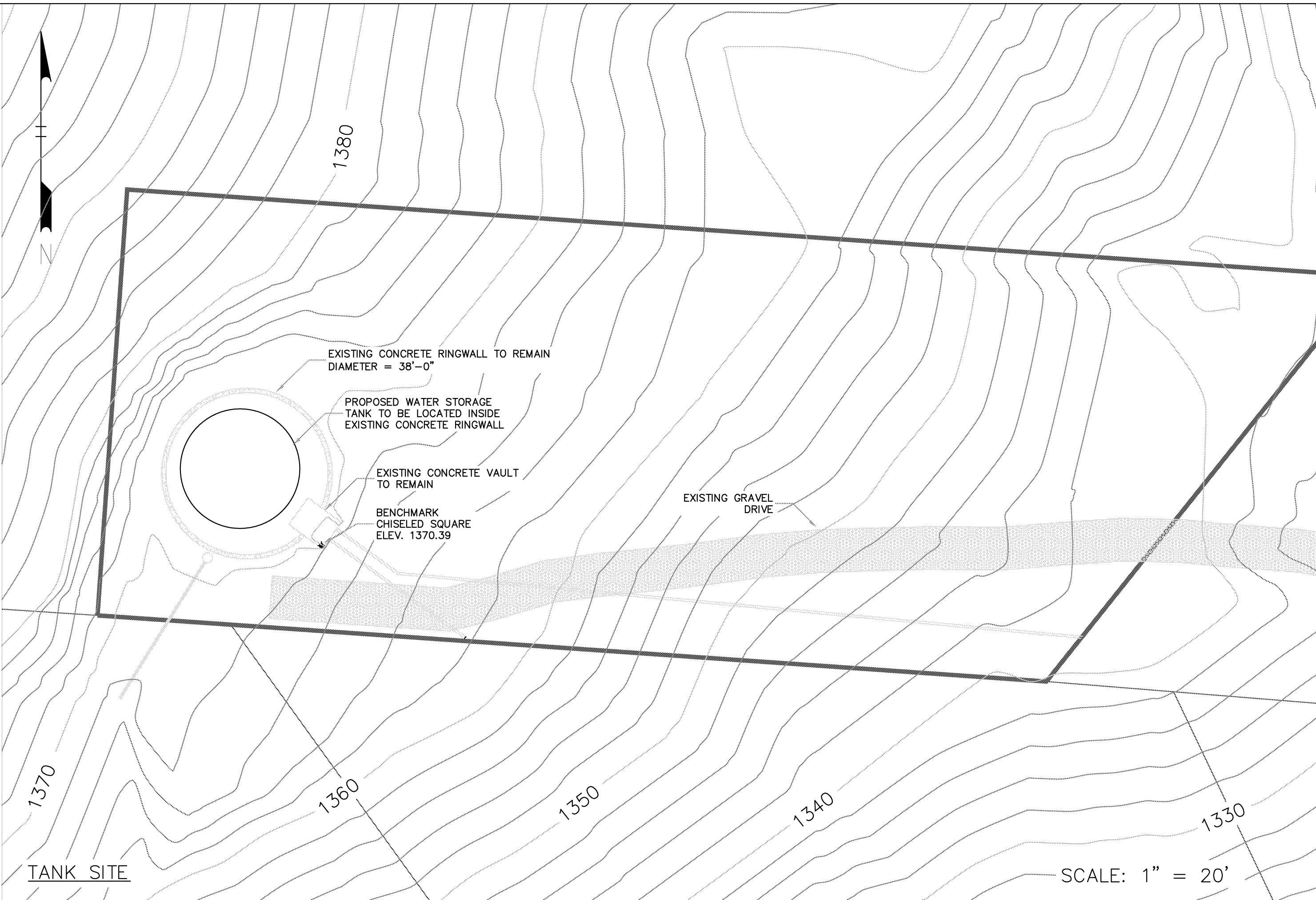


- NOTES:**
- CONTRACTOR TO FURNISH AND INSTALL ALL MATERIAL REQUIRED TO CONNECT TO EXISTING INLET/OUTLET PIPING AND DRAIN LINE AND EXTEND PIPING TO PROPOSED TANK. ALL EXCAVATION BACKFILL AND COMPACTION SHALL BE PERFORMED BY CONTRACTOR. EXISTING CONCRETE VAULT SHALL BE SAW CUT BY CONTRACTOR AS NECESSARY TO EXTEND PIPING TO PROPOSED TANK.

