

## Madison Water Utility

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Tom Heikkinen, General Manager

119 E. Olin Avenue  
Madison, Wisconsin 53713  
Telephone: 608 266-4651  
FAX: 608 266-4644  
E-mail: [water@cityofmadison.com](mailto:water@cityofmadison.com)

### **LETTER OF INTENT**

#### **Lakeview Reservoir Replacement Project**

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May 7, 2014

**To:** City of Madison Planning Department and Plan Commission  
215 Martin Luther King Jr. Blvd. LL110  
Madison, WI 53703

**From:** Alan Larson, PE, BCEE  
Madison Water Utility

**Re:** Land Use Application for Conditional Use  
(Reservoir Replacement on Lot 1 of CSM 12189, Easement to City of Madison Document No. 2909070)

Reservoir Owner – City of Madison Water Utility  
Engineering Consultant– Short Elliott Hendrickson (SEH)  
Architect – Potter Lawson, Inc.

#### **Project Address**

**Lake View Hill Park**  
1202 Northport Drive, Madison, WI 53704

#### **Project Description**

The project includes demolition of the existing elevated steel tank water reservoir built in 1938 located on the subject site, which is undersized for current and projected water demand in the area this tank serves, and replace it with a new two zone reservoir water storage tank. The new tank will be of either steel or concrete construction, depending upon the outcome of a competitive bid process which will be conducted through standard City procurement contracting procedures.

Cellular antennae located on the existing water tower will be moved to a temporary monopole which will be installed on the site for the duration of the construction process for the new tank, then the antennae will be moved back onto the new tank and the monopole will be removed.

The site is located within the Lake View Hill county park on Dane County lands. The existing tank is a contributing structure to the collection of buildings and structures which were listed on the National Register of Historic Places in 1993 as Lake View Sanatorium. Neither the tank nor the buildings are local historic landmark structures.

The new tank will be designed as a two reservoir tank. The lower tank will have a storage capacity of 1,000,000 gallons, and the upper tank a storage capacity of 300,000 gallons. The tank shell will be cylindrical with a diameter of approximately 50', and a height of approximately 135'. Grade at the base of the tank is approximately elevation 1015'. Final details for the tank design are engineering driven, and partially dependent upon the tank fabricator/erector.

The construction process will require temporary use of a limited area of park land extending beyond the City owned easement. Madison Water Utility has been coordinating with Dane County government and the Citizen Advisory Panel (CAP) on all aspects of the project, including the tank design, aesthetic details, construction phase details for access and the use of the site, as well as site and landscape repair and restoration back to a condition that will satisfy the needs of the County, City, local constituents and users of the park. This coordination process has been ongoing since the Fall of 2013 and will continue through the completion of the project.

#### **Development Team**

Owner	City of Madison Water Utility	Alan Larson
Consulting Engineer	Short Elliott Hendrickson, Inc.	Jon Strand
Architect	Potter Lawson, Inc.	Robert Mangas, Doug Hursh

#### **Construction Schedule**

Construction is anticipated to start as soon as approvals are granted, with construction commencing in Summer of 2014, and project completion in the Fall of 2015.

#### **Approvals Requested**

This application is for approval of a major alteration to an existing site which is an allowed conditional use in a CN zoning district under the 2013 City of Madison zoning code. Approvals requested include:

- Permit to erect a temporary cellular antenna monopole
- Demolition permit to remove the existing elevated steel tank water tower (Reservoir No. 113)
- Conditional Use Application for a new two zone reservoir (either steel or concrete construction)

#### **Certified Survey Map**

Lot 1 of CSM 12189, Easement to City of Madison Document No. 2909070.

#### **Demolition**

The development team submitted the required notice to the City, Alder, and Neighborhood Association in October 2013.

All applicable provisions of the demolition ordinance will be complied with, and a reuse and recycling plan will be submitted for approval prior to the issuance of the demolition permit.

#### **Compatibility with Approved Master Plans**

The proposed Lave View Reservoir replacement project team is working with Dane County Parks and citizen groups through the CAP process to insure that the project will satisfy the overall goals, character, and include considerations of neighbors and users of the park, and the Lake View Hill Park Master Plan adopted by the Dane County Board of Supervisors on August 6, 2009 (Res. 74, 09-10).

#### **Neighborhood and City Process**

The development team has been hosting events since early last fall to inform the public and solicit public input. These have included numerous Citizen Advisory Panel meetings, two public meetings, two Water Utility Board meetings each of which included a public hearing, meetings with Dane County staff, and a DAT meeting with City staff in December of 2013. The Madison Water Utility hosts a web page on their web site that provides information on the project, its purpose, and the process that the utility is following to erect this replacement tower.

#### **Buildings on the Site**

There are three small buildings which will remain on the property that house the cellular equipment of the cellular carriers. There is also a small white shed which will remain.

#### **Site Access and Parking**

Vehicular and construction access to the site is from North Port Drive. Contractor access and use of the site and parking spaces on adjacent Dane County land will be restricted as indicated in bid documents. Any damage from the construction process will be repaired by the contractors completing the work of this project.

No additional parking or new paved areas is included in this project.

Respectfully submitted,



for Alan Larson, PE, BCEE  
Madison Water Utility

**Attachments:**

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Project Location – 2013 City of Madison Adopted Zoning Map

Project Location – Aerial View

CSM Map No. 12189 and Easement Document No. 2909070 (legal description of parcel)

Photos of the existing water tower and buildings on the easement

CAP hand-outs showing the two zone tank concept and Pressure Zone 5 and 6

Excerpt from the Great Lakes Archeological Research Center Report on Investigations No. 695 (pgs 28, 29, 30)

