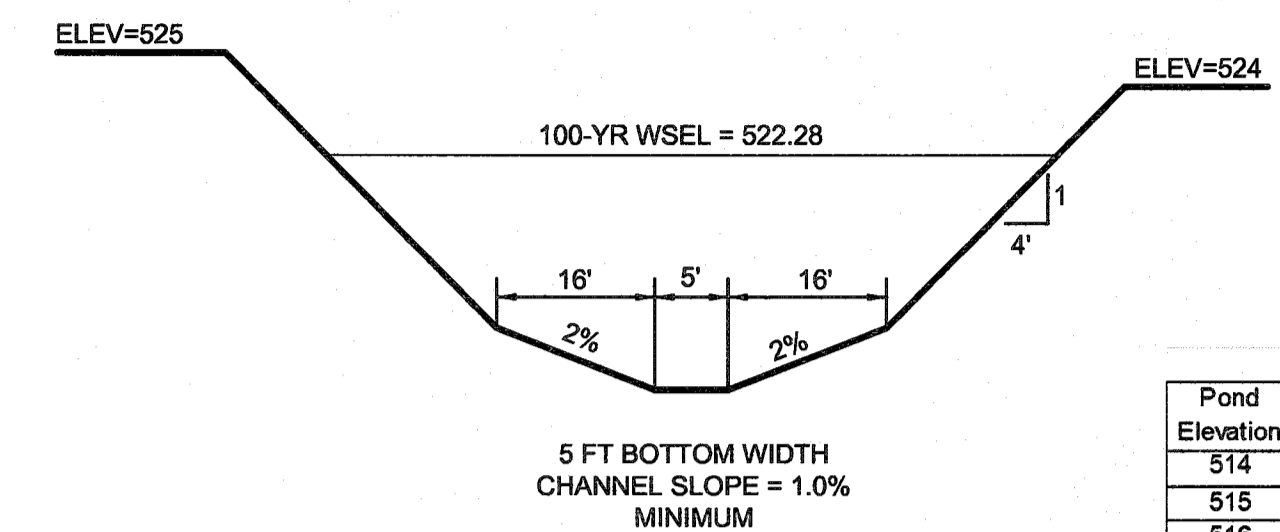


0 10 20 40
 (IN FEET)
 1 inch = 20 ft. Horiz.



CHANNEL SECTION A-A

Q₁₀₀ Line 16 = 51.6 cfs
 Q_{total} = 10.0 cfs (flow is routed into Line 9)
 Orifice Size - 13.5 inches
 Q_{100ORIFICE} = 10.0 cfs
 100-YR WSEL = 520.86 feet
 Required Volume = 1.64 ac-ft
 Volume Provided at elev 520.86 = 1.64 ac-ft

Pond Elevation	Area (acre)		Δh	Storage (acre-ft)	
	Lower	Upper		Storage	Cumulative
514	0	0.03	0.00	0.00	0.00
515	0.03	0.08	1.00	0.05	0.05
516	0.08	0.15	1.00	0.11	0.17
517	0.15	0.21	1.00	0.18	0.35
518	0.21	0.27	1.00	0.24	0.58
519	0.27	0.34	1.00	0.30	0.89
520	0.34	0.40	1.00	0.37	1.26
520.86					1.64
521	0.40	0.48	1.00	0.44	1.70

NOTE:

TEMPORARY CHANNEL WILL BE CREATED WITH PHASE 7B TO DIVERT FLOW TO THE SOUTH INTO LINE 9 THAT IS BUILT WITH PHASE 7A. THE REROUTING OF WATER IS NECESSARY DUE TO A CONFLICT IN GRADE WITH A GRADE TO DRAIN CHANNEL AND THE EX. 30" NTMWD WATER LINE. THE TEMPORARY DRAINAGE CHANNEL WILL BE REMOVED WITH THE CONSTRUCTION OF PHASE 7C AND OR PHASE 7D, AT WHICH TIME A PIPE CROSSING OF THE 30" NTMWD WATER LINE WILL BE INSTALLED.

