

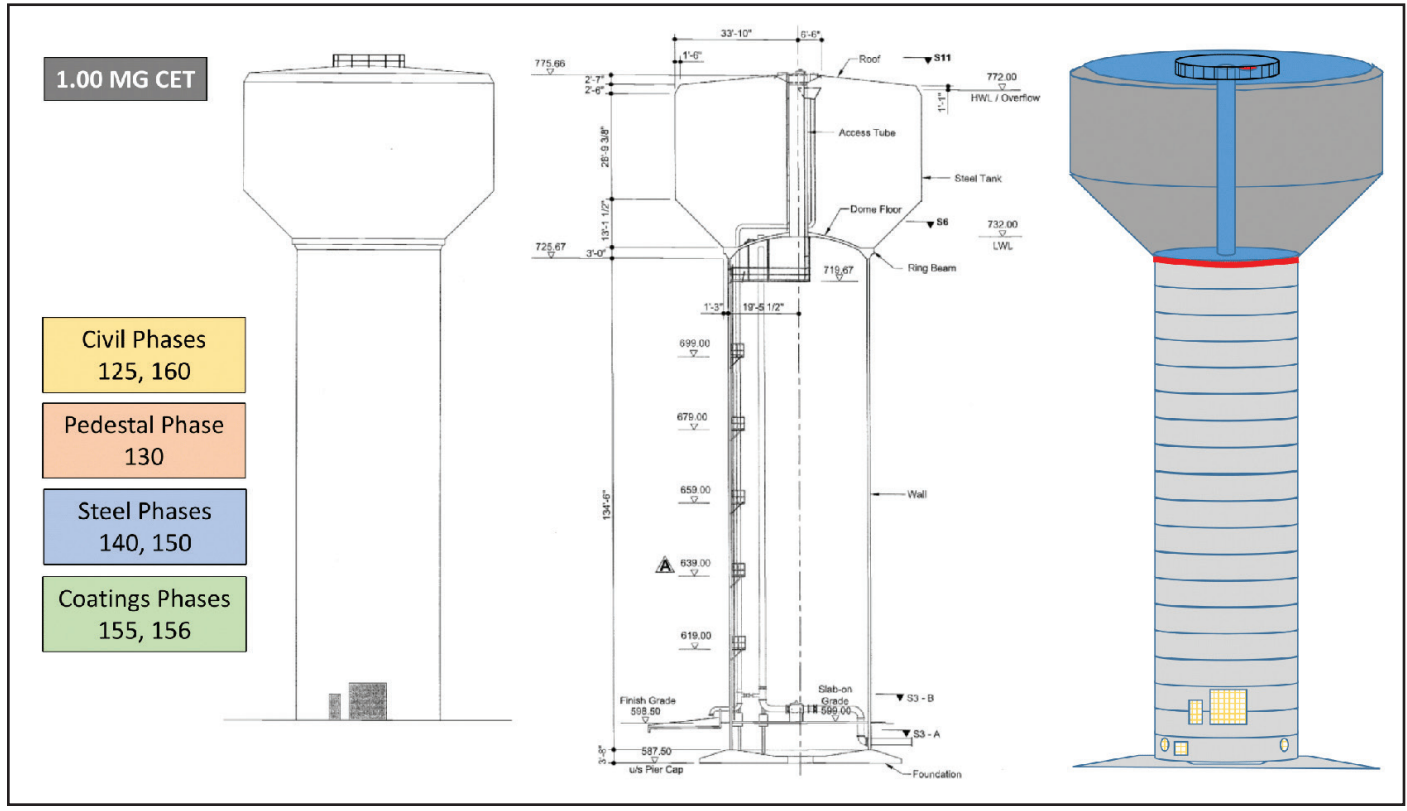
# Mebane City Beat: Raising the town's water capacity

BY KELLY HUNTER  
SPECIAL TO THE NEWS OF ORANGE

Water is an essential part of life and one of the most abundant natural resources in the world. Used in many ways, water is critical for the survival of ecosystems, keeping your body functioning correctly, as well as industrial, agricultural, household, and recreational activities. For a city or town to thrive, the basic needs of its citizens and businesses must be met. These basic needs include access to clean water in a quick and timely manner. The City of Mebane developed its first larger elevated water storage tank in 1967 to accommodate and address these needs for a growing and evolving city.

