



State of Ohio  
**Public Works Commission**  
*Application for Financial Assistance*

**IMPORTANT:** Please consult "Instructions for Financial Assistance for Capital Infrastructure Projects" for guidance in completion of this form.

**Applicant**

Applicant: Northwestern Water and Sewer District Subdivision Code: \_\_\_\_\_  
 District Number: 5 County: Wood Date: 09/10/2021  
 Contact: Garret Chamberlain, P.E. Phone: (419) 354-9090  
(The individual who will be available during business hours and who can best answer or coordinate the response to questions)  
 Email: gchamberlain@nwwsd.org FAX: (419) 354-9344

Project Name: Bloomdale Elevated Tank Painting and Repairs Zip Code: 44817

**Project**

Subdivision Type <small>(Select one)</small>	Project Type <small>(Select single largest component by \$)</small>	Funding Request Summary <small>(Automatically populates from page 2)</small>
<input type="checkbox"/> 1. County	<input type="checkbox"/> 1. Road	Total Project Cost: <u>182,160.00</u>
<input type="checkbox"/> 2. City	<input type="checkbox"/> 2. Bridge/Culvert	1. Grant: <u>91,080.00</u>
<input type="checkbox"/> 3. Township	<input checked="" type="checkbox"/> 3. Water Supply	2. Loan: <u>0.00</u>
<input type="checkbox"/> 4. Village	<input type="checkbox"/> 4. Wastewater	3. Loan Assistance/ Credit Enhancement: <u>0.00</u>
<input checked="" type="checkbox"/> 5. Water (6119 Water District)	<input type="checkbox"/> 5. Solid Waste	Funding Requested: <u>91,080.00</u>
	<input type="checkbox"/> 6. Stormwater	

**District Recommendation** (To be completed by the District Committee)

Funding Type Requested <small>(Select one)</small>	SCIP Loan - Rate: _____ % Term: _____ Yrs	Amount: _____ .00
<input type="checkbox"/> State Capital Improvement Program	RLP Loan - Rate: _____ % Term: _____ Yrs	Amount: _____ .00
<input type="checkbox"/> Local Transportation Improvement Program	Grant:	Amount: _____ .00
<input type="checkbox"/> Revolving Loan Program	LTIP:	Amount: _____ .00
<input type="checkbox"/> Small Government Program	Loan Assistance / Credit Enhancement:	Amount: _____ .00
District SG Priority: _____		

**For OPWC Use Only**

STATUS: _____	Grant Amount: _____ .00	Loan Type: <input type="checkbox"/> SCIP <input type="checkbox"/> RLP
Project Number: _____	Loan Amount: _____ .00	Date Construction End: _____
	Total Funding: _____ .00	Date Maturity: _____
Release Date: _____	Local Participation: _____ %	Rate: _____ %
OPWC Approval: _____	OPWC Participation: _____ %	Term: _____ Yrs

**1.0 Project Financial Information** (All Costs Rounded to Nearest Dollar)

**1.1 Project Estimated Costs**

Engineering Services

Preliminary Design:	_____	1,500 .00	
Final Design:	_____	3,500 .00	
Construction Administration:	_____	6,810 .00	
Total Engineering Services:	a.) _____	11,810 .00	8 %
Right of Way:	b.) _____	.00	
Construction:	c.) _____	153,500 .00	
Materials Purchased Directly:	d.) _____	.00	
Permits, Advertising, Legal:	e.) _____	1,500 .00	
Construction Contingencies:	f.) _____	15,350 .00	10 %
Total Estimated Costs:	g.) _____	182,160 .00	

**1.2 Project Financial Resources**

Local Resources

Local In-Kind or Force Account:	a.) _____	.00	
Local Revenues:	b.) _____	91,080 .00	
Other Public Revenues:	c.) _____	.00	
ODOT / FHWA PID: _____	d.) _____	.00	
USDA Rural Development:	e.) _____	.00	
OEPA / OWDA:	f.) _____	.00	
CDBG:	g.) _____	.00	
<input type="checkbox"/> County Entitlement or Community Dev. "Formula"			
<input type="checkbox"/> Department of Development			
Other: _____	h.) _____	.00	
Subtotal Local Resources:	i.) _____	91,080 .00	50 %

OPWC Funds (Check all requested and enter Amount)

Grant: <u>100</u> % of OPWC Funds	j.) _____	91,080 .00	
Loan: <u>0</u> % of OPWC Funds	k.) _____	.00	
Loan Assistance / Credit Enhancement:	l.) _____	0 .00	
Subtotal OPWC Funds:	m.) _____	91,080 .00	50 %
Total Financial Resources:	n.) _____	182,160 .00	100 %

### 1.3 Availability of Local Funds

Attach a statement signed by the Chief Financial Officer listed in section 5.2 certifying all local resources required for the project will be available on or before the earliest date listed in the Project Schedule section. The OPWC Agreement will not be released until the local resources are certified. Failure to meet local share may result in termination of the project. Applicant needs to provide written confirmation for funds coming from other funding sources.

### 2.0 Repair / Replacement or New / Expansion

2.1 Total Portion of Project Repair / Replacement:	<u>182,160 .00</u>	<u>100 %</u>	<div style="border: 1px solid black; padding: 2px; font-size: small;">A Farmland Preservation letter is required for any impact to farmland</div>
2.2 Total Portion of Project New / Expansion:	<u>0 .00</u>	<u>0 %</u>	
2.3 Total Project:	<u>182,160 .00</u>	<u>100 %</u>	

### 3.0 Project Schedule

3.1 Engineering / Design / Right of Way	Begin Date: <u>09/01/2021</u>	End Date: <u>01/01/2022</u>
3.2 Bid Advertisement and Award	Begin Date: <u>05/15/2022</u>	End Date: <u>08/01/2022</u>
3.3 Construction	Begin Date: <u>09/01/2022</u>	End Date: <u>05/15/2023</u>

Construction cannot begin prior to release of executed Project Agreement and issuance of Notice to Proceed.

Failure to meet project schedule may result in termination of agreement for approved projects. Modification of dates must be requested in writing by project official of record and approved by the Commission once the Project Agreement has been executed.

### 4.0 Project Information

If the project is multi-jurisdictional, information must be consolidated in this section.

#### 4.1 Useful Life / Cost Estimate / Age of Infrastructure

Project Useful Life: 15 Years      Age: 1995 (Year built or year of last major improvement)

*Attach Registered Professional Engineer's statement, with seal or stamp and signature confirming the project's useful life indicated above and detailed cost estimate.*

#### 4.2 User Information

Road or Bridge:      Current ADT \_\_\_\_\_ Year \_\_\_\_\_      Projected ADT \_\_\_\_\_ Year \_\_\_\_\_

Water / Wastewater: Based on monthly usage of 4,500 gallons per household; attach current ordinances.

Residential Water Rate      Current \$ 53.50      Proposed \$ 53.50

Number of households served: 316

Residential Wastewater Rate      Current \$ 53.15      Proposed \$ 53.15

Number of households served: 316

Stormwater: Number of households served: 0

## 4.3 Project Description

- A: SPECIFIC LOCATION (Supply a written location description that includes the project termini; a map does not replace this requirement.) 500 character limit.

The elevated tank is located at Harrison and Railroad Streets in Bloomdale, Ohio.

- B: PROJECT COMPONENTS (Describe the specific work to be completed; the engineer's estimate does not replace this requirement) 1,000 character limit.

The 200,000 gallon elevated water tank that serves the Villages of Bloomdale and Bairdstown was constructed in 1995. The tank is a single pedestal spheroidal style tank. A detailed tank inspection was completed in 2020 indicating several repairs and the need for repainting the tank. Paint coating are an integral component of an elevated tank. Substandard paint systems can allow corrosion to take place impacting the structural integrity of the tank as well as water quality. In addition to the removal of the existing paint system and repainting the entire tank, several repairs and required improvements are indicated below.

~Installation of Cathodic Protection will protect the structural steel components.

~Installation of safety handrail.

~Relocation of existing antennae on roof of tank to safety rail.

~Replacement of roof vent.

~Replacement of roof hatch gaskets.

~Mesh Screen on overflow.

~Power wash, clean and re-coat exterior of tank

- C: PHYSICAL DIMENSIONS (Describe the physical dimensions of the existing facility and the proposed facility. Include length, width, quantity and sizes, mgd capacity, etc in detail.) 500 character limit.

This is a 200,000 gallon, single pedestal spheroidal elevated water storage tank.

## 5.0 Project Officials

Changes in Project Officials must be submitted in writing from an officer of record.

### 5.1 Chief Executive Officer (Person authorized in legislation to sign project agreements)

Name: Jerry Greiner

Title: President

Address: 12560 Middelton Pike

City: Bowling Green State: OH Zip: 43402

Phone: (419) 354-9090

FAX: (419) 354-9344

E-Mail: jgreiner@nwwsd.org

### 5.2 Chief Financial Officer (Can not also serve as CEO)

Name: Kay Ball

Title: CFO

Address: 12560 Middleton Pike

City: Bowling Green State: OH Zip: 43402

Phone: (419) 354-9090

FAX: (419) 354-9344

E-Mail: kball@nwwsd.org

### 5.3 Project Manager

Name: Garret Chamberlain, P.E.

