

Prepared for  
THE CITY OF NEGAUNEE



Special Advisory Committee  
**Waterworks Study**

City of Negaunee

# Waterworks Study

Negaunee, Michigan

Presented to:

**The City of Negaunee**

Nate Heffron, City Manager  
319 West Case Street,  
Negaunee, MI 49866

January 4, 2023

Report compiled by:

**Special Advisory Committee  
On the Former Waterworks Building  
Negaunee, Michigan**

Dave Dompierre, Chairman  
Don Mourand  
Art Gischia  
Esko Alasimi  
John Larson  
Mike Lempinen  
dwdompierre@aol.com

# Table of Contents

Introduction	1
Historical Context	2
Executive Summary	3
Present Conditions	4
Building Concepts	5
Photos of Interior Present Conditions	6
Photos of Exterior Present Conditions	7
Interior Building Concept Renderings	8
Exterior Building Concept Renderings	9
Estimate of Probable Construction Cost	10
Appendices	11

# 1 Introduction

The information provided in this report has been developed by a six-member committee established by a directive from City Manager Nate Heffron on February 7, 2022. The committee thanks Nate and City Planner David Nelson, who have been resources to the committee. A majority of the committee is composed of individuals having extensive experience in various aspects of design, construction, management and maintenance of all types of buildings. The others have skills and experience that enable them to facilitate other aspects of the committee's work. We are hereby conveying to the council and Negaunee residents, background information that the committee believes to be the most important factors to be considered when deciding on the future of the Waterworks and property. The council has the ultimate responsibility to make the best decision as to whether the Waterworks is given new life as a useful asset for the city, or if the structure is permanently removed from the place it has held in the life of our community for 140 years. We recommend that the council and administration take concrete steps to move the project along in whatever direction that a decision dictates.

## 2 Historical Context

In September of 1881, the Negaunee area was experiencing a water shortage. Prior to 1881, Negaunee drinking water was supplied to the town from several sources, including Partridge Creek, the Jackson Mine pit number 7, Mud Lake, and some area natural springs. In 1882, a seven-story stamp mill was constructed on Partridge Creek to reduce ore from the Jackson Mine. The mill had machinery that required cooling water from the creek. Therefore, the water would henceforth not be safe for drinking.

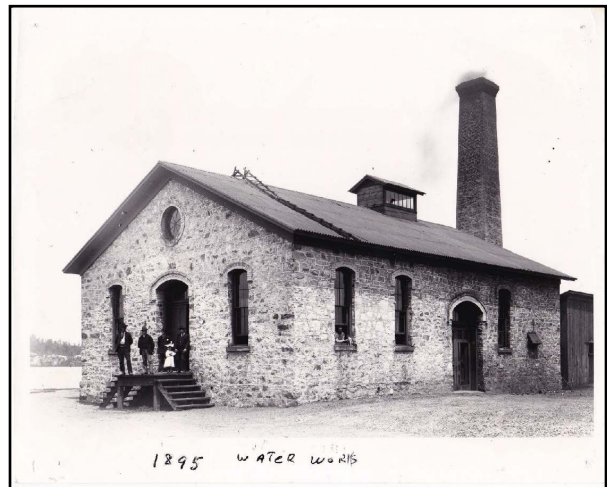


Waterworks and Johnson's Sawmill

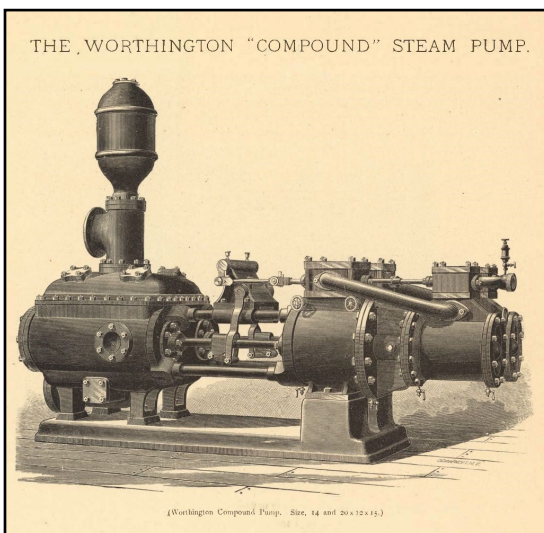
The waterworks was to be built of stone and brick. The stone for the building came from the "rock cut", just northeast of today's Miner's Park. *Mesnard Quartzite* from the exposed rock face was used to build the waterworks.

The city had previously installed a 7-inch wooden pipe from pit #7 at the Jackson Mine, up Iron Street to Teal lake Avenue and Main Street. The line served fire hydrants, with a pump with sufficient pressure to push water

City leaders began to look to Teal Lake as a potential source for city water. This would require the construction of a municipal waterworks. The city amended its charter to allow for adequate expenditures to begin financing a waterworks. The council voted 4 to 1 to build the structure at the SE corner of Teal Lake, adjacent to Johnson's Sawmill.



Waterworks in 1895

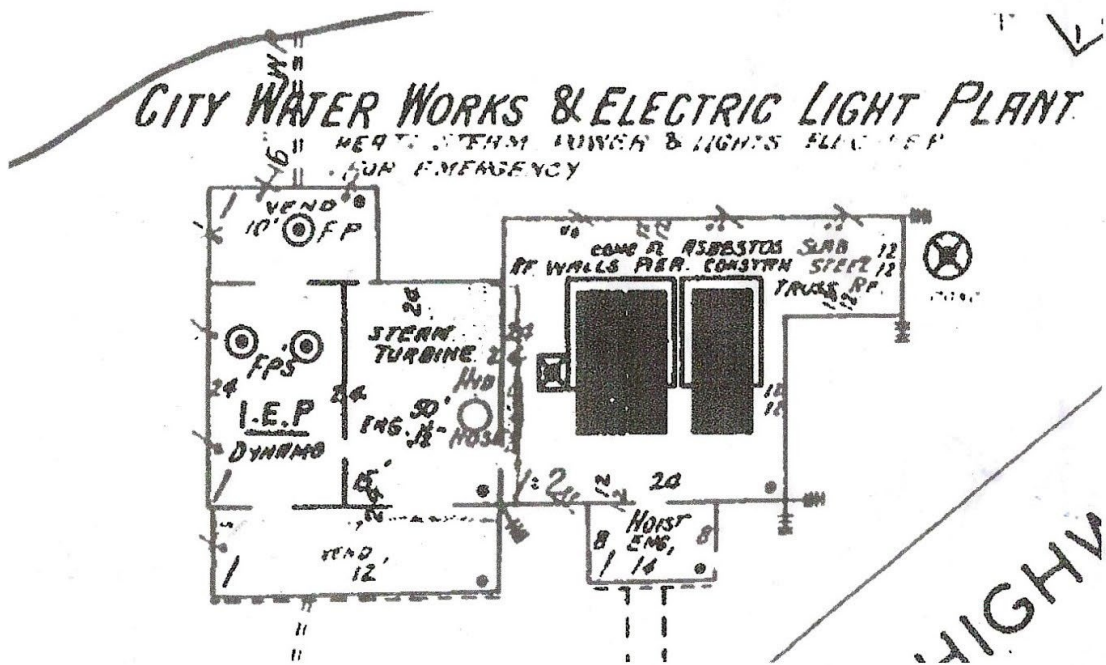


(Worthington Compound Pump. Size, 14 and 20 x 12 x 15.)

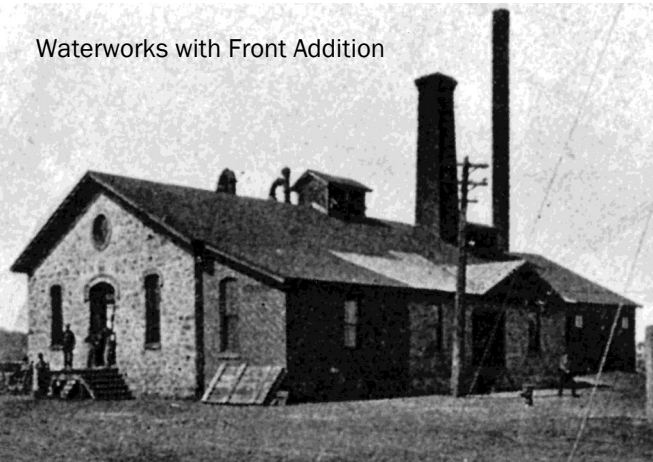
up the Iron Street hill, to the Breitung House.

Similar wooden piping was laid along Teal Lake Avenue to the waterworks on the lake. A Worthington Compound pump was installed at the waterworks building to supply water for 20 hydrants. A test with open hydrants lifted six hoses into the air 75 to 125 feet. In 1883, the city invited residences to hook up to new water lines, as they were completed. The Breitung House began installing bathing facilities using the new city water. Pipes were extended to Peck and Tobin Streets, and people began signing up for water. The Breitung House added steam heat in 1886.

The municipality decided to generate its own power for use by the fledgling electrical utility. In 1897, a brick power plant was erected abutting the waterworks. The city began selling electrical power.



