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P:\PR56211\Cadd\Modis\Cw\C-DR0001.dwg 7/17/2019 2:21:33 PM Mulvey, Kyle

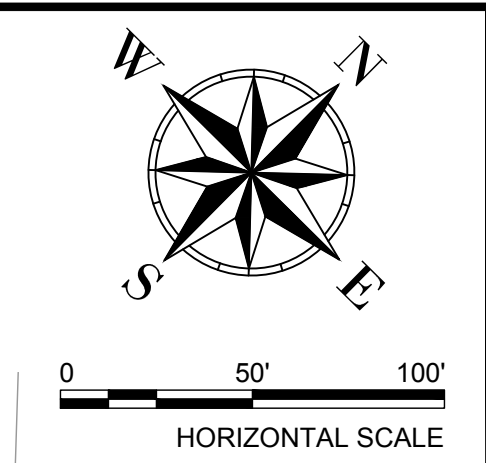
BASIN 'D' PROPOSED DRAINAGE AREA CALCULATIONS													
AREA ID	AREA (acres)	C	Tc (min)	I-5 (in/hr)	I-10 (in/hr)	I-25 (in/hr)	100.00 (in/hr)	Q-5 (cfs)	Q-10 (cfs)	Q-25 (cfs)	Q100 (cfs)	NOTES	
TO DETENTION POND D-1													
D-1	1.42	0.75	10	6.10	7.10	8.30	9.80	1.81	2.10	2.52	3.94	10.44	SHEET FLOW TO DETN. POND D-1
OS-6	0.64	0.90	10	6.10	7.10	8.30	9.80	0.99	1.16	1.41	1.68		EX. DETN. POND QRELEASE = 1.68 CFS TO POND D-1
OS-7	0.37	0.35	10	6.10	7.10	8.30	9.80	0.79	0.92	1.07	1.27		EX. COMMERCIAL DEV. SHEET FLOWS TO POND D-1
OS-4	0.50	0.90	10	6.10	7.10	8.30	9.80	2.73	3.17	3.71	4.38		EX. COMMERCIAL DEV. SHEET FLOWS TO POND D-1
TOTAL AREA	2.93							6.30	7.15	8.01	9.44	17.77	TOTAL FLOW TO DETENTION POND D-1
TOTAL AREA	1.61							4.61	5.24	6.19	7.33	10.44	TOTAL FLOW FROM OFFSITE TO DETENTION POND D-1
TOTAL AREA	1.42							6.50	7.56	8.94	10.44	10.44	TOTAL FLOW FROM ONSITE FLOW TO DETENTION POND D-1
TO DETENTION POND D-2													
D-2	1.77	0.75	10	6.10	7.10	8.30	9.80	3.10	3.43	4.12	4.85	13.01	SHEET FLOW TO DETN. POND D-2
D-3	1.41	0.75	10	6.10	7.10	8.30	9.80	4.66	5.22	6.19	7.39	10.38	FLOWS TO C.Y. AREA DRAINS TO POND D-2
D-4	0.56	0.75	10	6.10	7.10	8.30	9.80	2.58	3.00	3.51	4.15		SHEET FLOWS TO CURB INLET D-4 TO POND D-2
D-5	0.38	0.75	10	6.10	7.10	8.30	9.80	1.76	2.05	2.40	2.83		SHEET FLOWS TO CURB INLET D-5 TO POND D-2
D-6	0.25	0.75	10	6.10	7.10	8.30	9.80	1.15	1.34	1.56	1.85		SHEET FLOWS TO CURB INLET D-6 TO POND D-2
D-7	1.72	0.75	10	6.10	7.10	8.30	9.80	7.87	9.16	10.71	12.85		SHEET FLOWS TO CURB INLET D-7 TO POND D-2
D-8	2.03	0.75	10	6.10	7.10	8.30	9.80	9.28	10.80	12.63	14.91		SHEET FLOWS TO CURB INLET D-8 TO POND D-2
D-9	0.44	0.75	10	6.10	7.10	8.30	9.80	2.02	2.35	2.74	3.24		SHEET FLOWS TO CURB INLET D-9 TO POND D-2
D-10	0.44	0.75	10	6.10	7.10	8.30	9.80	3.83	4.46	5.21	6.15		SHEET FLOWS TO CURB INLET D-10 TO POND D-2
TOTAL AREA	9.41							43.06	50.11	58.68	69.17	103.72	TOTAL FLOW TO DETENTION POND D-2 (NO OFFSITE FLOW)
BYPASS FLOW													
D-0	0.02	0.75	10	6.10	7.10	8.30	9.80	0.11	0.13	0.15	0.18		TO DROP INLET D-0 BYPASS POND TO DESIGN PNT. 4
D-11	0.15	0.75	10	6.10	7.10	8.30	9.80	0.89	0.90	0.93	1.10		TO DROP INLET D-11 BYPASS POND TO DESIGN PNT. 4
OS-1	0.16	0.80	10	6.10	7.10	8.30	9.80	0.78	0.91	1.08	1.10		EX. DETN. POND QRELEASE = 1.1 CFS TO DESIGN PNT. 4
OS-2	0.41	0.90	10	6.10	7.10	8.30	9.80	2.25	2.62	3.06	3.62		EX. COMMERCIAL DEV. SHEET FLOWS TO DESIGN PNT. 4
OS-3	0.37	0.90	10	6.10	7.10	8.30	9.80	1.37	1.62	1.85	2.01		EX. DETN. POND QRELEASE = 2.01 CFS TO DESIGN PNT. 4
OS-5	3.02	0.35	20	4.90	5.90	6.60	8.30	5.18	6.24	6.98	8.78		BYPASS PIPE FLOW THROUGH SITE TO DESIGN PNT. 4
TOTAL AREA	4.13							10.38	12.31	14.03	16.78	16.78	TOTAL FLOW TO BYPASS TO DESIGN PNT. 4
TOTAL AREA	16.48							64.43	75.24	87.65	103.72	103.72	TOTAL FLOW TO DESIGN PNT. 4