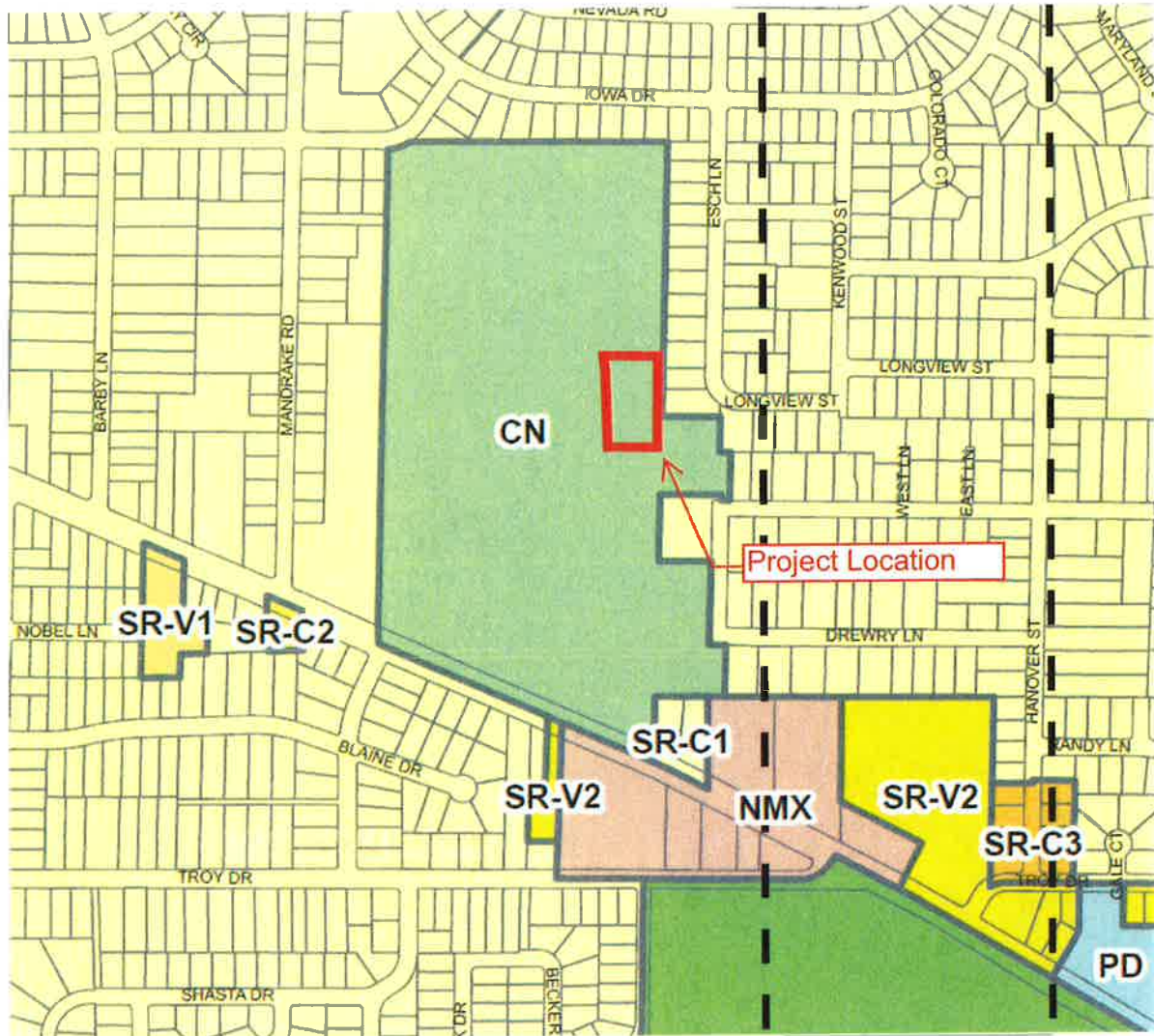
Summary of current telecommunications licenses

Concept elevation views of steel tank

Concept elevation views of concrete tank

Drawing set including site survey, grading and utility plans, landscape plans, site plan, and contractor use of site and erosion control

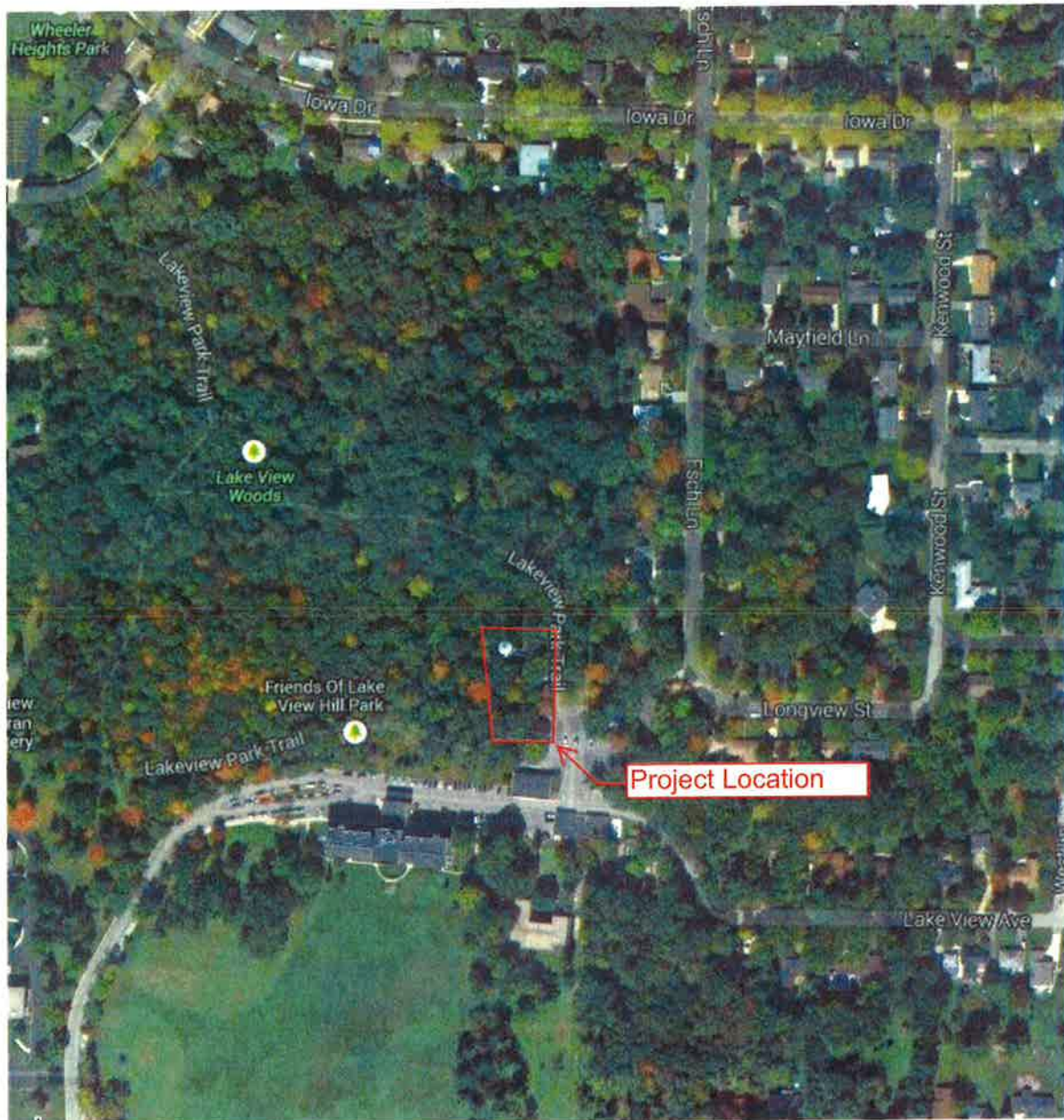
## Lakeview Reservoir Replacement Project



