

STORMWATER MANAGEMENT NOTE:

THIS DEVELOPMENT IS A REDEVELOPMENT OF EXISTING COMMERCIAL PROPERTY. THE PROPOSED DEVELOPMENT SITE DRAINAGE RUNOFF AND IMPERVIOUS AREA IS LESS THAN THE IMPERVIOUS AREA OF THE EXISTING DEVELOPED AREA.

EXISTING AREA (0.54 ACRES):
 GRASS - (C=0.30): 0.10 ACRES
 BUILDING - (C=0.95): 0.06 ACRES
 CONCRETE - (C=0.95): 0.04 ACRES
 ASPHALT - (C=0.85): 0.34 ACRES
 ACCUMULATIVE C=0.77

PROPOSED AREA (0.54 ACRES):
 GRASS - (C=0.30): 0.13 ACRES
 BUILDING - (C=0.95): 0.05 ACRES
 CONCRETE - (C=0.95): 0.06 ACRES
 ASPHALT - (C=0.85): 0.30 ACRES
 ACCUMULATIVE C=0.74

INPUT FROM APWA 5600 REQUIREMENTS

TABLE 5602-5: DESIGN AID FOR CALCULATING RAINFALL INTENSITY
 KANSAS CITY METROPOLITAN AREA

RETURN PERIOD	EQUATION 1 5 ≤ Tc ≤ 15		EQUATION 2 15 < Tc ≤ 60	
	I	Tc	I	Tc
25 YR.	I = 175 / (Tc + 18.8)		I = 214 / (Tc + 26.7)	
100 YR.	I = 256 / (Tc + 18.8)		I = 331 / (Tc + 26.7)	

INTENSITY - DURATION - FREQUENCY

Return	Tc				
	5	10	15	30	60
2	5.41	4.41	3.72	2.61	1.65
5	6.47	5.35	4.56	3.31	2.14
10	7.35	6.08	5.18	3.77	2.47
25	8.53	7.05	6.01	4.46	2.95
50	9.36	7.70	6.68	4.97	3.30
100	10.32	8.59	7.36	5.52	3.68

