

MARYLAND HISTORICAL TRUST

**Maryland Inventory of Historic Properties
CONTINUATION SHEET**

Section Summary Page 1 Trappe Water Tower (T-352)
name of property
Talbot County, MD
county and State

1. Historic Period Theme: Community Planning
2. Geographic Organization: Eastern Shore
3. Chronological/Development Period: A.D. 1870-1930 / Industrial/Urban
Dominance
4. Resource Type: Structure
5. Narrative Capsule Summary: T-352 / Trappe Water Tower/ 1927

The Trappe Water Tower is a stock structure developed by the Pittsburgh - Des Moines Steel Company and erected by them in 1927. The structure includes a 50,000 gallon steel tank and a support system that consists of four steel girders anchored to poured concrete pads. Each pad has four large bolts set into it to receive the anchor plate for the girder supports. These are secured to the pad and the bolts with large nuts. The only variation from the stock design of this tower is the actual height of the tower. The height is determined by the extent of the properties to be served and the level of the land. The water tower is on a parcel that is about fifty-six feet above sea level. The surrounding town's landscape is flat with little variation beyond three or four feet. The distance from the ground to the base of the tower's tank is about 105 feet. The total height of the tower is about 120 feet.

The water tower is located on a landlocked parcel of land that measures about fifty feet on a side and is located behind parcels of land that front on Greenfield Avenue and Main Street. The surrounding buildings on Greenfield Avenue are all residential buildings that were mostly built after 1950. The buildings on Main Street nearest the water tower parcel are also residential but date from the nineteenth century. The buildings that are just north of the water tower parcel are part of the small central business district of Trappe.

The Water Tank and Tower in Trappe, Talbot County, Maryland is located within an historic district that has been recognized as eligible for listing on the National Register of Historic Places by the Maryland Historical Trust. The Water Tank and Tower have been a part of that district since its construction in 1927 and have served as a local landmark since that time. The Water Tank and Tower assumed increased significance when the new U.S. Route 50 was constructed east of the Town of Trappe and traffic routed away from the central part of town. For many travelers, the Water Tank and Tower and the traffic light on Route 50 serve as the only markers for the Town of Trappe. The Water Tank and Tower were removed by the Atlantic Tank Company under contract to the Town of Trappe in July 2000.

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Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets. Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Trappe Water Tower
other names/site number T-352

2. Location

street & number Greenfield Road (tax parcel 1676) not for publication
city or town Trappe vicinity
state MD code MD county Talbot code 041 zip code 21673

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this survey nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official Date

State or Federal agency and bureau
In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of commenting or other official Date

State or Federal agency and bureau

4. Certification

I, hereby certify that this property is:

- entered in the Maryland Register
entered in the National Register
See continuation sheet.
determined eligible for the National Register
See continuation sheet.
determined not eligible for the National Register
removed from the National Register
other (explain):

Signature Date of Action

5. Classification

Ownership of Property (Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property (Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

Contributing	Noncontributing	
<u>0</u>	<u>0</u>	buildings
<u>0</u>	<u>0</u>	sites
<u>1</u>	<u>0</u>	structures
<u>0</u>	<u>0</u>	objects
<u>1</u>	<u>0</u>	Total

Number of contributing resources previously listed in the National Register NA

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.) NA

6. Function or Use

Historic Functions (Enter categories from instructions)

Cat: government Sub: public works

Current Functions (Enter categories from instructions)

Cat: government Sub: public works

7. Description

Architectural Classification (Enter categories from instructions)

Other; Art Deco Industrial

Materials (Enter categories from instructions)

foundation concrete pad

roof tin

walls Sheet steel

other Steel wire

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield information important in prehistory or history.

- Criteria Considerations (Mark "X" in all the boxes that apply.)
- A** owned by a religious institution or used for religious purposes.
 - B** removed from its original location.
 - C** a birthplace or a grave.
 - D** a cemetery.
 - E** a reconstructed building, object, or structure.
 - F** a commemorative property.
 - G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)
Community Development

Period of Significance 1927- 1997

Significant Dates 1927

Significant Person (Complete if Criterion B is marked above)

Cultural Affiliation

Architect/Builder Pittsburgh-Des Moines Steel Company

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file

- previously surveyed
preliminary determination of individual listing (36 CFR 67) has been requested.
previously listed in the National Register
previously determined eligible by the National Register
designated a National Historic Landmark
recorded by Historic American Buildings Survey #
recorded by Historic American Engineering Record #

Primary Location of Additional Data

- X State Historic Preservation Office
Other State agency
Federal agency
Local government
University
Other

Name of repository:

10. Geographical Data

Acreage of Property .05

UTM References (Place additional UTM references on a continuation sheet)

Table with 4 columns: Zone Easting, Northing, Zone Easting, Northing. Row 1: 18, 407804, 4279209, 3. Row 2: 2, 4.

Verbal Boundary Description Tax Parcel 1676 Map 300 (Trappe, Maryland)
Boundary Justification This information includes only the legal parcel on which the tower was located.

11. Form Prepared By

name/title Stephen G. Del Sordo/Historian
organization Heritage Resource Group, Inc.
date July 2000
street & number 305 Oakley Street telephone 410-228-8934
city or town Cambridge state MD zip code 21613

Additional Documentation

The following items are submitted with the completed form:
Continuation Sheets
Maps
Photographs
Additional items (Check with the SHPO or FPO for any additional items)

Property Owner

name Town of Trappe
street & number telephone 410-476-3170
city or town Trappe state MD zip code 21673

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Section 7 Page 1 Trappe Water Tower (T-352)
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The Trappe Water Tower is a stock structure developed by the Pittsburgh - Des Moines Steel Company and erected by them in 1927. The structure includes a 50,000 gallon steel tank and a support system that consists of four steel girders anchored to poured concrete pads. Each pad has four large bolts set into it to receive the anchor plate for the girder supports. These are secured to the pad and the bolts with large nuts. The only variation from the stock design of this tower is the actual height of the tower. The height is determined by the extent of the properties to be served and the level of the land. The water tower is on a parcel that is about fifty-six feet above sea level. The surrounding town's landscape is flat with little variation beyond three or four feet. The distance from the ground to the base of the tower's tank is about 105 feet. The total height of the tower is about 120 feet.

