

**MCMULLEN COUNTY, TEXAS -- REQUEST FOR QUALIFICATIONS:**  
**OPERATOR FOR WATER/WASTEWATER INFRASTRUCTURE**  
**AND UTILITY SERVICE OPERATIONS**

**ATTACHMENT 1. PROJECT INFORMATION**

- 3. WRITTEN INFORMATION** - Diagrams, maps, and other relevant information regarding the Project may be obtained from: (a) Half Associates, Inc. at 300 E. Sonterra Blvd. STE 230, San Antonio, TX 78258; and (b) County Judge, McMullen County, Texas, McMullen County Courthouse, First Floor, 501 River Street, Tilden, Texas 78072.

**3.1 Calliham Water System Infrastructure**

**A. Operations**

The current Calliham, TX water system operates as follows: Water from a well is pumped through a cooling tower and then to three ground storage tanks. The well pump, cooling tower, ground storage tank and transfer pump station are located within the Calliham Unit of the Choke Canyon State Park, located on a peninsula in Choke Canyon Reservoir located north of Highway 72 approximately at County Road 302 (See **Exhibit 1 – Water System Schematic**). The water is chlorinated with liquid chlorine solution between the cooling tower and the storage tanks. The water is then transferred from the ground storage tanks through an existing four (4) inch PVC line to two existing transfer pumps. These transfer pumps then pump (transfer) water through an existing four (4) inch PVC force main (approximately 11,000 linear feet) to a large ground storage tank at the distribution pump station in Calliham (See **Exhibit 2 – Water Transfer Main**). From the ground storage tank at the distribution pump station, water is pumped into the water distribution system. Currently, there are approximately 90 customers served by the water system (see **Exhibit 3 – Water Infrastructure Overall Project Layout**). A study completed by Half Associates in 2012 noted that the system has the capacity to serve about 200 customers without further modification.

**B. System Condition**

- a. Well: The well (TX State Well 7838101) at the Calliham Unit of the Choke Canyon State Park was originally drilled in 1965. It was originally drilled for an oil test to 12,605' depth, but was plugged back to 5400' deep and converted to a water well. Perforated from 4860 to 4910 feet. The well is at elevation 228 and draws on the Carrizo Aquifer.
- b. Well pump: Installed in 2002.
- c. Ground storage tanks (at Well site): 3 – 6500 gallon fiberglass tanks installed in 2016.
- d. Cooling tower: New tower brought online in 2016.
- e. Transfer Pumps: Two 120 gpm (at 148' head) potable water pumps installed in 2012.
- f. Approximately 11,000 LF of 4" WL from Transfer pumps to Calliham ground storage tanks. The last 1700 LF of 4" WL was just replaced with 6" C-900 Cl. 150 PVC during construction of the new sanitary sewer line.

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- g. Ground storage tanks: One is a bolted, galvanized steel tank with a 66,000 gallon capacity (19' diameter, 30' high). Second tank is older concrete tank with 18,000 gallon capacity.
- h. Pressure tank: 2,500 gallon, good condition.

