



Osseo City Council Meeting

AGENDA

WORK SESSION

Monday, February 29, 2016
7:00 p.m., Council Chamber

MAYOR: DUANE POPPE COUNCILMEMBERS: HAROLD E. JOHNSON, MARK SCHULZ, LARRY STELMACH, ANNE ZELENAK

1. Discuss City Policies for Purchasing, Petty Cash, Capital Assets
2. Discuss General Fund Excess Policy
3. Discuss North Water Tower
4. Discuss Procedures for Council Approval
5. Discuss Emergency Response Communication
6. Discuss Heritage Preservation Commission
7. Discuss Amendments to City Code § 153.091 *Signs: Regulations and Standards; Permits*; and § 151.04 *Property Maintenance: Amendments to International Property Maintenance Code to Clarify Size Requirements for House Numbers*
8. Discuss Amendments to City Code §153.009 Definitions and §153.037, Central Business District, CBD to Address Mobile Food Vending



City of Osseo City Council Work Session Meeting Item

Agenda Item: Discuss City Policies for Purchasing, Petty Cash, Capital Assets

Meeting Date: February 29, 2016

Prepared by: Teri Portinen, Finance

Attachments: Policy Drafts

The Minnesota State Auditor suggests writing accounting policies and procedures; and also approving them at a council level to emphasize its importance and authority.

Clear and concise policies and procedures clarify council expectations by providing guidance, ensuring legal compliance, and establish consistency and continuity for all departments.

Presented today are 3 drafts prepared by staff and reviewed by legal counsel. The purchasing policy contains general criteria to meet the definition of public purpose, which is defined by the Minnesota Supreme Court, as (1.) activity that benefits the community as a whole, (2.) it relates directly to functions of government operation, and (3.) it doesn't benefit a private interest. Included in the purchasing procedures are provisions for payment of those purchases. Different levels of authority are established to provide checks and balances.

The Petty Cash Funds must be established by council and a custodian of the fund appointed. It is required by statute that meeting minutes document the creation and amount of petty cash funds.

Included in the Recommendations for Management document prepared by our 2014 auditors was the recommendation to establish a formal Capital Asset Policy. They feel it would provide for consistency to compare with financial statements for future periods.



City of Osseo City Council Work Session Meeting Item

Agenda Item: Discuss City Policies for Purchasing, Petty Cash, Capital Assets

Meeting Date: February 29, 2016

Prepared by: Teri Portinen, Finance

Attachments: Purchasing Policy

Background:

The adoption of a purchasing policy provides a tool for users that follows statutory guidelines and provides consistent direction of public spending. The purchasing policy is the main document that governs other policies such as the use of credit cards and travel. This policy also suggests payment guidelines as well.

Purchasing/contracting – This section suggests basic purchasing guidelines for the city. Items of this nature would be general operating purchases/contracts of less than a \$2000 max.

Payment process – Currently, early release of payments are performed for payroll and benefit related items such as payroll taxes, retirement contributions, and insurance related premiums. It is an allowable practice (MS 412.271) for councils to authorize release of payments prior to council approval for certain claims. In summary, these would be items already approved by contract, claims that would inflict a penalty for non-payment, or discounts available if paid by a certain date. The payments would be detailed in each council packet for review. This process would benefit finance personnel in the distribution of transaction entry through-out the periods in between council meetings.

Electronic signatures – the use of such signatures is authorized under MS 47.41. The city currently uses a mayoral signature stamp for checks and electronic signatures of the Mayor and City Clerk on payroll checks. It is requested that electronic signatures on payable checks is utilized as well. A listing, along with the checks, would be given to the City Clerk to ensure payments are legitimate. Signature stamps are easily misplaced or stolen which puts the city at risk.

Recommendation/Action Requested:

1. Set threshold for purchasing. Note credit card policy allows for \$2000 by public works and \$1000 by all other departments.
2. Allow/disallow electronic signatures.
3. Allow/disallow designation of authority to release payments authorized by statute prior to council meetings.
4. Other language/suggestions to be included and/or changed.

Next Step:

Finalize policy and submit to council for approval. If designation of authority to release payments is suggested, draft resolution to authorize such authority as required by MS 412.271.