The water tower is located on a landlocked parcel of land that measures about fifty feet on a side and is located behind parcels of land that front on Greenfield Avenue and Main Street. The surrounding buildings on Greenfield Avenue are all residential buildings that were mostly built after 1950. The buildings on Main Street nearest the water tower parcel are also residential but date from the nineteenth century. The buildings that are just north of the water tower parcel are part of the small central business district of Trappe.

The 1925 catalog published by the Pittsburgh - Des Moines Steel Company shows the various tanks made by the company and was used by clients to determine the size of the tank and the amount of land required to locate the tank. The standard tower and tank of 50,000 gallons and with the height of the central riser of 105 feet required that the concrete supports be spaced 37.5 feet apart on the square. The company recommended that an additional ten feet be added to this square for the parcel of land on which the tank would sit. Some municipal and industrial clients would include this tract with the associated pumping and purifying buildings. Others would use separate parcels and pipe the water to and from the tank after passing through the purifying works for the water system. The Trappe Water Tower has its concrete support pads set at 37.5 feet apart from the center each pad.

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The pads used at Trappe are two feet and six inches square. Unlike the pads shown in the company literature, the pads at Trappe are flat and almost flush with the ground surface. The four bolts set into the concrete as anchor points are one and three-quarters inches in diameter. The central shaft or riser of the tower is set on a concrete pad that is five feet square. The portion of that pad on which the steel shaft sits has a concrete collar that is hexagonal in design and three-inches high and three-inches wide.

The central riser or pipe consists of 15 sections of steel piping. The lowest section is twelve feet and eleven inches in circumference. The steel used to make each section is three-eighths of an inch in thickness. Each section above that first section is slightly smaller and reduced by the thickness of the steel section below. Each section is formed as a flat plat and then curved in manufacture and closed into a round section with rivets. The rivet heads are cone-shaped and one and one-half inches wide. They are five-eighths of an inch high. Each section of curved riser is riveted to the section below and above with the same rivets and in the same pattern except that the lap joints of each riser section are shifted so that no section lap joint fits near another. The pattern at this tower and observed at similar towers is to alternate the joint from front to back. The top of the central riser or stack is fitted with an expansion collar that is made from wood and insulated from the weather. This collar fits around the bottom of the tank.

The bottom of all Pittsburgh - Des Moines water tanks are hemispherical. Company literature claims that this shape is self cleaning and more economical than other shapes. The shape also makes it easier to calculate wind and weight stresses. The bottom is manufactured from three-eighths inch sheet steel that is shaped at the factory and shipped to the job site. Once on the site, each section of the bottom is riveted into place and then hoisted to the top of the central riser stack. The bottom of the tank at Trappe is eight feet in height. The main section of the tank is fitted onto the top of the bottom; along with a steel walkway that surrounds the tank and is used for maintenance checks and repairs. This walkway has a safety rail. Access to the walkway is by a ladder that is attached to one of the tower legs. There are no safety features on the ladder or walkway other than the safety railing on the walkway. The tank is straight sided. The top is capped with a sheet-steel roof. This roof is fitted with an access panel.

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In addition, there is a revolving ladder that is attached to the central portion of the roof. This allows a workman to have somewhat secure access to the entire roof without having to bring an additional ladder or to use ropes or lines to work on the roof. Also, the top of the roof is fitted with a cast iron finial as a decorative feature. The only other decorative feature of the water tank is that the name of the community or factory, in this case, Trappe, is written in large capital letters.

The steel tower legs that support the tank are made from two pieces of channel-shaped steel. The flat of the tower steel is one-foot wide with a three-inch lip. The channel is set outward and the flat surfaces face its opposing member. The two pieces are secured with steel straps that are two and one-half inches wide and eighteen and one-half inches long. The straps are fastened to the support steel with a rivet at each end. There are twenty-six straps on each side of each section of tower support. Each piece of tower support is riveted to the section above with a rivet plate. Cross braces are laid from this rivet plate to the tower support to each side of the tower support. Diagonal wire braces are laid at an angle from top to bottom of each section. At the juncture of each section, additional bracing is attached to a collar around the central steel riser or shaft of the tank.

There are no other buildings or structures associated with this water tank except for the water feed and delivery lines that were placed underground when the tank was constructed. The pump house and other support buildings associated with the municipal water system were removed some years ago.

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Changing needs and an increased demand for water and the age of the existing tower and tank forced the Town of Trappe to construct a new tower and water tank at some distance from the old tower and tank. The Water Tower and Tank were last used in 1997. The Tower and Tank have been unused since that time. When the structure was removed from its site in July 2000, the tower and base were sold for scrape metal. The tank, without its bottom, was sold to Thomas's Salvage Yard in Trappe for use as a storage shed.

The Trappe Water Tower and Tank are a standard design manufactured and erected by the Pittsburgh-Des Moines Steel Company in 1927. A company catalog published in 1925 shows the various water towers that the company manufactured and erected. They could accommodate a wide variety of municipal and industrial needs. Thousands were built by this company across the country. Many hundreds remain. For instance, the Town of Queenstown in Queen Anne's County, Maryland has the same size and style tank. Another is located in Eastville, Virginia on that state's lower Eastern Shore. A slightly larger version of this standard tank is located on the grounds of the former Phillips Packing Company Complex in Cambridge, Dorchester County, Maryland.

The water tower that Trappe purchased in 1927 was part of an effort by many rural governments to provide a municipal water system for their community or to upgrade an existing system. Not only did this provide safe and reliable potable water for domestic, commercial, and industrial use, it also

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provided water for fire protection. This was important in attracting new businesses to the community and in keeping fire insurance rates at a minimum.

Municipal water and sewer systems have been found throughout the ancient world by archeologists working in the small and large cities around the Mediterranean Basin and in the New World. However, the need and function of these basic systems were lost for many generations and then rediscovered again in the seventeenth and introduced into the larger cities of Europe. Community and municipal systems were brought to the Americas with the French and English colonists. The first systems were common wells and refuse dumps. These soon evolved into piped water systems and community disposal areas; but only in the larger cities.