### **3.2 Calliham Wastewater System Infrastructure**

#### **A. Operations**

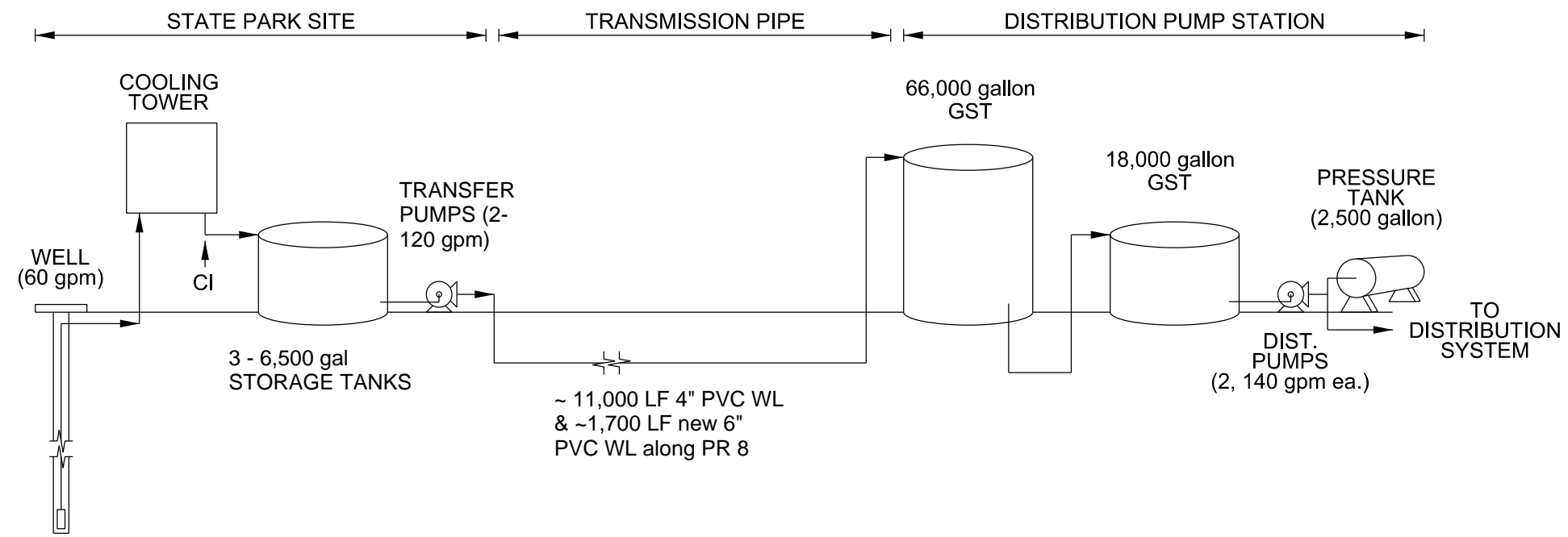
The current Calliham, TX sewer system operates as follows: Approximately 90 services connect to recently constructed/rehabbed sanitary sewer main (project completed in August 2016). Gravity system collects from residences/businesses and drains to a wet well/lift station at Quail Run. Lift station then pumps wastewater to corner of Park Road 8 just north of SH 72, at which a gravity line then conveys flow to the 5-acre site on CR 302 with a 30,000 gallon holding tank and lift station (See **Exhibit 4 – Wastewater Infrastructure Overall Project Layout**). The Quail Run site also has a backup 30,000 gallon holding tank should the 5-acre site's tank be full. The 5-acre site and Quail Run stations communicate with each other and notify the operator of levels (see **Exhibit 5 – Sanitary Sewer System Schematic**).

Wastewater is pumped from the 5-acre site holding tank and transported to the Tilden, TX WWTP located on SH 16 at Old Fowlerton Road and operated by McMullen County WCID #1.

#### **B. System Condition**

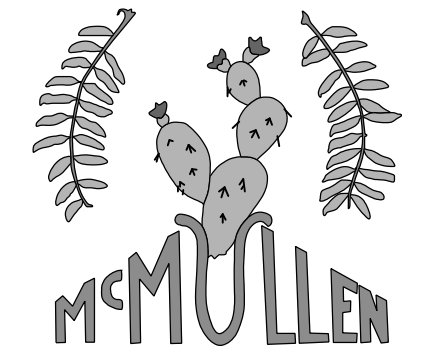
- a. Gravity Main: 8" – 10" PVC Sanitary Sewer collection system, throughout most of Calliham. Some older 8" PVC on Deer Trail/Quail Run North. 12" PVC Gravity line from Park Road 8 to 5-acre site (Refer to Sanitary Sewer Construction and Improvements Plans, Halff Associates, Dated 2/4/2015).
- b. Quail Run Holding Tank – 30,000 gallon fiberglass holding tank (10' diameter)
- c. Quail Run Lift Station – Wet well with two Solids handling submersible pumps, 11 hp, 460V, 3-phase pumps w/ 4" phase invertors. Pump design point 116 gpm @ 117 ft. Installed summer 2016.
- d. Force Main: 4" HDPE Sanitary Sewer, installed summer 2016.
- e. 5-acre site Holding Tank – 30,000 gallon fiberglass holding tank, installed summer 2016.
- f. 5-acre site Lift Station – Wet well with two solids handling submersible chopper pumps, 3 hp, 460V, single phase pumps. Pump design point 90 gpm @ 31 ft.