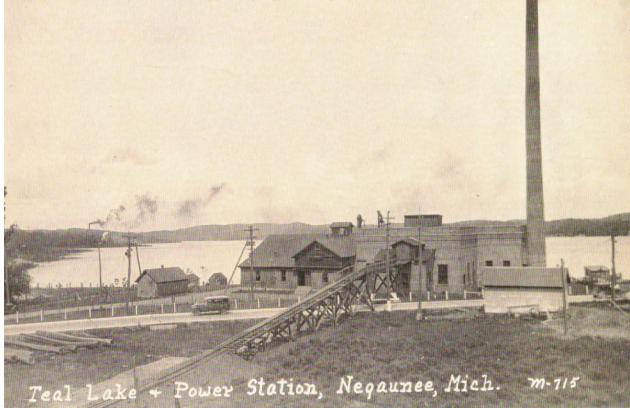
Water meters were installed in 1906. The spring at Iron and Silver Streets dried up, probably due to increased mining activity. Residences are remodeling to install indoor bathrooms. Fred Martin's store downtown is displaying an indoor bathtub with a shower for sale.



Some cases of typhoid occurred in 1910. The water in Teal Lake was tested. As a precaution, a wire fence was erected along the shore of the lake, to keep cows from wading in the water. The water in Teal Lake periodically is tested unfit for drinking. Animal wastes are suspected as part of the problem. A new intake pipe was installed in 1913. The wooden water main from the waterworks to the city along Teal Lake Avenue was replaced by an iron pipe.

In 1931, an engineering firm was consulted about allowing swimming in the lake (city water supply). The firm gave three alternatives: 1. Upgrade to a good filtration system, 2. Move the intake to another area of the lake, 3. Find a new water source.

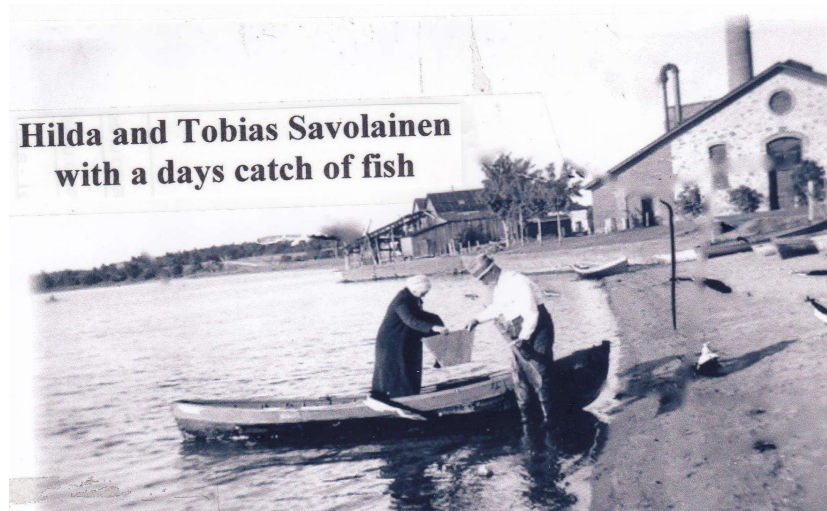
In 1934, the city replaced wooden water mains with cast iron. U.S. 41 (old route) was routed along the south shore of Teal Lake, and by-passed downtown. Automobiles are becoming more prevalent. The waterworks installed a new pumping system in that year.



In 1950, the Negaunee City Council decided to add fluoridation to the water supply at Teal Lake. This required chemicals and feeders.

After 109 years of service, the city decommissioned the Negaunee Waterworks in 1991, and joined the Ishpeming Negaunee Water Authority. Water is now pumped from wells north of Ishpeming.

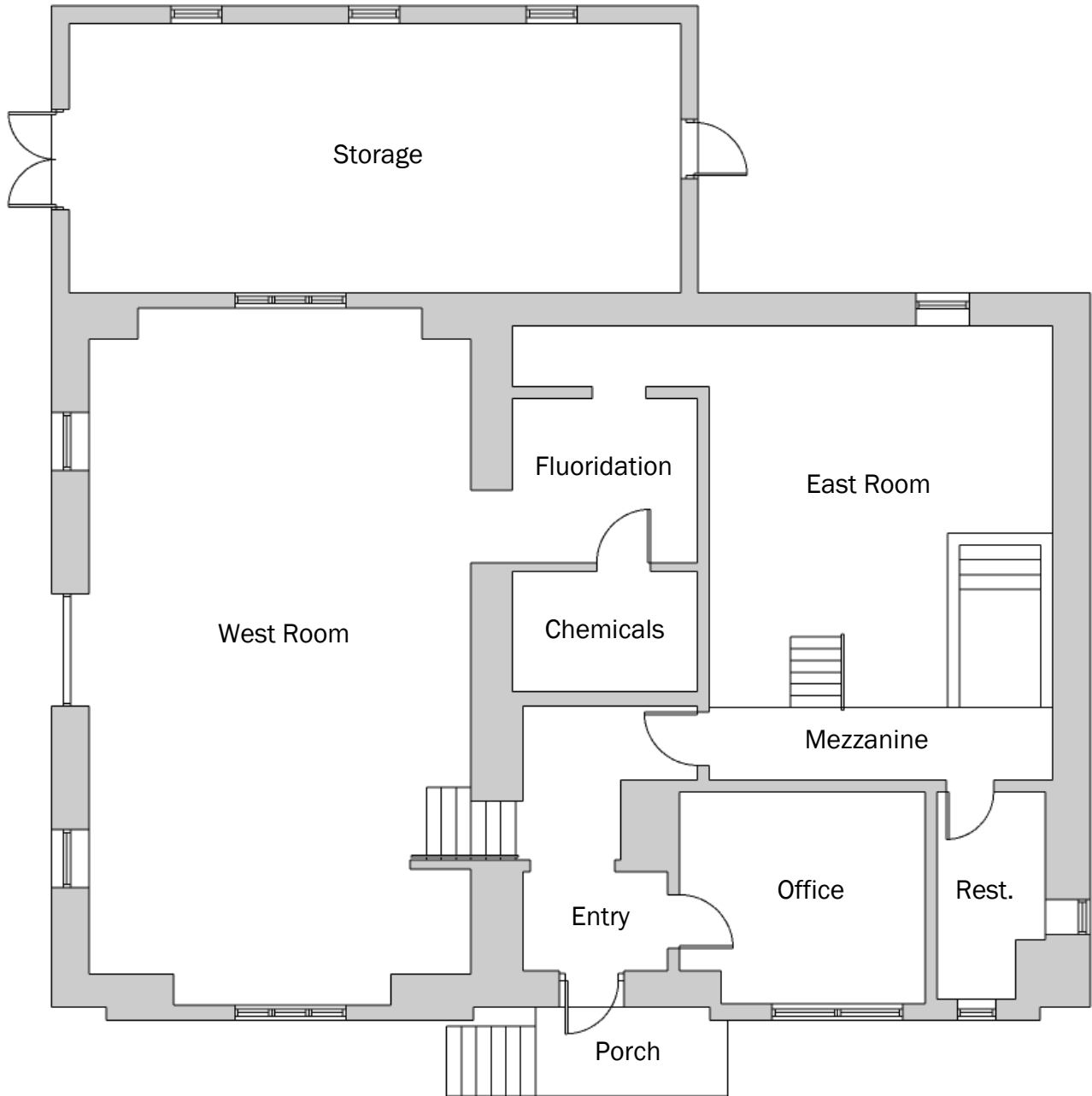
Waterworks with Electric light Plant



Waterworks and Thompson's ice house



# Negaunee Waterworks Building - Existing Conditions



Existing Floor Plan



### 3 Executive Summary

In 1996, the City of Negaunee received a grant of approximately \$75,000 for the purpose of making Teal Lake Access Improvements. The grant agreement authorized the installation of a boat launch ramp and dock as well as a fishing dock with parking lot improvements on the property surrounding the Waterworks. In exchange for the grant, the city provided about \$25,000 in matching funds. The City signed an agreement that the parcel of land on which the Waterworks stands would be “permanently committed to Michigan’s recreation estate”. This appears to clearly establish that the Waterworks property can only be used for recreation related activities.

The Waterworks has been found to be structurally sound and suitable to be re-used for a new purpose. This determination was made by Rich Uren, local Structural Engineer and Architect. With his assurances, there is a very good reason to acknowledge that the building has potential for re-use that would allow it to serve the community in a productive way for a very long time.

Parking is limited at the Waterworks site. This puts a restriction on the type of activities that can be held at that location. We cannot fill all available parking spaces with attendees at Waterworks activities to the detriment of recreational lake users. The residents of Negaunee will, we believe, continue to support non-motorized use of Teal Lake as a destination for silent sports enthusiasts. But lake users need to have clear access and parking at all hours of the day, or they likely will stop coming. Reducing the use of a public access site is not desirable, by the community, nor would it be well received by the Michigan DNR.

