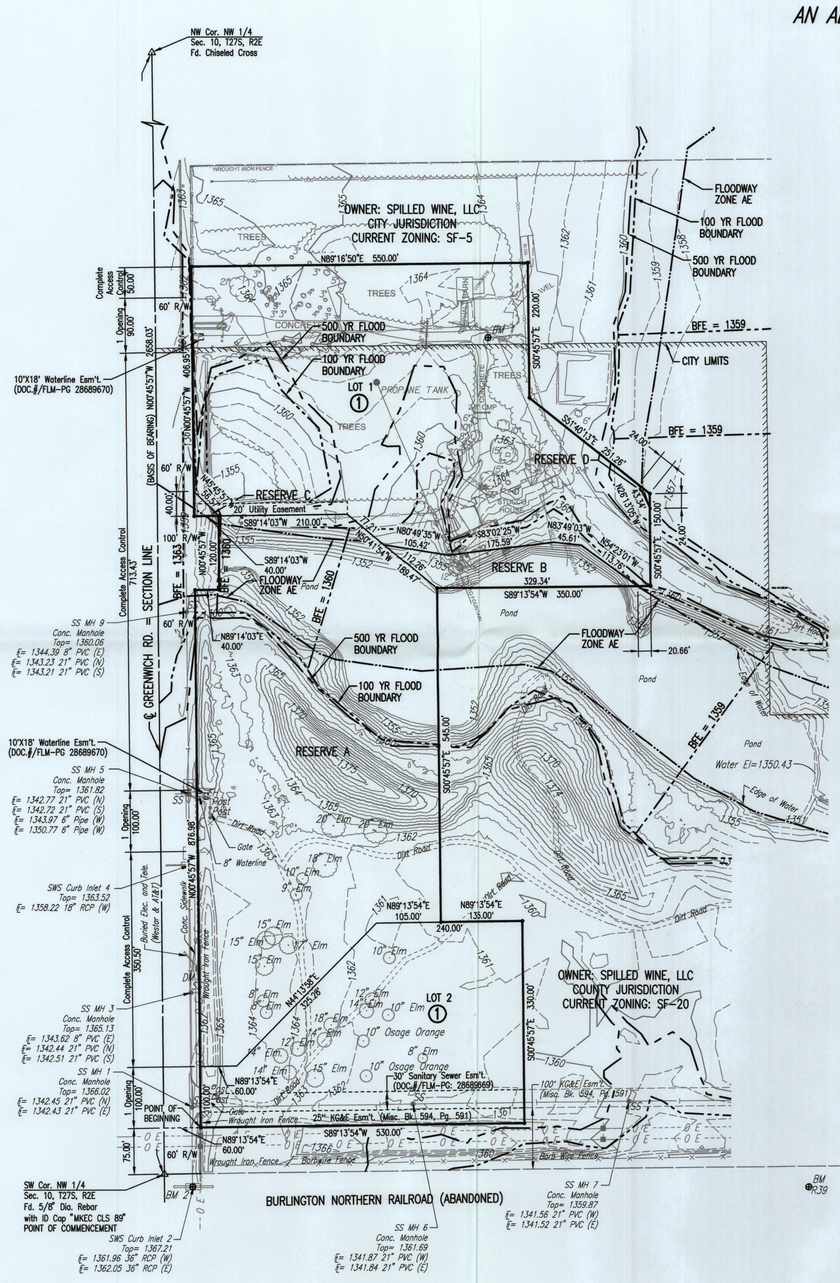
SPILLED WINE ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

DRAINAGE PLAN



BENCHMARK LIST

BM R 39 – HELD FOR PROJECT DATUM BENCHMARK NGS BM "R 39" STANDARD DISK, ON THE NW CORNER OF THE RAILROAD BRIDGE.
ELEV. = 1361.74 (NAVD 88)

BM 1 – CHISELED "d" AT THE SE CORNER OF THE E END OF THE CONCRETE DRIVEWAY, E OF WHERE THE DRIVE GOES S TO A HOUSE.
ELEV. = 1363.725 (NAVD 88)

BM 2 – CHISELED "d" ON THE TOP FRONT CENTER OF THE STORM DRAIN CURB INLET ON THE E SIDE OF GREENWICH ROAD AND ON THE N SIDE OF THE RAILS TO TRAILS HIKING PATH FROM THE ABANDONED RAILROAD RIGHT OF WAY BETWEEN 13TH STREET AND 21ST STREET.
ELEV. = 1367.13 (NAVD 88)

NOTES

Stormwater Detention:
Stormwater detention from the proposed redevelopment is not required since the site is directly adjacent to a water course that drains more than 10 times the area of the plat.

