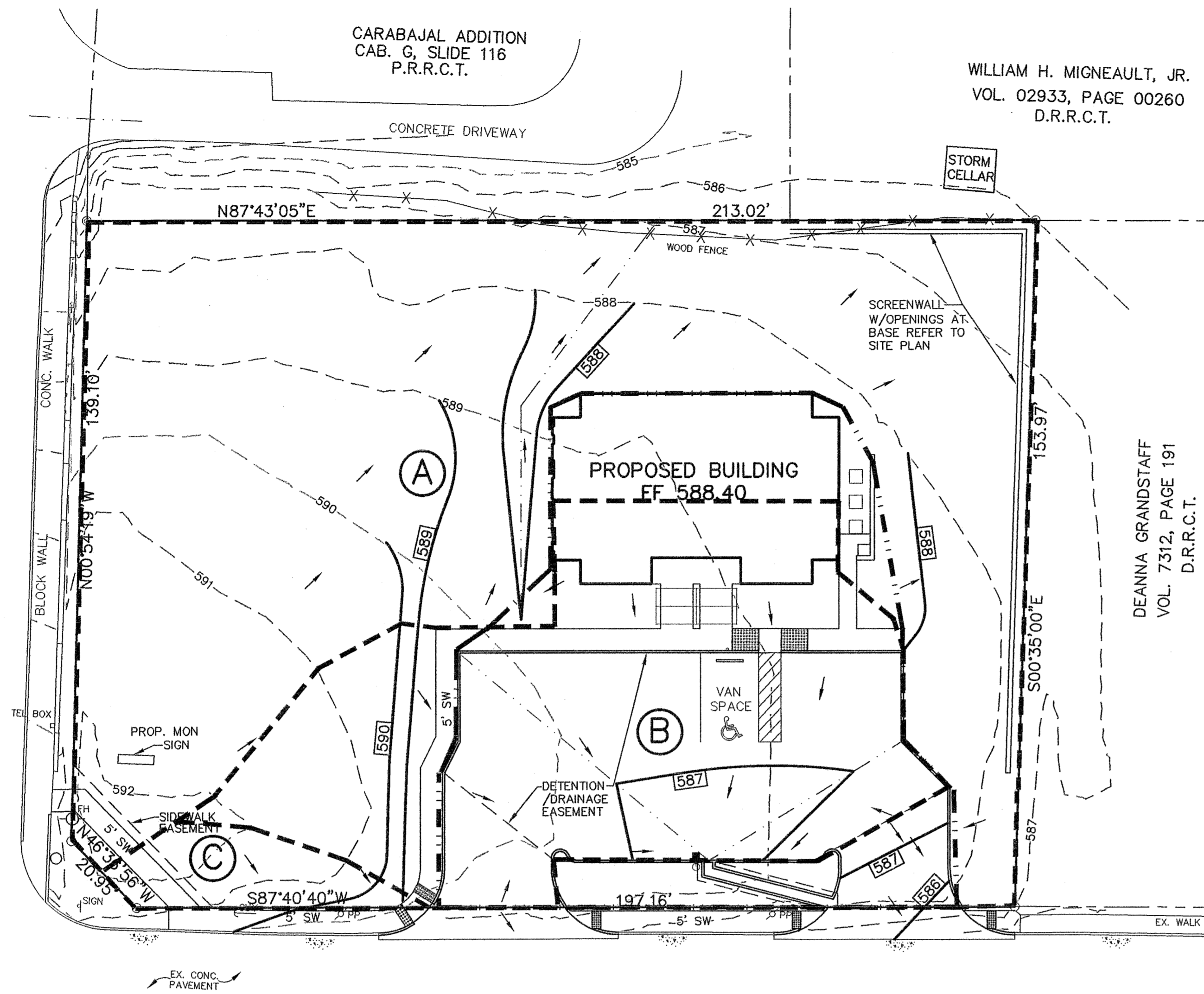


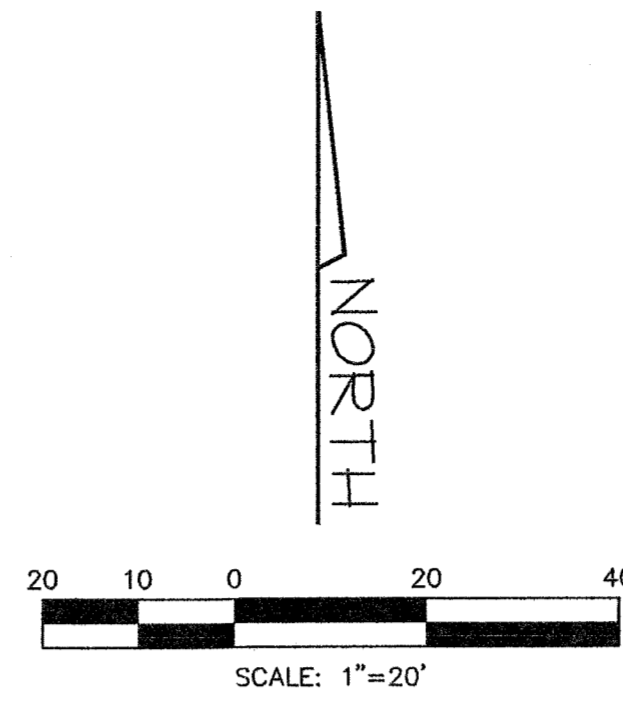
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STATE HWY. NO. 205
S. GOLIAD STREET
(VARIABLE WIDTH R.O.W.)