**END OF SECTION**



HALFF SM  
 TBP FIRM REGISTRATION # 312  
 800 E. SONNENBLUM BLVD, SUITE 230  
 FORT WORTH, TEXAS 76106  
 TEL (214) 798-1895  
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**SANITARY SEWER**  
 CONSTRUCTION AND IMPROVEMENTS  
 Callitham, TX



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 MARCUS G. CANTU 120345 AUGUST 18, 2016  
 NAME P.E. # DATE

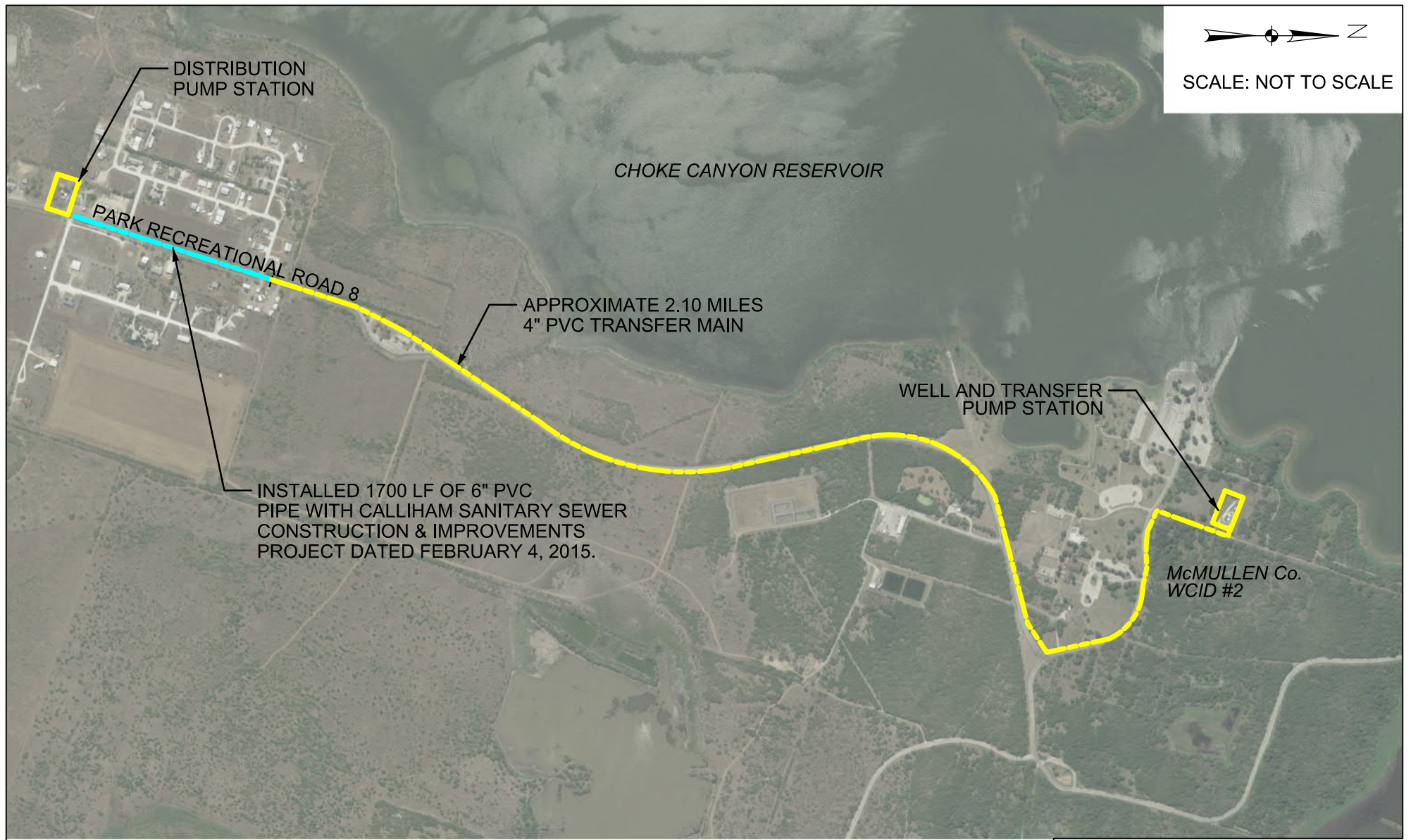
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Drawn By: CC
Checked By: MGC
Scale: NTS
Sheet Title
WATER SYSTEM SCHEMATIC
SHEET 1 OF 5