Lead paint on the exterior of the Waterworks is an important consideration. It has to be removed before any remedial work, such as tuckpointing and brick repairs are done. Unfortunately, removal using either of two methods, sandblasting or high pressure water, requires that the building be totally encapsulated to contain the material coming off the surface. Verbal estimates from providers of both methods set the cost at \$50,000 to \$60,000, mainly because of the cost of encapsulation. Unfortunately, we won’t know the true image presented by the stone and mortar of the exterior until the paint is removed. If the appearance of the stone exterior walls is not attractive, additional cost could be required to prepare and paint the walls.

Any plan for activities within the Waterworks has to take related costs and other factors into account. To reduce operating expenses, there is a preference that the Waterworks not be heated in the winter, other than the restrooms. Also, the City will not have the staff to assign someone to the building on a regular basis. Finally, some feel that staffing with volunteers may not be possible in the Waterworks setting. It would seem that these conditions, if applied, would greatly affect the use of the Waterworks for winter activities, and to some degree, even in the summer months.

While investigating all prospects for the Waterworks, we secured an estimate from a local firm to demolish the Waterworks. Because of environmental regulations related to the exterior’s lead paint, the cost to dispose of all of the lead contaminated debris in the landfill is doubled, resulting in a total cost of \$100,000 for demolition and disposal. Grants from outside sources to pay for demolition are typically not available, so this cost would likely fall on the City taxpayers.

Mitigation of hazardous materials inside the building is not expensive. The presence of asbestos is relatively minimal. Results from samples that were professionally collected and analyzed found asbestos present on a short length of water pipe, which can be easily mitigated. Unfortunately, asbestos is also found in the glazing compound used on all of the building's windows and doors. This contamination can only be mitigated by removing all of the existing windows and doors, and replacing them with new units.

To evaluate the condition of the Waterworks roof, Rich Uren, local Structural Engineer/Architect was hired by the city in December of 2021. A thorough inspection of all components of the roof system showed that because of the massive timbers used in the roof trusses, there is no evidence of any weakness or failing in the entire roof structure. The one critical weakness related to the roof is the extremely poor condition of the roofing itself. Rich's report emphasized the need for replacement of the roofing "immediately" to prevent water intrusion into the building, which will accelerate the deterioration of the structure. Thus far, no action has been taken to protect the building by replacing the severely damaged roofing.

Originally, the interior of the Waterworks was open at the on-grade floor to the underside of the roof sheathing. This allowed for the decorative wood panel below the roof to be seen, as well as the three large timber trusses that support the roof. At some point in time, a ceiling of fibrous panels was installed below the trusses, presumably to retain heat within the lower work areas. Part of the plan for renovation, specifies the removal of the insulating ceiling, to expose the unique and impressive view of the roof truss structure. Opening the area to view would require some relatively minor plaster repairs to the two gable end walls, along with applying paint to these walls and the structural components of the roof system.

There are three large rooms at grade level that comprise approximately 90% of the usable floor space in the building. This does not include the space below the existing office/restroom area, which will be dedicated to mechanical services. The usable space in the elevated former office/restroom area, will be used for storage of supplies and maintenance purposes. This space will not be handicapped accessible, although ambulatory visitors will be able to enter the building from an exterior man door entrance at this level. Although not intended to be used by the public, it is worth mentioning that the former restroom space has a very attractive mosaic ceramic tile floor that is totally intact. It also has existing, but outdated plumbing, whereby it could possibly serve as a unisex restroom, if such a need ever fits with the activities of the building.

At some point in time, a 12 foot high floor to ceiling partition constructed of clay tile, was installed to create an enclosed area for handling chemical additives to the water supply. No longer needed for this purpose, it is recommended to remove this partition, which would result in a larger open space, and at the same time provide a direct access between the two largest rooms in the building. One of our consultants tells us that removal of this wall is not complicated and is not anticipated to entail high costs. The former chemical processing area would require some concrete infill on the floor.

The floors in the building all appear to have a concrete base. The east room floor remains a bare concrete surface. The west room floor is covered with what appears to be a high-quality 5"x 6" quarry tile. In 2010, the City removed all of the pumps and piping from this room. This left some open pipe trenches in the floor. Apparently, to provide a somewhat level work area, the trenches were filled and the entire floor in this room was covered with road gravel to a depth of 4 - 6 inches. We have carefully removed gravel from 6 or 7 small areas in the room, and have found totally intact floor tile in each location. A current city employee, who worked at

the Waterworks in the final months of operation, tells us that about 90% of the floor is covered by the attractive tile (below the gravel). The entry has this same tile, as does the stairway between the two areas. To make the floor a uniform, flat surface, the road gravel covering the tile must be carefully removed, and the trenches filled with concrete or a similar material.

The west room and the entryway, as well as the former restroom/office areas have attractive, heavy duty, ceramic wall tile covering the lower half of the walls. These tiles are, with only a few exceptions, totally intact with no cracks in the tile or the grout. The tile should be retained to enhance the appearance of the interior. The upper walls in these areas are covered with plaster, or other surface materials that will need to be replaced and coated with quality paint. The east room should have three of its walls painted to show the texture of the original stone and mortar surfaces, and the alterations to the stone/brickwork that have been undertaken over the building's 140-year history. The fourth wall in this room would be made of partition tile, and will also be painted.

Two barrier free restrooms with access from both the inside and the outside of the Waterworks are desired. They could be placed in the addition which is attached to the northwest side of the original stone structure. This is the portion of the building that has been the location used to store equipment for the annual fireworks display over Teal lake. In addition to the restrooms, there is also to be space for a small storage room.

It is agreed to by committee members and other sources that all-new electrical services will be required in the Waterworks preservation project. It is further agreed that all-new plumbing services will also be required.

The steps that exist on the southeast brick and stone-faced side of the building, are in very poor condition. After removal of the existing steps, a replacement could be built with a different design, which will be an enhancement to the overall appearance of the structure. An idea for this new concrete step would be to have steps on the east and west sides of a platform set in front of the man-door facing Croix Street and US 41 (refer to drawings).

The relatively small, lowest level of the building, which could be used for mechanical purposes, has a history of having standing water in it during the years when the building was active. We are told that about ten years ago, an additional 12" of concrete was placed on top of the original floor in this space. This appears to have reduced the opportunity for lake/ground water to accumulate on that level. There is also a sump built into the floor to further control any intrusive water.

Contemplative site plan iterations call for sidewalks to be constructed that would lead from the building exits to the paved parking and traffic areas. These sidewalks pass through green spaces adjacent to the building. Consideration would need to be given to the accommodation of snow removal during the winter months. Landscaping of other areas on the property will also need to be developed. Snow removal will need to be considered.

The committee is well aware that refurbishing the Waterworks is dependent on the city's success in gaining significant grant money from outside sources. To be approved for such grant funding, typically, 25% of the total project cost must be provided as a match by the city. Generally, the city can cover a match requirement with in-kind services, related to the project, provided by city workers and equipment.

The question as to how the building will be used after its substantial upgrade is all important. Discussions between the city administration and the committee have centered on the concept of creating an interpretive center, which would inform the local and traveling public about the Negaunee area in general and Teal Lake specifically. This idea was chosen as one that is familiar to many, and that could be presented as an illustration of one possible use for the Waterworks building. The fact that the Waterworks committee was encouraged to carry out its work without any financial constraints, allowed it to develop a plan that made the most of everything the structure has to offer. This product, of course, comes at a cost, and the committee leaves it to the people of Negaunee to decide whether or not renovation of the Waterworks building, as described in this report, or in some other form, is a desirable and feasible project for this community. Such a project should be evaluated from both an historic preservation and a community development point of view. The committee has made its best effort to present the facts necessary to make an informed choice in this regard.

## 4 Present Conditions

Construction began on the existing Waterworks in 1882, using stone acquired from the “rock cut” where today’s US 41 enters Negaunee, from the direction of Marquette. Construction was started just 9 years after the 1873 establishment of the City of Negaunee. The main building measures (43’ x 33’-3”) and is oriented at 45 degrees to an East-West axis. The northwest - southeast axis line appears to align with the center line of Teal Lake Avenue. Early in its history, a brick lean-to addition (20’-10” x 13’-0”) was added along the southwest wall, facing the lake. The Waterworks roof pitch is 6:12 with 12” overhangs on the gable ends, and 2’-0” overhangs on the southeast (Teal Lake) and northwest eaves (Croix Street). The stone and brick portions of the façade have been painted in past years. Windows and doors are wood with wood frames. Asphalt shingles on the roof are in bad shape, especially on the southeast facing surfaces. Evidence of framing for a no longer extant roof cupola can be seen in the attic. This historic cupola can be seen in early photos of the Waterworks.

The interior is divided into several rooms, which have evolved over the life of the building. Pumping equipment and lake water intake piping was located in a subfloor trench and grating. Today, this trench is filled with aggregate. An approximate 6” layer of aggregate covers the entire floor in this area. Investigation has revealed that the original floor has a clay tile surface. The walls in this room are also covered in glazed clay tile. Steps leading down into this room from the upper floor are finished in glazed quarry tile. All waterworks pumping equipment and piping has been removed.