**Project Location - 2013 City of Madison Adopted Zoning Map**



## Lakeview Reservoir Replacement Project



**Project Location - Aerial View**

# CERTIFIED SURVEY MAP NO. 12189

LOCATED IN THE NE1/4 OF THE SW1/4, THE SE1/4 OF THE SW1/4, THE NW1/4 OF THE SE1/4 AND THE SW1/4 OF THE SE1/4 OF SECTION 25, T8N, R9E, CITY OF

WEST 1/4 CORNER OF SECTION 25 MADISON, DANE COUNTY, WISCONSIN.

4.00' SOUTH OF P.K. NAIL FOUND.  
DANE COUNTY COORDINATES

N 507016.40 25  
E 821480.86

(S89°26'W) DOC NO. 1023850  
S89°29'43"E

1727.30' N 25°59'E  
WEST LINE OF THE SW1/4 OF SECTION 25

2654.13' N 25°59'E  
BRASS CAP IN CONCRETE AT THE

12 2654.13' N 25°59'E  
SOUTHWEST CORNER OF SECTION 25

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DANE COUNTY COORDINATES

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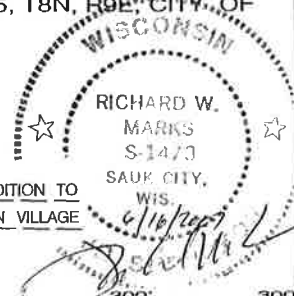
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DANE COUNTY COORDINATES



SCALE 1" = 300'

"A"	S1°19'37"W	274.20'
"B"	S88°51'22"E	205.84'
"C"	S1°32'40"W	126.27'
"D"	S89°13'57"E	40.00'
"E"	S1°33'51"W	174.59'
"F"	N88°56'48"W	29.94'
"G"	N1°32'40"E	20.47'
"H"	N89°18'02"W	215.89'
"I"	S89°04'30"E	185.36'
"J"	S1°39'00"W	299.57'
"K"	S88°53'15"E	60.06'
"L"	S46°05'25"W	263.84'

NW-SE

THESE LOTS AND THIS PART OF HANOVER PLAT WERE VACATED - VOL. 86, P. 207, DOC. NO. 500105

CI CENTRAL ANGLE - 23°04'48"

ARC LENGTH = 80.56

RADIUS = 200.00

LONG CHORD = N 70°19'51" E 80.02

TANGENT BEARINGS = N 58°47'27" E & N 81°52'15" E

EASEMENT TO CITY OF MADISON DOCUMENT NO. 2909070

SEE DETAIL ON PAGE 2

NE-SW

VACATED HANOVER STREET

LANDS WITHIN THIS CSM THAT, PRIOR TO THE RECORDING OF THIS CSM, WERE DESCRIBED AS

LOTS 9 THROUGH 12, BLOCK 2, LAKE VIEW HEIGHTS ARE SUBJECT TO THE LEGAL

RESTRICTIONS LISTED IN THE QUIT CLAIM DEED RECORDED AS DOCUMENT NO. 3991272.

DANE COUNTY TO THE CITY OF MADISON VOL. 760 OF DEEDS P. 566 DOC. 1077284

SE-SW

NORTHPORT DRIVE

LEGEND AND NOTES

- DENOTES 3/4" X 24" SOLID ROUND IRON ROD WEIGHING 1.50 LBS. PER LINEAL FOOT SET.
- ⊙ DENOTES 1" INSIDE DIAMETER IRON PIPE FOUND UNLESS OTHERWISE NOTED.
- ⊗ DENOTES 1/4" INSIDE DIAMETER IRON PIPE FOUND.
- DENOTES 1" SOLID ROUND IRON ROD FOUND.
- 1.) BEARINGS ARE GRID BASED ON THE DANE COUNTY COORDINATE SYSTEM DESIGNED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION. NAD 83 (97). THE WEST LINE OF THE SW1/4 OF SECTION 25 BEARS N1°25'59"E.
- 2.) WHEN DIFFERENT RECORDED BEARINGS AND DISTANCES ARE SHOWN IN PARENTHESES.