It was not until the end of the nineteenth century that municipal water systems considered a basic service in America. Smaller cities and rural communities began to install these utilities for the first time as part of their efforts to become more modern. The Town of Trappe began to install their first municipal water system in 1926 with the design of the system and the laying of water pipes into the community. The tower and tank were a part of this first system and installed in 1927. The 50,000 gallon tank supplied the water for the two-hundred and fifty people who lived within the borders of Trappe at the time. According to the Town's water superintendent, Robert Crosswell, the tank and tower were delivered by railroad to the Trappe Train Station and then hauled to its site by horse and wagon.

The Pittsburgh - Des Moines Steel Company was formed in 1893 as a partnership known as Jackson & Moss and based in Des Moines, Iowa. Their speciality was the construction of municipal water systems. As part of their business, they helped to shift water system construction away from the use of reservoirs and wooden tanks and into the use of steel tanks. The advantage of the steel tank was that it kept the water cleaner and its natural gravity feed helped to maintain an even pressure in the water system without the use of expensive pumps. They also designed and patented the hemispherical bottom and other features of steel tank construction.

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In 1900, they were joined by another local firm that specialized in bridges to form the Des Moines Bridge and Iron Works. Their business grew rapidly and the company's 1925 catalog claims that they were building tanks in almost every state in the Union. As a result, they created a plant and base of operations in Pittsburgh, Pennsylvania in 1907. Two of the partners moved to Pittsburgh and together they changed the name of the firm to the Pittsburgh - Des Moines Steel Company. They also expanded their business to include the design, fabrication, and erection of radio towers. During World War I, they built a tower in Bordeaux, France for the United States Government that was the tallest in the world at 820 feet.

After the war, they expanded again to become general contractors for steel structures and built water supplies and softener plants for railroad companies. One of the steel structures that they built and erected is the Jefferson National Expansion Memorial Steel Arch in St. Louis. This arch was begun in 1947. Today, the company is known as the Pitt - Des Moines Steel Company, Inc. or as PDM and they operate facilities across the country. They continue to manufacture and install a wide variety of tanks and containers including containment vessels for nuclear power plants and for undersea habitats.

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McClintic - Marshall Corporation

1932 *Elevated Water Tanks and Standpipes.* Bethlehem, PA : McClintic - Marshall Corporation (a subsidiary of Bethlehem Steel Corporation).

Pittsburgh - Des Moines Steel Company

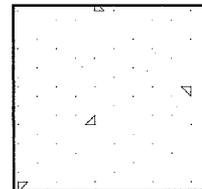
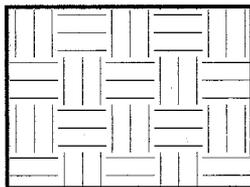
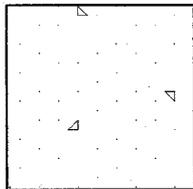
1925 *Municipal Water Works.* Pittsburgh, PA: Pittsburgh - Des Moines Steel Company.
2000 *PDM Service Centers WebSite/Home Page.* [www:pdmsteel.com](http://www.pdmsteel.com).

Schlotzhauer, Kristine

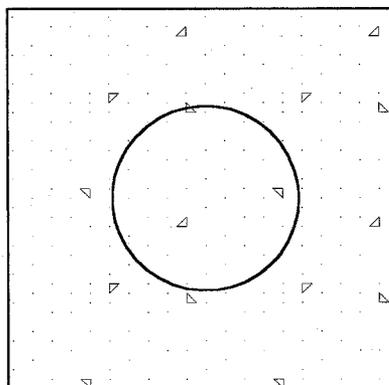
2000 "Trappe water tower removed." in *The Star Democrat.* 20 July 2000.

Trappe Water Tower T-352

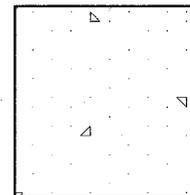
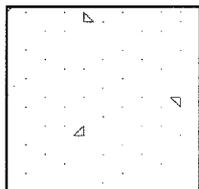
Trappe, Talbot County, Maryland



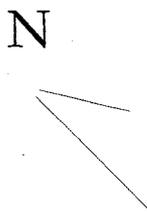
Water Valve Access



Central Pad for Shaft



Tower Feet (one of four)