BASIN 'A' PROPOSED DRAINAGE AREA CALCULATIONS													
AREA ID	AREA (acres)	C	Tc (min)	I-5 (in/hr)	I-10 (in/hr)	I-25 (in/hr)	100.00 (in/hr)	Q-5 (cfs)	Q-10 (cfs)	Q-25 (cfs)	Q100 (cfs)	NOTES	
A-1	0.33	0.75	10	6.10	7.10	8.30	9.80	1.49	1.73	2.02	2.39		SHEET FLOW TO EX. CURB INLET
A-2	0.18	0.75	10	6.10	7.10	8.30	9.80	0.81	0.94	1.10	1.30		SHEET FLOW TO TOWNSEND DRIVE
TOTAL AREA	0.50							2.30	2.67	3.13	3.69		TOTAL FLOW TO DESIGN PNT. 1
BASIN 'B' PROPOSED DRAINAGE AREA CALCULATIONS													
AREA ID	AREA (acres)	C	Tc (min)	I-5 (in/hr)	I-10 (in/hr)	I-25 (in/hr)	100.00 (in/hr)	Q-5 (cfs)	Q-10 (cfs)	Q-25 (cfs)	Q100 (cfs)	NOTES	
B-1	0.20	0.75	10	6.10	7.10	8.30	9.80	0.91	1.05	1.23	1.46		SHEET FLOW OFF-SITE TO DROP INLET
TOTAL AREA	0.20							0.91	1.05	1.23	1.46		TOTAL FLOW TO DESIGN PNT. 2
BASIN 'C' PROPOSED DRAINAGE AREA CALCULATIONS													
AREA ID	AREA (acres)	C	Tc (min)	I-5 (in/hr)	I-10 (in/hr)	I-25 (in/hr)	100.00 (in/hr)	Q-5 (cfs)	Q-10 (cfs)	Q-25 (cfs)	Q100 (cfs)	NOTES	
C-1	0.84	0.75	10	6.10	7.10	8.30	9.80	3.85	4.48	5.24	6.19		SHEET FLOW OFF-SITE TO EX. FIRELANE
TOTAL AREA	0.84							3.85	4.48	5.24	6.19		TOTAL FLOW TO DESIGN PNT. 3

NOTES:
 1. LOT 1, BLOCK 1 VILLAGE GREEN RESIDENCE AT ROCKWALL ADDITION TO BE DEVELOPED AT A LATER TIME.
 2. DETENTION PONDS DESIGNED TO HANDLE STORM WATER FROM BOTH PROPOSED LOTS.
 3. DETENTION IS ONLY PROVIDED FOR ONSITE DEVELOPMENT. EXISTING OFFSITE FLOW IS INCLUDED IN DESIGN CALCULATIONS.