Prior to the construction of the first larger elevated storage tank, Mebane relied heavily on the Lake Michael Reservoir as its primary water source. As the primary water source, Lake Michael was responsible for providing the city with water for manufacturing, industry practices, cooking, bathing, drinking, playing, and sufficient fire flows. According to the National Fire Protection Association (NFPA), a fire flow is the flow rate or volume of a water supply, measured at 20 psi residual pressure, available to the responding fire department for manual firefighting. Typically, this is water that is available at the surrounding fire hydrants, but it can be supplied with another approved source, such as a static water supply like a tank or pond. Back in the 1960s, Mebane was starting to see a rise in the number of individuals coming to live here, with a population increase of 14.3%. Anticipating more growth on both sides of the county line, city officials prepared a Community Facilities Plan and Public Improvements Report, which outlined the process of water being treated for human consumption and stored in two separate storage areas, an underground storage basin with a holding capacity of 250,000-gallons and a small 75,000-gallon elevated water tank. Upon doing their evaluations, officials found that by having a small, elevated storage tank, sufficient water pressure was not generated to meet the requirement of having 1500 gallons per minute (GPM) available for fire flow. Thus, in December of 1966, voters in Orange County approved a bond to finance water and sewer lines to a proposed industrial park at the intersection of Interstate 85 and Buckhorn Road. Part of the bond issue was also constructing a 300,000-gallon elevated water tank on South 11th Street that would meet the demand for pressured water becoming available to the entire developed area while increasing the water pressure by 22.7 percent.

According to Census Data in N.C., the City of Mebane has roughly 19,376 residents today. Water for the city is stored in the 300,000-gallon elevated water storage tank on South 11th Street and a 3-million-gallon clear well or ground storage tank at the Graham-Mebane Water Treatment Plant off U.S. 70. The city's



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PHOTOS COURTESY OF THE CITY OF MEBANE

water distribution system produces clean water at the water treatment plant and then transports and stores that water in the clear well. Water from the clear well is then pumped to the elevated water storage tank. The elevated water storage tank holds the

water, and due to gravitational energy, the tank sends the water to our distribution system at a consistent pressure. Currently, the clear well and tank configuration meet regulatory requirements. However, the tanks are too small to equalize hourly demand variations while maintaining sufficient fire flow reserves. The city compensates for the lack of existing elevated storage tank capacity by taking advantage of surplus pumping

capacity at the plant. As Mebane continues to grow, the current configuration could be problematic during future high peak demands. In an effort to be proactive and maintain a high quality of life for our residents, city officials determined a new elevated water storage tank was needed. Once complete, this new tank will provide fire flows at a rate of 3,000 GPM for three hours, even if the existing tank is empty. The new tank will also provide a cushion of redundancy if one of the two elevated tanks needs to be taken out of service for maintenance. Project Engineer Aaron Babson from Hazen and Sawyer stated, "The new elevated storage tank on South Third Street is a vital piece to reinforcing the available fire flow and potable water storage for the citizens of Mebane. The tank will sustain fire flows of 3,000 GPM for three hours in the downtown area, providing assurance that the city will have adequate supplies in an emergency event. We are thankful to the City of Mebane for including us in such an important project and look forward to its upcoming successful completion."

The new elevated water storage tank is under construction and will hold one million gallons. Landmark Structures from Fort Worth, Texas, has been constructing water tanks across the U.S. since 1974. Because of their knowledge and experience, they were awarded the bid and given the notice to proceed on November 27, 2023. The tank is being funded by a \$150,000 State Capital Infrastructure Fund (SCIF) Grant, a \$2,502,990 Economic Development Association (EDA) Grant, and city financing. Before construction could begin, city officials had to determine the location of where the tank would be built. Various factors had to be considered, such as the location needed to be in an area of high ground elevation to decrease the height of the tank, the tank needed to be near transmission mains to minimize utility connections, and the location needed to be in an area where high fire flows are required. The water tank site also needed to be approximately the same distance from the supply source as the existing tank on South 11th Street. This allows for balanced water

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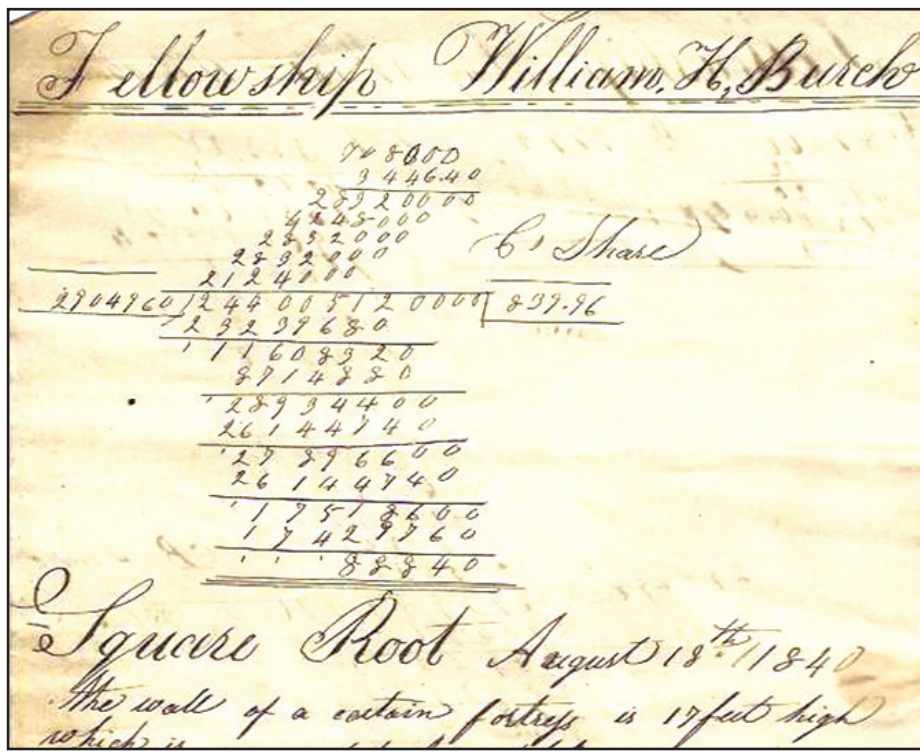
**News of Orange**  
919-732-2171

