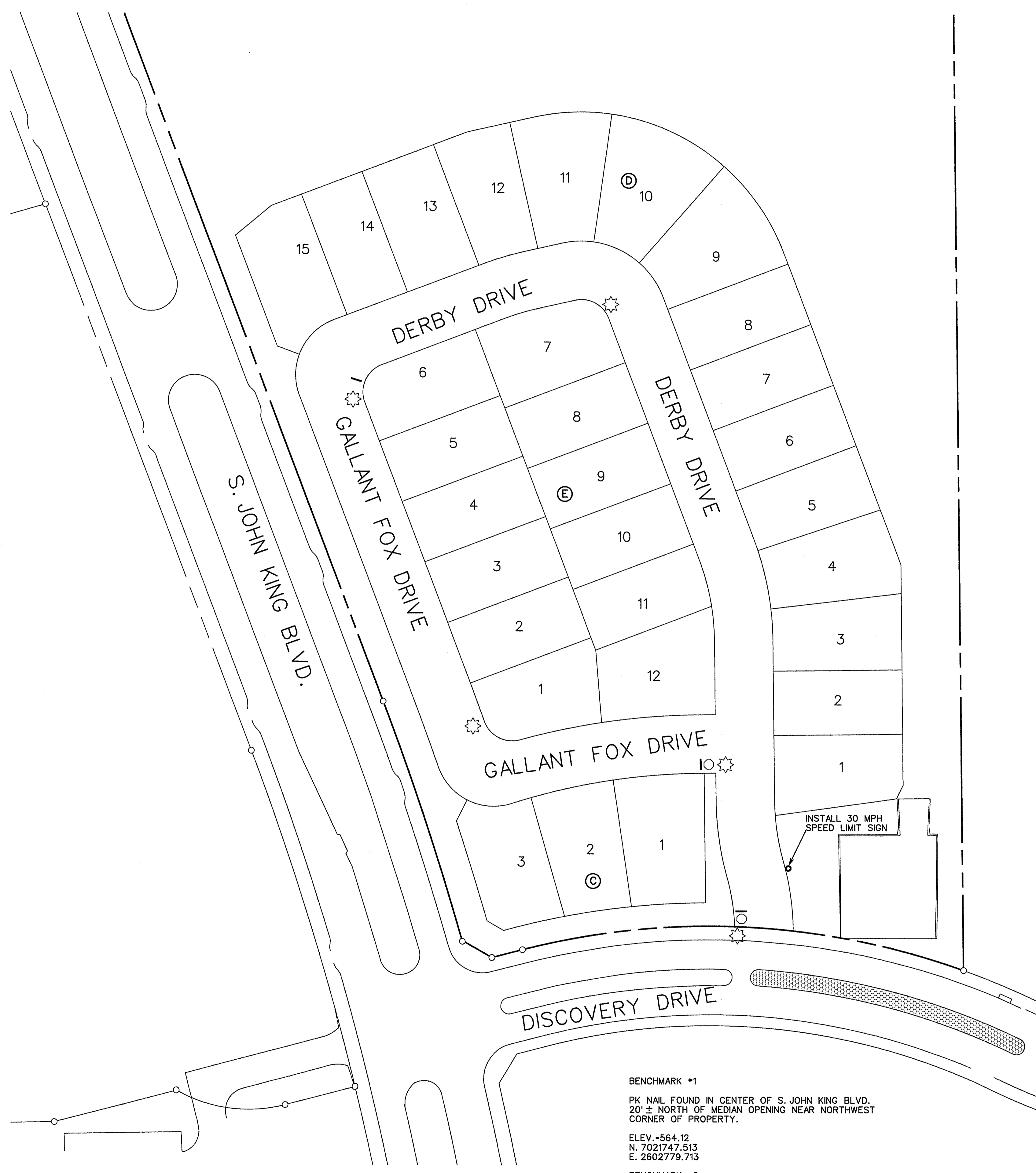
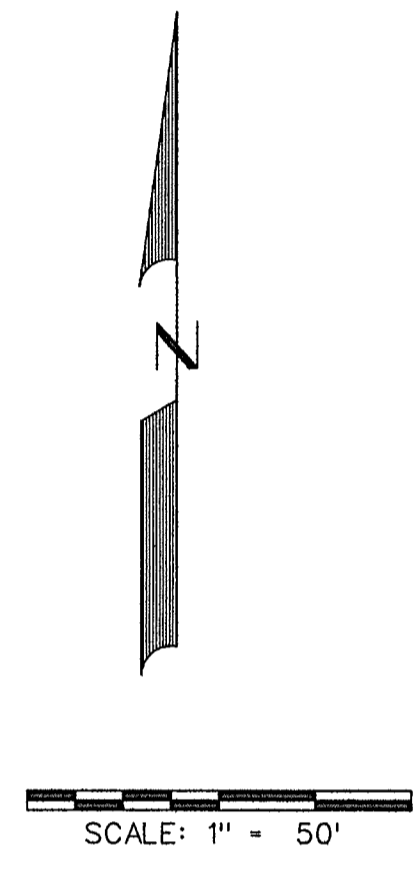
- LEGEND**
- SILT FENCE (BEFORE CONSTRUCTION) - - - - -
 - INLET PROTECTION [Symbol]