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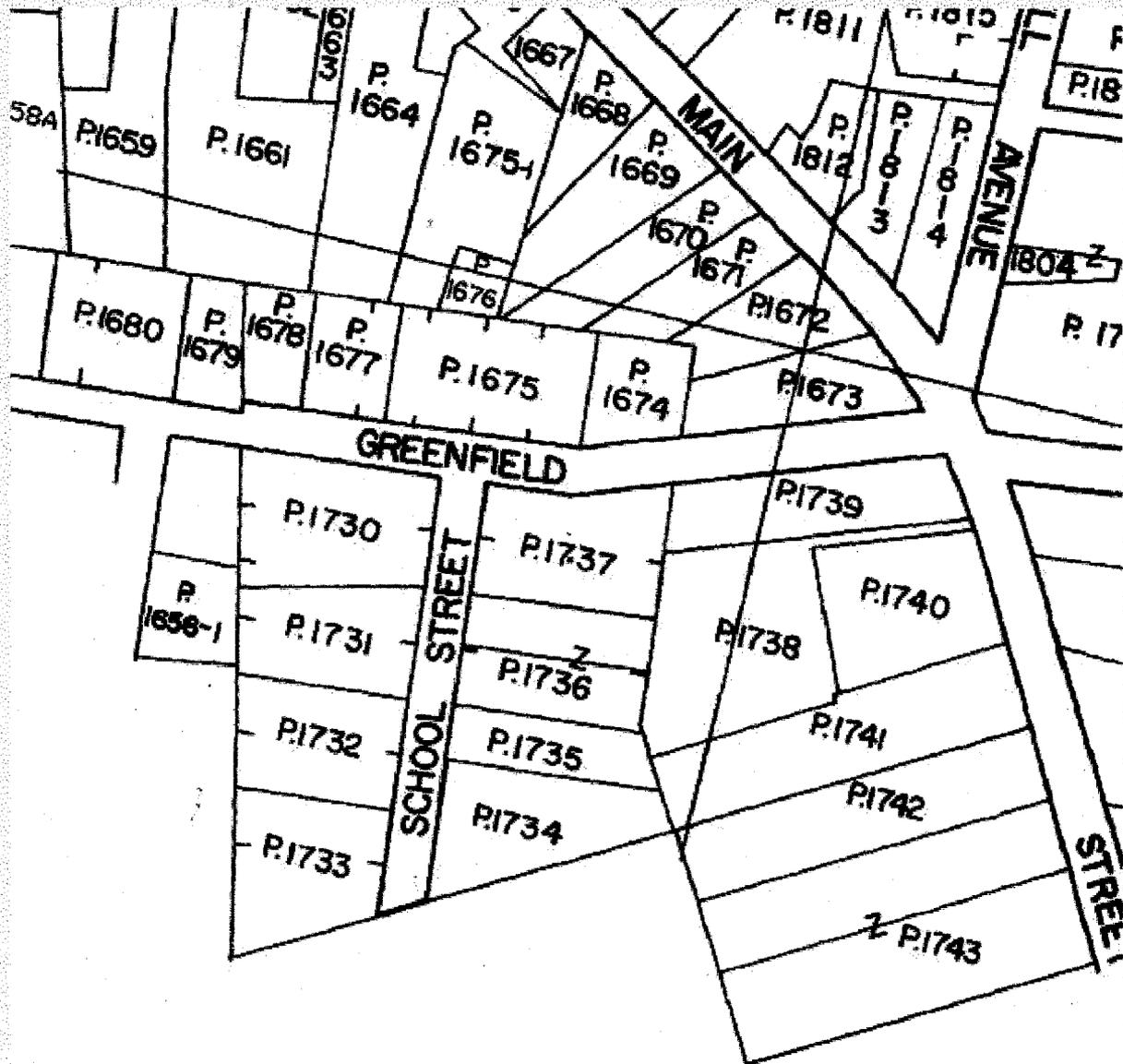
Real Property Information

Maryland Department of Assessments and Taxation
Real Property System

[Go Back]

