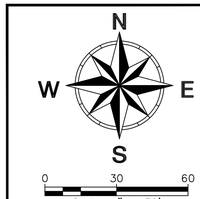
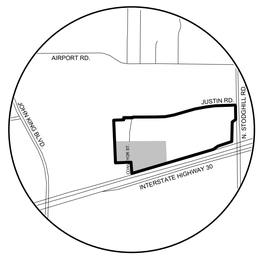


GRADING LEGEND

- EXISTING CONTOURS (629)
- PROP. CONTOURS (629)
- Ex. Spot Grade (629.50tc)
- PROP. TOP OF CURB (629.50TC) / PROP. TOP OF PAVEMENT (629.00TP)
- PROP. FINISHED GRADE (629.00G)
- FLOW ARROW
- GRADE BREAK



VICINITY MAP
NOT TO SCALE

BEFORE YOU DIG Texas 811

BENCH MARKS:

BM#1 - "X" cut on the most Westerly Northwest corner of a curb inlet, West curb line of F.M. Highway 3549, ±18.0 feet East of the East property line of Tract 2 and ±5.1 feet North of the North property line of Tract 2.

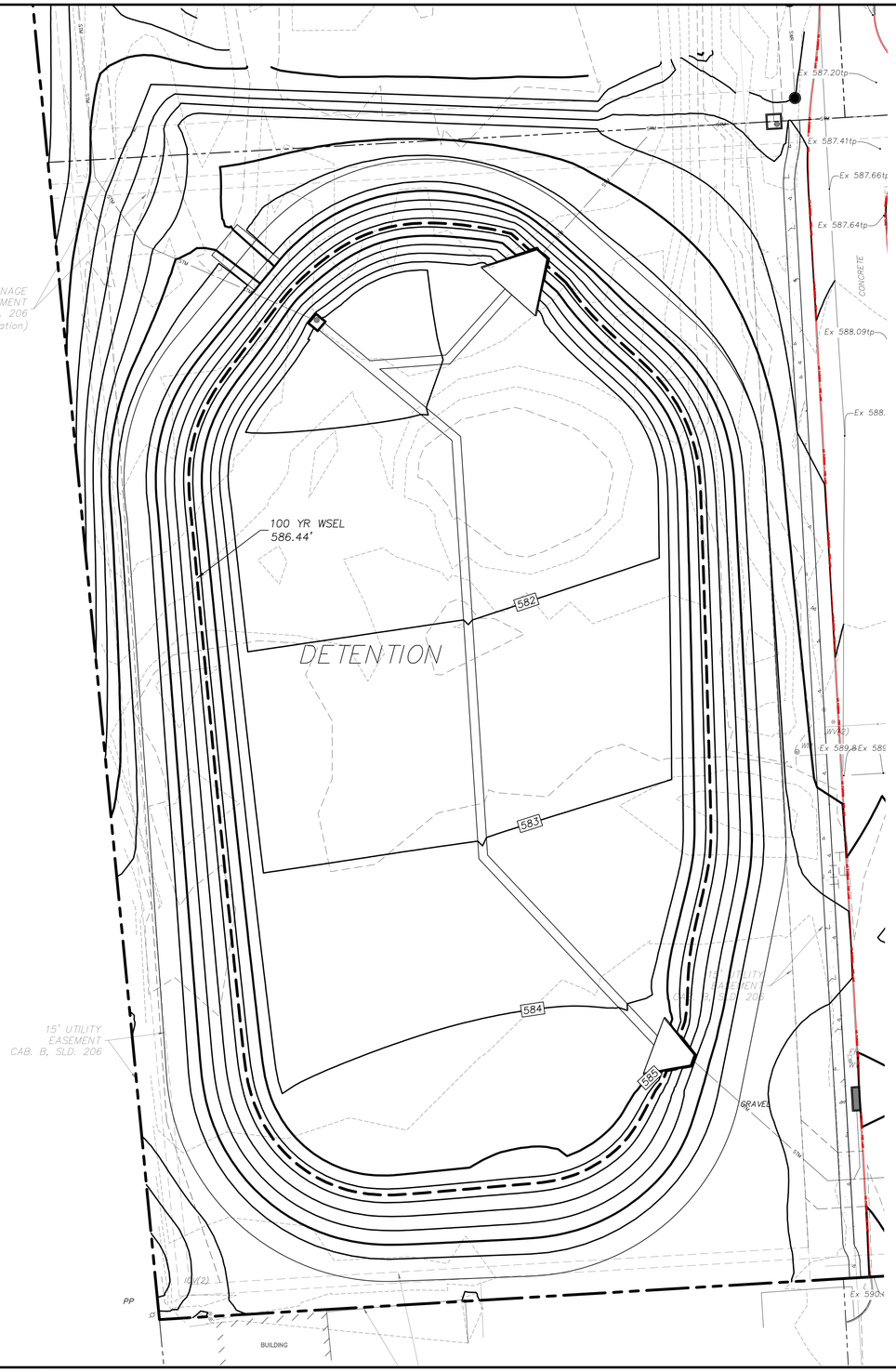
ELEVATION - 605.81 feet

BM#2 - "X" cut on the most Northerly Northwest corner of a curb inlet, West curb line of F.M. Highway 3549, ±81.2 feet East of the East property line of Tract 2 and ±27.3 feet North of the South property line of Tract 2.

ELEVATION - 593.26 feet

BM#3 - "X" cut on the most Northerly Northwest corner of a curb inlet, North curb line of Interstate Highway 30 (service road), ±10.9 feet South of the South property line and ±33.8 feet Northeast of the most Southerly Southwest corner of Tract 2.

ELEVATION - 587.31 feet



DETENTION POND CALCULATIONS Table 1

Storm Event	Existing Flow Rate						
100 Year	77.82 cfs						
MIN	I-100YR	C*	TOTAL AREA (ac)	TOTAL CFS	TOTAL FLOW	OUTFLOW	STORAGE
10	9.80	0.90	28.56	251.92	151150	46692	104458
15	9.00	0.90	28.56	231.35	208217	58365	149852
20	8.30	0.90	28.56	213.36	256030	70038	185992