A substantial partition wall with glazed tile finish, separates this room from the northwest side of the building. A door opening leads through a former fluoridation lab room which contained accommodations for the chlorinating process. The remaining room on the northwest side measures (15’-3” x 22’-1”) A circular bricked in opening appears to have provided access to a chimney stack. This northeast wall was adjacent to Negaunee’s Electrical Plant in the 19th century. The tall chimney stack is plainly visible in historic photos.

A raised mezzanine (4’-0” x 15’-3”) is accessible via steps from this room. A small office was located on the upper level (8’-0” x 9’-1”) A small restroom (5’-6” x 8’-4”) is also located at this level.

A low ceiling basement sub-level, under the office area was most recently used as a break area by Waterworks employees. The facility heating plant was located down on this level.

The Croix Street entrance leads to a small vestibule (5’-1’ x 6’-9”) with a polished tile wainscot. The upper walls are clad in a fibrous wall board. This small vestibule leads to another small ante room (4’-4’ x 6’-11:”) at the head of the stair to the large southwest pump room.

Drop ceilings consist of fibrous tiles fitted onto ceiling joists.

## 5 Building Concepts

When the City of Negaunee constructed the Waterworks in 1882, the young town needed a utilitarian structure to house pumping equipment used to extract water from Teal Lake. It was not meant to be fancy. Workers used stone rubble from a nearby “rock cut” blasted to allow room for a wider road to pass to Marquette. The pump house needed to do its job, providing reliable water for a growing mining community.

Now, after some 140 years, the pumps, piping and fluoridation tanks are gone. Negaunee has joined with neighboring Ishpeming with piping water from a nearby well field. The old stone and brick **Negaunee Waterworks** is no longer used for pumping water from Teal Lake.

The 140 year-old building prominently stands on the SE corner of Teal Lake.



### 1. Our History and Traditions

Through displays, interpretive panels, photos, artworks, artifacts, dioramas, videos, maps, rotating stories of prominent historic people, and event descriptions, **The Waterworks** relates the Negaunee story, Highlighting local history and today’s events, it’s an introduction to our area for visitors and a reminder of our legacy for locals. The prominent location of the building can point to iconic aspects of our community that are located in the historic downtown.

### 2. Recreational Opportunities (all seasons)

Teal Lake offers recreational opportunities and scenic beauty. It offers summer and winter fishing, nature photography, fireworks watching, sunset viewing, fall color viewing and waterside strolling, kayaking and non-motorized boating. This facility could be home to rentals

for kayaks, canoes, and ice fishing shanties. The heated restrooms can be available and accessible from the outside as well as inside.

### **3. Indigenous Peoples**

Exhibits describe important contributions of historic local indigenous peoples, especially at Teal Lake. The exhibits will tell the story of Mahji Gesick, Charles Kawbawgam, and the Ojibwa village at the outlet to Teal Lake. Indigenous peoples will want to contribute to the story telling.

### **4. Ecology of Teal Lake and Area**

Exhibits explore the ecology of wetlands environments along the shorelines of Teal Lake. They describe the hydrology and provide interactive information about important natural cycles of animals and plant life.

### **5. Events at Teal Lake**

Annual events on the lake will be highlighted and promoted at the Waterworks, including the summer “Teal Lake Swim” diabetes fundraiser, the Pioneer Days fireworks display, long boat practices, sailboarding, an ice fishing derby, and the “Teal Lake Meltdown” the annual ice thaw prediction contest.

### **6. Geographic Significance**

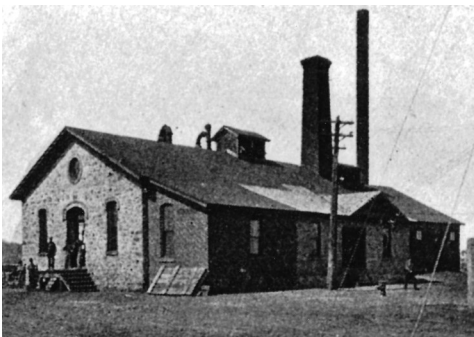
Historic Ojibwa Village at the NE outlet of the lake, Indigenous Peoples Trail to points west, William Austin Burt Expedition and the Discovery of Iron Ore in our region, Early mine sites along the south shore, the “White House” on the south shoreline point, a quartzite bluff on the north shore, Section 1 corner, the Waterworks is one of the oldest buildings in Negaunee.

### **7. Rotating Displays**

**The Waterworks** will be a location for reliable information about the environment on a northern inland lake, its local history, local people, local events.

### **8. Waterworks Renovation**

Renovate the 140-year old building to preserve and protect from the elements and restore its historic character. Improve roof material, make weathertight, replace fascia, soffits, flashing, etc. Replace all windows and doors, tuckpoint brick and stone joints where needed. Replace missing or damaged brick and stone, where possible.