# What Happened?! School memories

BY VICKY L. KRUCKEBERG  
SPECIAL TO THE NEWS OF ORANGE

Our childhood is often measured by the years we progress through formal schooling: elementary, middle, high school, and university/college. The Orange County Historical Museum's collection includes over one hundred items that reflect the lives of county residents from the mid-19th century to today. They include a 1901 Report Card for Edwin Jobe from the William Bingham School (he received a score of 83 in English and a 93 in history), an 1898 photograph of students and teachers at the Misses Nash and Miss Kollock School, an 1881 University of North Carolina Commencement Ball Invitation, and a 1960s Hillsborough High School women's gym suit. These items portray past days filled with chalk dust, oral repetition, schoolyard fights, awkward prom dates, school activities, and graduation.

A rare recent gift to the museum is an unbound selection of over 30 pages that date from 1829 to 1840 prepared by William H. Burch. Burch was born in 1816 and died in 1889 in Chapel Hill. In elaborate Copperplate handwriting, he defines subjects such as Mathematics, Fellowship, Square Root, Addition, and Multiplication. The definition is followed by a series of test questions and his answers, which provide an insight into his



A sample math problem from William Burch's papers

education. Unfortunately, only parts of the papers are readable due to their fragility, insect damage, and discoloration. Additional research is needed to learn more about Burch and his education.

The Orange County Historical Museum invites you to try your skill at answering the following test questions from these papers. Let us know if you can solve the problems because the answers

are unreadable. Good luck!

"If a man can travel 305 miles in 30 days when the days are 14 hours long in how many days can he travel 1056 miles when the days are 12 1/2 hours long?"

"A merchant bought a quantity of coffee of which he paid 560 dollars. There afterwards he sold it for 610 dollars 87 1/2 cents. How much did he gain by the transaction?"

## BREAK-IN CONTINUED FROM PAGE 1

of Durham, into the custody of the detention center under no bond and set his first court appearance. Under the Pre-Trial Integrity Act, a defendant already on pretrial release for earlier criminal charges who receives new charges must wait for a judge to set bond and modify existing or add additional conditions of pre-trial release at the first appearance. Given that Steward has pending charges in Durham County, the law prohibited the magistrate from granting bond in this case.

The Sheriff's Office reminds trail and park users not to bring valuables with them when they head out for a hike. If a thief steals credit or debit cards, victims should cancel the cards, contact related financial institutions, and notify the credit bureaus immediately.

Lead investigator K. Stewart would like to thank everyone who provided tips about these break-ins and the suspect's identity.

## LACROSSE CONTINUED FROM PAGE 1

that effectively salted the victory away. Clark, Gray Crabtree, and Josh Crabtree all scored in an electrifying fury that gave OHS an 11-4 advantage.

It also gave the large home crowd hope that this time around, things would be different and the Panthers would indeed move on to the state final. They gave the Panthers all the support they could hope for, cheering them all the way through to the spirited triumph.

Croatan rallied with several offensive attacks that resulted in goals in the final period, but the Panthers held the Cougars off with three more goals of their own.

Gray Crabtree led the way offensively for OHS with seven goals, while Kruse, Orange's all-time assists leader, pushed his career total closer to the 550 mark with an additional six in the East final. In goal, Parker Christie-Pohl and Katie Wolter got the job done for the Panthers, as Orange's defense kept Croatan off-balance for most of the evening.

Orange will face off against the winner of the West Regional final between Bishop McGuinness and Lake Norman

Charter. That match was played after our weekly press deadline.

Bishop McGuinness and Lake Norman Charter also met in the 2023 West Regional final, with Lake Norman Charter picking up a 19-4 victory on its way to the NCHSAA 1A/2A/3A state title with a victory over Northwood in the championship match.