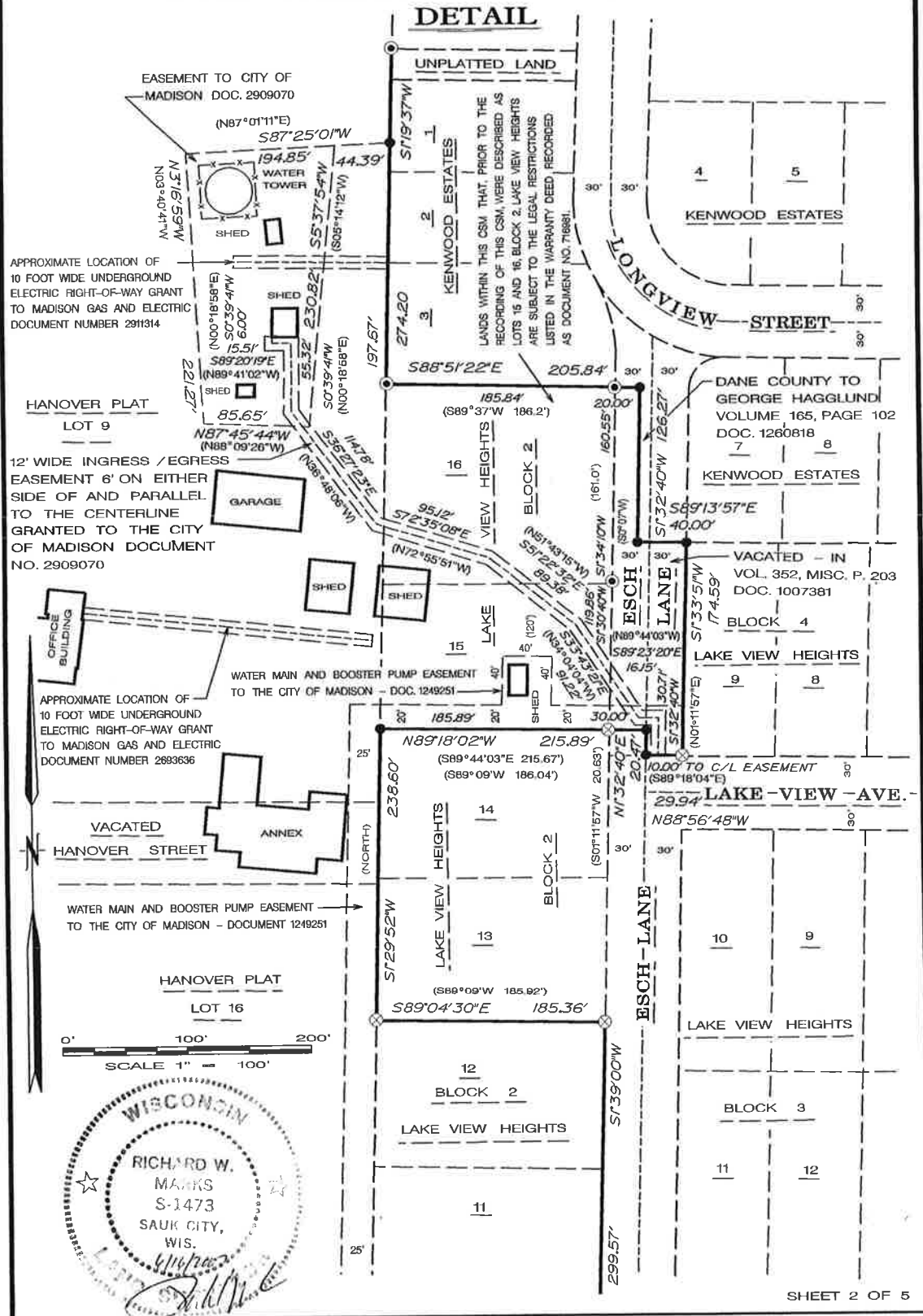
PREPARED FOR:  
DANE COUNTY LAND & WATER RESOURCES DEPARTMENT  
1 FEN OAK COURT - ROOM 223  
MADISON, WISCONSIN 53718-8812  
BRASS CAP IN CONCRETE AT THE SOUTH 1/4 CORNER OF SECTION 25 DANE COUNTY COORDINATES  
N 504339.74  
E 824056.19

**RIVER VALLEY**  
**LAND SURVEYING**

RICHARD MARKS - PHONE (608)643-4391  
504 CEDAR STREET - SAUK CITY - WI - 53583

RECEIVED FOR RECORD THIS 30th DAY OF June 2007 AT 2:10 P.M. AND  
RECORDED IN VOLUME 75 OF CERTIFIED  
SURVEYS ON PAGE 131-135  
Krisa Chiverski by Nicole Reed, Deputy  
REGISTER OF DEEDS  
DOCUMENT NUMBER 4328930 SHEET 1 OF 5

LOCATED IN THE NE1/4 OF THE SW1/4, THE SE1/4 OF THE SW1/4, THE NW1/4 OF THE SE1/4 AND THE SW1/4 OF THE SE1/4 OF SECTION 25, T8N, R9E, CITY OF MADISON, DANE COUNTY, WISCONSIN.