Title: Assistant Engineer

Address: 12560 Middleton Pike

City: Bowling Green State: OH Zip: 43402

Phone: (419) 354-9090

FAX: (419) 354-9344

E-Mail: gchamberlain@nwwsd.org

## 6.0 Attachments / Completeness review

Confirm in the boxes below that each item listed is attached (Check each box)

- A certified copy of the legislation by the governing body of the applicant authorizing a designated official to sign and submit this application and execute contracts. This individual should sign under 7.0, Applicant Certification, below.
- A certification signed by the applicant's chief financial officer stating the amount of all local share funds required for the project will be available on or before the dates listed in the Project Schedule section. If the application involves a request for loan (RLP or SCIP), a certification signed by the CFO which identifies a specific revenue source for repaying the loan also must be attached. Both certifications can be accomplished in the same letter.
- A registered professional engineer's detailed cost estimate and useful life statement, as required in 164-1-13, 164-1-14, and 164-1-16 of the Ohio Administrative Code. Estimates shall contain an engineer's seal or stamp and signature.
- A cooperative agreement (if the project involves more than one subdivision or district) which identifies the fiscal and administrative responsibilities of each participant.
- Farmland Preservation Review - The Governor's Executive Order 98-IV, "Ohio Farmland Protection Policy" requires the Commission to establish guidelines on how it will take protection of productive agricultural and grazing land into account in its funding decision making process. Please include a Farm Land Preservation statement for projects that have an impact on farmland.
- Capital Improvements Report. CIR Required by O.R.C. Chapter 164.06 on standard form.
- Supporting Documentation: Materials such as additional project description, photographs, economic impact (temporary and/or full time jobs likely to be created as a result of the project), accident reports, impact on school zones, and other information to assist your district committee in ranking your project. Be sure to include supplements which may be required by your local District Public Works Integrating Committee.

## 7.0 Applicant Certification

The undersigned certifies: (1) he/she is legally authorized to request and accept financial assistance from the Ohio Public Works Commission as identified in the attached legislation; (2) to the best of his/her knowledge and belief, all representations that are part of this application are true and correct; (3) all official documents and commitments of the applicant that are part of this application have been duly authorized by the governing body of the applicant; and, (4) should the requested financial assistance be provided, that in the execution of this project, the applicant will comply with all assurances required by Ohio Law, including those involving Buy Ohio and prevailing wages.

**Applicant certifies that physical construction on the project as defined in the application has NOT begun, and will not begin until a Project Agreement for this project has been executed with the Ohio Public Works Commission. Action to the contrary will result in termination of the agreement and withdrawal of Ohio Public Works Commission funding from the project.**

Jerry Greiner, President

Certifying Representative (Printed form, Type or Print Name and Title)

Original Signature / Date Signed

 09/10/2021

RESOLUTION NO. 2021-89

Authorization to participate in the Ohio Public	}	Northwestern Water
Works Commission State Capital Improvement	}	and Sewer District
For the Bloomdale Elevated Tank Painting & Repairs	}	September 9, 2021

Trustee Arnold moved the adoption of the following Resolution:

A resolution authorizing Jerry Greiner, President to prepare and submit an application to participate in the Ohio Public Works Commission State Capital Improvement and/or local transportation improvement program(s) and to execute contracts as required; and

WHEREAS, the State Capital Improvement Program and the Local Transportation Improvement Program both provide financial assistance to political subdivisions for capital improvements to public infrastructure, and

WHEREAS, the Northwestern Water and Sewer District is planning to make capital improvements to the Bloomdale Elevated Water Tank; and

WHEREAS, the infrastructure improvements herein above described are considered to be a priority need for the community and are qualified projects under the OPWC programs,

NOW THEREFORE, BE IT RESOLVED by the Northwestern Water and Sewer District that:

Section 1: The President is hereby authorized to apply to the OPWC for funds as described above.

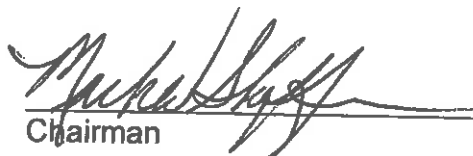
Section 2: The President is further authorized to enter into any agreements as may be necessary and appropriate for obtaining this financial assistance; and be it further


RESOLVED, That this Northwestern Water and Sewer District Board of Trustees hereby finds and determines that all formal actions relative to the passage of this resolution were taken in open meetings of this Board, and that all deliberations of the Board and of its


committees, if any, which resulted in formal action, were taken in meetings open to the public, in full compliance with applicable legal requirements, including Section 121.22, Ohio Revised Code.

Trustee Kate seconded the resolution and the roll being called on its adoption, the vote resulted as follows:

YES 8 NO 0 ABSTAIN 0

  
Chairman

  
Secretary

Attest:   
Clerk of the Board





**CHIEF FINANCIAL OFFICER'S CERTIFICATION OF LOCAL FUNDS /  
LOAN REPAYMENT LETTER**

September 10, 2021

I, Kay Ball of the Northwestern Water & Sewer District, hereby certify that the Northwestern Water and Sewer District has the amount of \$91,080 in the treasury and that this amount will be used to pay the local share for the Bloomdale Elevated Tank Painting and Repairs project when it is required.

A handwritten signature in blue ink that reads "Kay Ball". The signature is written in a cursive style.

Kay Ball  
CFO

*Responsible for every drop.*

12560 Middleton Pike • P.O. Box 348 • Bowling Green, Ohio 43402  
Fax: (419) 354-9344 • (877) 354-9090 • [www.nwwsd.org](http://www.nwwsd.org) • E-mail: [district@nwwsd.org](mailto:district@nwwsd.org)  
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NORTHWESTERN WATER AND SEWER DISTRICT  
 VILLAGE OF BLOOMDALE ELEVATED WATER TANK REPAIR AND REPAINTING  
 Preliminary Construction Cost Estimate

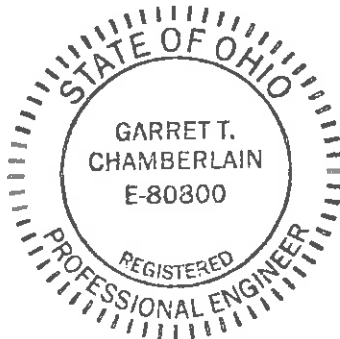
9/10/2021

<u>Item</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Install Cathodic Protection	LS	1	\$23,000	\$23,000
Install Handrail and Relocate Roof Antennae	LS	1	\$16,000	\$16,000
Replace Roof Vent	LS	1	\$8,000	\$8,000
Install Roof Hatches	LS	1	\$500	\$500
Install Mesh Screen at Overflow	LS	1	\$1,000	\$1,000
Power Wash and Tool Clean Exterior	LS	1	\$25,000	\$25,000
Recoat Exterior of Tank	LS	1	\$80,000	\$80,000
Subtotal Construction				\$153,500
Contingency (10%)				\$15,350
<b>TOTAL CONSTRUCTION</b>				<b>\$168,850</b>
Permits				\$0
Advertising				\$1,500
Preliminary Design				\$1,500
Final Design				\$3,500
Construction Administration				\$6,810
<b>TOTAL PROJECT COST</b>				<b>\$182,160</b>

The estimated useful life of the Village of Bloomdale Elevated Water Tank Repair and Repainting is 15 years.

I certify to the best of my knowledge, that the Engineer's Opinion of Probable Cost and Estimated Project Useful Life are true and accurate.

  
 Garret Chamberlain, P.E.



Responsible for every drop.



## FARMLAND PRESERVATION REVIEW LETTER

### FARMLAND PRESERVATION REVIEW FOR THE OHIO PUBLIC WORKS COMMISSION

Bloomdale Elevated Tank Painting and Repairs  
September 10, 2021

This review is to comply with Farmland Preservation Review Advisory of the Ohio Public Works Commission and the Governor's Executive Order 98-IV. This review was accomplished by the Northwestern Water & Sewer District.

1. The immediate impact the project will have on productive agricultural and grazing land related to land acquisition.

There will be no immediate impact on productive agricultural and grazing land related to land acquisition as no land acquisition is required.

2. Indirect impact that will result in the loss of productive agricultural and grazing land from development related to the project.

There will be no indicated impact that will result in the loss of productive agricultural and grazing land from development as a result of this project.

3. Mitigation measures that could be implemented when alternative sites or locations are not feasible.

No mitigation measures will need to be implemented as no alternative sites or locations will be required.

  
Jerry Greiner, President

9/10/2021  
Date

Responsible for every drop.

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**DISTRICT 5**  
**Capital Improvement Project**  
**Priority Rating Sheet, Round 36**

COUNTY: Ward PROJECT NUMBER: 11021108  
 PROJECT: Ward Biocumulative Elevated Tank Design et al  
 EST. COST: \$18,211,000

