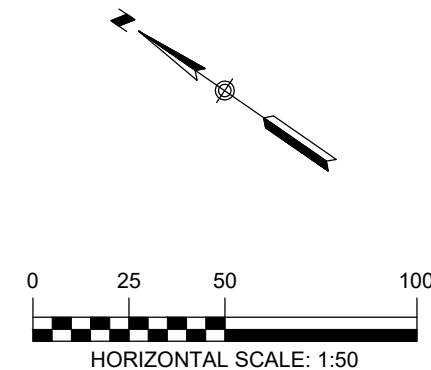


SEE SHEET C1.03 OF NISSAN WAY EXTENSION (PI2019-0080) FOR ULTIMATE DRAINAGE AREA MAP



- LEGEND**
- 700 — EXISTING CONTOURS
 - 700 — PROPOSED CONTOURS
 - B.L. BUILDING SETBACK LINE
 - U.E. UTILITY EASEMENT
 - D.E. DRAINAGE EASEMENT
 - — DRAINAGE AREA
 - TC — TIME OF CONCENTRATION
 - A-1 POINT OF CONCENTRATION
 - DRAINAGE FLOW DIRECTION
 - DA ACRES DRAINAGE AREA LABEL
 - A — BEGIN SHEET FLOW
 - B — TRANSITION FROM SHEET FLOW TO SHALLOW CONCENTRATED FLOW
 - C — TRANSITION FROM SHALLOW CONCENTRATED FLOW TO CHANNEL FLOW
 - D — TRANSITION FROM UNPAVED TO PAVED SHALLOW CONCENTRATED FLOW
 - E — TRANSITION FROM SHEET FLOW TO CHANNEL FLOW

DRAINAGE AREA MAP CAN BE REFERENCED ON SHEET C1.03 OF NISSAN WAY EXTENSION CIVIL CONSTRUCTION DOCUMENTS (PI2019-0080)

Table 5 - Existing to Ultimate Comparison					
Point of Concentration	Drainage Area	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
Ex B	Ex B	7.06	17.53	23.80	31.72
B	Ult B	16.15	31.54	40.34	51.35
Proposed is Less Than or Equal to Existing		NO	NO	NO	NO

Table 3 - Ultimate Conditions Hydrology Calculations - City of New Braunfels								
Point of Concentration	Drainage Area	Area	T _c	CN	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
A1a	Ult A1a	43.27	74.13	90.15	52.18	107.94	139.97	179.94
A1b	Ult A1b	1.93	36.79	95.10	4.34	8.24	10.47	13.27
A1c	Ult A1c	2.20	36.79	94.84	4.92	9.36	11.91	15.10
A1	Ult A1a+A1b+A1c	45.47	74.13	90.38	55.21	113.79	147.43	189.40
A2b	Ult A2b	0.41	14.34	96.78	1.43	2.71	3.45	4.36
A2a	Ult A2a+A2b	2.72	14.34	95.24	9.59	18.13	23.03	29.17
A2	Ult A2a+A2b+A2c	3.52	52.43	94.73	6.12	11.69	14.88	18.88
B1a	Ult B1a	0.27	17.88	93.00	0.82	1.60	2.05	2.61
B1b	Ult B1b	0.21	10.00	93.00	0.77	1.50	1.92	2.44
B2a	Ult B2a	0.33	10.00	93.00	1.21	2.36	3.02	3.84
B2b	Ult B2b	0.36	10.00	93.00	1.31	2.55	3.25	4.14
B2c	Ult B2c	0.28	11.31	93.00	0.98	1.90	2.42	3.08
B2d	Ult B2d	0.35	10.00	93.00	1.28	2.50	3.20	4.06
B2e	Ult B2e	0.32	17.85	93.00	2.00	3.90	4.99	6.35
B2f	Ult B2f	0.63	20.77	93.00	1.82	3.54	4.54	5.77
B3a	Ult B3a	0.32	30.15	93.00	0.76	1.48	1.90	2.41
B3b	Ult B3b	0.32	25.58	93.00	0.83	1.62	2.07	2.64
B3c	Ult B3c	0.32	30.15	93.00	0.76	1.48	1.90	2.41
B3d	Ult B3d	0.32	25.58	93.00	0.81	1.58	2.03	2.59
B3e	Ult B3e	1.33	47.04	93.00	2.36	4.63	5.93	7.56
B3f	Ult B3f	0.44	14.10	93.00	1.47	2.87	3.67	4.66
B3g	Ult B3g	1.55	12.01	93.00	5.41	10.52	13.45	17.10
B3h	Ult B3h	0.38	10.00	93.00	1.38	2.68	3.43	4.36
B4a	Ult B4a	1.72	10.73	93.00	6.18	12.02	15.37	19.55
B4b	Ult B4b	0.28	63.42	93.00	0.41	0.80	1.03	1.31
B4c	Ult B4c	0.23	52.52	93.00	0.38	0.75	0.96	1.22
B	Ult B	9.96	63.42	93.00	16.15	31.54	40.34	51.35

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

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LICENSED PROFESSIONAL ENGINEER
Chris Van Heerde, P.E.

07/29/2020

ULTIMATE DRAINAGE
AREA MAP INSET
VANGUARD FARMS APARTMENTS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JULY 2020
DRAWN BY: LB
DESIGNED BY: JMM
REVIEWED BY: CVH
HMT PROJECT NO.: 323.001

SHEET
C3.4