30	6.90	0.90	28.56	177.37	319266	93384	225882
40	5.80	0.90	28.56	149.09	357825	116730	241095
50	5.00	0.90	28.56	128.53	385587	140076	245511
60	4.50	0.90	28.56	115.68	416434	163422	253012
70	4.00	0.90	28.56	102.82	431857	186768	245089
80	3.70	0.90	28.56	95.11	456535	210114	246421
90	3.50	0.90	28.56	89.97	485840	233460	252380
100	3.40	0.90	28.56	87.40	524398	256806	267592
110	3.20	0.90	28.56	82.26	542906	280152	262754
					Detention Storage Required (cubic feet) =		267,592
					Detention Storage Required (acre feet) =		6.14
					100 Year Water Surface Elevation =		586.47
					Pond Elevation Including 2 ft Freeboard =		588.47

100-YEAR EMERGENCY SPILLWAY CAPACITY CALCULATION

Channel Height	h	1	ft
Base	b	10	ft
Mannings	n	0.015	
Slope	S	1	%
Right Side Slope	zR	4	ft/ft
Left Side Slope	zL	4	ft/ft
Channel Area	Ch A	14.00	ft^2
Water Area	A	10.60	ft^2
Wetted Perimeter	Wp	16.62	ft
Hydraulic radius	R	0.637914	
Velocity	V	7.34	ft/s
Depth	d	0.802461	ft
Flow Rate	Q_{cap}	116.24	cfs
	Q100	77.82	cfs

AS–BUILT

THIS RECORD DRAWING IS COMPILATION OF A COPY OF THE SEALED ENGINEERING DRAWING FOR THIS PROJECT; MODIFIED BY ADDENDA, CHANGE ORDERS, AND INFORMATION FURNISHED BY THE CONTRACTOR. THE INFORMATION SHOWN ON THE RECORD DRAWINGS THAT WAS PROVIDED BY THE CONTRACTOR OR OTHERS NOT ASSOCIATED WITH THE DESIGN ENGINEER CANNOT BE VERIFIED FOR ACCURACY OR COMPLETENESS. THE ORIGINAL SEALED DRAWING ARE ON FILE AT THE OFFICES OF WINKELMANN AND ASSOCIATES, INC.