ID	CATEGORIES TO BE CONSIDERED	PRIORITY FACTORS						WEIGHT FACTOR	TOTAL	PRIORITY FACTORS					
		0	1	2	3	4	5			0	1	2	3	4	5
1	1	REPAIR OR REPLACE vs. (REPAIR OR REPLACE)						10	0	0	0	0	0	0	0
2A	1	EXISTING PHYSICAL CONDITION Please refer to Ordinance 88 of the Board of Supervisors Technology and Information Services Department (Public Law or Ordinance 88-1076)						4	0	0	0	0	0	0	0
2B	1	AGE Type Road Underwater Storage/Valve Sanitary Sewer, Water Supply, Storm/Stormwater Other Wards						2	0-10 Yrs 11-20 Yrs 21-30 Yrs 31-40 Yrs 41-50 Yrs 51+ Yrs	0	1	2	3	4	5
3	2	PUBLIC HEALTH AND/OR SAFETY CONCEPTS Subject to Board Approval Subject to Board Approval for Public Health						8	No Impact Minimal Moderate Major Critical Extreme/Disaster	0	1	2	3	4	5
4	2	LOCAL WATERING FUNDS Percentage of Local Watering Funds are funds derived from the applicant's budget or a transfer to the local water utility's budget, assessed to the rate of the applicant's rate?						20	5% 10% 15% 20% 25% 30%	0	1	2	3	4	5
5	1	OTHER FUNDS (Exclude 88-1076) Grants and other revenues not provided by the applicant through grants by the applicant, including GSA, Contributions etc. - total dollar value of grant or other funds						0	5% 10% 15% 20% 25% 30%	0	1	2	3	4	5
6	1	OTHER QUALITY AND LOCAL FUNDS (ORDINANCE 88-1076) Please refer to Ordinance 88 of the Board of Supervisors Technology and Information Services Department						20	0 1 2 3 4 5	0	1	2	3	4	5
When scoring a project that is only grant or other funds, please see the attached "Other Funds" sheet to ensure you are scoring the project for the grant or other funds. Then use the score of the "Other Funds" sheet to score the total (grant or other funds).									Grant per Applicant \$500,000 \$1,000,000 \$1,500,000 \$2,000,000 \$2,500,000 \$3,000,000 \$3,500,000 \$4,000,000 \$4,500,000 \$5,000,000 \$5,500,000 \$6,000,000 \$6,500,000 \$7,000,000 \$7,500,000 \$8,000,000 \$8,500,000 \$9,000,000 \$9,500,000 \$10,000,000 \$10,500,000 \$11,000,000 \$11,500,000 \$12,000,000 \$12,500,000 \$13,000,000 \$13,500,000 \$14,000,000 \$14,500,000 \$15,000,000 \$15,500,000 \$16,000,000 \$16,500,000 \$17,000,000 \$17,500,000 \$18,000,000 \$18,500,000 \$19,000,000 \$19,500,000 \$20,000,000						
7	1	JOB CRITICAL DESCRIPTION Indicate if all the job critical items include supporting documents in the form of a commitment letter from the contractor or other party						0	0-4 Jobs 5-14 Jobs 15-24 Jobs 25+ Jobs	0	1	2	3	4	5
8	1	ABILITY TO MAINTAIN USERS (The number of "in" users) is a critical factor in the project. The number of "in" users is a critical factor in the project. The number of "in" users is a critical factor in the project.						2	0-40 Users 41-100 Users 101-250 Users 251-500 Users 501-1000 Users 1001+ Users	0	1	2	3	4	5
9	1	ECONOMIC IMPACT Local jobs as a percentage of the District's total jobs						1	100% 85%-99% 70%-84% 55%-69% 40%-54% 25%-39%	0	1	2	3	4	5
10	1	READY TO PROCEED						1	Phase Not Begun Yet Preliminary Engineering Complete Final Design Complete	0	1	2	3	4	5
11		SUBTOTAL RANKING POINTS (MAX = 912)						68	Does the project have a significant impact on productive farmland? YES NO Does the project affect wetlands? YES NO Does the project affect the applicant's ability to proceed to the State Approval process? YES NO						
12		COUNTY SUBCOMMITTEE PRIORITY POINTS (0-20-0)													
12A		DISCRETIONARY POINTS BY DISTRICT (MAX=1)							Does the project have a significant impact on the County's Community Impact? Include documentation to support the County's significance.						
12B		DISCRETIONARY POINTS BY DISTRICT (MAX=1)							Does the project have a significant impact on the County's Community Impact? Include documentation to support the County's significance.						
14		GRAND TOTAL RANKING POINTS													

\* Applicants must certify local and other share contributions. Specify all funding sources to be utilized as local share at the time of application submission

**DISTRICT 5  
CAPITAL IMPROVEMENT PROJECTS  
QUESTIONNAIRE**

**ROUND 36**

Name of Applicant: Northwestern Water + Sewer District  
 Project Title: Bloomdale Elevated Tank Painting and Repairs

The following questions are to be answered for each application submitted for State Issue II SCIP, LTIP and Loan Projects. Please provide specific information using the best documentation available to you. Justification of your responses to these questions will be required if your project is selected for funding, so please provide correct and accurate responses. Villages and Townships under 5,000 in population should also complete the Small Government Criteria.

1. What percentage of the project in repair A=100%, replacement B= \_\_%, expansion C= \_\_%, and new D= \_\_%? (Use dollar amounts of project to figure percentages and make sure the total equals one hundred(100) percent) A+B=100% C+D= \_\_% ORC Reference(s):164.06(B)(1); 164.14(E)(10)

Repair/Replacement = Repair or Replacement of public facilities owned by the government (any subdivision of the state).

New/Expansion = Replacement of privately owned wells, septic systems, private water or wastewater systems, etc.

- 2a. Existing Physical Condition of Infrastructure ORC Reference(s):164.06(B)(2);164.14(E)(9);164.14(E)(2); 164.14(E)(8)

Points	Category	Description	Examples
10	Failing	Infrastructure has reached a point where it requires replacement, reconstruction or reconfiguration to fulfill its purpose	-Intersection Reconfiguration due to accident problem- Structural paving of 3.5" or greater of additional pavement - Pavement Widening to meet ODOT L&D Standards - Complete Pavement Reconstruction -Water or Sewer Line Replacement - Water or Sewer Plant Replacement - Widening graded shoulder width to ODOT L&D Standard -Complete Bridge or Culvert replacement-Replacement of a major component of a water and/or sewer treatment plant which would result in a failure in meeting WQ Standards
8	Poor	The condition is substandard and requires repair or restoration in order to return to the intended level of service and comply with current design standards. Infrastructure contains deficiency and is functioning at a diminished capacity.	-Multiple course of paving - Structural Culvert Lining - Bridge Deck Replacement - Replacement of a component such as a control mechanism, pumps, hydrants, valves, filters,

			etc of a water or sewer plant - Single course of paving with 25% base repair-Widening graded shoulder width to less than ODOT L&D Standard
6	Fading	The condition requires reconditioning to continue to function as originally intended.	-Single course of paving -Sewer Lining Projects -Water tower painting -Repair of a tank to maintain structural integrity in existing water and sewer systems-Widening aggregate berm on existing graded shoulder width
4	Fair	The condition is average, not good or poor. The infrastructure is still functioning as originally intended. Minor deficiencies exist requiring repair to continue to function as originally intended and/or to meet current design standards	
2	Good	The condition is safe and suitable to purpose. Infrastructure is functioning as originally intended, but requires minor repairs and/or upgrades to meet current design standards	
0	Excellent	The condition is new or requires no repair. Or, no supporting documentation has been submitted	

2b. Age of Infrastructure ORC Reference(s):164.06(B)(2)

Life	20	30	50
Project Type	Road	Wastewater and Water Treatment	Bridge/Culvert, Sanitary Sewer, Water Supply, Storm Water, Solid Waste
Points			
0	0-4 Years	0-6 Years	0-10 Years
1	5-8 Years	7-12 Years	11-20 Years
2	9-12 Years	13-18 Years	21-30 Years
3	13-16 Years	19-24 Years	31-40 Years
4	17-20 Years	25-30 Years	41-50 Years
5	20+ Years	30+ Years	50+ Years

3. Health and Safety Rating: ORC Reference(s):164.06(B)(4),164.14(E)(1); 164.14(E)(10)

If the proposed project is not approved what category would best represent the impact on the general health and/or public safety?

## ROADS

Extremely Critical:	Resurfacing, Restoration, Rehabilitation and Reconstruction (4R) of a Major Access Road.*
Critical:	Resurfacing, Restoration and Rehabilitation (3R) of a Major Access Road.*
Major:	Resurfacing, Restoration, Rehabilitation and Reconstruction (4R) of a Minor Access Road.*
Moderate:	Resurfacing, Restoration and Rehabilitation (3R) of a Minor Access Road.*
Minimal:	Preventative Maintenance of a Major Access Road.
No Impact:	Preventative Maintenance of a Minor Access Road.

**Projects that have a variety of work will be scored in the LOWEST category of work contained in the Construction Estimate.**

### *Road/Street Classifications:*

<i>Major Access Road:</i>	<i>Roads or streets that have a dual function of providing access to adjacent properties and providing through or connecting service between other roads.</i>
<i>Minor Access Road:</i>	<i>Roads or streets that primarily provide access to adjacent properties without through continuity, such as cul-de-sacs or loop roads or streets.</i>
<i>Preventative Maintenance:</i>	<i>Non Structural Pavement work such as chip sealing, cape sealing, micro-surfacing, crack sealing, etc.</i>

*\*(3R) Resurfacing, Restoration and Rehabilitation - Improvements to existing roadways, which have as their main purpose, the restoration of the physical features (pavement, curb, guardrail, etc.) without altering the original design elements. (Surface and Intermediate layer Mill and Fills, overlays with less than or equal to 3.5" of additional pavement, etc....)*

*\*(4R) Resurfacing, Restoration, Rehabilitation and Reconstruction - Much like 3R, except that 4R allows for the complete reconstruction of the roadway and alteration of certain design elements (i.e., lane widths, shoulder width, SSD, overlays with greater than 3.5" of additional pavement. etc.).*

## BRIDGES SUFFICIENCY RATING

Extremely Critical:	0-25, or a General Appraisal rating of 3 or less.
Critical:	27-50, or a General Appraisal rating of 4.
Major:	51-65 or a General Appraisal rating of 5 or 6.
Moderate:	66-80 or a General Appraisal rating of 7.
Minimal:	81-100 or a General Appraisal rating of more than 7.
No Impact:	Bridge on a new roadway.

## WASTEWATER TREATMENT PLANTS

- Extremely Critical:** Improvements required by the Environmental Protection Agency (EPA) in the form of a consent decree, finding and orders or court order, and Health Department Construction Ban.
- Critical:** Improvements required by the Environmental Protection Agency (EPA) in the form of NPDES permit requirements or Notice of Violations.
- Major:** Replace deficient appurtenances. Update existing processes due to EPA recommendations.
- Moderate:** Increase capacity to meet current needs or update processes to improve effluent quality.
- Minimal:** New/Expansion project to meet a specific development proposal.
- No Impact:** New/Expansion to meet future or projected needs.