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

**DEVELOPMENT PLANS FOR
 ROCKWALL DOWNES
 PHASE 2
 ROCKWALL, TEXAS**

AS-BUILT MARCH 2017
 INFORMATION PROVIDED
 BY CONTRACTORS
 (NOT FIELD VERIFIED)

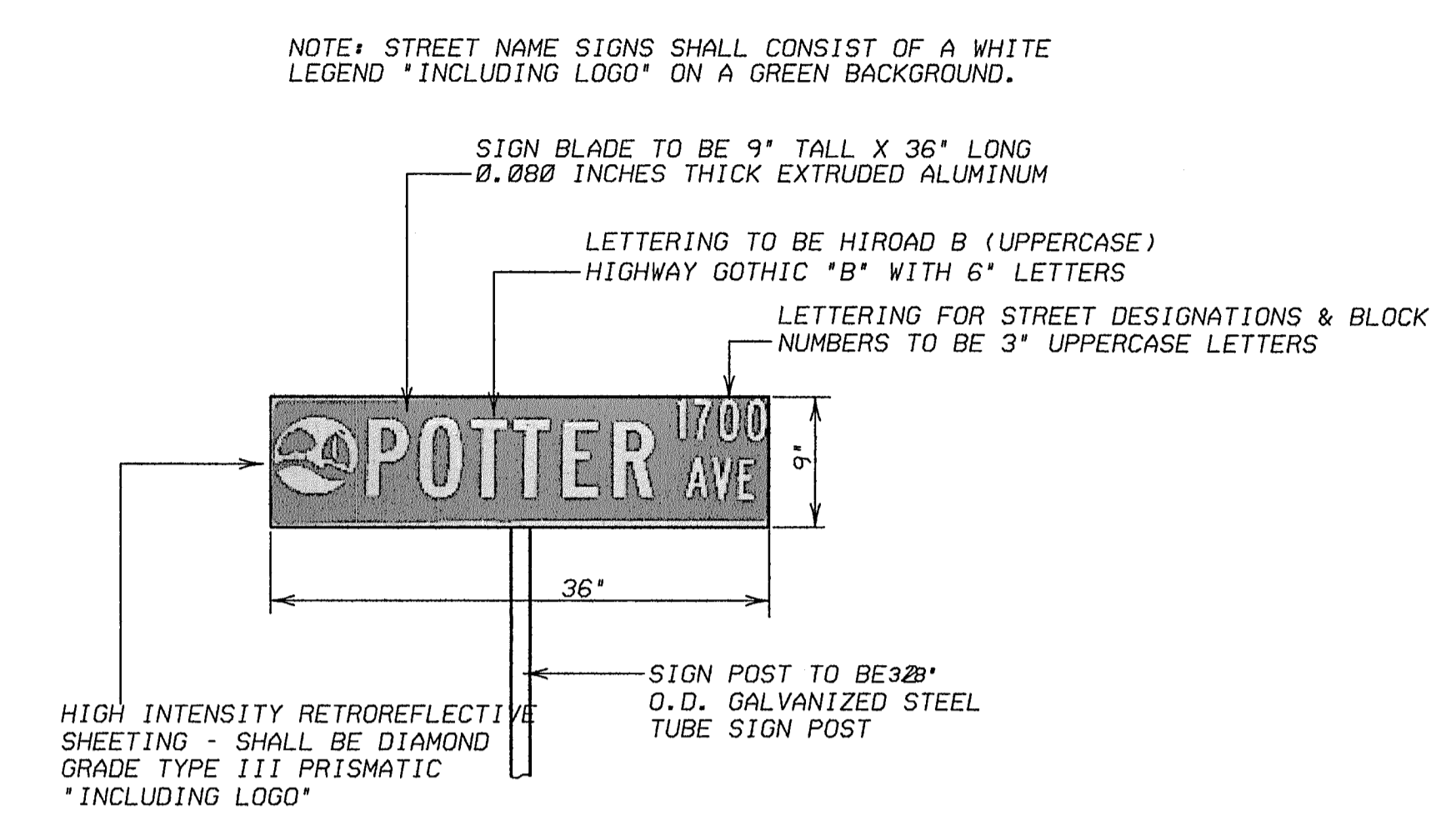
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE	11 OF 12
14071	APRIL 2016	1"=50'	