WINKELMANN AND ASSOCIATES, INC. — *04–20–2026* DATE

Pond Storage

Elevation	Contour Area	Storage (Incremental)	Storage (Cumulative)	Storage
(ft)	(sq-ft)	(cu-ft)	(cu-ft)	(ac-ft)
580.39	0.00	0.00	0.00	0.00
581	3,952.00	1976.00	1976.00	0.05
582	25,518.00	14735.00	16711.00	0.38
583	46,171.00	35844.50	52555.50	1.21
584	64,915.00	55543.00	108098.50	2.48
585	78,362.00	71638.50	179737.00	4.13
586	83,766.00	81064.00	260801.00	5.99
587	89,132.00	86449.00	347250.00	7.97
588	94,700.00	91916.00	439166.00	10.08
589	100,462.00	97581.00	536747.00	12.32
590	106,512.00	103487.00	640234.00	14.70
591	112,807.00	109659.50	749893.50	17.22

Storm Event	Q_{max}	WSE	STORAGE (cu-ft)	STORAGE (ac-ft)
100	77.82	586.47	267,592	6.14

Select County:	ROCKWALL
Enter C Value:	0.90
Enter Total Area:	28.562
Starting Flow Line:	580.39
Number of Storm Events:	5

Total Pond Area and Composite C value

Area #	Area (ac)	C Value	C*A
C-1	2.890	0.90	2.601
C-2	3.920	0.90	3.528
C-3	0.735	0.90	0.662
C-4	1.632	0.90	1.469
C-5	9.955	0.90	8.960
C-6	0.996	0.90	0.896
C-7	0.854	0.90	0.769
C-8	0.180	0.90	0.162
C-9	0.302	0.90	0.272
C-10	2.500	0.90	2.250
C-11	0.204	0.90	0.184
C-12	0.940	0.90	0.846
C-13	2.330	0.90	2.097
C-14	0.267	0.90	0.240
C-15	0.585	0.90	0.527
C-16	0.272	0.90	0.245
			0.000
			0.000
			0.000
			0.000
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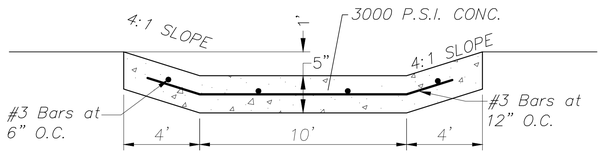
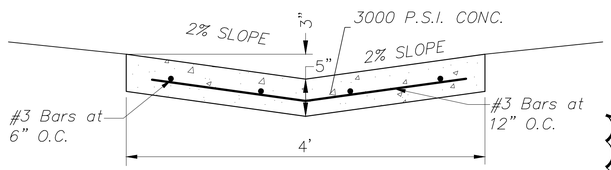
			0.000
Total Pond Drainage Area	28.562		25.706
		COMPOSITE C VALUE (total area/sum of C'A)	0.90



EMERGENCY SPILLWAY
N.T.S.



4' CONCRETE PILOT FLUME (INSIDE POND)
N.T.S.

NOTICES TO CONTRACTOR

EXISTING UNDERGROUND/BURIED PUBLIC, PRIVATE, AND FRANCHISE UTILITIES/FACILITIES AFFECT THIS SITE, AND ARE DEPICTED ON THE PLANS PER THE BEST AVAILABLE INFORMATION AT THE TIME THE PLANS WERE PRODUCED. WINKELMANN & ASSOC., INC. SHALL NOT BE RESPONSIBLE FOR KNOWING THE EXACT LOCATION OF ALL FACILITIES OR DEPICTING EXACT LOCATIONS OF SAID FACILITIES ON THE PLANS BEYOND WHAT IS STATED ABOVE.

CONTRACTOR(S) SHALL CALL "811" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING WORK ON THE SITE, AND SHALL NOT BEGIN ANY EXCAVATION OR DEMOLITION ACTIVITES UNTIL AFTER SAID FACILITIES HAVE BEEN MARKED AND/OR FLAGGED PER "811" OR THE FACILITY OWNERS.

CONTRACTOR(S) SHALL BE WHOLLY RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO SAID FACILITIES DUE TO WORK BEING DONE WITHOUT FOLLOWING THE PROCEDURES ABOVE.

No.	DATE	REVISION	APPROV.
1.			
2.			
3.			
4.			
5.			

LAST SAVED BY: CDUGOSA April 21, 2026

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
4750 HOLBERT PLAZA DRIVE, SUITE 215
DALLAS, TEXAS 75230 (972) 490-1999 FAX
Texas Engineer Registration No. F-10866-00
Texas Surveyor Registration No. 100866-00

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STATE OF TEXAS
WILLIAM R. WINKELMANN
120378
LICENSED PROFESSIONAL ENGINEER

02-25-2025
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY WILLIAM R. WINKELMANN, P.E. # 120378

DETENTION POND 1 PLAN

I–30 FRONTAGE RD & FM 3549
ROCKWALL, TX

83456

IKEA @ ROCKWALL HEIGHTS

C-05.04

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