## 6 Photos of Interior Present Conditions



Stair down from Croix Street Entry



Double Door Facing U.S. 41



Croix Street Facing Windows



Southeast Corner



Lake Facing Windows



Northwest Corner Intake Room





Wall Facing U.S. Highway 41



Attic Access Trap Door



West Room - Looking at Stair to Entry



Northeast Corner of Mezzanine



SE Corner of Mezzanine



Clay Tile Wall to be Removed



Basement Looking at Sump



Basement Looking at SE Corner



Basement Looking at SW Corner



Basement SW Corner



Wood Timber Truss in Attic



Window at Attic Gable



Ceiling Framing



Attic Partition



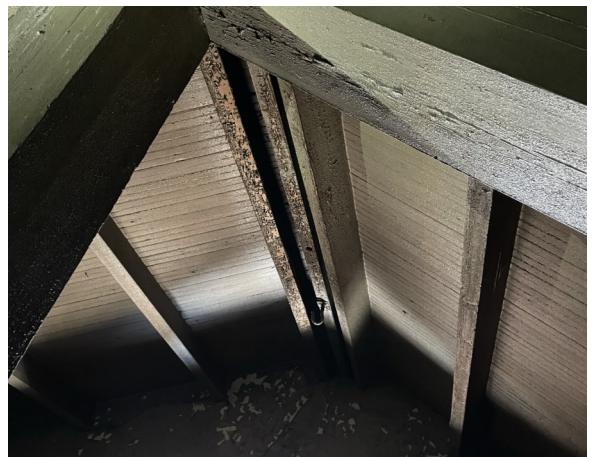
Ceiling Framing



Roof Truss



Gable Wall



Roof Framing



Roof Framing



Gable Window Frame Remnant



Attic Space



Cupola Framing



Attic Framing



Chimney

## 7 Photos of Exterior Present Conditions



Croix Street Facing Facade



Perspective of Croix Street Facade



Corner at U.S. 41 Highway



U.S. 41 Highway Facing Facade



Teal Lake Facing Facade



Northeast Facing Facade

## 8 Interior Building Concept Renderings (not incl. in cost est.)



Main Floor Gallery 1



Main Floor Gallery 1



Wall Paintings Gallery 1



Gallery 1



Gallery 1



Gallery 1





Gallery 3



Gallery 2



Gallery 2



Gallery 2

## 9 Exterior Building Concept Renderings



Perspective View from U.S. 41 Highway



Daytime Perspective View from U.S. 41 Highway



View of Croix Street Entrance



View of Waterworks Sign



Highway Facing Grade Entrance



View from Teal Lake



View from U.S. 41



View from U.S. 41 Highway



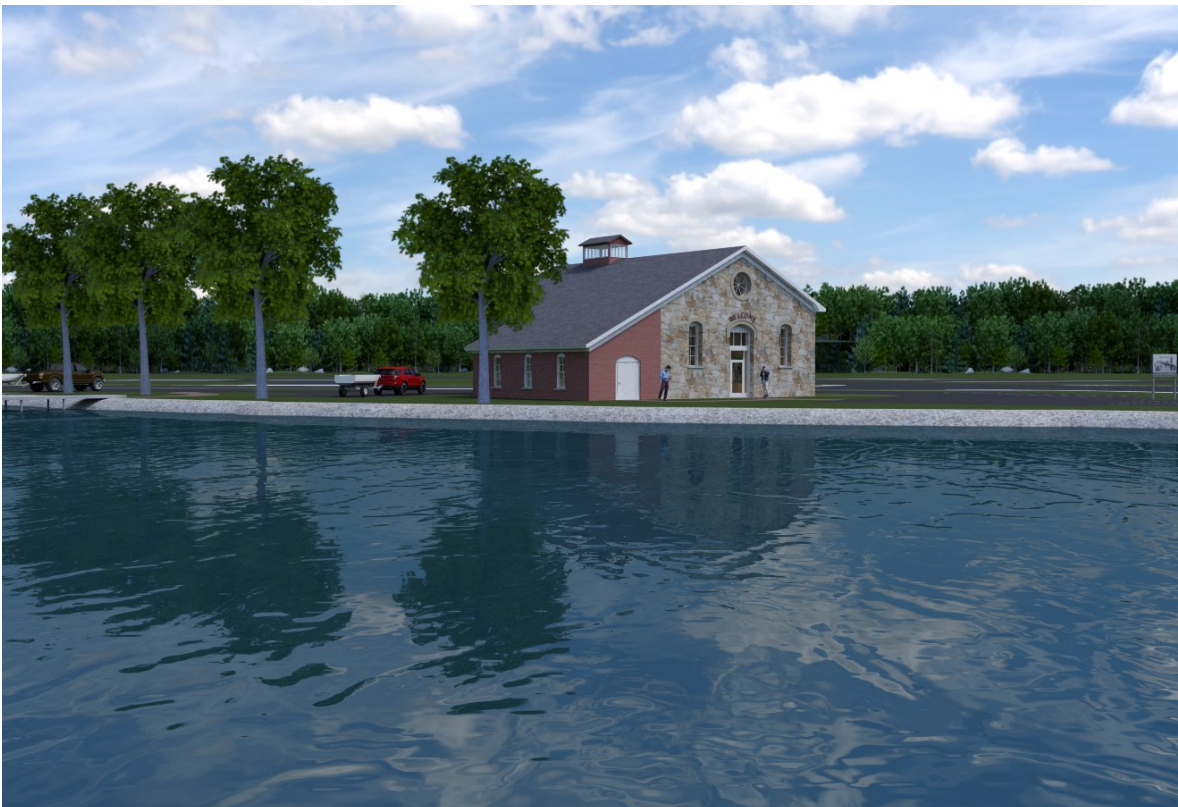
Entrance View from U.S. 41



View from U.S. 41 Highway



View from Teal Lake



View from Teal Lake



## 10 Estimate of Probable Construction Cost

Many factors impact cost of construction, and several have converged over the past two years to create an unprecedented impact. Global economics, driven by a war in eastern Europe, a pandemic which has spanned over two years, and a labor force which does not meet with the job demand have fueled a climate of rising interest rates. All are factors which have driven the cost of construction to unprecedented levels, and compounded the difficulty when forecasting future escalation rates. Annual cost escalation factors beyond completion of this estimate should be factored into the estimated project cost identified in this report.

We engaged with several suppliers to obtain estimates for their specialty area. Thanks to Frailing Electric and J-Goods Plumbing and Heating, Northern Restoration and Waterproofing, St. Germain Sandblasting, Rudy Goupille and Sons, Sherwin Williams and Lakeshore Environmental for their valuable expertise.

Utilizing historical information from cost estimating manuals and the assistance of the aforementioned group of local suppliers and contractors, the estimated cost of construction, based on today's costs is estimated to be **\$695,000 to \$782,000** dependent upon final determination of Building Code interpretation. (Refer to the itemized estimate for potential alternatives.)

In addition to the factors noted above, the following impact computation of the estimate:

- Plans are at a “schematic” state, with major building concepts shown, but not detailed. As plans are further developed, the cost will be affected accordingly.
- The design is based on the existing building footprint. No additions are planned, rather the proposed use has been incorporated to the best of our knowledge into the existing building footprint.
- The exact Code which applies to this project has not been identified by the County Building Codes Department. For the basis of this estimate, we are assuming this project would fall under the “Michigan Rehabilitation Code for Existing Buildings”. Since we have not resolved at this time a code requirement to meet the current Energy Code, insulating the roof and exterior stone walls to meet with the Energy Code are listed as “Potential Costs within the estimate Plumbing, Heating and Electrical are estimated based on the current codes.
- Contingency factor given the state of plan development is 15% and the Overhead/Profit margin is 25% of base costs. These would be affected by further plan and specification development.

Under some scenarios, the selected Construction Delivery system can have a positive effect on the cost. Construction Management, Design-Build, Fixed Price and Time and Material contracts with “not-to-exceed” contract caps are some options that should be evaluated prior to entering into any contracts for either design or construction. Each has its specific advantages/disadvantages.

The Committee is has been made aware of potential funding sources available through various agencies within the State of Michigan, most of which require some local match. Determining a funding mechanism is not within the committee charge, therefore, no costs related to financing are included.

## **Negaunee Waterworks Building**

**Proposed Use: Interpretive Center**

**U.S. 41/Croix St. Negaunee, Michigan 49866**

### **Outline Specification:**

The following description of work is complementary to the building plans and forms the basis for the Estimate of Construction Cost. The Outline Specification follows the Construction Specification Institute categorical separation of work which is recognized by professional designers and construction personnel.

**Division 1 Bidding and Contract Requirements :** (N/A) at this time.

**Division 2 Sitework:** Selective demolition of South exterior stairs and support structure, chimney (to below roof level), abatement of lead based exterior paint, removal of asbestos containing materials (window caulking and pipe insulation), removal of ceiling in Exhibit/Assembly areas, cutting and removal of concrete floor for new sub slab piping, removal of existing gravel on floor, removal of windows and exterior doors and frames, and interior plaster/drywall ceiling and wall finishes with related disposal costs, and site restoration at affected areas. Note: no modification to existing asphalt paving is included.

**Division 3 Concrete:** Includes concrete footings and foundations for new entrances, brick paver sidewalks to each entrance from existing asphalt driveway, floor patching as needed at existing pipe trenches, and floor patching at new sub slab piping from restrooms to existing sewer waste on South side of lowest level, concrete slab in new restroom and storage room on lake side of building, and new porch slab and steps on front entrance.

**Division 4 Masonry:** New brick exterior on south monumental stairs, tuckpointing and repair of exterior mortar and brick.

**Division 5 Metals:** Pipe railings and installation sleeves for south entrance, interior stairs and mezzanine railing system.

**Division 6 Carpentry and 8 Doors, Frames and Hardware:** Interior steel studs for partition wall and ceiling framing, furring and related fasteners, selective demolition of roof and reconstruction of cupola, replacement of deteriorated fascia, soffit and exterior trim as needed at window and door replacements, installation of interior and exterior doors and windows and related trim and hardware.

**Division 7 Thermal and Moisture Protection:** Fiberglass ceiling and wall insulation at restroom and vestibule areas. Note: potential cost for spray foam insulation on exterior stone walls and Insulated roof system as may be required by Code, and replacement of roofing.

**Division 8 Doors, Frames and Hardware:** New windows, exterior doors and interior hollow metal doors, frames, and hardware

**Division 9 Finishes:** Painted floors in restrooms, vestibule, storage and East vestibule/storage area. All existing tile floors are assumed to be in good condition, although covered with gravel at this time.

**Division 10 Specialties:** Grab bars, toilet paper, soap and towel dispensers, disposal containers, restroom mirrors.

**Division 11 Conveying Equipment:** Not Used

**Division 15 Mechanical:** Water supply , piping and waste connected to existing, new venting, floor drains, ADA compliant fixtures, water heater, two gas hot air furnaces which will permit heating the restroom area independent of the main building, coils for future air conditioning/dehumidification, (compressor is not included.) Air ventilation system to provide for outside air exchange, all exposed spiral duct system with related controls.

**Division 16 Electrical:** New 200 Amp Overhead Service with circuit breakers and lockable cabinet, wiring for hot air furnaces, pendant and track lighting in Exhibit/Assembly areas. (These fixtures and pendants will remain visible below cathedral ceiling (existing deck and timber trusses will be exposed). Some accent LED floods for ceiling/truss system. Exterior LED at entrances with dusk to dawn control and surface mounted LED lights in restrooms and vestibule with motion control activation.

The Cost Estimate as presented in the Appendices is separated into four potential options:

1. Full Project Completion.
2. Alternative to full roofing replacement.
3. Demolition with and without lead based paint abatement.
4. Restoration of Exterior only.

# 11 Appendices

1. Estimate of Probable Construction Cost
2. Notes From Public Hearing no. 1, 07.26.2022
3. Minutes of Public Hearing no. 1, 07.26.2022
4. Schematic Documents

## Negaunee Waterworks Building

### Renovation Cost Estimate -12/8/2022

		<b>Estimated Cost</b>	<b>Subtotal</b>	<b>Potential Cost</b>
<b>Division 2 Sitework</b>				
	Lead Based paint abatement exterior	\$ 60,000		
			\$ 60,000	
	Selective Demolition			
	Remove south entry steps/landing	\$ 3,700		
	Remove Chimney to roof level	\$ 800		
	Remove roof framing for Cupola	\$ 800		
	Interior drywall above ceramic tile and South wall Assembly	\$ 4,000		
	Grade floor gravel removal	\$ 2,400		
	Ceiling plaster and framing	\$ 3,000		
	Floor cutting and removal for plumbing connection	\$ 1,600		
	Asbestos Abatement	\$ 2,300	\$ 18,600	
<b>Division 3 Concrete</b>				
	Monumental Stair footings/masonry block/stone /slab/steps	\$ 7,600		
	Fill Floor trenches with concrete.	\$ 1,000		
	Restroom & Vestibule concrete floor	\$ 3,500		
	Exterior Entrances, Brick Pavers 910 sf	\$ 11,500	\$ 23,600	
<b>Division 4 Masonry</b>				
	Tuckpointing, brick replacement exterior	\$ 65,000		
	Stone/brick tuckpointing interior ( budget number)	\$ 5,000		
	Tile Repair( budget number)	\$ 3,000	\$ 73,000	
<b>Division 5 Metals</b>				
	Handrails and Guardrails Interior	\$ 13,360		
	Exterior	\$ 7,040	\$ 20,400	
<b>Division 6 Wood and Plastic</b>				
	Construct Cupola 9' x 5' with siding, roofing, insulation and interior panel	\$ 6,000		
	Soffit and Fascia repairs budget number	\$ 6,500		
	New windows, including Cupola and Round west gable	\$ 53,220	\$ 65,720	

