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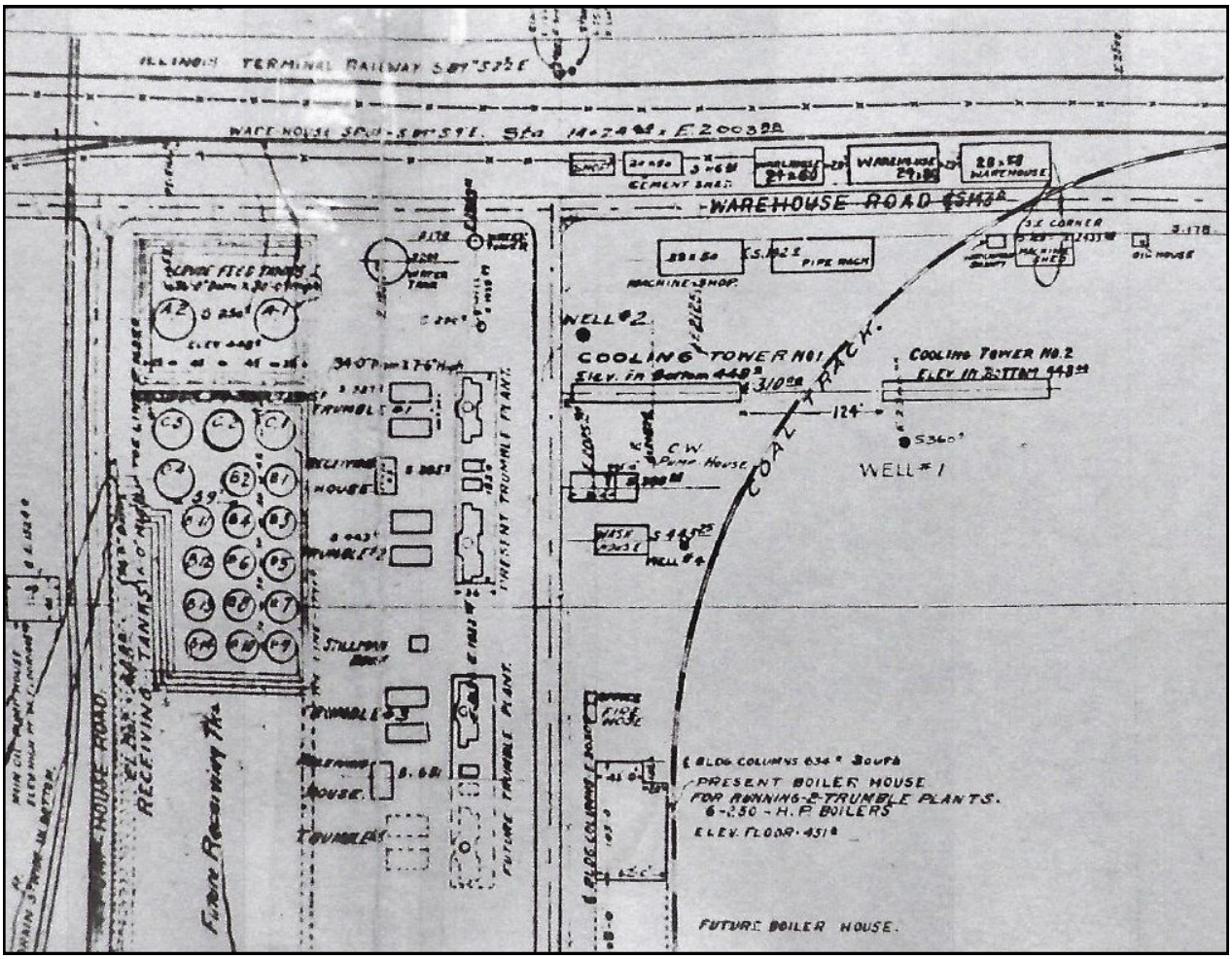
100 Years at the Wood River Refinery

BROUGHT TO YOU BY THE WOOD RIVER REFINERY HISTORY MUSEUM

Tracks, Roads, and Lines



A portion of the 1917 plot plan

INSIDE THIS ISSUE:

With the workers' facilities nearing completion, activity on the refinery grounds was beginning to increase at a rapid rate. The additional workers would be on site very soon, and there was much to do before the projected completion date.

The date set for the completion of the Wood River Refinery was February 28, 1918. The board of directors wanted the refinery ready before the completion of the 10" crude oil pipeline coming from Cushing, OK.

Most likely, the very first high priority project for the refinery was the modification of the railroad tracks that formed the north boundary of the refinery property.

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Tracks, Roads, and Lines (cont.)

Several sidings (in railroad terms this was a dead-end branch from the main line or a storage track) would be required to handle the rail deliveries. After construction was completed, these sidings would become tank car loading racks for the refinery's finished products. All shipments of finished products were transported by rail in 1917.

The construction of the four roads that would allow easy access to the various operating units, tankage, shops, storage, and support equipment would also be high on the construction priority list. From the archives of the museum, it appears that the roads, at least in this early stage, were no more than compacted dirt.