MODIFIED RATIONAL METHOD DETENTION CALCULATIONS (100-YEAR)

Allowable Release Rate
 10.00 cfs

Actual Release Rate
 10.00 cfs

Required Storage Volume
 71247 cu. Ft
 2839 cu. Yd.
 1.64 ac-ft

Time to Peak (Peak)
 100 minutes

Duration (Min.)	Intensity (In./Hr.)	C	A (Acres)	Q (cfs)
10.0	9.80	0.500	10.53	51.6

Duration (Min.)	Intensity (In./Hr.)	C	A (Acres)	Q (cfs)	Inflow(cf)	Outflow(cf)	Storage(cf)	Storage(cy)
10	9.80	0.500	10.53	51.6	30958	6000	24958	924
15	9.00	0.500	10.53	47.4	42647	7500	35147	1302
20	8.30	0.500	10.53	43.7	52439	9000	43439	1609
30	6.90	0.500	10.53	36.3	65391	12000	53391	1977
40	5.80	0.500	10.53	30.5	73289	15000	58289	2159
50	5.00	0.500	10.53	26.3	78975	18000	60975	2258
60	4.50	0.500	10.53	23.7	82993	21000	64293	2381
70	4.00	0.500	10.53	21.1	88452	24000	64452	2387
80	3.70	0.500	10.53	19.5	93506	27000	66506	2463
90	3.50	0.500	10.53	18.4	98509	30000	69509	2574
100	3.30	0.500	10.53	17.4	104237	33000	71237	2599
110	2.90	0.500	10.53	15.3	100772	36000	64772	2399