Account ID : 2103106195

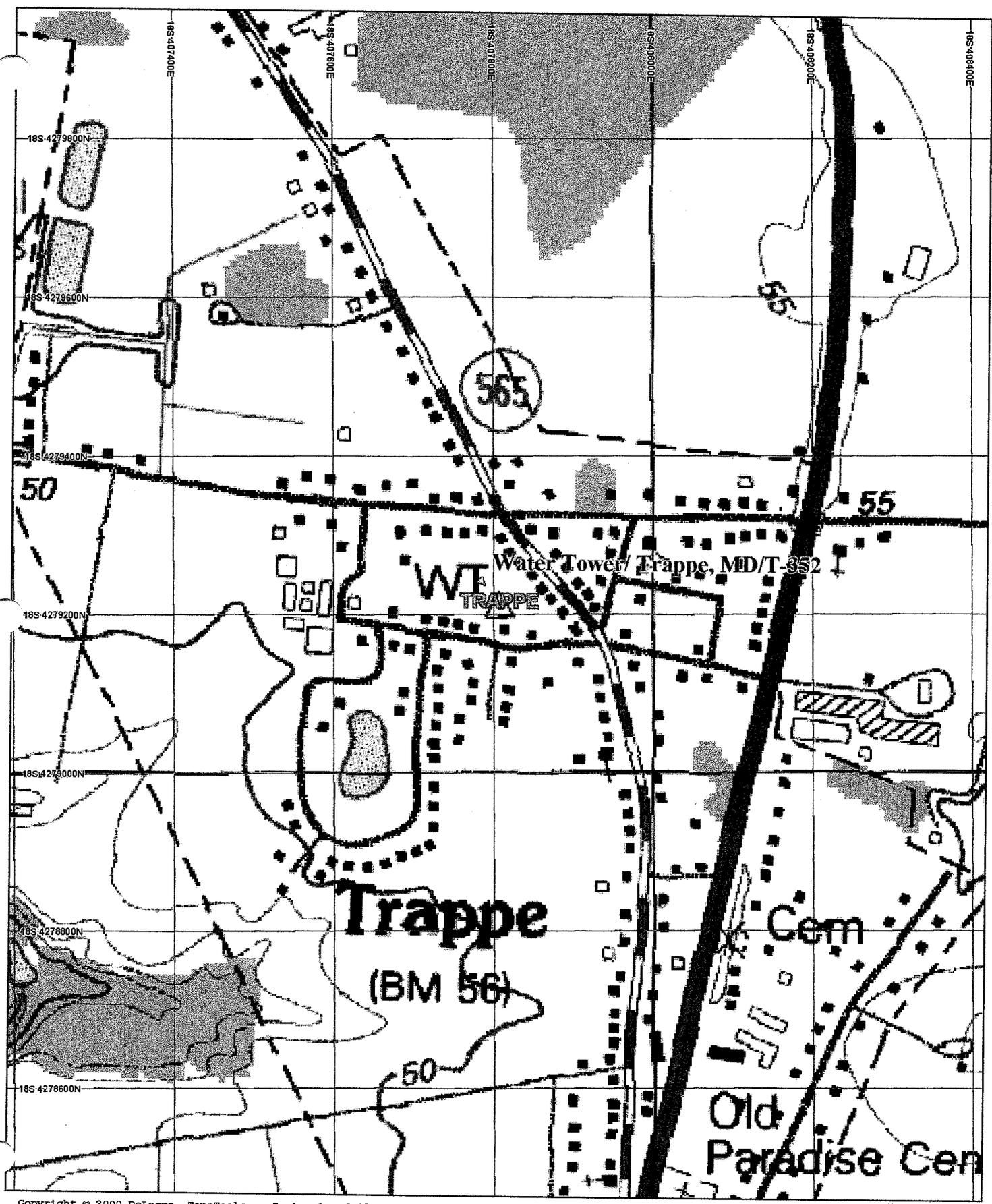
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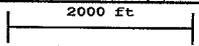
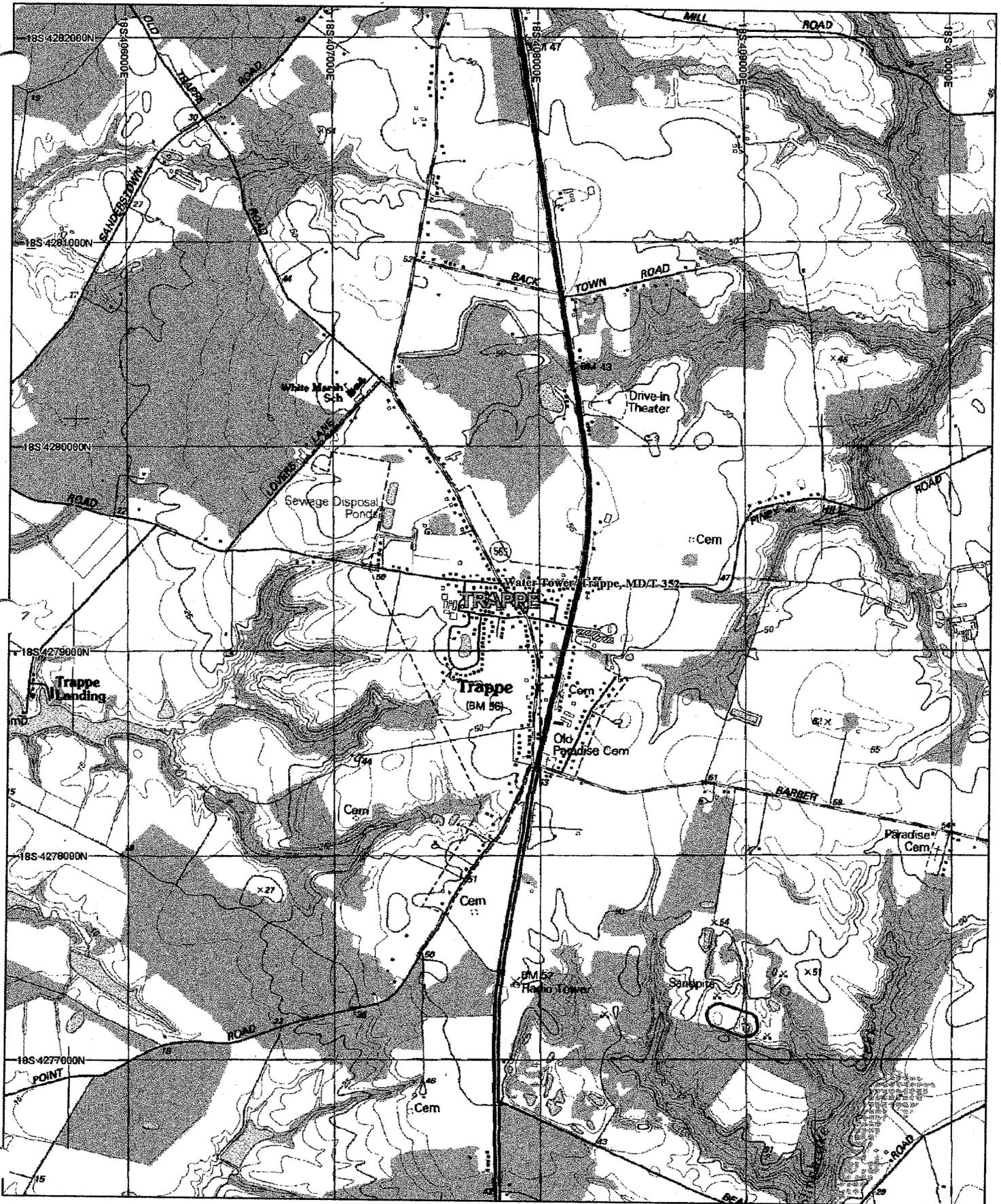


Property maps provided courtesy of the Maryland Office of Planning © 1999.
For more information on electronic mapping applications, visit the Maryland Office of Planning web site at www.op.state.md.us.