## WATER TREATMENT PLANT

- Extremely Critical:** EPA orders in the form of a consent decree, findings and orders or court order.
- Critical:** Improvements to meet Environmental Protection Agency (EPA) Safe Drinking Water Regulations and/or Notice of Violations.
- Major:** Replace deficient appurtenances. Update existing processes due to EPA recommendations.
- Moderate:** Increase capacity to meet current needs or update processes to improve water quality.
- Minimal:** New/Expansion project to meet a specific development proposal.
- No Impact:** New/Expansion to meet future or projected needs.

## COMBINED SEWER SEPARATIONS (May be construction of either new storm or sanitary sewer as long as the result is two separate sewer systems.)

- Extremely Critical:** EPA orders in the form of a consent decree, findings and orders or court order. Health Department Construction Ban.
- Critical:** Separate, due to chronic backup or flooding in basements.
- Major:** Separate, due to documented water quality impairment, or due to EPA recommendations.
- Moderate:** Separate, due to specific development proposal within or upstream of the combined system area.
- Minimal:** Separate, to conform to current design standards.
- No Impact:** No positive health effect.

## STORM SEWERS

- Extremely Critical:** Improvements ordered by the Environmental Protection Agency (EPA) in the form of a consent decree, findings and orders or court order.



- Critical:** Chronic flooding (structure damage) or improvements required by the Environmental Protection Agency (EPA) in the form of NPDES permit requirements or Notice of Violations.
- Major:** Inadequate capacity (land damage).
- Moderate:** Inadequate capacity with no associated damage.
- Minimal:** New/Expansion to meet current needs.
- No Impact:** New/Expansion to meet future or project needs.

### CULVERTS

- Extremely Critical:** Structurally deficient or functionally obsolete. Deterioration has already caused a critical safety hazard to the public.
- Critical:** Inadequate capacity with land damage and the existing or high probability of property damage.
- Major:** Inadequate capacity (land damage).
- Moderate:** Inadequate capacity with no associated damage.
- Minimal:** New/Expansion to meet current needs.
- No Impact:** New/Expansion to meet future or projected needs.

### SANITARY SEWERS

- Extremely Critical:** EPA orders in the form of a consent decree, findings and orders or court order. Health Department Construction Ban.
- Critical:** Replace, due to chronic pipe failure, chronic backup or flooding in basements, sewer system overflows, and/or improvements required by the Environmental Protection Agency (EPA) in the form of NPDES permit requirements or Notice of Violations.
- Major:** Replace, due to inadequate capacity or infiltration, or due to EPA recommendations.
- Moderate:** Rehabilitate to increase capacity to meet current needs or to reduce inflow and infiltration.
- Minimal:** New/Expansion project to meet a specific development proposal.
- No Impact:** New/Expansion to meet future or projected needs.

### SANITARY LIFT STATIONS AND FORCE MAINS

- Extremely Critical:** Structurally deficient. Deterioration has already caused a safety/health hazard to the public, or; EPA orders in the form of a consent decree, findings and orders or court order.
- Critical:** Inadequate capacity with actual or a high probability of property damage; or improvements required by the Environmental Protection Agency (EPA) in the

form of NPDES permit requirements.

- Major:** EPA recommendations, or; reduces a probable health and/or safety problem.
- Moderate:** Rehabilitate to increase capacity to meet current needs.
- Minimal:** New/Expansion to meet a specific development proposal.
- No Impact:** New/Expansion to meet future or projected needs.

### WATER PUMP STATIONS

- Extremely Critical:** Structurally deficient. Deterioration has already caused a safety hazard to the public, or, EPA orders in the form of a consent decree, findings and orders or court order.
- Critical:** Inadequate capacity with the inability to maintain pressure required for fire flows.
- Major:** Replace due to inadequate capacity or EPA recommendations.
- Moderate:** Rehabilitate to increase capacity to meet current needs.
- Minimal:** New/Expansion to meet a specific development proposal.
- No Impact:** New/Expansion to meet future or projected needs.

### WATER LINES/WATER TOWERS

- Extremely Critical:** Replace to solve low potable water pressure or excessive incidents of main breaks in project area.
- Critical:** Replacement/Rehabilitation due to structural deficiency such as excessive corrosion and/or safety upgrades, etc.
- Major:** Replace undersized water mains as part of an overall upgrade process. Replace water meters that have exceeded their useful life.
- Moderate:** Increase capacity to meet current needs. Spot repairs/recoating to restore moderate corrosion of water components.
- Minimal:** New/Expansion project to meet a specific development proposal.
- No Impact:** New/Expansion to meet future or projected needs.

### OTHER

- Extremely Critical:** There is a present health and/or safety threat.
- Critical:** The project will provide immediate health and/or safety benefit.
- Major:** The project will reduce a probable health and/or safety problem.

- Moderate: The project will delay a health and/or safety problem.
- Minimal: A possible future health and/or safety problem mitigation.
- No Impact: No health and/or safety effect.

**NOTE:** Combined projects that can be rated in more than one subset may be rated in the other category at the discretion of the District 5 Executive Committee. In general, the majority of the cost or scope of the project shall determine the category under which the project will be scored.

(Submittals without supporting documentation will receive 0 Points for this question.)

Extremely Critical \_\_, Critical \_\_, Major \_\_, Moderate , Minimal \_\_, No Impact \_\_. Explain your answer. *Narrative is attached.*

(Additional narrative, charts and/or pictures should be attached to questionnaire)

4. Identify the amount of local funds that will be used on the project as a percentage of the total project cost. ORC Reference 164.06(B)(6); ORC 164.06(B)(7); ORC 164.06(B)(3); ORC 164.14(E)(4)

A.) Amount of Local Funds = \$ 91,080.00

B.) Total Project Cost = \$ 182,160.00

RATIO OF LOCAL FUNDS DIVIDED by TOTAL PROJECT COSTS (A ÷ B) = 50 %

Note: Local funds should be considered funds derived from the applicant budget or loans funds to be paid back through local budget, assessments, rates or tax revenues collected by the applicant.

5. Identify the amount of other funding sources to be used on the project, excluding SCIP or LTIP Funds, as a percentage of the total project cost. ORC Reference(s): 164.06(B)(7); 164.14(E)(4)

Grants  % Gifts  %, Contributions  %

Other  % (explain) \_\_\_\_\_, Total  %

Note: Grant funds and other revenues not contributed or collected through taxes by the applicant should be considered other funds. The Scope of Work for each Funding Source must be the same.

6. Total Amount of SCIP and Loan Funding Requested- An Applicant can request a grant per the categories below for points as indicated on the Priority Rating Sheet. If the Applicant is including a loan request equal to, but not exceeding 50% of the OPWC funding amounts listed below, there will be no point penalty. If loan funds requested are more than 50%, points as listed in the Priority Rating Sheet will apply. ORC Reference(s): 164.14(E)(10); 164.06(B)(5)

- \_\_\_\_\_ \$500,001 or More
- \_\_\_\_\_ \$400,001-\$500,000
- \_\_\_\_\_ \$325,001-\$400,000
- \_\_\_\_\_ \$275,001-\$325,000



\$175,001-\$275,000

\$175,000 or Less

There are times when the District spends all of the grant money and has loan money remaining. When this happens, the district makes a loan offer in the amount of the requested grant to the communities that were not funded. The offers are made in the order of scoring. We need to know if you are not successful in obtaining grant dollars for your project if you would be interested in loan money:

YES  NO

(This will only be considered if you are not funded with grant money and there is remaining loan money.) Please note: if you answer "no" you will not be contacted, only if you answer "yes" will an offer be made in the event that there is loan money remaining.

- 7. If the proposed project is funded, will its completion directly result in the creation of permanent full-time equivalent (FTE) jobs (FTE jobs shall be defined as 36 hours/week) ? Yes \_\_\_ No . If yes, how many jobs within eighteen months? \_\_\_ Will the completed project retain jobs that would otherwise be permanently lost? Yes \_\_\_ No \_\_\_. If yes, how many jobs \_\_\_ will be created/retrained within 18 months following the completion of the improvements?

ORC Reference(s): 164.14(E)(3);164.14(E)(10)

(Supporting documentation in the form of letter from affected industrial or commercial enterprises that specify full time equivalent jobs that will be retained or created directly by the installation or improvement of Public infrastructure. Additional items such as; 1) newspaper articles or other media news accounts, 2) public meeting minutes, and/or 3) a letter from the County Economic Development Director or State of Ohio Economic Development Professional that alludes to the requirement for the infrastructure improvement to support the business. Submittals without supporting documentation will receive 0 points for this question.)

- 8. What is the total number of existing users that will directly benefit from the proposed project if completed? 316 (Use households served, traffic counts, etc. and explain the basis by which you arrived at your number.) ORC Reference 164.14(E)(7); 164.06(B)(10)

Based on current customer accounts.

- 9. Economic Distress Criteria ORC Reference 164.06(B)(8)

What is the Local Median Household Income as a percentage of the District Median Household Income?

100 %. Please utilize the Economic Distress Scoring Criteria based on ACS 2013-2017 Data provided in Exhibit A.

- 10. Readiness to Proceed Criteria ORC Reference 164.06(B)(9); ORC 164.14(E)(5)

Please categorize the status of planning and design elements for the project.