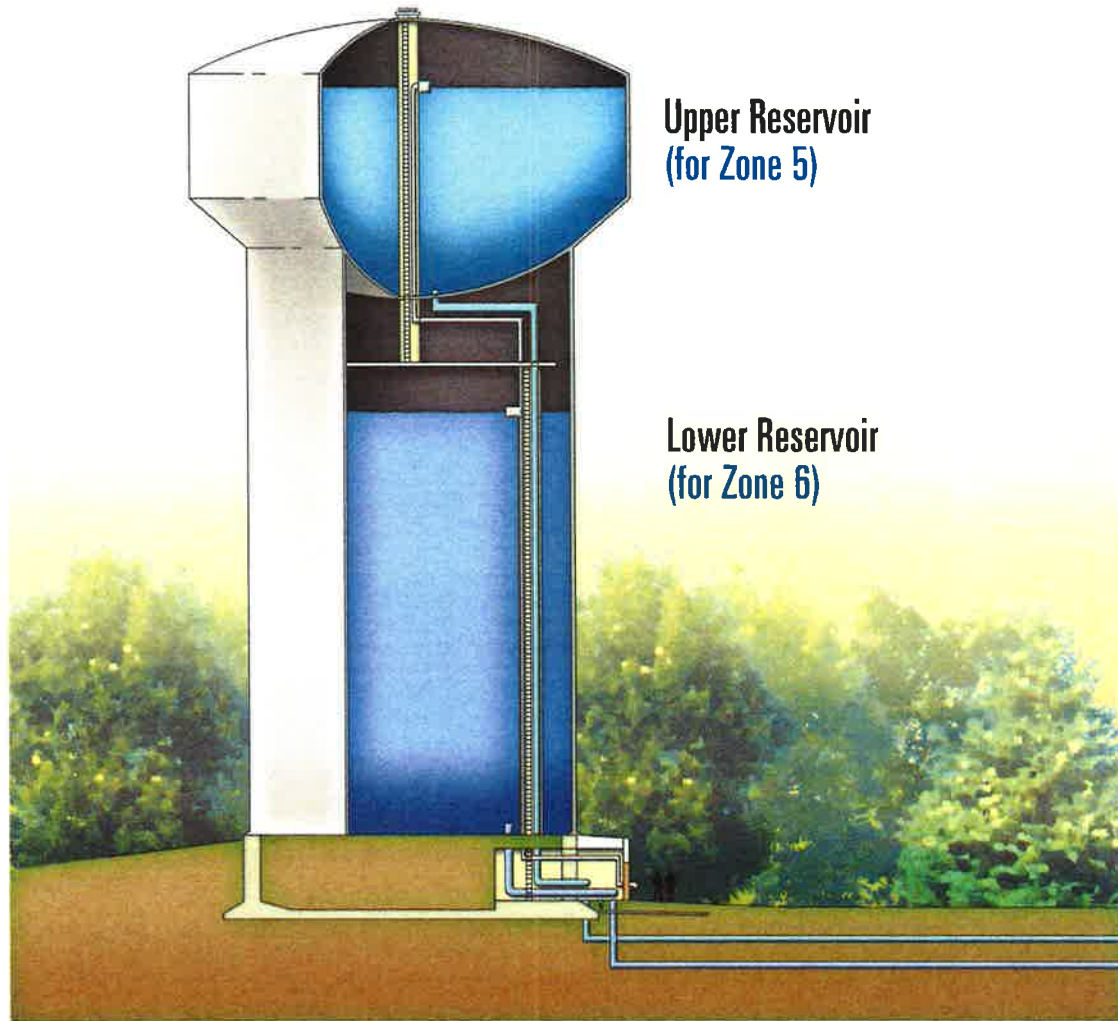








# Two Zone Reservoir Concept





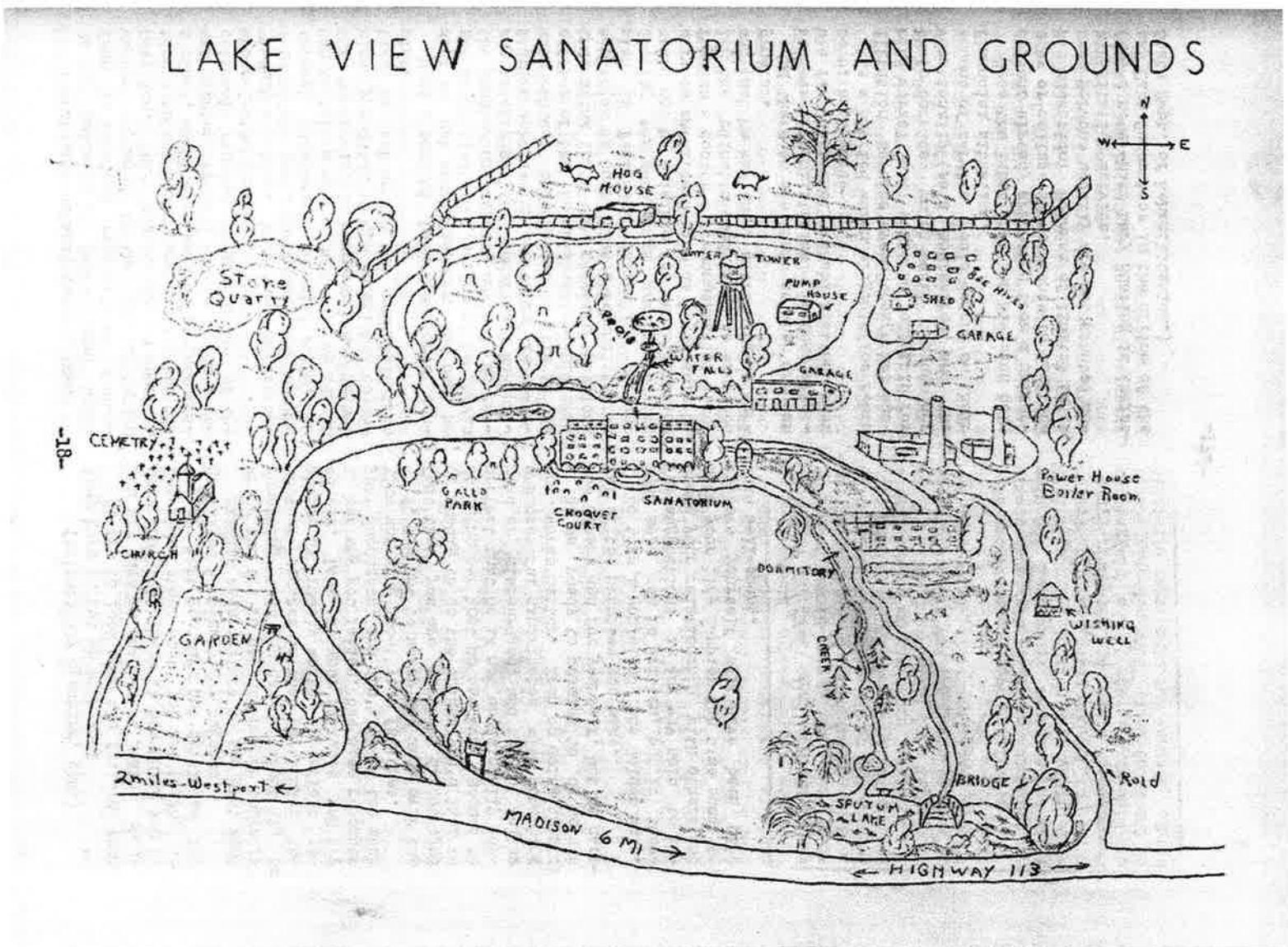
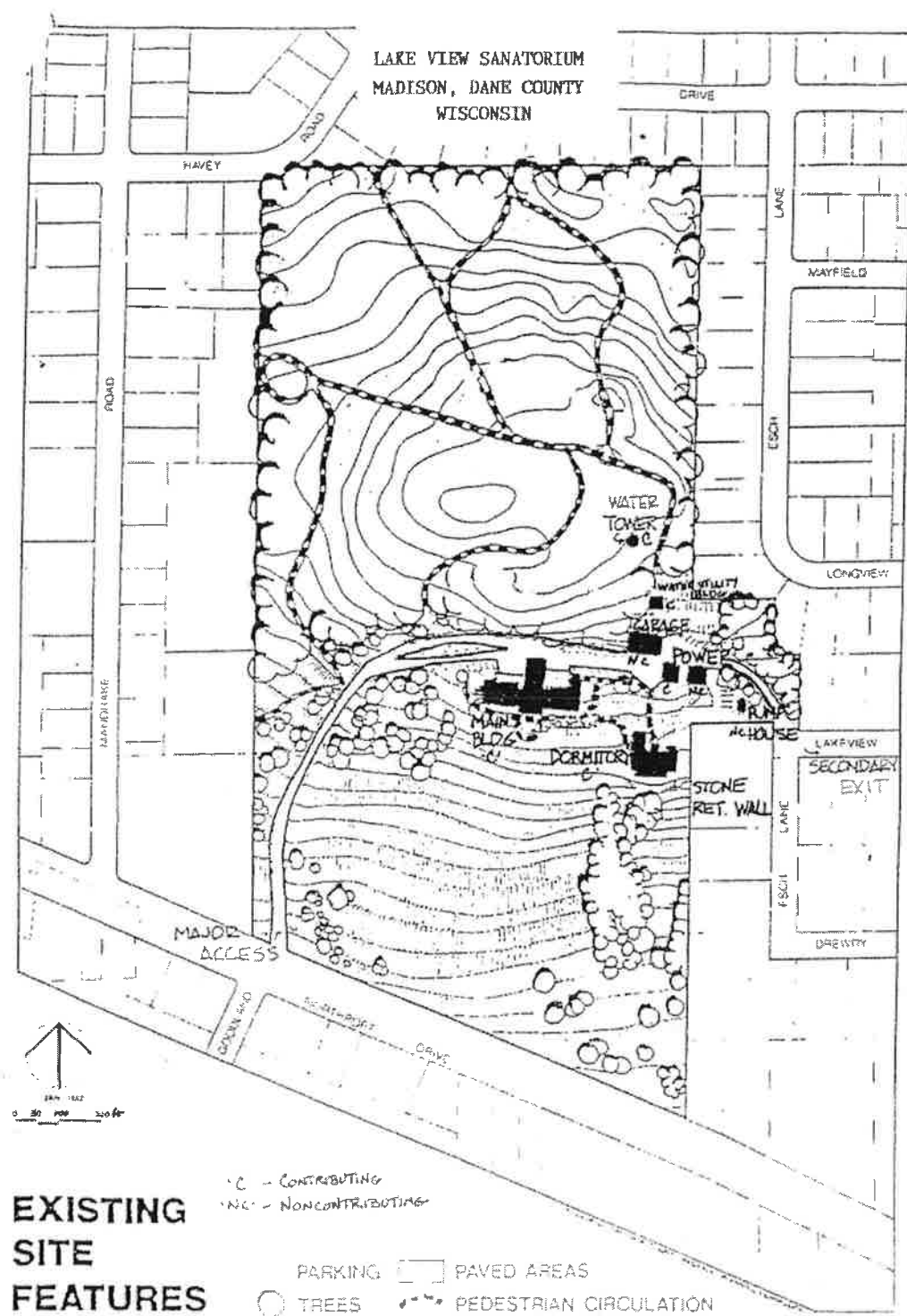