T-352







T-352



Figure 1 View from East



Figure 2 View from Main Street



Figure 3 View from Main Street



Figure 4 View from Greenfield Avenue



Figure 5 Full View



Figure 6 Base



Figure 7 Lower Section

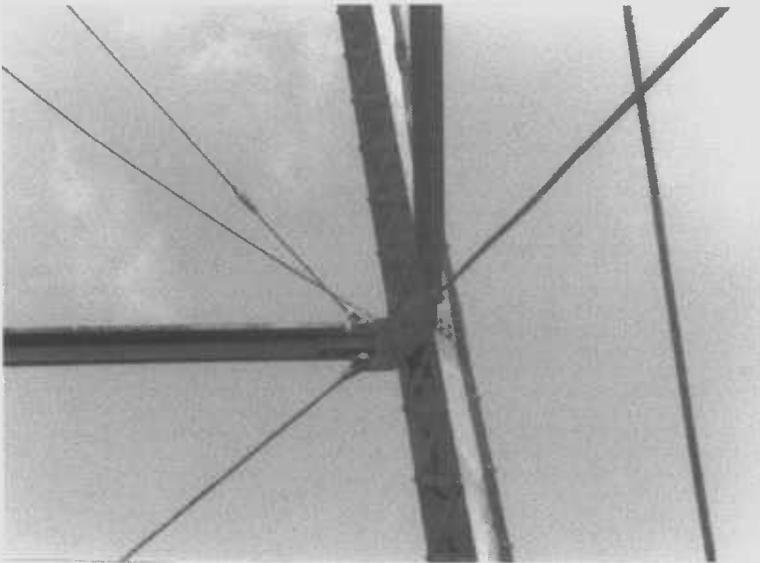


Figure 8 Tie Wire Attachment and Detail

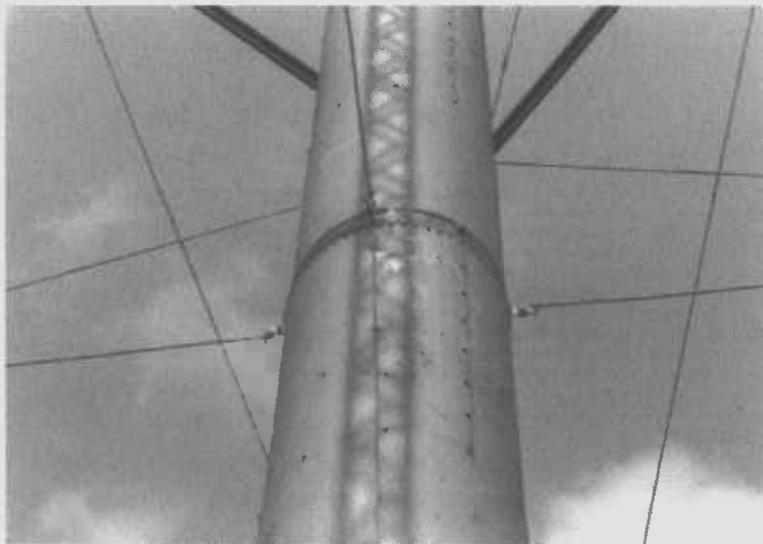


Figure 9 Shaft and Wire Supports



Figure 10 Tank and Bottom

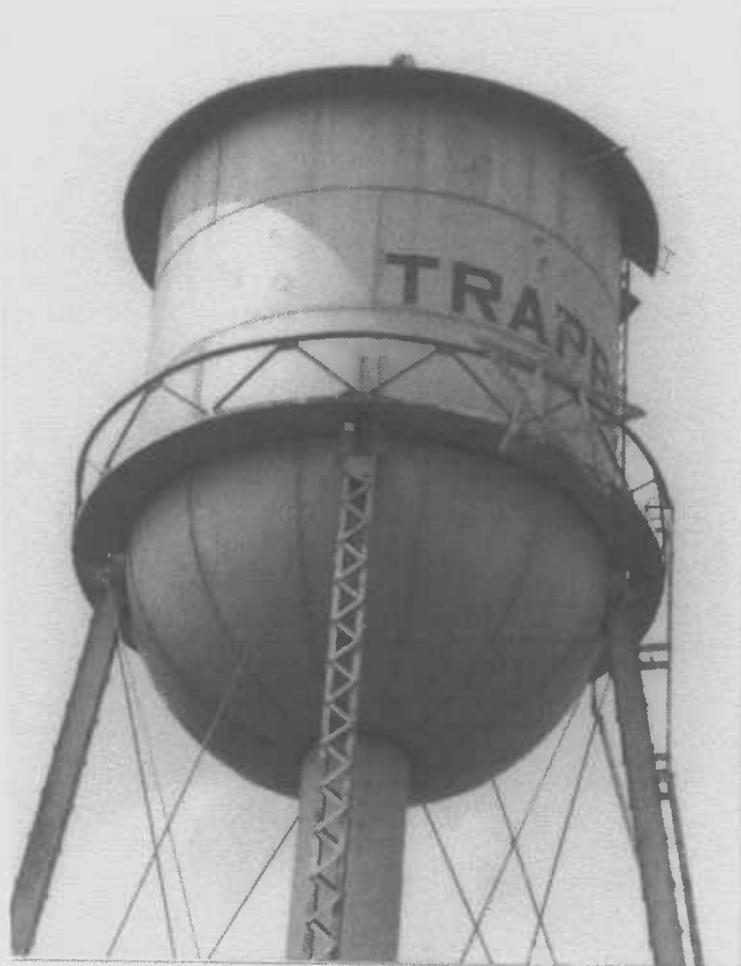


Figure 11 Tank and Bottom/ Legs and Ladder



Figure 12 Tank with Ladder and Roof Ladder



Figure 13 Tank Removed



Figure 14 Tank Bottom



Figure 15 Tank with Ladder and Roof Access

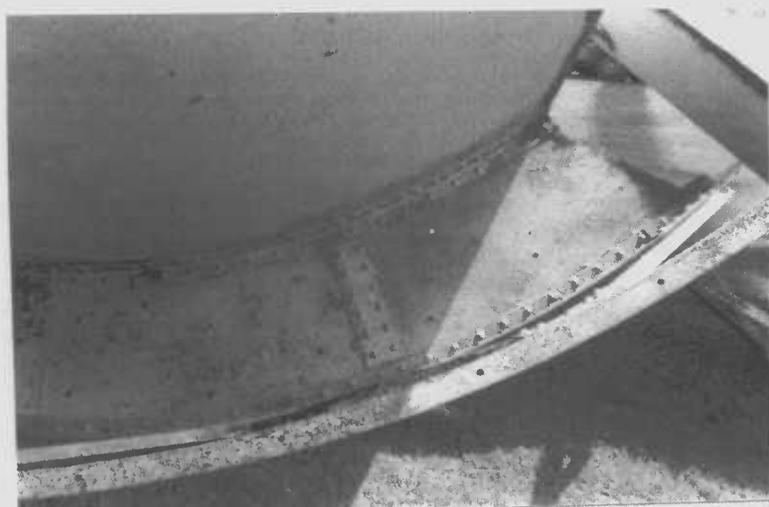


Figure 16 Walkway