**EXHIBIT 1**

Sheet Number



SCALE: NOT TO SCALE

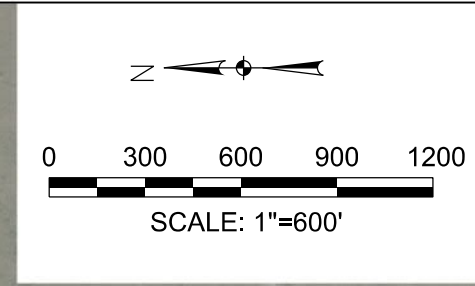
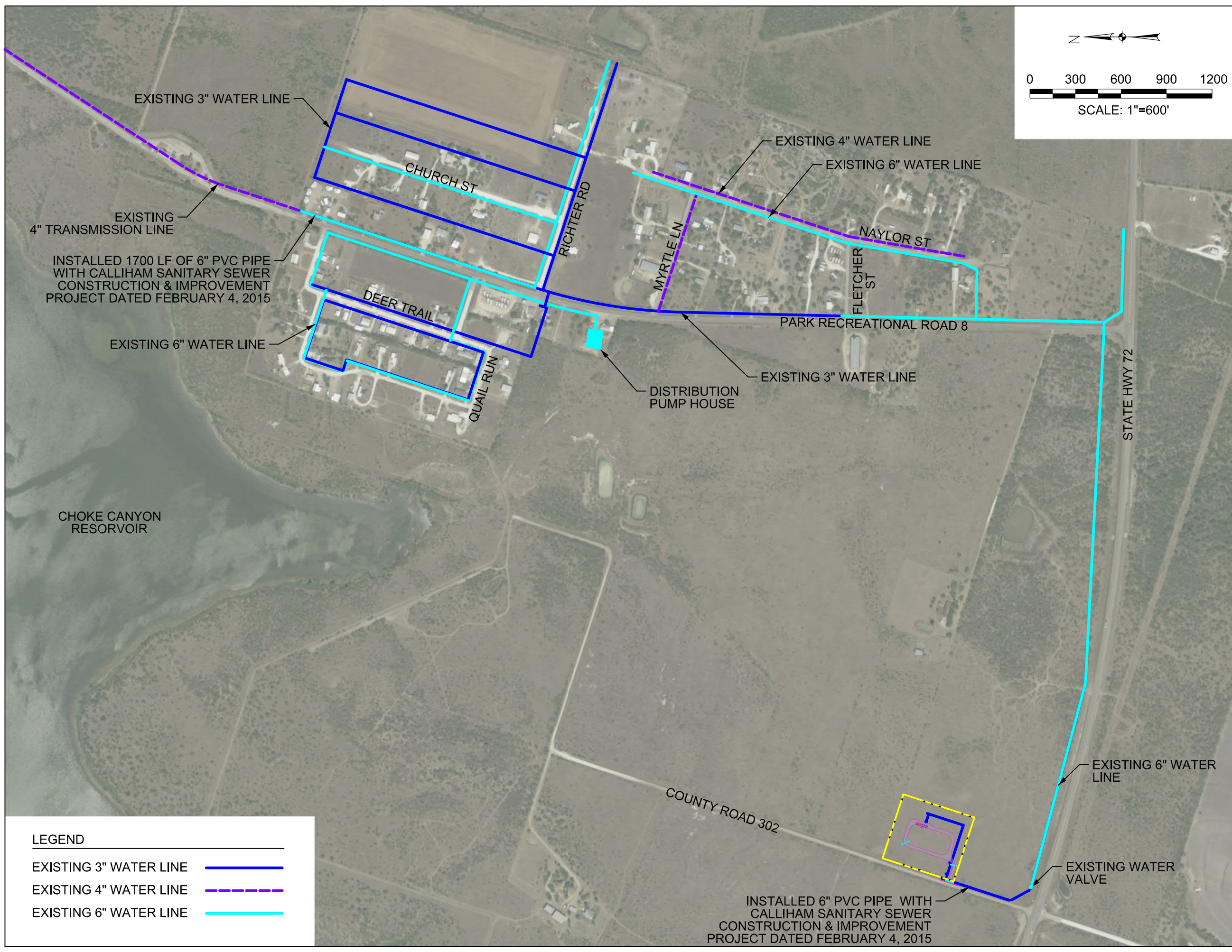