BENCHMARK *1
 PK NAIL FOUND IN CENTER OF S. JOHN KING BLVD.
 20' ± NORTH OF MEDIAN OPENING NEAR NORTHWEST
 CORNER OF PROPERTY.
 ELEV. -564.12
 N. 7021747.513
 E. 2602779.713

BENCHMARK *2
 "X" FOUND ON NORTH END OF TOP OF HEADWALL ON
 WEST SIDE OF S. JOHN KING BLVD. AT BUFFALO CREEK.
 ELEV. -550.82
 N. 7020725.306
 E. 2602982.310

INSTALL 30 MPH
 SPEED LIMIT SIGN



STREET SIGN DETAIL
 NOT TO SCALE

STREET SIGN NOTES

All signage installed shall comply with the current "Texas Manual on Uniform Traffic Control Devices" and the "Standard Highway Sign Designs for Texas".

The developer shall be responsible for furnishing and installing all regulatory, warning and street name signs and sign mounts in accordance with the approved engineering plans.

Block Numbers are required on all street name blades.

Street Name Blades shall be nine inch (9") tall extruded aluminum. The blades shall be 0.080 inches thick.

High Intensity Retro reflective Sheeting for Street, Regulatory, and Warning Signs - shall be high intensity diamond grade type III prismatic.

The Lettering for the street blades shall be HIROAD B with all uppercase fonts. "Highway Gothic B" with six-inch letters. Letters for abbreviated street designations shall be three inches (3") tall with all uppercase fonts (i.e., LN, PKWY, CT, etc.). Block numbers shall be three-inches (3") tall.

The street sign background shall be green and the legend shall be white.

The street sign blade must incorporate the current City of Rockwall logo.

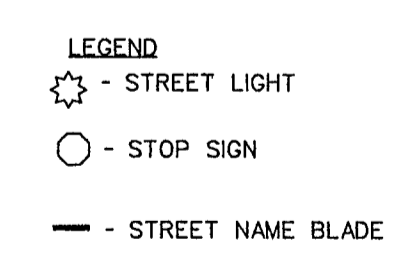
For a street with a cul-de-sac end, a standard W 14-2a shall be mounted over the street name blade.

Sign posts shall be 2 3/8" O.D. galvanized steel tube sign post with a galvanized finish.

Sign clamps and brackets shall be high strength aluminum.

STREET LIGHTS:
 Street lights shall be spaced at intervals no greater than 400 ft.

STREET SIGN LOGO:
 The City logo on the street sign blade shall incorporate the current City of Rockwall Logo. The logo shall consist of high intensity retroreflective sheeting which is diamond grade type III prismatic with white legend.



AS-BUILT MARCH 2017
 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 ROCKWALL DOWNS PHASE 2 ROCKWALL, TEXAS</p>			
<p>STREET SIGN AND LIGHT PLAN</p>			
DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE	
14071	APRIL 2016	1"=50'	12 OF 12