DESIGN POINT 3:
 EX. OFFSITE FIRE LANE.
 EX. TOTAL FLOW = 6.21 CFS
 PROP. FLOW = 6.19 CFS

DESIGN POINT 1:
 EX. OFFSITE SHEET FLOW TO NE (EVENTUALLY FLOWS TO CURB INLET).
 EX. Q100 = 3.83 CFS
 PROP. Q100 = 3.69 CFS



DESIGN POINT 4:
 EX. 4'X4' DROP INLET W/ 30" RCP.
 EX. 30" RCP CAPACITY = 40.00 CFS

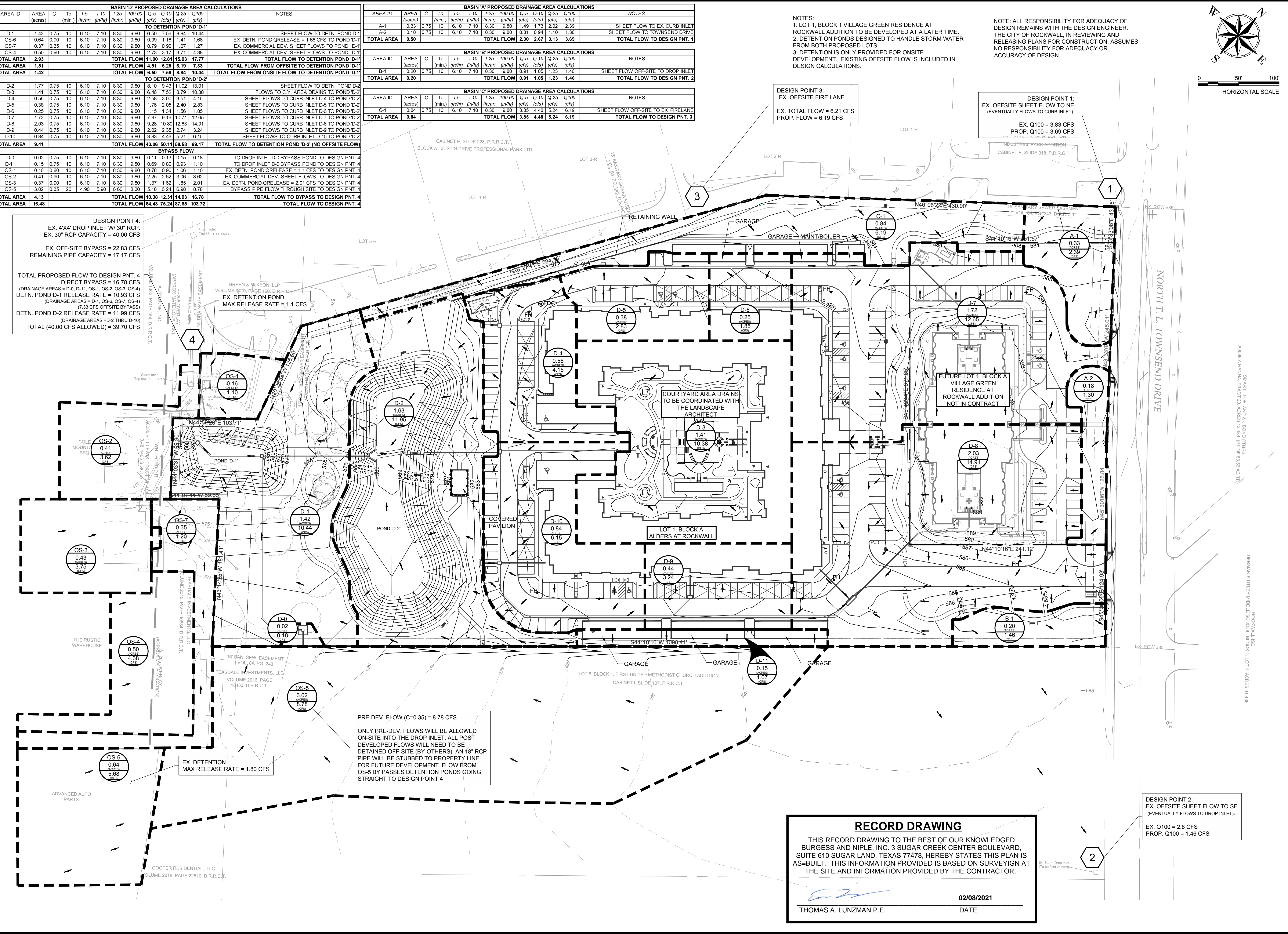
EX. OFF-SITE BYPASS = 22.83 CFS
 REMAINING PIPE CAPACITY = 17.17 CFS

TOTAL PROPOSED FLOW TO DESIGN PNT. 4
 DIRECT BYPASS = 16.78 CFS
 (DRAINAGE AREAS = D-0, D-11, OS-1, OS-2, OS-3, OS-4)
 DETN. POND D-1 RELEASE RATE = 10.93 CFS
 (DRAINAGE AREAS = D-1, OS-6, OS-7, OS-4)
 (7.33 CFS OFFSITE BYPASS)
 DETN. POND D-2 RELEASE RATE = 11.99 CFS
 (DRAINAGE AREAS = D-2 THRU D-10)
 TOTAL (40.00 CFS ALLOWED) = 39.70 CFS

PRE-DEV. FLOW (C=0.35) = 8.78 CFS

ONLY PRE-DEV. FLOWS WILL BE ALLOWED ON-SITE INTO THE DROP INLET. ALL POST DEVELOPED FLOWS WILL NEED TO BE DETAINED OFF-SITE (BY-OTHERS). AN 18" RCP PIPE WILL BE STUBBED TO PROPERTY LINE FOR FUTURE DEVELOPMENT. FLOW FROM OS-5 BY PASSES DETENTION PONDS GOING STRAIGHT TO DESIGN POINT 4

EX. DETENTION