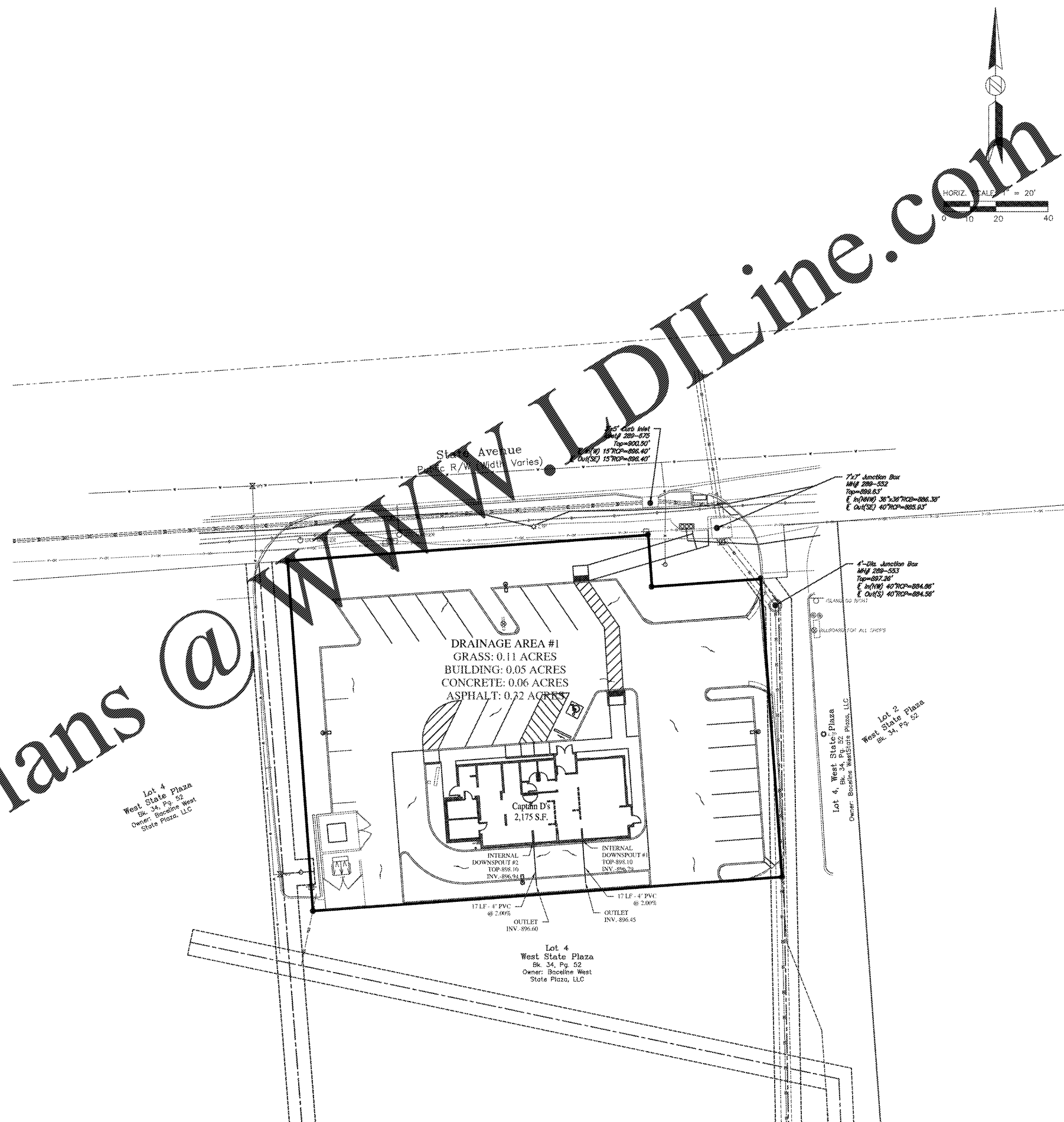
EXISTING 25-YEAR FLOW
 Q=0.77x6.77 = 5.41 cfs

PROPOSED 25-YEAR FLOW
 Q=0.74x6.77 = 5.01 cfs

EXISTING 100-YEAR FLOW
 Q=0.77x9.35 = 7.20 cfs

PROPOSED 100-YEAR FLOW
 Q=0.74x9.35 = 6.92 cfs

Order Plans @



Architect:
JJO
 JOHN J. ODOM, ARCHITECT
 38 MEADOWBROOK COUNTRY CLUB ESTATES
 DALLAS, MISSOURI 65011
 PH: 1-417-343-8800
 WWW.JJOARCHITECT.COM
 E-MAIL: JOHNS@JJOARCHITECT.COM

Civil Engineer:
RDC
 REYLING DESIGN & CONSULTING
 4516 Boardwalk | Smitton, IL | 62285
 reylingdc@gmail.com
 Kansas Firm License: E-2758
 KS Certificate of Authority: 5066014

Professional Engineer Seal:
 T. J. REYLING, P.E.
 25336
 KANSAS PROFESSIONAL ENGINEER
 LICENSE EXPIRES - 04.30.2021
 DATE SIGNED - 03.17.2020

ENGINEER OF RECORD:
 Todd J. Reyling, PE
 Kansas PE 25336

ISSUED / REVISED	DATE
ISSUED TO CLIENT	01.21.2020
REVISED PER CITY COMMENTS	02.14.2020
REVISED PER CITY COMMENTS	03.17.2020

PROJECT NUMBER: 19-159

New Ground Up Building:
Captain D's
 7525 State Avenue
 Kansas City, KS 66112
 Wyandotte County

Stormwater
 Drainage Plan
C400