WILLIAM H. MIGNEAULT, JR.
VOL. 02933, PAGE 00260
D.R.R.C.T.

DEANNA GRANDSTAFF
VOL. 7312, PAGE 191
D.R.R.C.T.



STORM WATER RUNOFF CALCULATIONS

AREA NO.	ACRES	TC (min)	"c"	"100" (IN./HR.)	"Q _{100"} (cfs)	DISCHARGE TO
A*	0.49	10	0.9	9.8	4.3	ADJACENT PROPERTY
B	0.23	10	0.9	9.8	2.0	DETENTION ST MARY ST
C*	0.02	10	0.9	9.8	0.2	ST MARY ST

* - INDICATES AREAS TO REMAIN GRASS AND UNDEVELOPED

LEGEND

- ▬▬▬▬▬▬ AREA FOR DETENTION CALCULATION
- ▬▬▬▬ DRAINAGE AREA BOUNDARY
- Ⓐ DRAINAGE AREA DESIGNATION
- 565— EXISTING CONTOUR
- ▬▬▬▬ PROPOSED CONTOUR

DETENTION CALCULATIONS

Undeveloped Discharge
Area = 0.24 Acres
Cres = 0.50
1100 = 9.8
TC = 10 min
Q(undeveloped) = 1.18 cfs

Storm Duration calculations CA = (0.9)(0.24) = 0.22

10min = 9.8	Q = 2.12
20min = 8.3	Q = 1.79
30min = 6.9	Q = 1.49
40min = 5.8	Q = 1.25
50min = 5.0	Q = 1.08
60min = 4.5	Q = 0.97

Volume Determination

10min	10 x 2.12 x 60	= 1272
	0.5 x 20 x 1.18 x 60	= 708
		564 c.f.
20min	20 x 1.79 x 60	= 2148
	0.5 x 30 x 1.18 x 60	= 1062
		1086 c.f.
30min	30 x 1.49 x 60	= 2882
	0.5 x 40 x 1.18 x 60	= 1416
		1266 c.f. *
40min	40 x 1.25 x 60	= 3000
	0.5 x 50 x 1.18 x 60	= 1770
		1230 c.f.
50min	50 x 1.08 x 60	= 3240
	0.5 x 60 x 1.18 x 60	= 2124
		1116 c.f.

* Volume Required: 1266 cf
Volume Provided: 1585 cf

RELEASE RATE CALCULATION

STORM EVENT	VOLUME REQ.	ALLOWABLE DISCHARGE	ACTUAL DISCHARGE
5 yr	726	0.73 cfs	0.5 cfs
10 yr	780	0.91 cfs	0.85 cfs
25 yr	978	0.98 cfs	0.89 cfs
100 yr	1,266	1.18 cfs	1.19 cfs