           Plans have not begun yet (0 Points)



Preliminary Engineering Complete (1 Point)

Final Design Complete (2 Points)

11. Base Score Total for Questions 1-10= 68

12. County Subcommittee Priority Points= \_\_\_\_\_

(25-20-15 Points for each of the SCIP and LTIP Project Categories)

13. DISCRETIONARY POINTS (BY DISTRICT COMMITTEE ONLY)

13a. A District Discretionary Point may be awarded to projects that demonstrate significant Area-wide, County, or Community Impact. (Include documentation to support the claim of significance) (Maximum of 1 Point at the discretion of the District Executive Committee) \_\_\_\_\_

ORC Reference 164.14(E)(7)

13b. A District Discretionary Point may be awarded to projects that demonstrate that the entity has maximized local financial resources including assessments. Provide a Fund Status Report and/or the water and sanitary waste utility rate structures are at least 2.5% of area median household income for combined systems and 1.5% of the area median household income for water and sanitary only systems. Please provide rate ordinances for water and sanitary sewer to be considered for discretionary points. (Maximum of 1 Point at the discretion of the District 5 Executive Committee) \_\_\_\_\_ ORC Reference 164.06(B)(3)

14. Grand Total of Points \_\_\_\_\_

15. Is subdivision's population less than 5,000 Yes No \_\_\_ If yes, continue. You may want to design your project per Small Government Project Evaluation Criteria, released for the current OPWC Round to assist in evaluating your project for potential Small Government Funding. The Small Government Criteria is available on the OPWC website at

<https://www.pwc.ohio.gov/Portals/0/Data/SmallGovernment%20Round%2036%20Methodology.pdf?ver=2019-08-07-071749-143>

16. OHIO PUBLIC WORKS COMMISSION SMALL GOVERNMENT PROGRAM GUIDELINES

All projects that are sponsored by a subdivision with a population of 5,000 or less, and not earning enough points for District Funding from SCIP or LTIP Funds, are then rated using the Small Government Program Rating Criteria for the corresponding funding round. In order to be rated the entity must submit the Small Government Supplement and their required budgets with their application.

Only infrastructure that is village- or township- owned is eligible for assistance. The following policies have been adopted by the Small Government Commission:

- District Integrating Committees may submit up to seven (7) applications for consideration by the

Date: 9/10/2021  
Signature: Joseph C. Chamberlain  
Title: Assistant Engineer  
Address: 12560 Middlebrook Pike  
Phone: 419 354-9090 x127  
FAX: 419 354-9344  
Email: jchamberlain@nwusd.org

## **Bloomdale Elevated Tank Painting and Repairs**

### **Project Description/Narrative**

The 200,000 gallon elevated water tank that serves the Villages of Bloomdale and Bairdstown was constructed in 1995. The tank is a single pedestal spheroidal style tank. A detailed tank inspection was completed in 2020 indicating several repairs and the need for repainting the tank. Paint coating systems are an integral component of an elevated tank. Substandard paint systems can allow corrosion to take place impacting the structural integrity of the tank as well as water quality.

An inspection report was prepared by Nelson Tank Engineering & Consulting and the Northwestern Water and Sewer District to ascertain the condition of the Bloomdale tank. A copy of this report is attached. The report indicates that the tank is in fair condition. The interior of the tank was repainted in 2016 and remains in good condition. No interior coating work is planned at this time.

In addition to removal of the existing paint system and repainting the entire tank, several repairs and required improvements are indicated below.

- Installation of Cathodic Protection will protect the structural steel components.
- Installation of safety handrail.
- Relocation of existing antennae on roof of tank to safety rail.
- Replacement of roof vent.
- Replacement of roof hatch gaskets.
- Mesh Screen on overflow.
- Power wash, clean and recoat exterior of tank

The Northwestern Water and Sewer District owns and operates the Village of Bloomdale water system. This tank also serves the Village of Bairdstown.

The proposed improvements will bring the tank to current safety and Ohio EPA standards. The proposed cathodic protection system will provide protection against corrosion of the structure and protect the paint systems inside and outside the tank. The condition of the existing paint is fair, but additional preparatory work may be required. The estimated coating costs can be highly variable depending upon what is found during the cleaning process prior to painting. The estimate includes a moderate amount of preparation prior to the recoating process.

Preliminary engineering is complete. Final engineering is underway and is scheduled to be complete by January of 2022. The project is scheduled to be bid from May to August of 2022. Work will take place in the late summer and fall of 2022 with final completion by May of 2023.

It is our intent to complete this project as soon as possible and in the most cost effective manner as well. Future planned projects will have a significant impact on the customers' user rates, so it is imperative that funding be obtained from as many sources as possible to lessen the impact.



**Nelson Tank Engineering  
& Consulting, Inc.**

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**VILLAGE OF BLOOMDALE  
MAINTENANCE INSPECTION  
200,000-GALLON  
ELEVATED TANK**

**DATE: JULY 16, 2021**



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## **SUMMARY**

Brown Steel Contractors constructed the tank in 1995. The tank is a spheroid design constructed with a height to high water line of 125 feet. It is supported by a single pedestal of welded construction. The internal water-containing structure is not equipped with a cathodic protection system. The tank's exterior surfaces appear to have been recoated, although, the exact date was not available. The wet and dry interior surfaces were painted in 2017 by Central Painting and Sandblasting.

The elevated water storage tank and appurtenances are in fair structural condition. The tank has been moderately damaged by internal corrosion. The tank's foundation is in good condition with little evidence of deterioration. The wet interior coating is an epoxy system that is in fair to good condition, 99.999 percent intact. The dry interior coating is an epoxy system that is in good condition, 99.999 percent intact. The exterior coating is a polyurethane system that is in fair condition, 99.99 percent intact.

The following maintenance is recommended. Associated probable costs for construction are provided for preparing a budget. These estimates do not include normal engineering costs:

Maintenance costs (2022):

Item	Recommended Repair	Estimated Cost(by NWSD)
1	Install cathodic protection	\$23,000
2	Install roof handrail and relocate antennas to handrail	\$16,000
3	Replace roof vent	\$ 8,000
4	Install gaskets to the roof hatches	\$ 500
5	Install 24 mesh screen to overflow pipe	\$1,000
6	Power wash, spot power tool clean and recoat exterior	\$105,000

## **INTRODUCTION**

Nelson Tank Engineering & Consulting, Inc. (NTEC) conducted a maintenance inspection on the 200,000-gallon elevated storage tank owned by Village of Bloomdale. The inspection consisted of an evaluation of the condition of the tank and appurtenances, a review of the coatings' condition and an evaluation of potential environmental, health and safety concerns. The inspection was conducted by NTEC technicians Ray Otberg and Mackenzie Otberg, with the report reviewed by Keith Nelson, PE. Dan Wickard scheduled the inspection for NWW&SD. NWW&SD provided personnel for assistance to expedite the inspection.

The interior surfaces were inspected by using a remote operated vehicle (ROV). NTEC uses a Chasing Innovation Gladius Mini Underwater ROV submarine. The ROV is powered from a DC source that is tethered to the control unit. Live video images are sent to the operator's video monitor where they are recorded.

The submarine and tether are chlorinated to 200 ppm prior to placing into the tank. The tank's water is evaluated for chlorine residual prior to and post inspection. The testing indicated no drop in chlorine residual.

The inspection consists primarily of a visual observation of the condition of the tank, appurtenances, coatings and exposed foundations. The inspection was conducted in accordance with a combination of AWWA D101 methods and procedures developed by NTEC. Coatings are reviewed for percent intact based upon Steel Structures Painting Council (SSPC) visual standards. Coatings are reviewed for signs of failure that include but are not limited to lifting, delaminating, cracking and blistering. Defects, such as overspray, runs and sags, are discussed when they are determined remarkable.

The tank and appurtenances are reviewed for visual signs of corrosion or structural damage. Corrosion damage is evaluated by visual observations or by using depth gauges or calipers wherever possible. Ultrasonic testing is only used in instances where the original plate thickness cannot be established. Estimates of internal pitting are prepared for each of the individual locations (i.e., roof, sidewall, bowl and riser) by selecting a representative area within each location. The estimate for total pitting within each location is then extrapolated from the representative area.

Environmental testing is performed on coatings only when uncertainty exists. Testing, therefore, is not performed on epoxy or polyurethane coating systems. Samples are analyzed to determine the presence of metals (lead, chromium and cadmium) in the coating system. Samples are collected by removing coating from the steel substrate. The reliability of the results is highly dependent upon sampling techniques. Variations in accuracy may be caused by difficulties in removing all the primer, multiple coating systems and variations in dry film thickness.

Estimates of probable costs are provided within the recommendations and summary of this report for the construction year reported. Probable costs are based upon the competitive bidding prices for construction costs only and do not include engineering costs. Construction costs are evaluated for prices received in the past year for similar work plus inflation.

Estimates consider the method of surface preparation, applied coatings, surface area, complexity and location of the structure and environmental compliance requirements. Estimates do not consider variations imposed by market factors, revisions in the scope of work, work performed with restricted schedules or projects scheduled in low temperature seasons.

## **EVALUATION**

### **WET INTERIOR**

The tank is lined with an epoxy system applied in 2017 by Central Painting and Sandblasting. The epoxy coating, overall, is in good condition; however, signs of deterioration was noted along the equator, bowl and access tube. The coating has been stained from the mineral and iron content of the water. Several minor defects were observed in varying locations. The following is a description of the classifications of the remaining intact coating along with notable defects or the presence of corrosion.

The epoxy coating remains 99.999 percent intact along the roof. Coating deterioration is occurring on the lap seams; however, adjacent plate surfaces have fully intact coating. Coating deterioration is, also, occurring along the vent and coupling openings. Holidays (pinholes) exist in these locations.

The epoxy coating remains 99.999 percent intact along the equator, bowl and access tube. Several coating breaks to the substrate were noticed along the equator, bowl and access tube. These breaks were mainly noted along weld seams; however, some were noted on the open plate sections. Overspray was noted along the access tube.

The tank's interior steel plating is in good condition with intermittent corrosion. Corrosion has resulted where the coating system deteriorated. Damage to the interior tank has been minimal and generally, been more aggressive below the water line.