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T-352

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* Koppa Water Tower

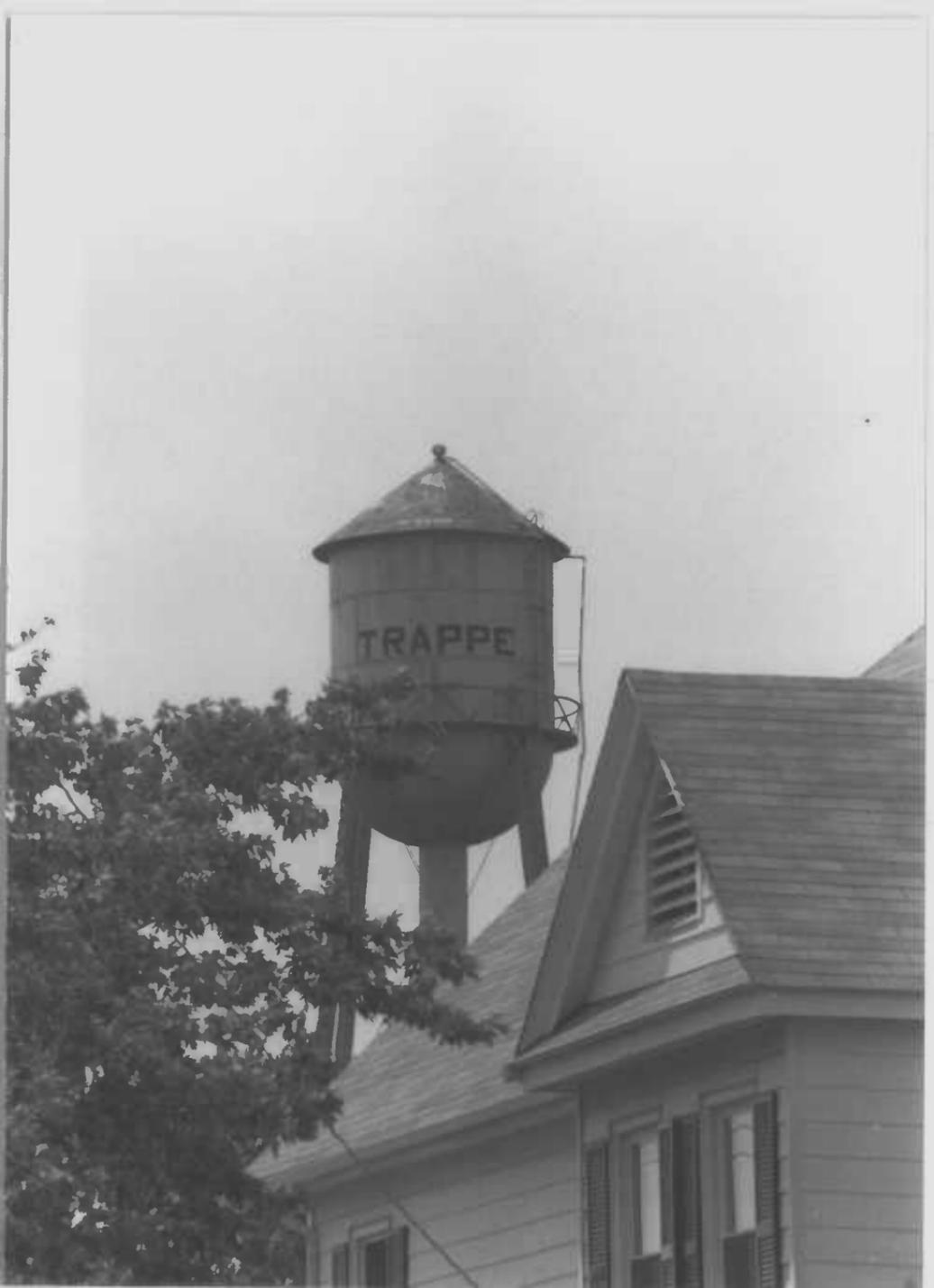
T-352

total analysis

8/20/50

total water

total water



Tropice water tower

T-352

at 6/11 2000

July 23 2

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Troppe water tower

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Troppe water tower

T-352

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July 2000

S. ...

view from W



Top of water tower

T-352

Tallest in "H" 3

July 1950

S. Dot Sando

Lower section



Troppe into tower

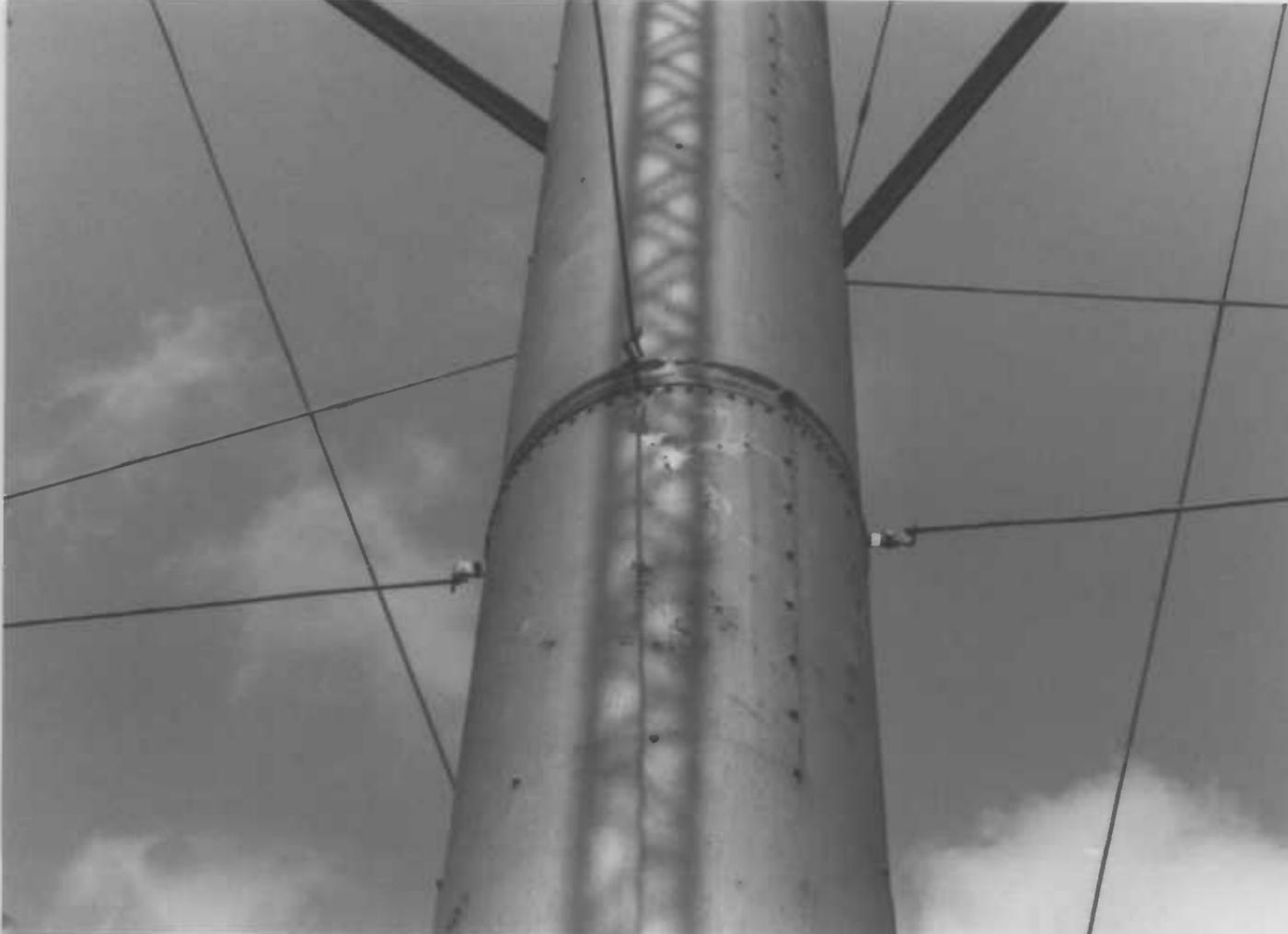
T-352

Salisbury County, NC

July 1900

S. Bot. Seeds