		Estimated Cost	Subtotal	Potential
<b>Division 7 Thermal and Moisture Protection</b>				
	Insulation(bathroom ceilings and Roofing replacement	\$ 3,100		
		\$ 24,000	\$ 27,100	
	Add for R-30 Continuous rigid roof insulation and additional fascia			\$ 38,000
<b>Division 8 Doors, Frames and Hardware</b>				
	Exterior Insulated Steel Doors, Frames and Hardware	\$ 9,931		
	Interior Steel Doors, Frames and Hardware	\$ 4,500	\$ 14,431	
<b>Division 9 Finishes</b>				
	Restroom framing,drywall,paint 2200 s.f. @9.30	\$ 20,480		
	Paint remaining interior stone an 9500 s.f.@5.00	\$ 47,500	\$ 67,980	
	Spray foam exterior stone walls 2000 s.f.@6.10			\$ 12,200
	Steel Studs and drywall exterior stone walls 2000 sf. @6.00			\$ 12,000
<b>Division 10 Specialties</b>				
	Bathroom Accessories (Mirrors, dispensers, trash receptacles)	\$ 2,000	\$ 2,000	
<b>Division 15 Mechanical</b>				
	Plumbing	\$ 19,200		
	Heating / Ventilation	\$ 35,200	\$ 54,400	
<b>Division 16 Electrical</b>				
	New electrical service, wiring and lighting	\$ 68,000		
			\$ 68,000	
	Subtotal Construction Cost	\$ 495,231	\$ 495,231	\$ 62,200
Contingency	15%	\$ 74,285		\$ 9,330
<b>Subtotal Construction Cost</b>		<b>\$ 569,516</b>		<b>\$ 71,530</b>
Contractor Overhead/Profit	22%	\$ 125,293		\$ 15,737
A/E Fees (6% of Construction Cost)		\$ 41,689		\$ 5,236
<b>Total Estimated Cost</b>		<b>\$ 694,809</b>		<b>\$ 87,267</b>
<b>Total Estimated Cost plus Potential Cost</b>				<b>\$ 782,076</b>

## Potential Alternatives/Phased Construction

### 1. Replace roofing on the South Side only until final determination of funding is secured.

( North Side is in fairly good condition with estimated 3-5 year life remaining)

<b>Total</b>	<b>\$15,000</b>
--------------	-----------------

### 2. Demolition cost option 1.

Remove lead based paint and asbestos .	\$62,000
Disposal of remaining material (Co. Landfill)	\$35,000
Site Restoration	\$7,500
<b>Total</b>	<b>\$ 104,800</b>

### Demolition cost option 2.

Demolition and disposal,no abatement	\$100,000
Site Restoration	\$7,500
<b>Total</b>	<b>\$107,500</b>

### 3. Complete restoration of Exterior Only

#### Demo

Lead based paint abatement	\$60,000
Remove Chimney and roof framing for cupola	\$3,900

#### Masonry

Tuckpoint/Brick replacement exterior	\$ 65,000
--------------------------------------	-----------

#### Wood and Plastic

Construct Cupola	\$ 6,000
Soffit and Fascia Repairs	\$ 6,500
New windows	\$ 53,220

#### Doors, Frames and Hardware

New Exterior Doors, Frames and Hardware	\$ 9,931
---	----------

\$ 204,551

Contingency	15%	\$ 30,683
-------------	-----	-----------

<b>Total Exterior only</b>	<b>\$ 235,234</b>
----------------------------	-------------------

## Notes from Public Hearing: July 26, 2022

# **The Advisory Committee to Study the Restoration of the City of Negaunee Waterworks Building**

The Advisory Committee held a public hearing at 6:00 pm in the cafeteria of the Lakeview School in Negaunee. Thirteen (13) residents of the City attended. Following a slide presentation by Advisory member Mike Lempinen and a question & discussion period, those in attendance completed a survey. (Attendees signed in form attached)

---

- 12 of the 13 attendees (92%) felt -The Building has potential
- 85% said the Building needs attention
- Only one attendee thought the Building needs to be demolished.
- A majority (77%) consider the Building adding to the recreational activity associated with Teal Lake.

The discussion of potential uses for the building led to the following ideas and thoughts:

### Usage

1. Consider paddle board and kayak or canoe rentals
2. A public art gallery with historic pieces (schematics of our mines or tribal artifacts).
3. A concession area for bathers
4. Rental space for picnics, weddings, of recreational activity
5. Display and interpret Native American artifacts
6. Local Ecology (fish species, eagle habitat)
7. Historical interpretation (the sawmill, the icehouse, the city's water supply, development of the city)
8. Interpretive or welcome center for the city
9. Bathroom facilities for boater and swimmers.
10. Develop around the history of Teal Lake (a Native American center thousands of year ago)

### Thoughts

1. Contact the Keweenaw Bay Indian Council for Native American interpretations and funding
2. The arched windows facing the highway should be saved and enhanced
3. Remove the stairs from main space or secondary space
4. Love the mock-ups in the presentation
5. Remove all the old paint. Expose the brick and rock
6. Do not overlook the educational component: local history, the lake, ecology, and the Native American elements
7. Maintain as much of the original footprint and structure as possible
8. Create a designated space for historical, educational research and classes
9. Concern about boats and trailers compatibility with a visitor center
10. Keep the building.
11. The building could be removed, but I would also be curious as to what the view of Teal Lake would be like at the stoplight with it.
12. The outside appearance is a reflection of our city. Need to be more welcoming to visitors.
13. The plan depends on funding.



Waterworks Building

Minutes of Public Hearing #1

July 26, 2022, 6:00 p.m.

Lakeview School Cafeteria

Present: Dave Nelson, City Planning and Zoning

-Committee Members: Dave Dompierre, John Larson, Mike Lempinen, Esko Alasimi, Art Gischia, Don Mourand

Public: Jon Christensen, Sherri Larsen, Barb Alasimi, Kevin Flohe, Barb Mourand, Anna Mattson,

Dave Nelson opened the meeting at 6:05 p.m. with a welcome to the public and a summary of committee responsibilities

Mike Lempinen led the discussion/slide show outlining the history of the building and its significance in the development of the City of Negaunee. A video and photographs of the exterior and interior spaces provided attendees with an overview of work necessary to bring the building back into use.

This was followed by a visual perspective of both the exterior and interior spaces as Mike and John envision incorporating the following:

- Removal of most of the existing ceiling to expose the structural wood roof system.
- Removal of hazardous lead-based paint and asbestos pipe insulation and caulking
- Installing a new roof cupola to replicate the original, and new roofing material
- Replacement of windows and exterior doors similar to the original configuration
- Retaining the existing wall and floor tile
- Restoration of the brick and stone exterior walls
- Creating barrier free restrooms with both interior and exterior access
- New paint , doors, and frames
- Heating, plumbing and electrical systems

Mike also explained the constricted site and the existing encumbrance to the State of Michigan through a previous grant. This precludes any use of the building for commercial purposes.

## Questions from the public:

**-Can it be used for commercial purposes?** Due to the MDNR grant for the boat launch, it cannot be used for commercial or business use. All proposed uses should be related to the history of Negaunee, the ecology of the lake, or connection to the Indigenous population, ( Jim Paquette’s discovery along the North Shore) or similar use.

**-Can interior walls be removed to create more open space?** Some can be removed, but emphasis has been focused on creating spaces on the ground floor utilizing the existing walls to create two main display areas on the ground floor, as well as the two new restrooms and a storage area on the lake side.

**-Stairs are shown to the existing office floor, where is the elevator located?** John Larson, Architect, provided this explanation: The Code that governs this renovation indicates the “primary use” area which must be accessible. The remaining upper floor area can be utilized without providing barrier free access. Primarily storage functions will be identified for these spaces. The committee also looked at the potential of a wheelchair lift, if necessary. Stairs could be removed but would not provide much added benefit to floor space.

**-Could the display area be used for “teaching purposes” (field trips)?** The proximity to the schools could accommodate this type of use.

**-Where would the kayak rental area be located?** Dave Nelson indicated that would be closer to the beach area.

**-Can the arched windows be reinstalled on the highway side to match the original building?** When the South facing addition was installed, the original stone exterior wall was removed. When that addition was demolished, the wall opening was infilled with brick. There is a possibility that arched top windows could be installed, but this has not yet been researched.

**-Increased traffic and parking on the site, is there adequate room?** A couple different options for parking have been researched. The property across the street (triangle in front of Holiday) may be an option, we are researching .

Dave Nelson explained potentials for funding: MDNR, Spark Grant and EGLE being potential sources. Some discussion ensued regarding interference with existing grant applications and how this project would rank among those already underway. Dave mentioned this project would likely be in the \$400-\$600K range and three to four years out, so the other projects underway should be completed by the time this project gets underway. He stressed that grant funding is a “must” to bring this project to fruition. (Source funding and matching is not under the purveyance of this committee.)