Pitting has occurred where the substrate is exposed below the water line along the equator, bowl and access tube. It does not appear that any of the pits have exceeded one half the steel plate thickness (normally repaired). For individual pit estimates refer to the field inspection report form.

A ladder is connected to the access tube and descends down it to the bowl and is in good condition. The rungs and rails remain intact with no obvious damage due to icing.

### **DRY INTERIOR**

The tank is lined with an epoxy system applied in 2017 by Central Painting and Sandblasting. It is in good condition with no significant areas of deterioration. The coating has good adhesion with no signs of cracking, lifting or delamination. A few minor defects were observed in varying locations. The following is a description of the classifications of the remaining intact coating along with notable defects or the presence of corrosion.

The basebell coating is covered with spray insulation. This insulation is in good condition and remains 100 percent intact. The epoxy coating remains 99.999 percent intact along the pedestal, diaphragm plate and access tube. Minor deterioration of the coating was observed along the platforms, stiffeners and manway hatch. Minor lifting of the coating was noted in these locations with surface corrosion forming. Overspray and dry spray were observed along the lower pedestal and pipe supports. A few runs and drips were observed, especially adjacent to the appurtenances.

The appurtenances include piping and ladders. Ladders are located in the basebell, pedestal and access tube. The ladders are in good condition with no defects noted. The ladders have a cable-type fall prevention system. The fall prevention system is in good condition. The cable appears in proper alignment with the hardware secured in place.

The tank includes the following piping: fill pipe, overflow pipe and condensate drain. The fill pipe condition could not be determined since it is coated with a spray-on urethane insulation. The insulation appears to be in good condition and all areas remain intact. The overflow pipe has coating lifting to the substrate at the slip joint near the top platform. The condensate pipe is equipped with a check valve and appears to be functioning properly.

A four-inch mud valve is located in the lower diaphragm plate. The valve is designed for removal of sediments during routine cleaning; however, it was not operated during the inspection.

The expansion joint is a glandular design located below the diaphragm. It has been covered with spray-on insulation.

## **EXTERIOR**

The tank's exterior is coated with a polyurethane system applied in 1995 by Northern Ohio Tank Painters and, apparently, recoated at a later date. Several minor defects were observed in varying locations. The following is a description of the classifications of the remaining intact coating along with notable defects or the presence of corrosion.

The coating remains over 99.99 percent intact along the pedestal. Minor signs of delamination and lifting were observed along the baseplates. The basebell appears to have been recoated to cover breaks in the original coating system. The polyurethane coating remains 99.999 percent intact along the bowl and equator with minor evidence of corrosion where the substrate is exposed. The roof, also, remains over 99.99 percent intact. The topcoat is showing signs of heavy weathering. A few minor signs of lifting from the substrate were seen. Small areas of intercoat delamination were observed. Surface corrosion has formed where the substrate was exposed.

The coating's adhesion was tested using a crosshatch adhesion method. This is a modified version of the ASTM D3359 and as a result does not replicate the same results

as the ASTM. This modified test method is used by NTEC to determine the coating's overall adhesion and cohesion. NTEC uses this method for evaluation of coating systems for repair. When results indicate good adhesion, coatings may be top coated with compatible coating systems. Similarly, results indicating poor adhesion should not be top coated. The test, although important, is only one of the variables used to assess the coating's ability to be top coated. Other variables include but are not limited to the generic type of coating, the age of the coating, and number of coats, percent intact, presence of defects or failure and dry film thickness.

The method consists of cutting a lattice pattern in the painted surface using a guide. Pressure sensitive tape is applied to the scribed area and then removed. The remaining pattern is evaluated by comparison with descriptions and illustrations. The illustrations are classified ranging from 0B to 5B. 0B represents greater than 65% removal of the coating and 5B represents fully intact coating.

Tests were performed on the roof and basebell. The following represents the classifications observed:

- |             |                    |
|-------------|--------------------|
| 1. Roof     | 2B, 3B             |
| 2. Roof     | 0B (previous test) |
| 3. Basebell | 4B, 4B             |

The appurtenances include overflow pipe, vent and hatches. The overflow pipe and support bracing are located within the dry interior. The base of the pipe extends through the basebell. There was no evidence of significant external corrosion. The base of the overflow pipe has a flap gate to prevent contamination; however, it does not contain a screen.

The overflow pipe and support bracing are located within the dry interior. The base of the pipe extends through the basebell. There was no evidence of significant external corrosion. The base of the overflow pipe has an internal screen and an outer flap. The screen does not meet the requirements for the Ten State Standards for mesh size.

The vent is an umbrella dome design located near the center of the roof. It is in good condition. There was no evidence of significant internal or external corrosion. Two antenna mounts have been fastened to the top of the vent. Due to the design and screen size, the vent does not meet the requirements for the Ten State Standards, although the screen remains intact and in good condition.

The tank contains three hatches: one at the top of the pedestal and two on the roof. The pedestal hatch is in good condition. Minor surface corrosion has developed on the hatch collars on the roof. The roof hatches are in good condition with minor surface corrosion forming. The roof hatches do not contain gaskets per the Ten State Standards.

The exposed concrete foundation was visually inspected for deterioration, undermining and root encroachment. The foundation is in good condition. A few minor cracks were observed but no extensive signs of deterioration have developed. The grout is in good condition with no evidence of deterioration.

## **RECOMMENDATIONS**

### **WET INTERIOR**

NTEC recommends installation of an automatic cathodic protection system. Cathodic protection inhibits corrosion on the submerged surfaces by means of an impressed current supplied to a wire anode. The anode is a circular wire hoop coated with titanium oxide. The tank acts as the cathode in the corrosion cell. The impressed current overrides the natural corrosion process occurring on the tank's submerged surfaces. Cathodic protection does not protect surfaces above the water line. These surfaces are, therefore, only protected by the coating system.

The system anode is installed in the tank's upper bowl in a horizontal and circular configuration. The anode is secured in position by tension ropes, buoys and in some designs by PVC extension pipes. This design differs from older designs that were suspended from the roof. The new design is less susceptible to ice damage in the winter months.

### **EXTERIOR**

NTEC recommends maintenance painting for the tank's exterior. The existing coating has fair to good adhesion and, therefore, provides a suitable substrate. We recommend power washing, spot power tool cleaning and application of a three-coat polyurethane system. The pressure washing usually incorporates oscillating (spinning) tips to ensure loose paint is removed. This method does not always remove poorly adhering paint which can pose adhesion failures in the future. This method is most successful when adhesion of the existing coating is rated at 3B or above. The polyurethane system would incorporate a binder coat that would be compatible with the existing coating. Painting will eliminate corrosion and extend the remaining life of the existing coating.

We recommend installation of a handrail along the exterior roof and relocating the existing antennas to the handrail. Currently the antennas are mounted to the roof vent, with one antenna blocking access to the wet interior.

NTEC recommends installation of a new vent in the center of the roof. The existing vent does not meet the Ten State Standards. The new vent would be a vacuum relief design



with 24 mesh screened openings.

We recommend installation of gaskets to the roof hatches. A gasket is required by the Ten State Standards.

We recommend installation of a screen for the overflow pipe. The existing screen does not meet the required 24 mesh size per the Ten State Standards. The cost would be considered incidental to painting.

**FIELD REPORT FORM**

**I. GENERAL**

OWNER:	Village of Bloomdale	DATE:	May 5, 2021
ADDRESS:	Railroad St.	HEIGHT:	125' HWL
TANK SIZE:	200,000-gallons	CONSTRUCTION:	Welded
TANK DESIGN:	Spheroid	LETTERING:	Bloomdale
MANUFACTURE:	Brown Tank	LOGO:	None
ERECTION DATE:	1995	COLOR:	Beige
LEAD INSP:	Ray Otberg	ASST INSP:	Mackenzie Otberg

**II. CONTROLS**

CONTROL LOCATION:	Basebell	BRAND:	Engineered Fluid Inc.
TELEMETERED:	No	RADIO TRANS:	Yes
HEATED:	Yes	INSULATED:	Yes
CATHODIC PROTECTION:	No	MANUFACTURER:	--
RECTIFIER (MAN, AUTO):	--	OPERATIONAL:	--
ANODE MATERIAL:	--	CONFIGURATION:	--
ANY DAMAGE:	--	DESCRIBE:	--

**III. FOUNDATION**

CONDITION OF CONCRETE:	Good
ANY APPARENT SETTLEMENT:	No
SOIL EROSION OR LACK OF COVER:	No
CRACKS:	Surface
DELAMINATION:	No
SPALLING:	No
AGGREGATE EXPOSED:	No
CONDITION OF GROUT:	Few minor chips
CONDITION OF BASE PLATES:	Good. Coating lifting in a few areas.
CONDITION OF ANCHOR BOLTS:	Good
SHRUBS ENCROACHING:	No

**IV. EXISTING COATING HISTORY**

SURFACE	DATE	PAINT SYSTEM	MANUFACTURE	CONTRACTOR
WET INTERIOR:	2017	Epoxy	Tnemec	Central Painting and Sandblasting
DRY INTERIOR:	2017	Epoxy	Tnemec	Central Painting and Sandblasting
EXTERIOR:	1995/?	Polyurethane/ polyurethane	Tnemec	Northern Ohio Tank Painters

**V. EXTERIOR CONDITIONS**

**A. PEDESTAL**

NUMBER OF SECTIONS:	7 + transition
GENERAL CONDITION OF COATING:	Good
PERCENT TOPCOAT INTACT:	99.99
PERCENT INTERMEDIATE/ PRIMER INTACT:	99.99
ADHESION TEST:	4B, 4B
CONDITION OF INSULATION/FROST JACKET:	N/A
RISER TIE BANDS:	N/A
COMMENTS:	Coating lifting to substrate in several locations. Coating is faded and chalked.