 MAX RELEASE RATE = 1.80 CFS



RECORD DRAWING

THIS RECORD DRAWING TO THE BEST OF OUR KNOWLEDGED BURGESS AND NIPLE, INC. 3 SUGAR CREEK CENTER BOULEVARD, SUITE 610 SUGAR LAND, TEXAS 77478, HEREBY STATES THIS PLAN IS AS-BUILT. THIS INFORMATION PROVIDED IS BASED ON SURVEIGN AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

DATE: 02/08/2021

THOMAS A. LUNZMAN P.E.

DESIGN POINT 2:
 EX. OFFSITE SHEET FLOW TO SE (EVENTUALLY FLOWS TO DROP INLET).
 EX. Q100 = 2.8 CFS
 PROP. Q100 = 1.46 CFS

BURGESS & NIPLE
 10701 CORPORATE DR., SUITE 118
 STAFFORD, TEXAS 77477
 PHONE: (281) 980-7705
 TBE FIRM REGISTRATION NO. F-10884

DRAINAGE AREA MAP (POST)

ALDERS AT ROCKWALL
 SENIOR INDEPENDENT LIVING
 COMMUNITY

NO.	REVISIONS	DATE	CHK
1	UPDATE WATERLINE LAYOUT	02/21/19	TAL
2	MINDY HUDZON COMMENTS	05/17/19	TAL
3	REV. TO SIDEWALKS & COURTYARD (STORM) PER LANDSCAPE	07/17/19	KTM

DATE: 7/17/19
 THOMAS A. LUNZMAN
 122259
 PROFESSIONAL ENGINEERING

JOB NUMBER: 56211
 DESIGNED BY: TAL
 DRAWN BY: NRM/TAL
 APPROVED BY: TAL
 CHECKED BY: JTR
 DATE: 01/29/2019
 SCALE: 1" = 50'
 SHEET NUMBER: C.11 OF 23