Lake Norman Charter would be looking for its third straight state championship with a triumph over Orange in the state final, while Orange is seeking its first state championship in school history in the sport of lacrosse.

The Panthers were stunned by First Flight in the East Regional final in 2022, and then in 2023 by their former conference rivals from Northwood. Lake Norman Charter went on to beat both schools in the state final.

Croatan was eager to play spoiler this time around, but they faced off against a different Orange team than those who came up short the previous two springs.

OHS punched its ticket to the Regional final last Friday evening, as the Panthers buried visiting Carrboro 21-10 behind relentless attacking on the offensive end and a stable presence on the defensive side.

Despite an extended rain delay, the

Panthers came out hot, rallying behind Gray and Josh Crabtree to four goals in the opening minutes, and an 8-3 lead in the first period. Connor Kruse tallied five goals in the win as Orange had five players record hat tricks.

Josh Cowan had four goals for the victorious Panthers, while senior Josh Crabtree, junior Gray Crabtree, and sophomore Brandon Williams scored three times apiece. Senior goalkeeper Katie Wolter had another solid performance in goal for the Panthers, coming up with five saves as OHS pulled away.

OHS advanced to the regional semifinal round on the strength of a pair of playoff victories over conference rivals in the opening two rounds. After crushing Southern Alamance 20-4 in Hillsborough on May 3, the Panthers returned to Auman Stadium on May 7 and blasted Western Alamance, 18-5, completing a series of six combined victories over the Patriots and Warriors on the lacrosse pitch this spring.

Orange shared the love in its opening round playoff triumph over Southern Alamance, as no less than 16 different Panthers tallied goals over the course of the match. Sophomore Brett Clark was the top performer, recording a hat trick with three goals in the win.

Kruse and freshman Owen Wimsatt each scored twice, while a total of thirteen others - seniors Alden Cathey, Josh Crabtree, Jace Womble, Bryce Nelson, and Josh Cowan, juniors Kale Womble, Gray Crabtree, Luke Nevius, and Brady Pfeiffenberger, sophomores Jay Parker, Matthew Macneir, and Brandon Williams, and freshmen Jackson Eakes - also found the back of the net for the Panthers.

In their 18-5 triumph over Western Alamance to reach the regional semifinal round, the Panthers got five goals from Brett Clark, along with two goals each from Kruse, Gray Crabtree, and Cowan. Josh Crabtree, Eakes, junior Aidan Monteith and freshman Alex King also scored for the Panthers, while Kruse led the way with a whopping eight assists. Kruse, Orange's all-time leading scorer, surpassed the 500-assist plateau earlier this spring.

And now it's on to the state final for the Panthers, as this special group of OHS seniors looks to put one final exclamation point on what has been a spectacular run over their four seasons at Orange.

In addition, Orange's younger players will look to build on this magical run in what they hope will be a sustained run of state championship appearances for the Panthers in the coming years.

## CITY BEAT CONTINUED FROM PAGE 2

levels and tank turnover, preventing high water age (referring to the time it takes to travel from a water source to consumers, with lower water age indicating better water quality). After considering all these factors, it was determined that 1420 S. Third St. would be best suited for the water tank.

The project is being completed in four phases. Phase one, the civil phase, is mainly completed and consists of mobilization, surveying, site clearing, grading, and foundation excavation. The project's second phase, the pedestal phase, is where the project is currently. The pedestal phase involves installing steel reinforce-

ment and using set forms to allow for concrete pours. Once a lift is poured and there has been substantial curing time, the set forms are stripped, and the process is repeated until you reach the desired elevation level. The next phase, the steel phase, includes the construction of the steel bowl that will hold one million gallons of water. The bowl will be built on the ground around the pedestal and then hoisted 200 feet to the top using a crane. The fourth phase, the coatings phase, will focus on maintaining the structural integrity and appearance of the tank. The tank will be painted with the Mebane logo added during the coatings phase. In terms of appearance, this new elevated water storage tank on South Third Street will be a composite tank. A compos-

ite tank is an elevated welded carbon-steel water storage tank supported by a steel-reinforced concrete support pedestal. The existing tank on South 11th Street is a multi-column elevated storage tank, which is an elevated welded carbon-steel water storage tank supported by a series of carbon-steel supporting columns and cross braces. You will see a difference in appearance between the existing tank supported by multiple columns/legs and the new water storage tank supported only by one pedestal.

The construction of the new elevated water storage tank will allow

for the city's future growth. This new tank will allow for a longer sustained fire flow duration and implies the city should not need another water storage tank for the next five years. Public Utilities Director Kyle Smith stated, "I am very excited to see the construction of the new tank. This will provide much-needed improvements to our distribution system and benefit the city for years to come." The tank is scheduled to be completed by May 2025 but is running ahead of schedule and is now expected to operate by early 2025.

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