# EXHIBIT 2

DATE: 08/18/2016 AVO: 28507



5000 WEST MILITARY, SUITE 100 McALLEN, TEXAS 78503 (956) 664-0286

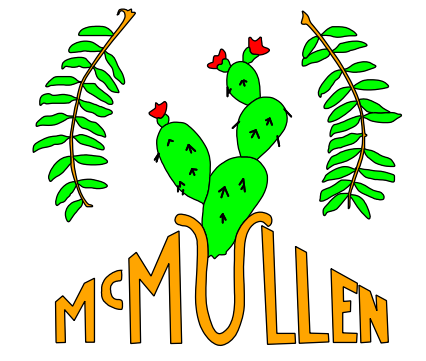


**LEGEND**

EXISTING 3" WATER LINE	
EXISTING 4" WATER LINE	
EXISTING 6" WATER LINE	



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Calliham, TX



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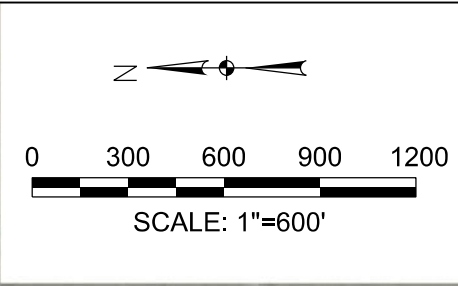
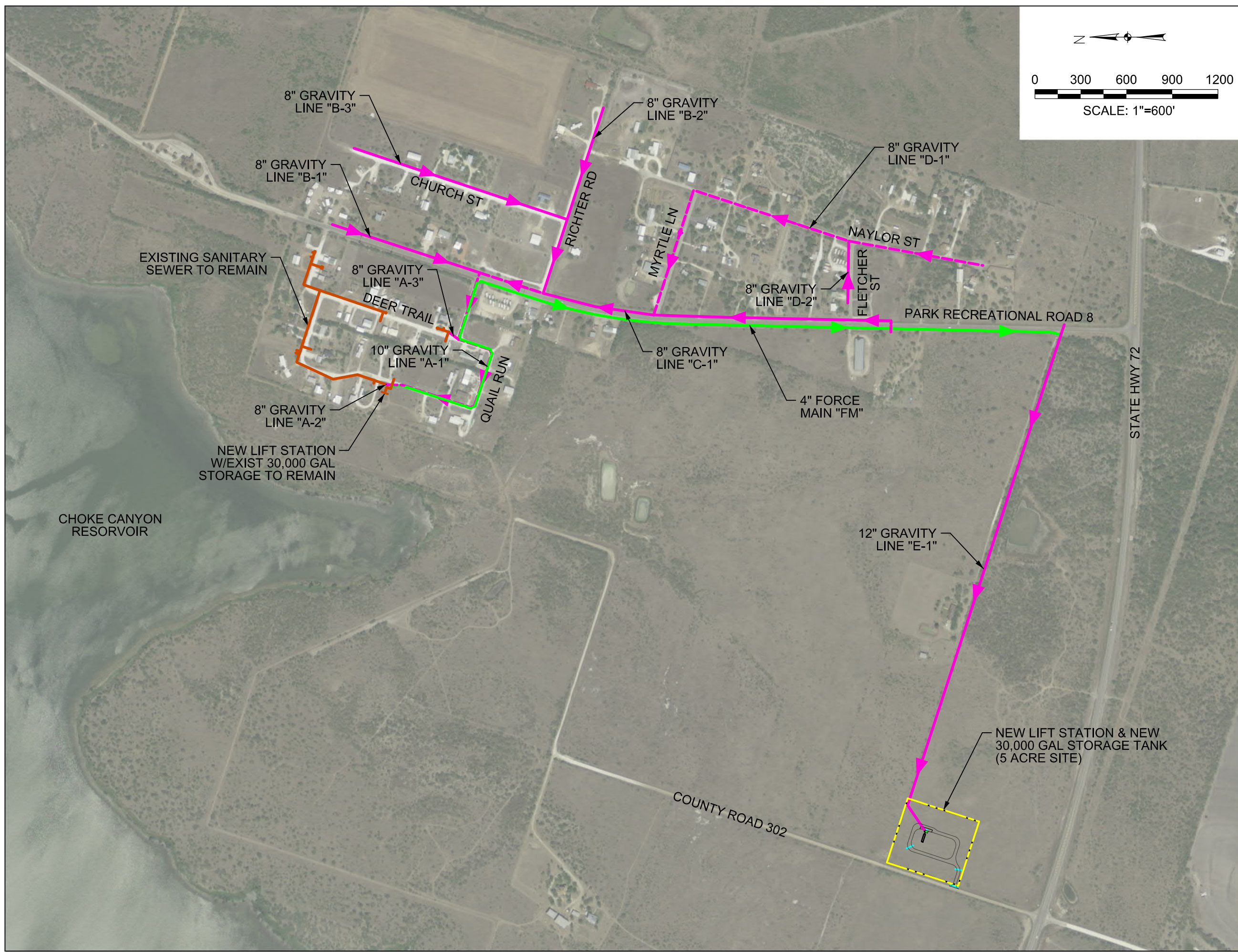
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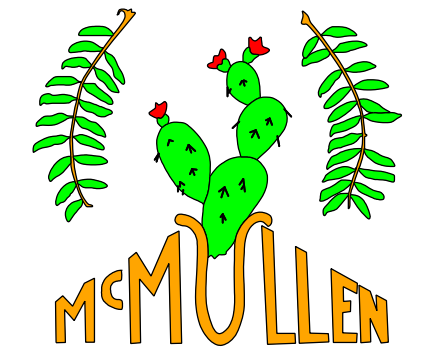
Sheet Title  
**WATER INFRASTRUCTURE OVERALL PROJECT LAYOUT**  
 SHEET 4 OF 5