Figure 3.12 Patient map of Lakeview Sanatorium grounds.





**Figure 3.13 Contributing and non-contributing buildings and structures at Lake View Hill County Park.**

2. Access to the cave system might be possible from an off-site location, efforts should be made to identify any potential entrances located outside of the boundaries of Lake View Hill County Park.

3. Care should be taken in the installation of any facilities requiring extensive or intensive ground disturbance in the event that any underlying fissures are encountered.

## **Results of the Archaeological Fieldwork**

### ***Sanatorium Buildings and Associated Features***

The 48 acres of the Lake View Hill County Park were formerly the grounds of the Lakeview Tuberculosis Sanatorium, which was in operation from the 1930s to the 1960s. At the height of its operation, the sanatorium consisted of: a main building; workers dormitories; site superintendent's residence; a power house; a pump house and water tower; hog barns and butchery area; ponds; gardens; and a waterfall fed by a system of water collection cisterns (Figure 3.12). In 1993, most of the major extant sanatorium buildings and architectural features were listed in the National Register of Historic Places. Contributing buildings and structures include the main sanatorium building, dormitory for help, maintenance building (original power house), water utility building, and water tower. Non-contributing buildings and structures include the power house, garage, and power house. A map detailing the locations of contributing and non-contributing buildings and structures on the property is provided as Figure 3.13. Other non-extant buildings and features associated with the sanatorium, specifically the remnants of the hog barn and water collection cisterns, were documented as part of the present study.

### ***Hog Barn Facility***

The foundation remnants of the reported sanatorium hog barn and butchering facility are located in the wooded area north of the main sanatorium buildings. The remnants of the hog barn consist of concrete slab floors surrounded by low poured concrete walls (Figure 3.12, 3.14). Brian Graedel remembers a livestock facility in the woods, a barn or slaughterhouse, with two sides, each serving one of two 10-acre hog operations (perhaps cattle too). That seems to match the concrete foundation-and- fence poles, north of the main east/west trail. Most of the north wall of the barn facility has fallen over. A large amount of cut animal bone was found strewn around the remnants of the hog facility.

Documentation of the sanatorium hog barn and butchering facility consisted of the completion of a plane table map of the remaining foundation walls and concrete floors of the facility. A rail imbedded in one of the foundation walls at the west side of the facility was used for a site datum for mapping. This datum was later assigned coordinates in the Dane County coordinate system using a Global Positioning System receiver provided by the county.

### **Management Issues**

1. The ruins of the Hog Barn Facility in and of itself would not be considered significant from an

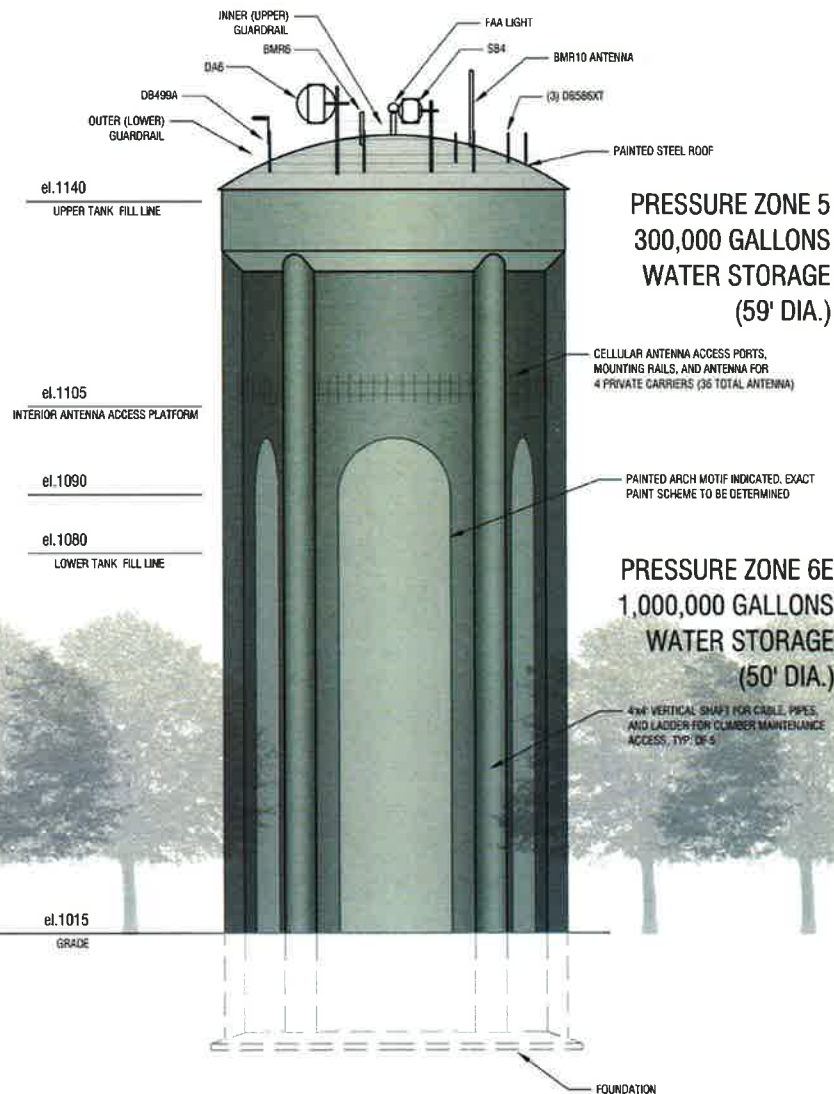
**LAKEVIEW WATER TOWER - 1202 NORTHPORT DRIVE  
SUMMARY RE: TELECOMMUNICATION LICENSES**