-Don thanked the audience for their attendance and participation and encouraged any comments to be forwarded to either the committee members or to Dave Nelson via email:  
([dnelson@cityofnegaunee.com](mailto:dnelson@cityofnegaunee.com))

-Mike noted that the “longboat group” had a representative at the meeting.

**-Anna Mattson asked about the building being placed on the Historical Building Register.** It has not, and, depending on funding sources, it may be prohibitive to have done so, limiting the ability for re-use.

-Dave Dompierre introduced the committee members, thanked the group for attending and the meeting closed at 7:10 p.m.

-After the meeting , Jon Christensen raised a question regarding any future plans for a round-about at the Teal Lake Avenue-US 41 intersection. That would impact this site as well as adjoining property on both sides of US 41. Dave Nelson indicated several reasons why a round -about would not work there.

End of meeting minutes

# Negaunee Waterworks

Negaunee, Michigan

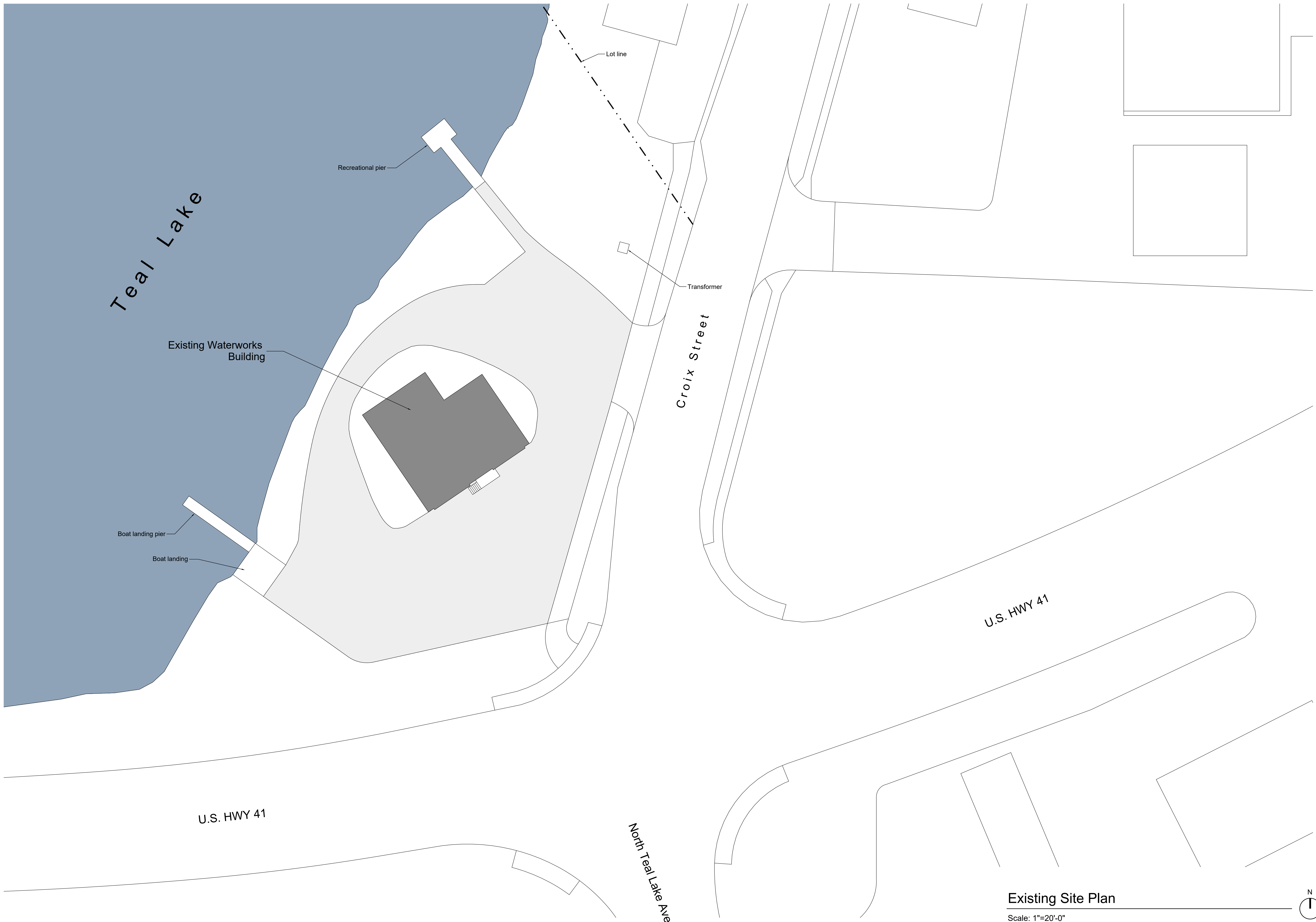
Preliminary - Not for Construction

01.04.2023

## Drawing Index

---

-	Cover Page
A1	Existing Site Plan
A2	Schematic Site Plan
A3	Floor Plan - Existing
A4	Floor Plan
A5	Elevations
A6	Elevations
A7	Overhead Perspective



Existing Site Plan

Scale: 1"=20'-0"



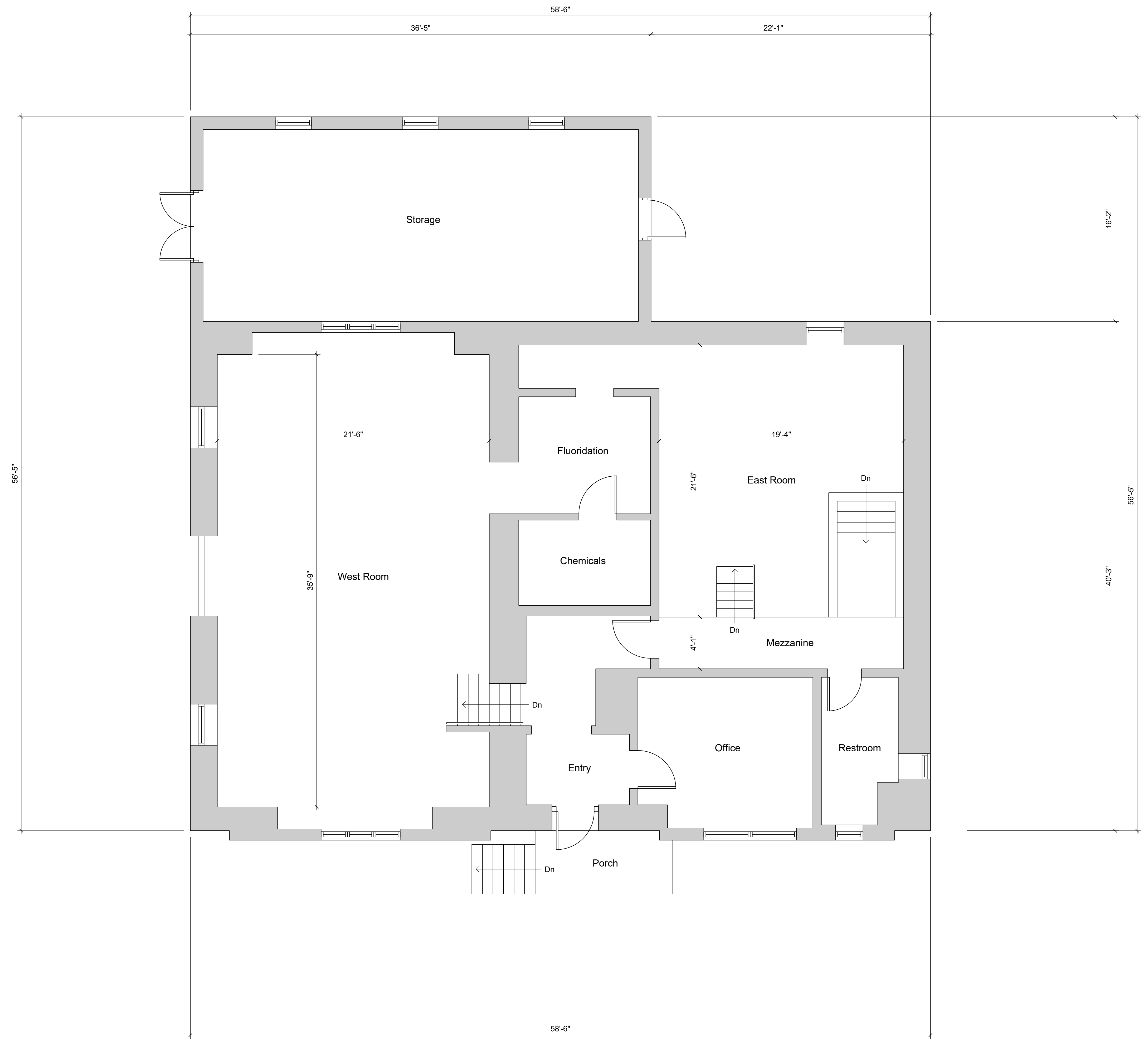
Project:  
Negaunee Waterworks  
Negaunee, Michigan


Preliminary	01.04.2023
Issue	Date

Existing Site Plan

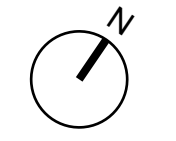
Drawing No.