DRAFT - Purchasing Policy

Purpose:

To provide clear and concise guidelines to its users and the assurance that public funds are dispensed according to the Minnesota Public Purpose Doctrine. The doctrine provides for 1) that public entities may only spend public funds if the purpose is for which tax money may be used; 2) the entity has authority to make the expenditure; and 3) that the expenditure must be proper, which means that public funds cannot be expended regardless of how desirable or commendable the purpose may be, unless there is statutory authority to do so.

Statutory Authority:

The City will follow all applicable laws that relate to purchasing including provisions under Minnesota Statutes Chapters 471, and Minn. Stat. 412.271 (as amended).

Purchasing Process (MS 412.271)

No disbursement of city funds shall be made except by an order drawn by the Mayor and City Clerk upon the Treasurer. Minnesota law provides that no order shall be issued for claims arising from the purchase of goods and services until the City Council has reviewed and approved the claim. Either the person claiming payment or the person's representative must prepare a written, itemized list of goods and services provided to the City. The claimant must also sign a declaration stating his/her claim is just and correct and that no part of it has been previously paid. The written claim is then brought to the Council for its approval. The Council may approve the claim, approve only part of the claim, or choose not to approve the claim at all.

Credit Cards: The City has authorized the use of credit cards. All use of a City credit card is subject to the Credit Card Policy.

City Purchasing will be limited to the following:

- Department Heads or their designee are authorized to approve purchases and agreements from approved vendors not exceeding \$2,000 for a single purchase by public works and \$1,000 for all other departments and will be responsible for purchasing within the department budget guidelines.
- Department Heads will ensure vendors are insured, and will not put the City at risk.
- Purchases greater than \$2,000 must be authorized by the City Council.
- All training/conference courses over \$100 must be approved by Council in advance. A copy of your request must be attached to the invoice and submitted for payment to the Finance Officer.
- Purchases requiring signatures on contracts will be signed by the Mayor and City Clerk and will be kept in the City's central filing system. A copy should be given to Finance.

Contract Purchasing (MS 471)

Only the Council may make contracts and price agreements on behalf of the city; individual councilmembers, council committees, and city administrative officers do not have that authority. If a contract does not require a tax levy higher than that allowed by law or result in indebtedness that exceeds the city's statutory debt limit, the law does not place an expenditure limit on such

agreements. The mayor and the clerk must sign and affix the city seal to the contract. As long as there is no reasonable doubt concerning the contract's legality, officials may not, on the basis of their own judgment, refuse to execute the contract.

The City shall follow Minnesota statutes under the Uniform Municipal Contracting Law.

- Contracts less than \$25,000: The City can purchase on the open market, but shall attempt to obtain two or more verbal quotes when possible.
- Contracts \$25,000 - \$100,000: The City shall use a sealed bid process or direct negotiations. Two or more bids/quotes shall be obtained in writing and kept for a period of one year.
- Contracts greater than \$100,000 must abide by the bidding law and use sealed bids. Public entities are required to obtain both a payment bond and a performance bond.

Exemptions:

- A city does not need to comply with competitive bidding requirements when purchasing property or equipment from the federal government, the state, or any political subdivision of the state. The council may authorize by resolution an officer or employee to enter a bid and make a down payment in connection with the bidding.
- The purchase, lease, or sale of real estate.
- Public safety equipment that is clearly and legitimately limited to a single source of supply and the contract price may be best established by direct negotiation.
- Emergency management.
- Professional services such as engineers, lawyers, architects, accountants, and refuse hauling. Request for Proposals are sufficient.
- Insurance.

Change-Orders

- All increases to the contract price, whether through change orders or otherwise, must obtain prior approved by the governing body which may require additional contractor's bonds.
- Minor change orders of \$\$\$\$ or %%% of the contract may be authorized by the city administrator without prior approval.

Consequences for failure to follow statutory requirements may result in a voiding of the contract. The City may have to pay for any benefits it has already received before the voiding of the contract.

Electronic Signatures – MS 47.41

The use of electronic signatures is authorized by the City. The City's designated officer(s) using such device for their signature authorizes the financial institutions to honor the following instruments bearing an electronic signature of his/her name:

- Checks
- Drafts
- Warrants
- Vouchers
- Check-orders on public funds.