**B. BOWL (75' – for Modeling)**

DESIGN:	Conical
NUMBER OF SECTIONS:	2
GENERAL CONDITION OF COATING:	Good
PERCENT TOPCOAT INTACT:	99.999
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999
COMMENTS:	Mildew build up. Coating if faded and chalked. A few small coating breaks noted.

**C. EQUATOR**

NUMBER OF SHELL SECTIONS:	2
GENERAL CONDITION OF COATING:	Good
PERCENT TOPCOAT INTACT:	99.999
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999

ADHESION TEST:	N/A
COMMENTS:	Coating is faded and chalked. A few small coating breaks noted.

**D. ROOF (112' -- for Modeling)**

DESIGN:	Sphere
GENERAL CONDITION OF COATING:	Good
PERCENT TOPCOAT INTACT:	99.99
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999
ADHESION TEST:	2B, 3B
COMMENTS:	Coating lifting to substrate in a few locations. Surface corrosion is present where steel is exposed. Antenna was installed above roof hatch, rendering it inoperable. Antenna mounts attached to vent.

**E. ACCESSORIES**

OVERFLOW PIPE SIZE:	8"	CONDITION:	Good
SCREEN SIZE:	None	CONDITION:	--
STUB:	No	GROUND LEVEL:	Yes
FLAP GATE:	Yes	SPLASH PAD:	Storm drain
RIP RAP:	Yes	SLOPED FROM TANK:	Yes
SHELL MANWAY SIZE	N/A	GASKET CONDITION:	--
RISER MANWAY SIZE:	N/A	GASKET CONDITION:	--
MUD VALVE:	N/A	SIZE:	--
CONDITION OF ROOF VENT:	Fair	DESIGN:	Umbrella
VACUUM RELIEF:	No	DISTANCE FROM SCREEN TO ROOF:	8"
SCREEN SIZE:	>24 mesh	SCREEN CONDITION:	Good
CONDITION OF ACCESS TUBE VENT:	N/A	SCREEN POSITION:	--
SCREEN SIZE:	--	SCREEN CONDITION:	--
BANDS:	--	BAND CONDITION:	--
DISTANCE FROM SCREEN TO ROOF:	--	-BLANK-	--
CATHODIC CAPS:	No	MISSING OR SLIPPED:	--
ROOF HATCH SIZE:	24" x 24"	CONDITION:	Fair

GASKET:	No	HASP LOCKED:	No
ACCESS TUBE HATCH SIZE:	24" x 24"	CONDITION:	Good
GASKET:	No	HASP LOCKED:	No
AVIATION LIGHTS:	No	CONDITION:	--
OBSTRUCTIONS:	No	ANTENNAE:	6
ROOF BALCONY:	N/A	CONDITION:	--

**VI. INTERIOR CONDITIONS**

**A. DRY INTERIOR**

**1. BASEBELL**

GENERAL CONDITION OF COATING:	Covered in insulation
PERCENT TOPCOAT INTACT:	--
PERCENT INTERMEDIATE/PRIMER INTACT:	--
COMMENTS:	Insulation is in good condition.
FILL PIPE DIAMETER:	12"
INSULATION TYPE:	Sprayed on urethane
CONDITION:	Good
FROST JACKET:	No
EXPANSION JOINT:	No
DESIGN AND CONDITION:	--
LADDER CONDITION:	Good
CAGED:	No
FALL PREVENTION DEVICE:	Cable
CONDENSATE DRAIN CONDITION:	Good
PIPE SUPPORTS CONDITION:	Good
LIGHTING CONDITION:	Working

**2. PEDESTAL**

GENERAL CONDITION OF COATING:	Good
PERCENT TOPCOAT INTACT:	99.999
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999
COMMENTS:	Pinholing on both platforms, though condensate platform has more.
FILL PIPE INSULATION CONDITION:	Good
FROST JACKET:	No
EXPANSION JOINT:	Yes

DESIGN AND CONDITION:	Glandular (covered with insulation).
LADDER CONDITION:	Good
CAGED:	No
FALL PREVENTION DEVICE:	Cable
PIPE SUPPORTS CONDITION:	Good
LIGHTING CONDITION:	Working

**3. DIAPHRAGM**

GENERAL CONDITION OF COATING:	Good
PERCENT TOPCOAT INTACT:	99.999
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999
COMMENTS:	A few minor pinholes.
MUD VALVE:	Yes -- Shand & Jurs
SIZE:	4"
COMPRESSION MANWAY:	No
SIZE:	--
GASKET CONDITION:	--

**4. ACCESS TUBE**

GENERAL CONDITION OF COATING:	Good
PERCENT TOPCOAT INTACT:	99.999
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999
COMMENTS:	A few areas of corrosion at manway hatch and random areas on ladder.
LADDER CONDITION:	Good
FALL PREVENTION DEVICE:	Cable
PIPE SUPPORTS CONDITION:	Good
COMPRESSION MANWAY SIZE:	24" x18"
GASKET CONDITION:	Unknown
LIGHTING CONDITION:	Working

**B. WET INTERIOR**

**1. BOWL**

GENERAL CONDITION OF COATING:	Good
PERCENT TOPCOAT INTACT:	99.999
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999

ACTIVE CORROSION:	Yes	TYPE:	Pitting
CONCENTRATION:	Open plates	INACTIVE CORROSION:	Yes
DEEPEST PIT:	1/16"	AVG PIT DEPTH:	1/32"
PIT ESTIMATE:	550	WELDING ESTIMATE:	0
PRIOR PIT WELDS:	No	# TO GRIND:	--
STRAY WELDS:	No	LINEAL ESTIMATE:	--
FILL PIPE DIAMETER:	12"	DRAIN DIAMETER:	N/A
ADDTNL PIPING:	No	CONDITION:	--
MIXING SYSTEM:	Yes and aerator	CONDITION:	Working
COMMENTS:	New pitting appears to have started on old pitting.		

## 2. EQUATOR

GENERAL CONDITION OF COATING:	Good		
PERCENT TOPCOAT INTACT:	99.999		
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999		
ACTIVE CORROSION:	Yes	TYPE:	Pitting
CONCENTRATION:	Weld seams	INACTIVE CORROSION:	Yes
DEEPEST PIT:	1/16"	AVG PIT DEPTH:	1/32"
PIT ESTIMATE:	830	WELDING ESTIMATE:	0
PRIOR PIT WELDS:	No	# TO GRIND:	--
STRAY WELDS:	No	LINEAL ESTIMATE:	--
PAINTER'S RAIL:	No	STIFFENER:	--
ANY LADDER:	No	CONDITION:	--
FALL PREVENTION:	--	CONDITION:	--
COMMENTS:	Coating stained at the water fluctuation line.		

## 3. ACCESS TUBE

GENERAL CONDITION OF COATING:	Good		
PERCENT TOPCOAT INTACT:	99.999		
PERCENT INTERMEDIATE/PRIMER INTACT:	99.999		
ACTIVE CORROSION:	Yes	TYPE:	Pitting
CONCENTRATION:	Random	INACTIVE CORROSION:	Yes
DEEPEST PIT:	1/32"	AVG PIT DEPTH:	1/64"
PIT ESTIMATE:	100	WELDING ESTIMATE:	0
PRIOR PIT WELDS:	No	# TO GRIND:	--
STRAY WELDS:	No	LINEAL ESTIMATE:	--
PAINTER'S RAIL:	No	STIFFENER:	No
ANY LADDER:	Yes	CONDITION:	Good
FALL PREVENTION:	No	CONDITION:	--

<b>WEIR DESIGN:</b>	Box	<b>CONDITION:</b>	Good
<b>COMMENTS:</b>	New pits appear to have formed on old pits. Overspray noted in several locations.		

**4. ROOF**

<b>GENERAL CONDITION OF COATING:</b>		Good	
<b>PERCENT TOPCOAT INTACT:</b>		99.999	
<b>PERCENT INTERMEDIATE/PRIMER INTACT:</b>		99.999	
<b>ACTIVE CORROSION:</b>	Yes	<b>TYPE:</b>	Surface
<b>CONCENTRATION:</b>	Couplings and vent opening	<b>INACTIVE CORROSION:</b>	No
<b>DEEPEST PIT:</b>	--	<b>AVG PIT DEPTH:</b>	--
<b>PIT ESTIMATE:</b>	0	<b>WELDING ESTIMATE:</b>	--
<b>ROOF BEAMS:</b>	No	<b>DESIGN:</b>	--
<b>NUMBER:</b>	--	<b>CONDITION:</b>	--
<b>CORROSION TYPE:</b>	--	<b>EST. PERCENT LOSS:</b>	--
<b>BOLTS:</b>	--	<b>CONDITION:</b>	--
<b>COMMENTS:</b>	Coating stained at outer roof.		

Note: Percentage of intact coating is based upon visual observation of actual paint remaining in comparison to SSPC-Guide Visual Standard No. 2, Figure 1. It does not indicate the coating has good adhesion, is free from defects or is failing. Any surface preparation estimates should consider these variables.