NOT TO SCALE



2012 WYWA DESIGN AND CONSTRUCTION STANDARDS

4.1 WATER STORAGE FACILITIES

- A. Water storage facilities shall be designed and constructed to meet the requirements of ANSI/AWWA D100 for "Welded Carbon Steel Tanks" or ANSI/AWWA D103 for "Factory Coated Bolted Steel Tanks" for water storage, latest edition, except as specified otherwise. Precast concrete water storage reservoirs may be required by the Participating Utility under specific conditions that require below ground reservoirs. An NSF approved active mixing system shall be installed in all tanks.
- B. Steel Standpipe, Reservoirs and Accessories.
- Supplemental Information to both ANSI/AWWA D100 and ANSI/AWWA D103
 - Earthquake Design: Seismic Zone 2 using fixed percentage method of 5%.
 - Electric Power: Developer/Contractor's obligation.
 - Compressed Air: Developer/Contractor's obligation.
 - Concrete Work: Comply with all requirements of ACI 301.
 - Supplemental Information to ANSI/AWWA D100.
 - Corrosion Allowances: 1/16-inch for parts in contact with water.
 - Submit written report certifying work inspected as set forth in ANSI/AWWA D100, Sec. 11.2.1. Mill and shop inspection by commercial inspection agency is required.
 - Submit details of all welded joints referenced on design drawings in accordance with ANSI/AWWA D100, Sec. 1.3.
 - Mill Scale: Completely remove by blast cleaning or pickling. (SSPC-SP10 or SSPC-SP8)
 - Bolt-joint welds subject to secondary stress where thickness is greater than three-eighths inch (3/8") shall have complete joint penetration welds.
 - Radiographic tests shall be required and film shall become property of the Participating Utility.
 - Protective Coatings:
 - Surface preparation and coating systems specifications will be provided by the Participating Utility at the time of plan preparation.
 - First anniversary inspection in compliance with ANSI/AWWA D102 will be required.
 - Paint color shall be as selected by the Participating Utility from the manufacturer's available colors.
 - Supplemental Information to ANSI/AWWA D103.
 - Tank Bottom: Concrete slab and steel base setting ring is required.
 - Full five (5) year manufacturers warranty on factory coating is required.
 - The following accessories, in addition to those required by either ANSI/AWWA D100 or ANSI/AWWA D103, shall be provided and installed.
 - Exterior safety cage, rest platform and roof ladder, handrails to accessories in conformance with OSHA. A fall prevention system, which complies with applicable OSHA regulations, is acceptable as a substitute for the cage and rest platform. All tanks with ladders shall include a climbing deterrent device to prevent unauthorized climbing of ladder. This device must be reviewed and approved by the Participating Utility prior to installation.
 - Overflow to ground, 1,000 GPM minimum, located near roof opening. Provide coarse screen and concrete splash pad and erosion-protected channel from overflow to drainage system or natural channel.
 - Screen vent against insects, provide special vent to insure fail-safe operation in event insect screens frost over.
 - Removable silt stop.
 - Separate drain line to drainage system or natural channel with erosion protection.
 - SCADA System to indicate water level in order to comply with VDH requirements.
- C. Disinfection
- After all painting and coating schedules have been completed and the specified drying times have elapsed, the Developer/Contractor shall proceed to disinfect the interior surfaces of the standpipe structure utilizing one of the following disinfection methods:
 - Tank shall be filled to overflow level with potable water to which enough chlorine has been added to produce an initial chlorine concentration of 50 mg/l in the full tank. The full tank should stand for 24 hours; however, in no case, shall it stand less than 6 hours. At the end of the holding period, the highly chlorinated water shall be drained to waste, the tank refilled with potable water and tested for bacteriological quality.
 - All interior surfaces of the tank shall have applied to them a strong chlorine solution containing at least 200 mg/l of free available chlorine. The chlorine solution shall be applied with either spray equipment or brushes. Any equipment used to apply the chlorine solution shall either be new or previously used only for disinfection purposes. Strong chlorine solution shall remain in contact with tank surfaces for at least 30 minutes. Tank shall then be filled with potable water to overflow level and tested for bacteriological quality.
 - Potable water containing a free chlorine residual 50 mg/l shall be placed in the tank to such a depth that when the tank is filled, the resulting chlorine concentration in the water will be at least 2 mg/l. The water containing 50 mg/l of chlorine shall stand in the tank for 24 hours. The tank shall then be filled with potable water and allowed to stand for 24 hours. At the end of the second 24-hour period, the chlorine residual shall be at least 2 mg/l. After bacteriological analysis of the water for quality, the tank may be placed in service without draining the water used to disinfect it.
 - Two consecutive bacteriological samples collected at 24-hour intervals shall be obtained from the standpipe structure before the tank is placed into service. The bacteriological test form shall be marked "CONSTRUCTION SAMPLE". Analysis of the samples shall be performed by a laboratory certified by the Division of Consolidated Laboratory Services (DCLS). If contamination is indicated in the bacteriological samples, the disinfection procedure shall be repeated at the Developer/Contractor's expense.

WESTERN VIRGINIA
WATER AUTHORITY

ENGINEERING SERVICES
601 S JEFFERSON ST, SUITE 300
ROANOKE, VA 24011
540-853-5641 or 540-853-5770

STATE OF VIRGINIA
ROGER R. BLANKENSHIP
LIC. NO. 040615
2-19-13
PROFESSIONAL

CHIVAS WATER
STORAGE TANK
SITE PLAN
& ELEVATION

Rev	Description	Date	By
1	Added dimension	02/19/13	RRB

Designed: RRB
Drawn: RRB
Checked: RWB
Approved:
Date: 01/02/13
Project:

Sheet 2 of 4