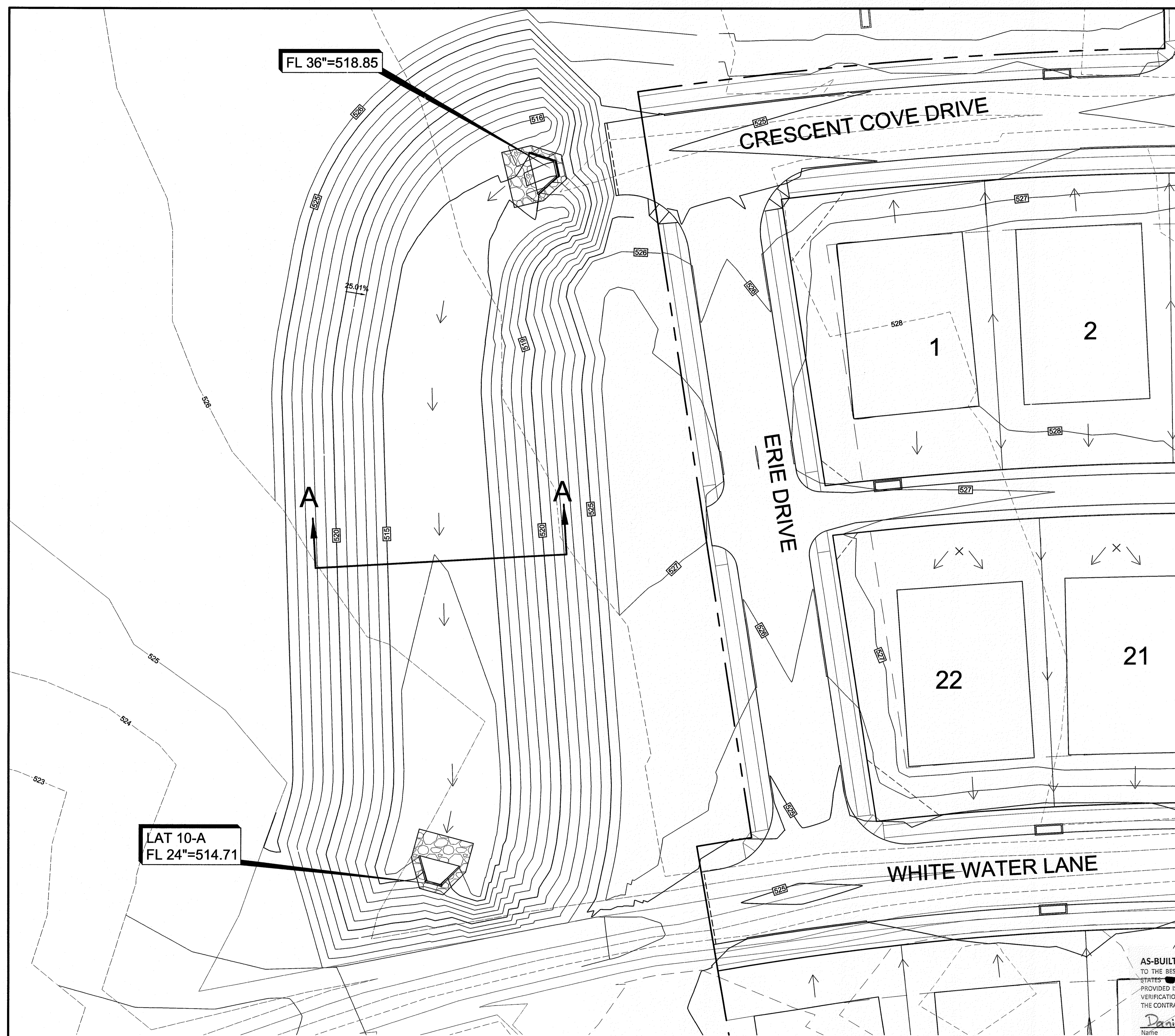
LEGEND

- ↘ DRAINAGE FLOW ARROW
- FP= 559.9 FINISHED PAD ELEVATION
- x 559.4 PROPOSED SPOT ELEVATION
- x 558.4 EXISTING SPOT ELEVATION
- 560--- EXISTING 5' CONTOURS
- 561--- EXISTING 1' CONTOURS
- 560--- PROPOSED 5' CONTOURS
- 561--- PROPOSED 1' CONTOURS
- DRIVEWAY

NOTE:
 SPOT ELEVATIONS INDICATING TOP OF NTMWD PIPELINE AND FINAL GROUND ELEVATION SHALL BE SHOWN ON GRADING PLANS. SURVEY INFORMATION BETWEEN IMPROVEMENTS AND NTMWD'S PIPELINE SHALL BE VERIFIED AT THE DESIGN STAGE AND INDICATED ON DRAWINGS.

NOTE:
 NO WALL / FOOTING SHALL BE CONSTRUCTED IN EASEMENT AND/OR RIGHT OF WAY

CONSTRUCTION SET 07-27-12
 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.



AS-BUILT DRAWINGS: 02/01/2013
 TO THE BEST OF JBI PARTNERS, INC. KNOWLEDGE HEREBY STATES THIS PLAN IS AS-BUILT. THE INFORMATION PROVIDED IS BASED ON CONSTRUCTION STAKING AND PAD VERIFICATION AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.
 Daniel Dewey 2-1-13
 Name Date

BENCHMARKS

- X-chiseled in CL of Alley East of Morningstar Drive within the third lot north of Midnight Pass. Elevation = 513.26
- PK Nail in CL of Caruth Lane & Alley intersection 150 feet +/- east of Morningstar Drive. Elevation = 491.68

NO.	REVISIONS DURING CONSTRUCTION	BY	DATE	NO.	SUBMITTALS	DATE

The seal appearing on this document was authorized by DANIEL DEWEY, P.E. 93961. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Practice Act.

7-27-12

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 www.jbipartners.com

Texas Registered Engineering Firm F-438

GRADING PLAN		PROJECT NO.
Caruth Lakes Phase 7B		HOE132
City of Rockwall, Texas		SHEET NO.
		13

Drawing: H:\Projects\HOE132B\HOE132B\PH7B.dwg Saved By: ddewey Save Time: 7/13/2012 2:50 PM
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