base



Troppe Water Tower

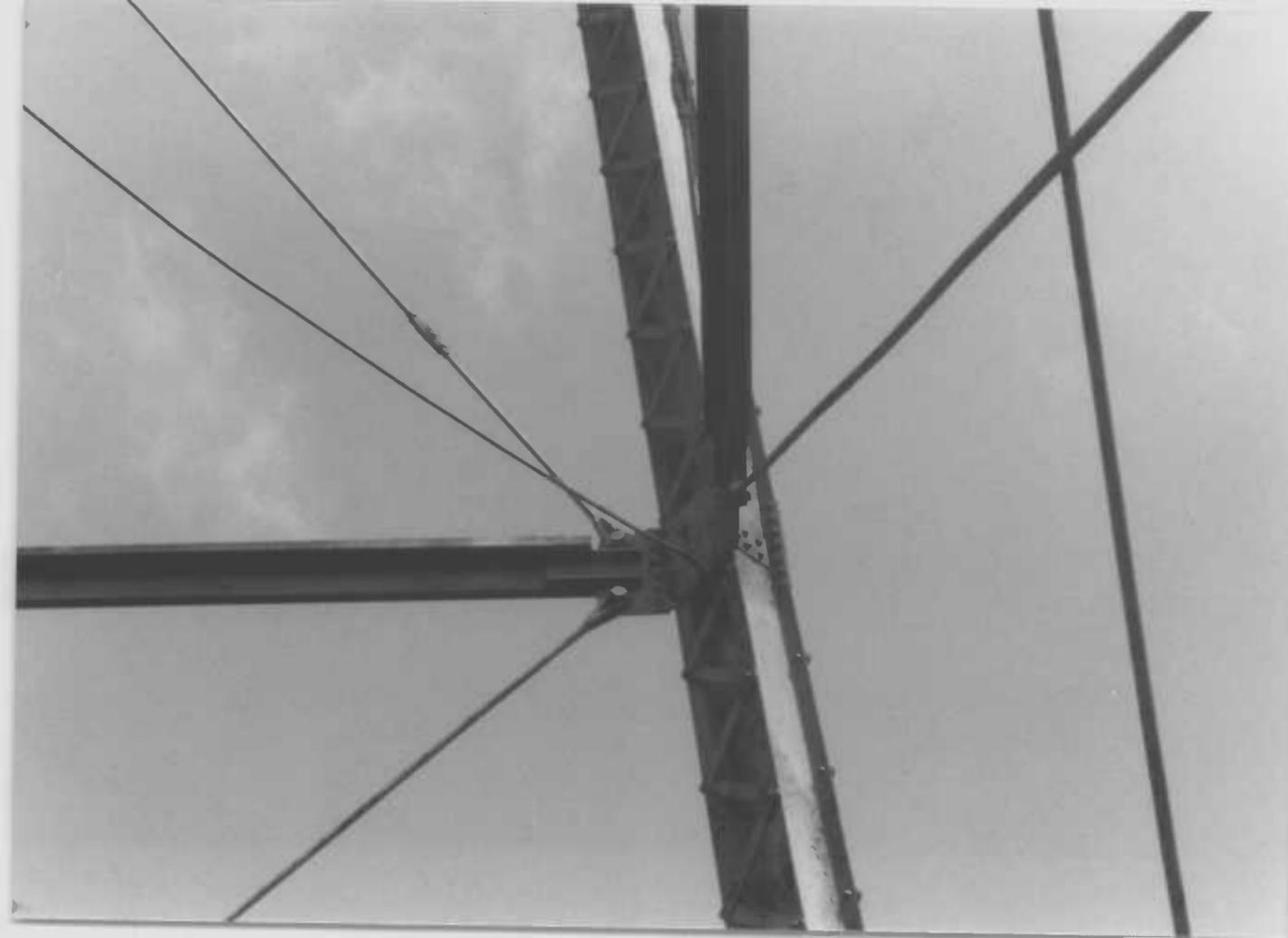
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Talbot County, Md

July 1900

Dr Det Sords

on site section



Enoppe water tank

T-352

Talkbot assembly

July 2000

En. Del. Santa

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Troppe Water Tower

T-352

Talbot County, MD

July 2000

Water Tower

under roof



Troppe Water Tower

T-352

Telbot (20.00/1.00)

July 2000

2000

2000



Troppe Water Tower

T-352

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July 2000

S. J. J. 1124

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Fridge 20-11-2003

F-352

1. 20.11.03
2. 21.11.03
3. 22.11.03
4. 23.11.03
5. 24.11.03