A1



Floor Plan - Existing

Scale: 1/4"=1'-0"



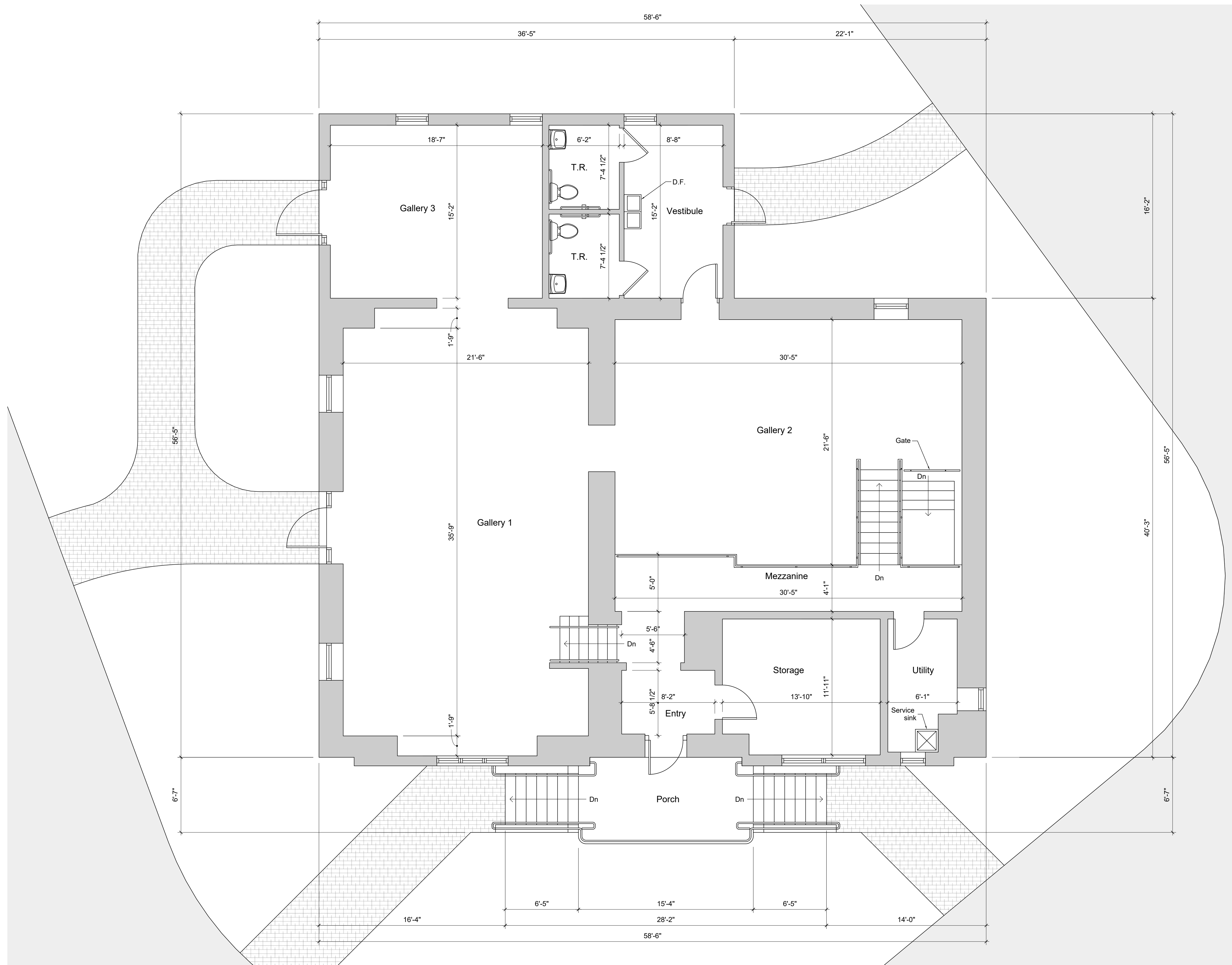
Project:  
Negaunee Waterworks  
Negaunee, Michigan


Preliminary	01.04.2023
Issue	Date

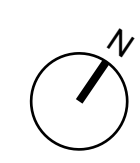
Floor Plan - Existing

Drawing No.

A3



**Floor Plan**  
Scale: 1/4"=1'-0"



Project:  
Negaunee Waterworks  
Negaunee, Michigan

Issue	Date
Preliminary	01.04.2023



West Elevation

Scale: 1/4" = 1'-0"



South Elevation

Scale: 1/4" = 1'-0"

Project:  
Negaunee Waterworks  
Negaunee, Michigan


Preliminary	01.04.2023
Issue	Date

Elevations

Drawing No.  
A5





East Elevation

Scale: 1/4" = 1'-0"



North Elevation

Scale: 1/4" = 1'-0"

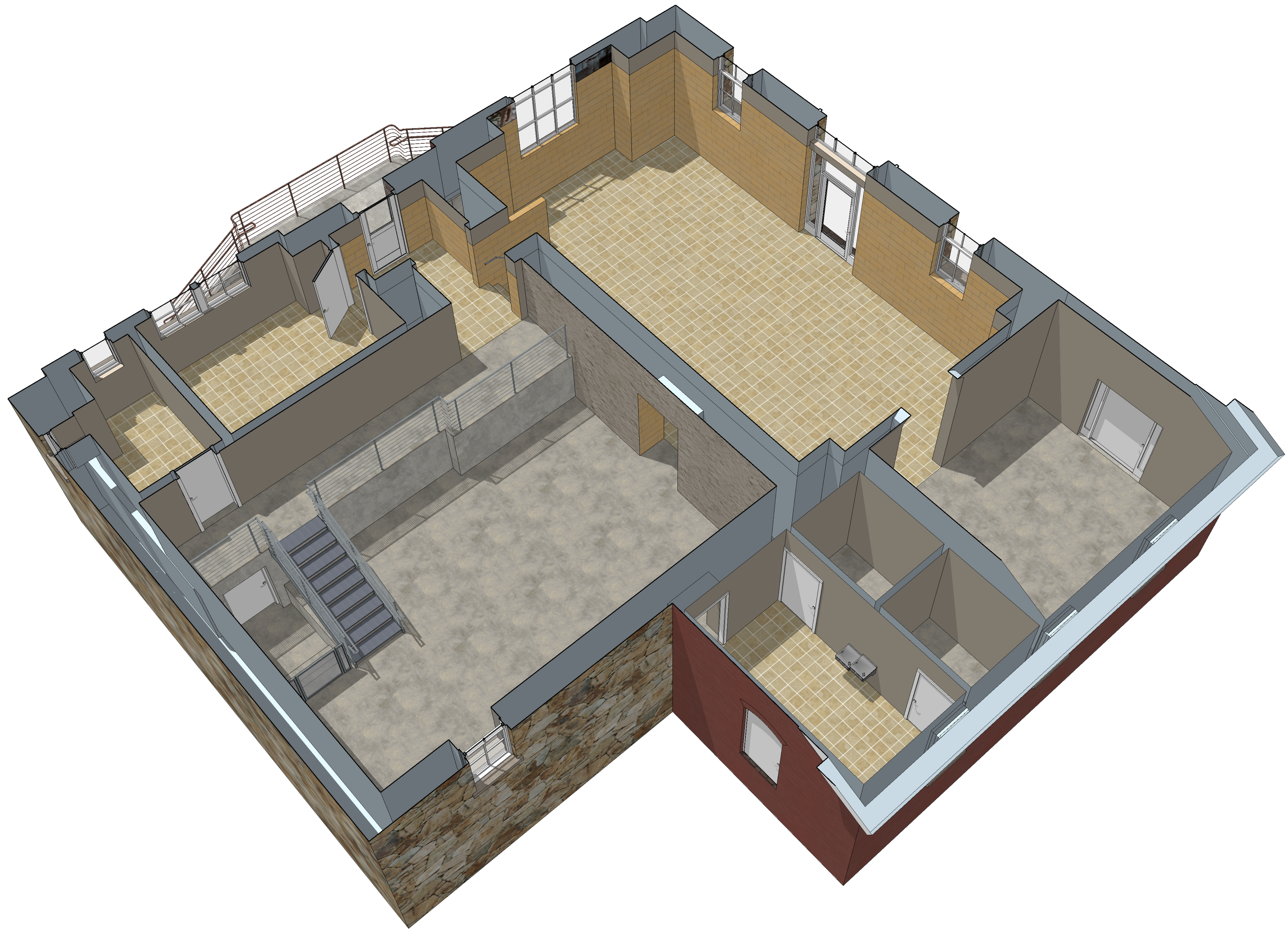
Project:  
Negaunee Waterworks  
Negaunee, Michigan

Preliminary	01.04.2023
Issue	Date

Elevations

Drawing No.

A6



Project:  
Negaunee Waterworks  
Negaunee, Michigan


Preliminary	01.04.2023
Issue	Date

Overhead Perspective

Drawing No.  
**A7**