Real Estate Project No.	Applicant	Contract Begin Date	Contract Expiration Date	Payment Due Date	Amount Next Due	Description of Equipment
4119	Sprint Spectrum L.P.	03/01/98	2/28/18	3/1/2014	\$26,221.75	9 antennas. Current ground cabinets will be relocated into middle equipment building.
3978	PrimeCo Personal Communications, L.P. (n/k/a Verizon Wireless)	06/01/97	5/31/17	6/1/2014	\$26,221.74	9 antennas. Cabinets are located within south equipment building.
3979	Madison SMSA Limited Partnership n/k/a Cingular (AT&T)	01/12/98	1/11/18	1/12/2014	\$22,475.77	Currenty 6 antennas. Will be adding 3 more when new tower constructed. Cabinets are located within south equipment building.

**Notes:**

- 1.) All license fees are subject to 4% annual adjustments.
- 2.) 50% of annual net revenues for each license at Lakeview Water tower are payable to Dane County by 2/1 of each year. Balance of net revenues are deposited into the City's Tower Revenue Fund (SO03). That money is used to fund the City's lead pipe replacement program.
- 3.) Per the terms of the Easement from Dane County, the City may grant licenses to a maximum of four (4) telecommunication companies for the placement and operation of telecommunications equipment and improvements on the Tower and Tower Easement Area.
- 4.) Each license is initially authorized via Common Council Resolution. Resolutions are considered by the following additional commissions/boards: Plan Commission, Board of Water Commissioners, Board of Public Works and Board of Estimates. Licensees are also required to obtain all necessary Zoning and Building Permit approvals.
- 5.) There are also City facilities located on the tower and within the north building east of tower. See SiteSafe RF report for listing of equipment.