The four roads were named based on their proximity to the future major structures of the refinery. The names of the roads were Warehouse Road, Stills Road, Pumphouse Road, and Office Road.

The Office Road, known today as Main Office Road, was approximately 1,100 feet in length from the Main Gate east to Stills Road. The Main Gate was set back from the Alton-Edwardsville Road (today often referred to as the Frontage Road) by approximately 730 feet, about where the Main Gate is today.

Stills Road was a north/south road extending from Office Road to Warehouse Road. The entire road was about 1,800 feet in total length.

Warehouse Road ran east to west along the northern edge of the refinery, parallel to the railroad tracks, except at the west end where the road was offset to the south around the railroad sidings discussed earlier. The road ended on the west end at the fence line. The east end of Warehouse Road ended at unused refinery property. End-to-end the road was approximately 5,000 feet in length.

The fourth road was named Pumphouse Road. This road began about 600 feet east of the Main Gate, extending north from Office Road to Warehouse Road. This road was also approximately 1,100 feet in length.

Warehouse Road, as you might suspect, provided access to the three warehouses that lined the north side of the road. There was also a Machine Shop at the corner of Stills Road and Warehouse Road. The Trumble Units were to be constructed along the west side of Stills Road. Support units called Stills were to be built on the east side of the road along with the Boiler House. Today all of the roads but one are named by a letter or number designation.

Trivia Question

What are the 1917 Stills Road, Warehouse Road, and Pumphouse Road called today?

Stills Road - _____

Warehouse Road - _____

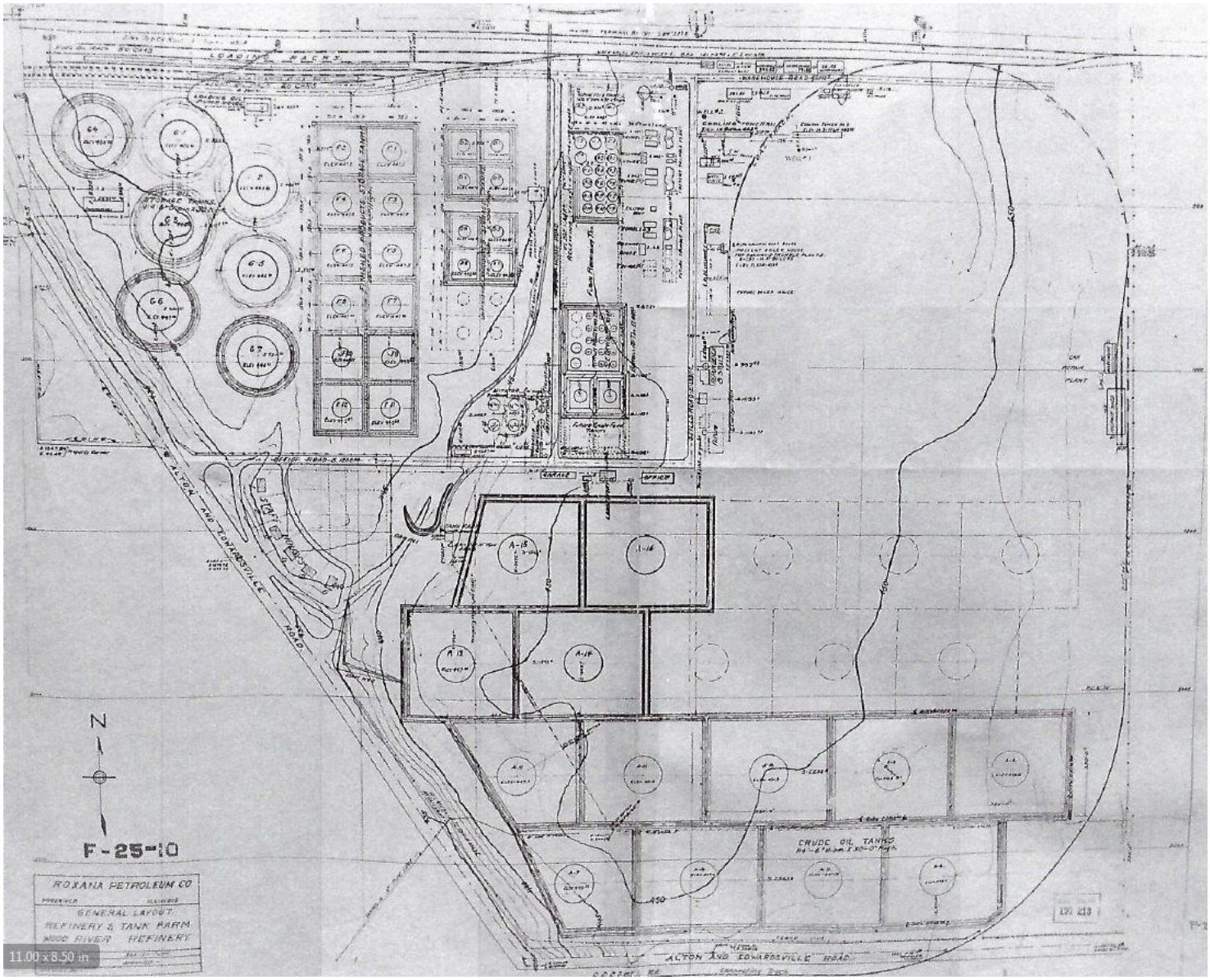
Pumphouse Road - _____

Send your answer to WRR.Community.Relations@p66.com. Next month, we'll reveal the answer and select one lucky winner to receive a 100th Anniversary trinket!