**VII. RECOMMENDATIONS**

<b>REPAIRS:</b>	Replace roof vent. Install roof hatch gaskets (2). Install a handrail to exterior roof and relocate antennas to handrail. Install cathodic protection. Install 24 mesh screen in overflow pipe.
<b>PAINTING:</b>	Power wash, power tool clean and recoat exterior.
<b>MISC:</b>	



**CROSS HATCH TEST FIGURE**


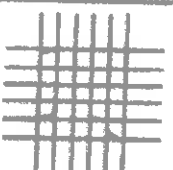
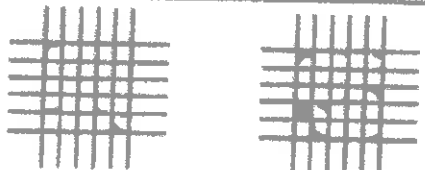
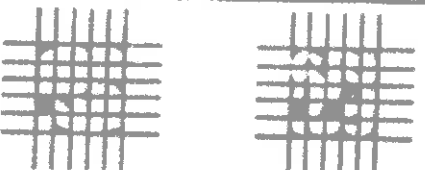






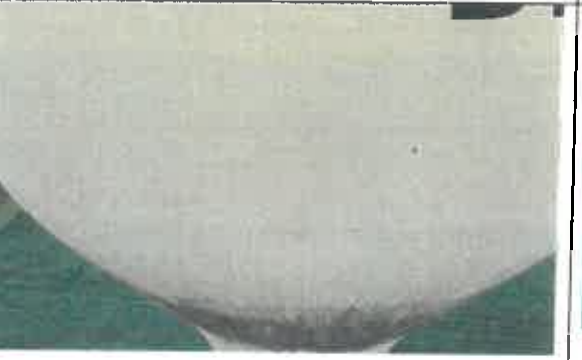
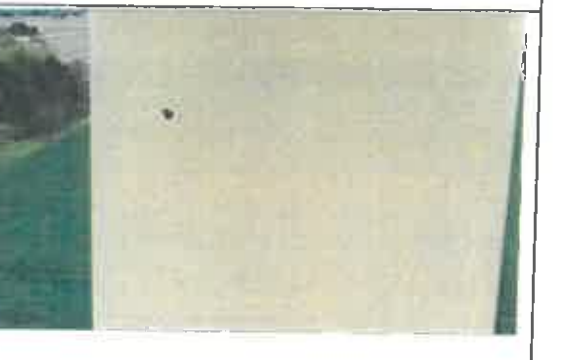







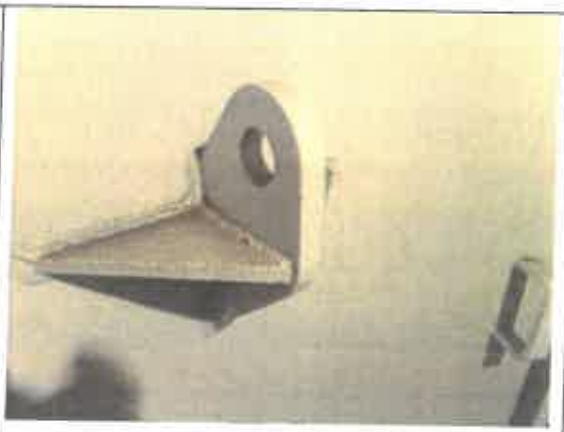




CLASSIFICATION OF ADHESION TEST RESULTS		
CLASSIFICATION	PERCENT AREA REMOVED	SURFACE OF CROSS-CUT AREA FROM WHICH FLAKING HAS OCCURRED FOR SIX PARALLEL CUTS AND ADHESION RANGE BY PERCENT
5B	0% None	
4B	Less than 5%	
3B	5 - 15%	
2B	15 - 35%	
1B	35 - 65%	
0B	Greater than 65%	

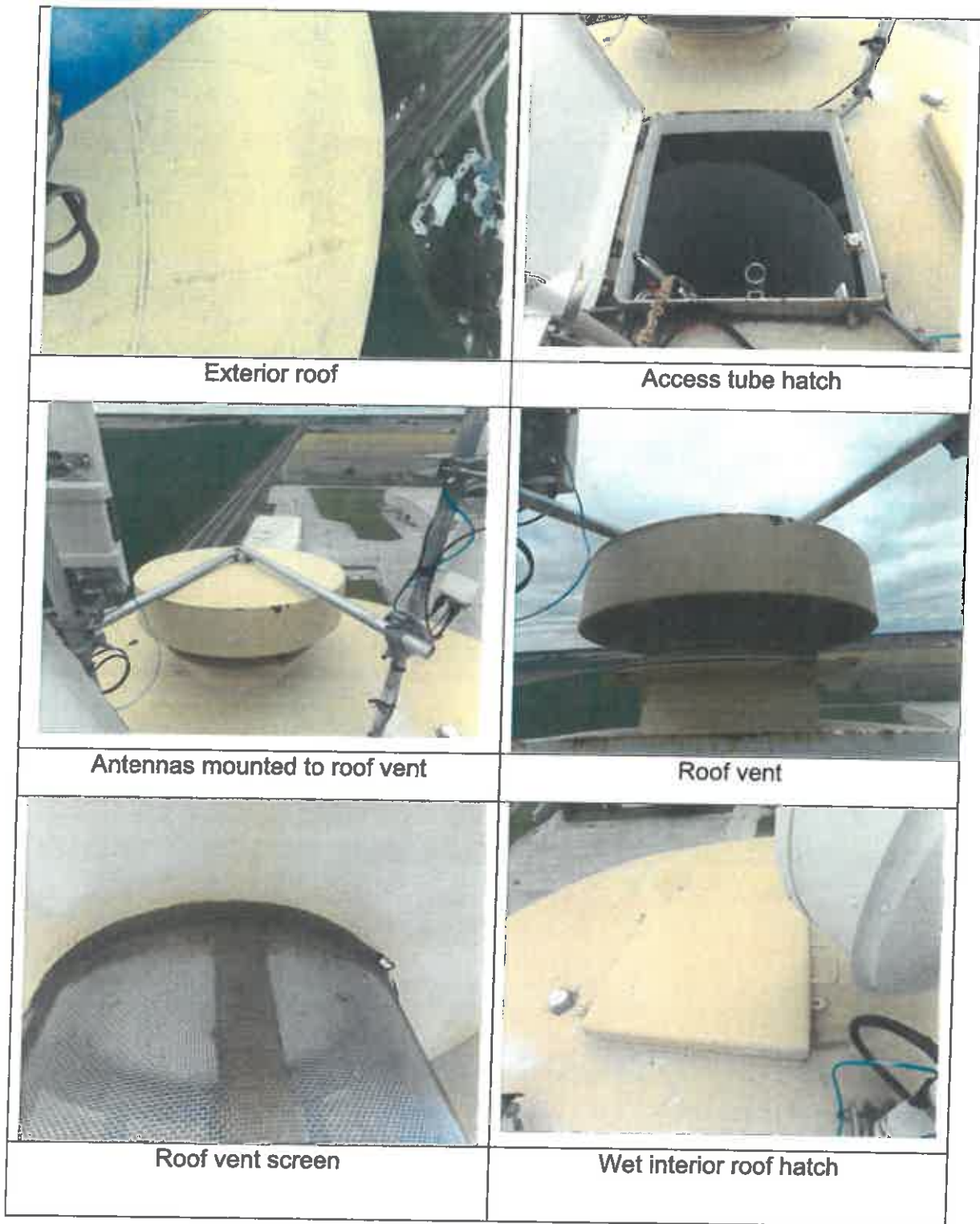
FIG. 1 Classification of Adhesion Test Results





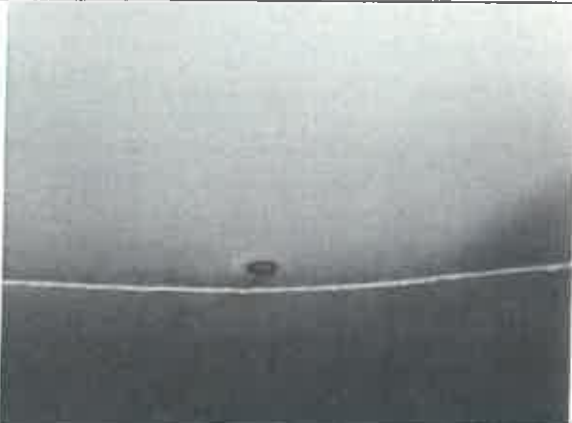

**PHOTOGRAPHS**

	
<p>200,000-gallon tank in Bloomdale, OH</p>	<p>Exterior pedestal</p>
	
<p>Exterior basebell</p>	<p>Exterior equator and logo</p>
	
<p>Small coating break on lower equator</p>	<p>Coating break on pedestal</p>

	
<p><b>Coating break on basebell</b></p>	<p><b>Overflow pipe with flap gate</b></p>
	
<p><b>Interior pedestal</b></p>	<p><b>Upper interior pedestal and condensate drain</b></p>
	
<p><b>Condensate platform and overflow pipe with antenna cable penetration</b></p>	<p><b>Interior pedestal</b></p>

 A photograph showing a network of dark, heavy-duty steel beams or stiffeners arranged in a crisscross pattern within a concrete or metal structure, likely a pedestal.	 A close-up photograph of a metal construction lug or bracket protruding from a light-colored, possibly concrete, wall. The lug has a circular hole and a triangular base.
<p>Internal stiffeners in pedestal</p>	<p>Construction lug in upper pedestal wall</p>
 A photograph of an interior space featuring a metal ladder or platform structure on the left and a rectangular hatch or opening in the wall on the right.	 A photograph of a horizontal pipe or valve assembly with a circular end, set against a dark background.
<p>Upper platform and bird hatch</p>	<p>Mud valve</p>
 A photograph looking down a long, narrow, metallic access tube. A metal ladder is visible on the left side of the tube.	 A photograph of a dark, rectangular hatch or door set into a wall, likely the access tube.
<p>Dry interior access tube</p>	<p>Manway hatch in the dry access tube</p>



	
<p><b>Wet interior roof hatch blocked by antenna</b></p>	<p><b>Roof layout</b></p>
	
<p><b>Weathered coating on exterior roof</b></p>	<p><b>Weathered coating on exterior roof</b></p>
	
<p><b>Wet interior roof</b></p>	<p><b>Wet interior roof</b></p>