**EXHIBIT 3**  
 Sheet Number



TBPE FIRM REGISTRATION # 312  
300 E. SONNENBLAU BLVD, SUITE 230  
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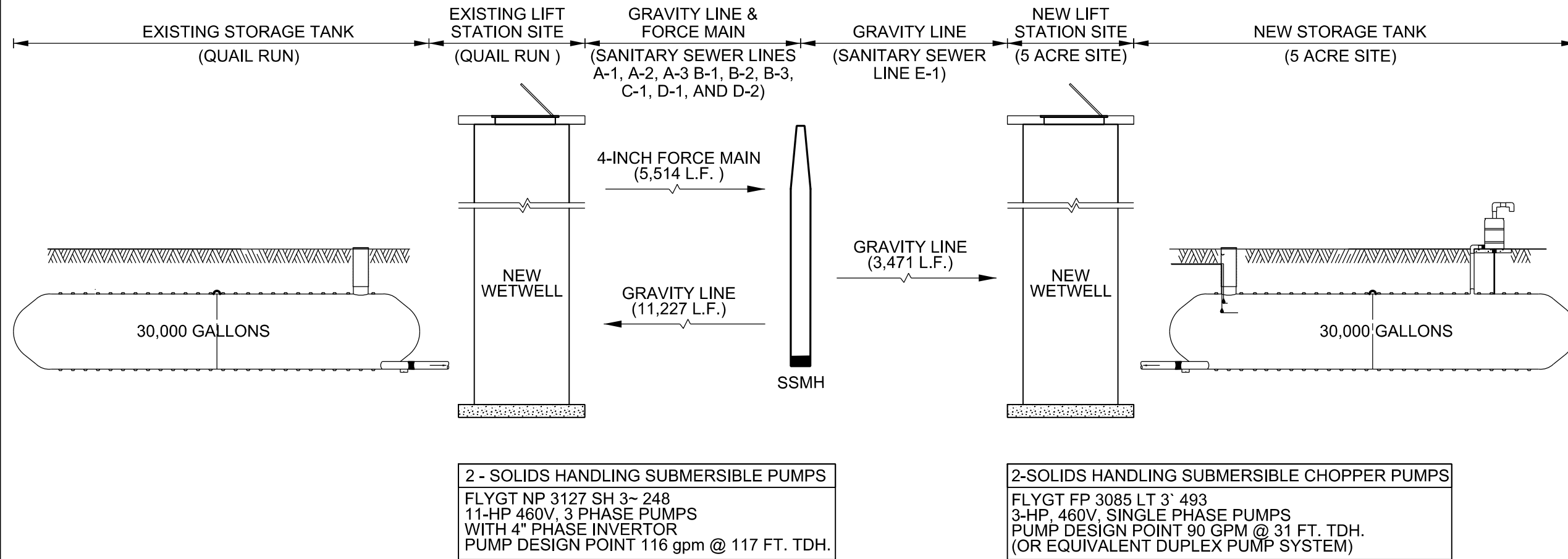


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Sheet Title
<b>WASTEWATER INFRASTRUCTURE OVERALL PROJECT LAYOUT</b>
SHEET 3 OF 5

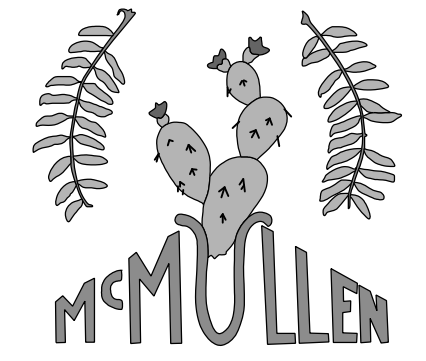
**EXHIBIT 4**

Sheet Number



TBPE FIRM REGISTRATION # 312  
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**SANITARY SEWER SYSTEM SCHEMATIC**

SHEET 2 OF 5

**EXHIBIT 5**

Sheet Number