Last Month's Question: *What does RMS stand for when used with a British ship? (i.e. RMS Lusitania)*
The Answer: RMS was a designation used by the British beginning around 1840. The designation, when used as a prefix for the name of a ship, meant Royal Mail Ship. It was used for sea-going vessels that carried mail under contract by the British Royal Mail organization. This designation allowed the ship to fly the pennant of the Royal Mail Service when sailing and to include the Royal Mail "Crown" insignia with the design of the ship.

The April trivia winner is: Hector Chaidez! Please contact Megan Allen or Melissa Erker to collect your 100th Anniversary prize!

1917 Plot Plan of the Refinery



SUPPORTING CAST

As the roads were being completed and the perimeter fencing was being installed (about 14,900 total feet or just short of 3 miles), refinery construction was underway. Underground piping, drainage ditches, water wells and foundations for the operating units and tankage foundations were high priority items on the construction list. Much of the work was done by hand and/or with the assistance of mules and horses as the heavy equipment we know and use today didn't exist.

While the operating equipment would be the most prominent structures, the support equipment was also important to the operation of the refinery. The support equipment consisted of the Office building, assorted pumphouses, two cooling water towers, a laboratory to insure product quality, a garage, boiler house with six boilers, water tower, the railroad tank car repair facility and accompanying warehouse building, and several storage tanks of various sizes. There was also a commissary located along the Alton-Edwardsville Road north of the main entrance. In addition, six staff houses were to be built along the west side of the refinery property south of the main entrance and along the Alton-Edwardsville Road.

The railroad repair facility and its associated warehouse were to be located on the extreme east end of the refinery property. It is unclear whether the repair facility was constructed in the early phase or if it was constructed at a later date. The plot plan does not show any roads or walkways to the area. Eventually Office Road would be extended toward the east.

There was one feature that was not included in the original plan – a parking lot. The automobile was still in its infant stage and was out of price range for the average family.

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Comments or Suggestions?
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Supporting Cast (cont.)

Soon though, Henry Ford would change the mobility of the United States forever.

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Steel storage tanks for petroleum manufacturing came about in the last two decades of the 1800s. Wooden barrels were replaced with riveted steel tanks to store petroleum as well as liquid chemical products. The steel tanks became the standard for storage when the required capacity was beyond a few barrels.

In the early 1900s, the United States developed codes to regulate flammable and combustible liquids and standards for performance testing and construction. It wasn't until the 1920s and 1930s that steel fabricators began turning from rivets to arc welding, which led to higher quality tanks. The early tanks were mostly constructed of galvanized steel, but when World War II began, there was a shortage of galvanized steel, and tanks were then built of black carbon steel.

The storage tanks in the refinery varied in size depending on the expected operating need and final production/shipping expectations. The tanks were grouped together to minimize piping and reduce pumping requirements. The height of some of the tanks can be determined from the 1917 plot plan.

The largest tanks were assigned to the Fuel Oil System. These tanks had a diameter of about 160 feet. The height of the tanks was 30 feet. There were seven tanks built in this style, and they bordered the parking lot that is now located north of the Main Office.

Storage tanks G6 and G7 still exist but are not of the original construction. Tank G7 sits in its original location. In 1958, the original riveted constructed tank was removed, and the new G7 was built with welded construction. Also, the original G7 tank was 160 feet in diameter while the new tank is 60 feet in diameter. In 1984, the original G6 tank that was located near G7 was disassembled and moved to North Property. It was rebuilt using welded construction.

The next largest tanks were the Crude Oil tanks. These tanks held the incoming crude oil that was to be utilized in the Trumble Units. There were two sizes: A1 and A2 were 64 feet in diameter while A4 through A15 were 144 feet and 6 inches in diameter. There is no information on A3. These tanks were located south of Office Road.

The last remaining riveted storage tanks were demolished within the past couple of years. A-22 built in November, 1926 was taken down in 2014 and A-42, built in June, 1934 was demolished this year.

There were two sets of tanks that were referred to as Receiving Tanks. The first group was designated B1 to B14. The second group was known as the "C" Tanks.

The Unfinished Product Storage Tanks were labeled D1 though D7. These tanks were 36 feet in diameter and 30 feet high. The 36-foot diameter Agitator Rerun Tanks carried the "E" designation and were numbered 1 to 4 while the Finished Product tanks were F1 to F12 and were about 60 feet in diameter and 30 feet tall.

There were also thirteen general Rerun Receiving Tanks that did not carry any letter designation, but each were 24 feet in diameter.

Today, the prefix letter of a tank does not necessarily designate the product in the tank but rather the shape/size of the tank. For example, an "A" tank will generally have a diameter greater than the height, while an "F" tank will generally have a height greater than its diameter. Even the naming system for our tanks has adapted and changed throughout history.