Downstream Channel Protection Volume:
Delaying runoff discharge volume for this stormwater regulation is not applicable since detention is not applicable.

Water Quality:
Site runoff from the first 1.2 inches of rainfall is displaced through the permanent pool volume of the existing pond on adjacent property owned by the applicant, north of Four Mile Creek. This volume is approximately 0.46 acre-feet. The pond surface area is approximately 3.0 acres. This results in an approximate depth of the water quality volume of 0.15 feet. The pond average depth is greater than 8 feet. The water quality requirement is met. See Tables 1 and 2 on this sheet.

FEMA Flood Hazard Zones:
FEMA floodplain and floodway locations and elevations based on information provided by the City of Wichita Stormwater Management (Proposed County-Wide Re-study)

TABLE 1																
WATER QUALITY VOLUME CALCULATIONS								EXISTING IMPERVIOUS AREA =				0.88	ACRES			
EXISTING IMPERVIOUS																
HSG=D			HSG=	A	B	C	D	A	B	C	D		TOTAL			
		Rvu		0.02	0.03	0.04	0.05									
UNDISTURBED PERCENTAGE		U	%				0	0	0	0	0		0			
		Rvd		0.15	0.2	0.22	0.25									
DISTURBED PERCENTAGE		D	%				0.0000	0	0	0	0.000		0.000			
		Rvi		0.95	0.95	0.95	0.95									
IMPERVIOUS PERCENTAGE		I	%				1.0000	0	0	0	0.950		0.950			
								Rv=Rvu*U+Rvd*D+Rvi*I				Rv=	0.950			
											REDEVELOP FACTOR	RC=	0.3			
											DRAINAGE AREA	A=	0.88	ACRES		
											RAINFALL	P=	1.2	INCHES		
								WQ VOL = Rv*RC*A*P/12				WQ VOL=	0.02508	AF		
												WQ VOL=	1092.485	CF		

TABLE 2																	
WATER QUALITY VOLUME CALCULATIONS									SITE AREA =			16.3	ACRES				
PROPOSED CONDITIONS									EX. IMPERVIOUS AREA =			0.88	ACRES	NEW IMPERVIOUS AREA =		0.72	ACRES
									DEVELOPED AREA =			15.42	ACRES				
			HSG=	A	B	C	D	A	B	C	D		TOTAL				
		Rvu		0.02	0.03	0.04	0.05										
UNDISTURBED PERCENTAGE		U	%				0	0	0	0	0		0				
		Rvd		0.15	0.2	0.22	0.25										
DISTURBED PERCENTAGE		D	%				0.95	0	0	0	0.238		0.238				
		Rvi		0.95	0.95	0.95	0.95										
IMPERVIOUS PERCENTAGE		I	%				0.05	0	0	0	0.044		0.044				
								Rv=Rvu*U+Rvd*D+Rvi*I				Rv=	0.283				
											DEVELOPED AREA	A=	15.42	ACRES			
											RAINFALL	P=	1.2	INCHES			
								WQ VOL = Rv*A*P/12				WQ VOL=	0.44	AF			
												WQ VOL=	18987.8	CF			
											TOTAL	WQ VOL=	0.46	AF			
											TOTAL	WQ VOL=	20080.29	CF			
								PERMANENT POND POOL VOLUME			ACRES	FEET					
											3	8	24.00	AF >	0.46	AF	
											WATER QUALITY VOLUME MET						

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Plot Scale 1:100, 09-16-2013, 8:44:44 AM by JES
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