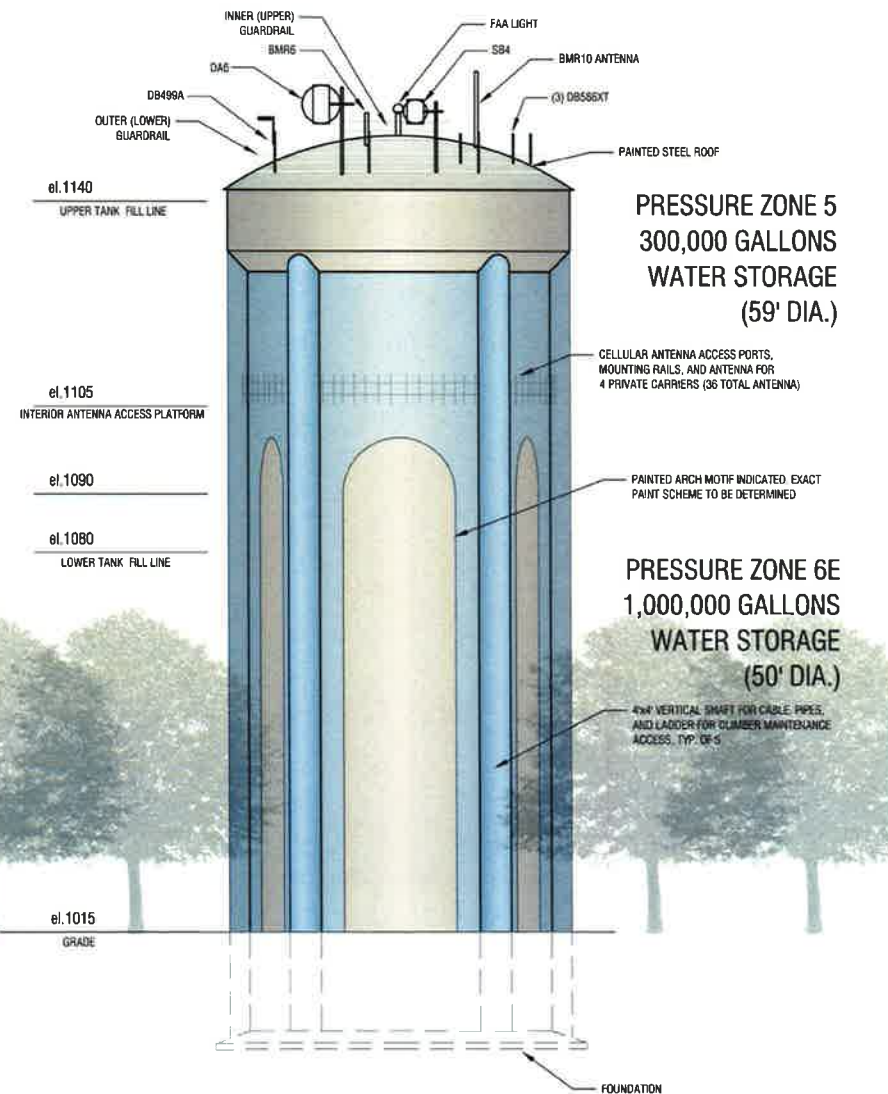




TWO ZONE TANK  
STEEL OPTION



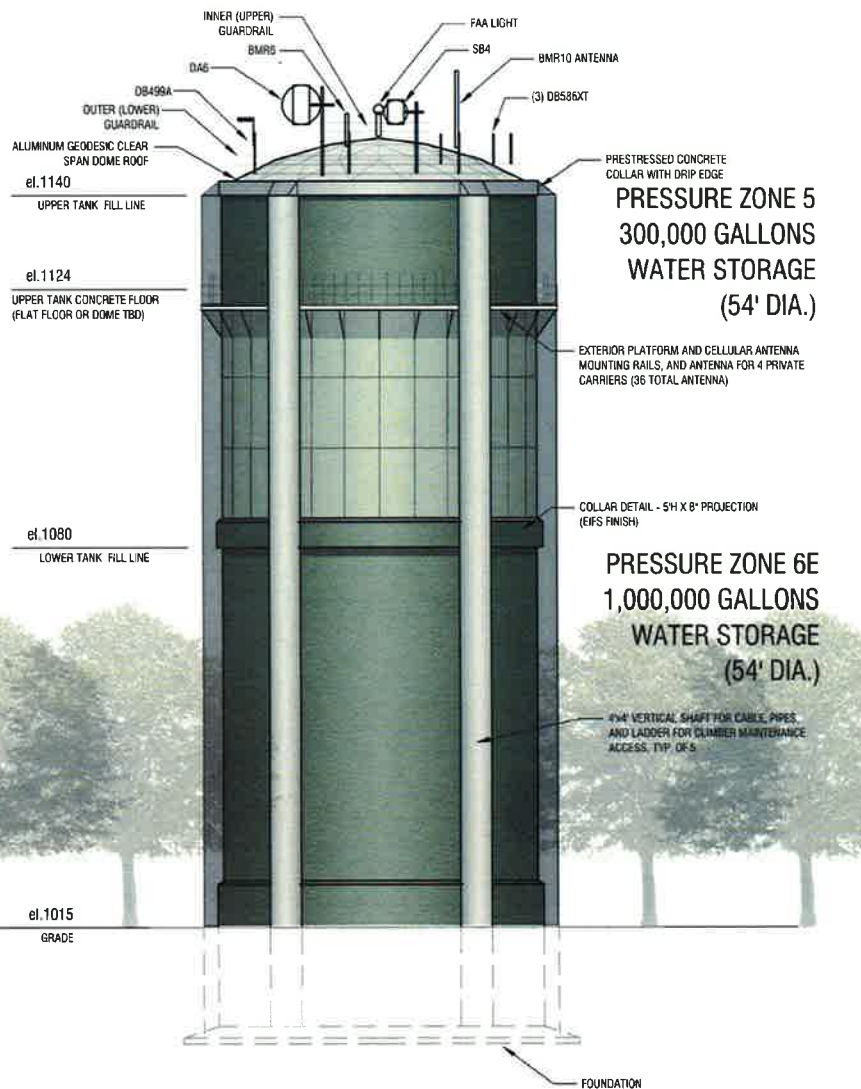
STEEL CONCEPT DESIGN OPTION - GREEN  
Lake View Reservoir Replacement Project  
Madison Water Utility  
April 30, 2014



TWO ZONE TANK  
STEEL OPTION



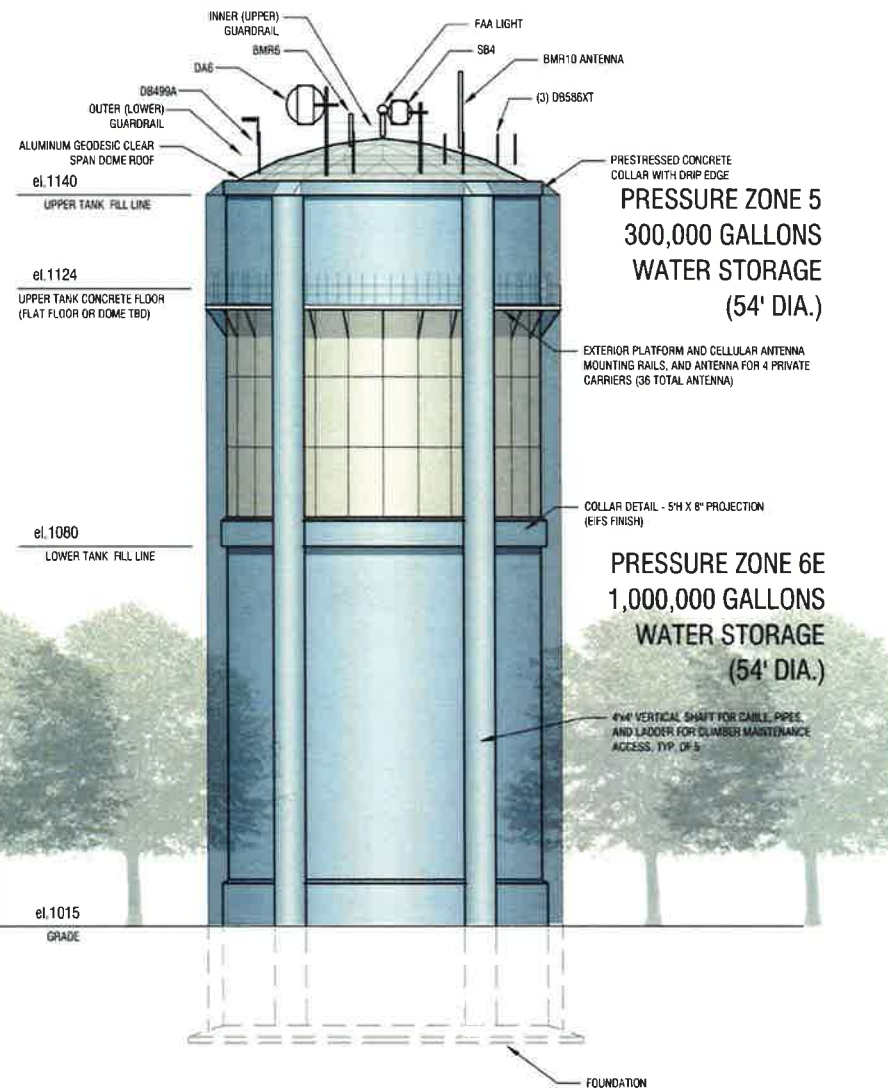
STEEL CONCEPT DESIGN OPTION - BLUE  
Lake View Reservoir Replacement Project  
Madison Water Utility  
April 30, 2014



TWO ZONE TANK  
CONCRETE OPTION



CONCRETE CONCEPT DESIGN - GREEN  
Lake View Reservoir Replacement Project  
Madison Water Utility  
April 30, 2014



TWO ZONE TANK  
CONCRETE OPTION



CONCRETE CONCEPT DESIGN - BLUE  
Lake View Reservoir Replacement Project  
Madison Water Utility  
April 30, 2014