DISCHARGE CALCULATION 100 YR

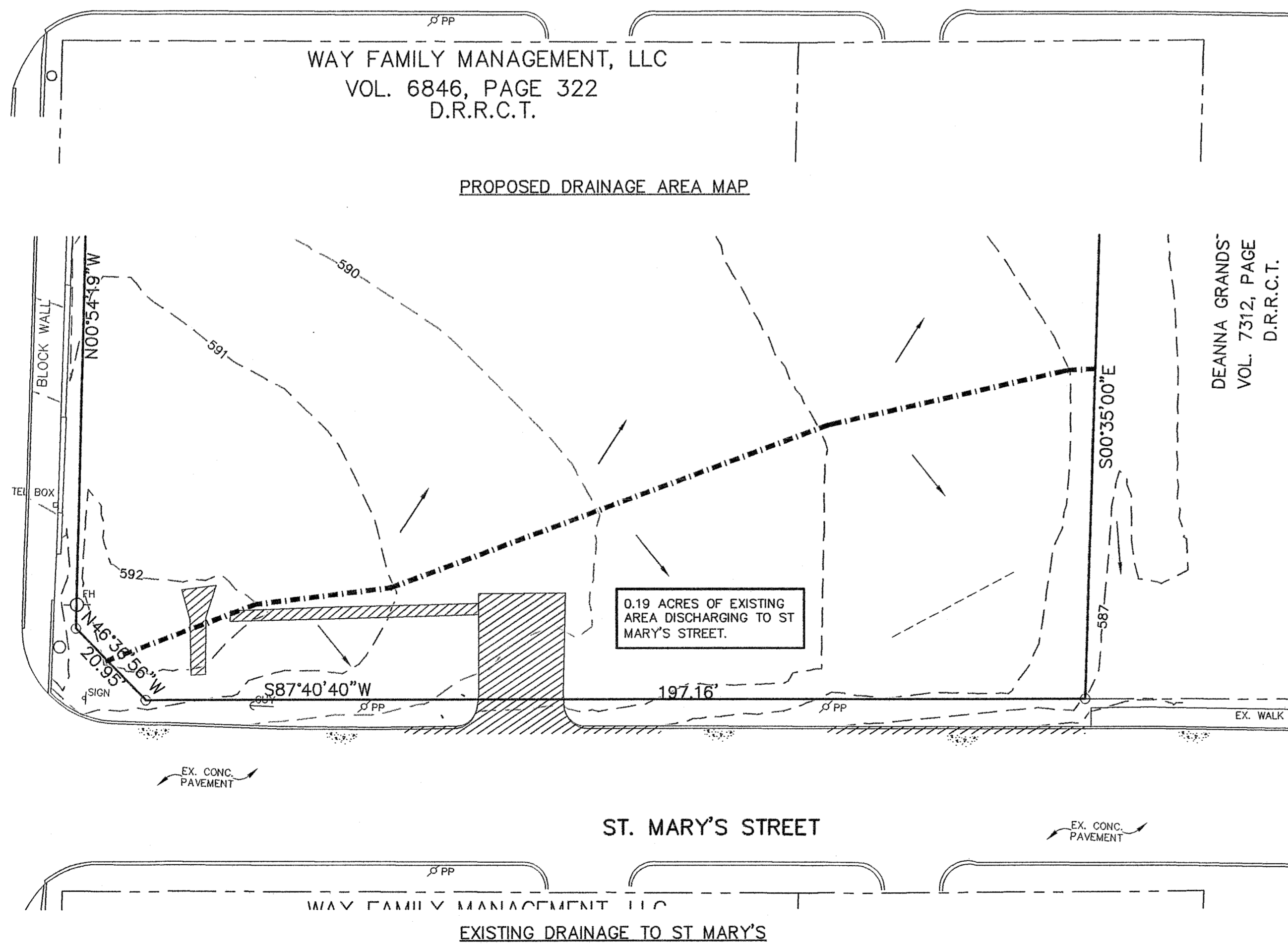
$$Q = CA / 2gH$$

$$Q = (0.63)(0.26) / (2)(32.2)(0.80)$$

$$Q = 1.18 \text{ cfs}$$

BENCHMARK: CENTER OF SANITARY SEWER MANHOLE COVER LOCATED IN THE INTERSECTION OF ST MARY ST. & BARNES ST, APPROXIMATELY 135 FEET EAST OF EAST PROPERTY CORNER
ELEV. 581.92

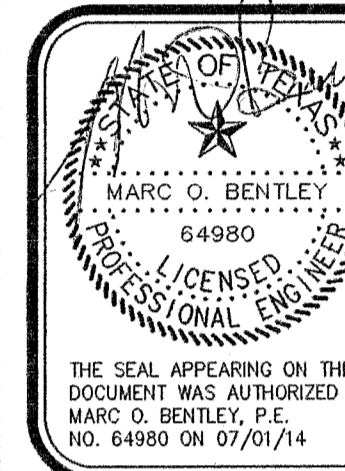
STATE HWY. NO. 205
S. GOLIAD ST
(VARIABLE WIDTH R.O.)



WAY FAMILY MANAGEMENT, LLC
VOL. 6846, PAGE 322
D.R.R.C.T.

DEANNA GRANDS
VOL. 7312, PAGE
D.R.R.C.T.

1855 EMERALD BAY
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Bentley
ENGINEERING, INC.
FIRM REG. NO. 674



DRAINAGE AREA MAP
ALBRIGHT, HILL & SUMPTER, PC
CITY OF ROCKWALL, TEXAS

RECORD DRAWING

No.	Date	Revision

Scale: 1"=30'
File Name: AHSITE
Date: APR 2014
Project No: 2014104

Sheet **C2**

RECORD DRAWING
TO THE BEST OF OUR KNOWLEDGE, BENTLEY ENGINEERING, INC. HEREBY STATES THAT THIS PLAN IS AS-BUILT. THE INFORMATION PROVIDED IS BASED ON SURVEYING PERFORMED AT THE SITE BY RUDY RANGEL, R.P.L.S. AND THE INFORMATION PROVIDED BY THE CONTRACTOR.
DATE: JUNE 18, 2015
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.