The designated officer(s) will not be personally liable for any loss that results from the use of his/her electronic signature if all of the following circumstances are met:

- The City Council adopts the Purchasing Policy approving the designated officer's use of an electronic signature.
- The loss is not due to a wrongful act of the public officer.

The City shall use an electronic signature for the Mayor and City Clerk.

Payment Process – MS 471.25

Vendor invoices are received through the mail or electronic formats and date stamped to show receipt. Account coding for invoices will be performed by the Department Head. Department Heads are responsible for invoices presented to them when received and are responsible for reviewing and approving all accounts payable paperwork, verifying pricing, and terms of agreements. Department Heads, or their designee, return approved invoices and all applicable documentation to the Finance Officer for timely payment. Department heads must explain the use of item/service, initial, and date, in ink, directly on the invoice.

The City is required to pay claims within 35 days of the receipt of the invoice (earlier for payroll withholdings). If the City is late making payment of a claim, the City must pay interest charges in accordance with Minnesota law. Interest may not apply if the City disputes the claim in good faith. If an invoice is incorrect, defective, or otherwise improper, or the City disputes the claim, the City must notify the vendor within 10 days of the receipt of an invoice. Upon receiving a corrected invoice, the City must pay the claim under the procedure described above.

The City authorizes the City Administrator or the City Clerk to approve certain vendor payments prior to the Council meeting. Vendor invoices with a due date prior to the next Council meeting received after the Accounts Payable listing has been prepared for the Council packet will be processed by the Finance Officer if deemed to be in the normal course of business and payment is properly approved. The City will also consider early payments on invoices to receive discounts. In order for the prepaid written claim to be endorsed, a majority of the Council must approve the claim at the next regular Council meeting. The following expenditures may be made without prior Council approval:

- Utilities and Rent.
- Other fixed charges determined under a contract that the Council has previously approved.
- Wages that have been previously set by the Council or Minnesota law.
- Payments to another public entity.
- Reimbursement of deposits held.
- Judgments.
- Principal or interest on obligations where the exact amounts have been previously fixed by contract.

The City Council will receive a complete listing of vendor payments that have been approved for payment by the City Administrator or City Clerk prior to the regular City Council meeting and a listing of unpaid vendor payments for authorization by the City Council at its next regular Council meeting. Unpaid checks will be mailed the day following the City Council approval unless otherwise authorized.

The Finance Officer will:

- Process timely payments to vendors after receipt of review from Department Heads.
- Monitor vendor statements; investigate invoicing or payment errors, and consider earlier payments to receive discounts and avoid late fees.
- Provide assistance to departments in service disputes with vendors.
- Assist Department Heads with account coding and monitoring their budget.
- Research returned checks that may need to be cancelled, voided or reissued.
- Issue IRS form 1099 to applicable vendors in January of the following year.

Electronic Fund Transfers

An Electronic Fund Transfer (EFT) is a formal process initiated by the City through a vendor's website for payment of a liability due. An EFT allows vendors to transfer funds from a designated City bank account to the vendor's bank account. To keep the City's exposure to a minimum the City will only allow EFT payments to Federal, State Organizations or vendors designated by the City that have a specific purpose for an EFT payment, such as a payment for a payroll liability.

Wire Payment Transfers (ACH Transfers)

Wire Payment Transfers or Automatic Clearing House (ACH) Transfers is a service provided through the banking system. An ACH Transfer will be required for all individual payroll transactions. The City will use Wire Payment Transfers or an ACH Transfer for the purpose of transferring funds between Investment Brokers and City bank accounts. ACH transfer for Vendor payments must be approved by Council.

Prepayment of Goods or Services

The City does not prepay for goods or services or utilize prepaid devices such as gift cards. If a vendor requires prepayment for goods or services, authorization must be obtained from the City Council.

Other Considerations

- Travel Policy
- Credit Card Policy
- Petty Cash Policy



City of Osseo City Council Work Session Meeting Item

Agenda Item: Discuss City Policies for Purchasing, Petty Cash, Capital Assets

Meeting Date: February 29, 2016

Prepared by: Teri Portinen, Finance

Attachments: Petty Cash Policy

The city currently has two petty cash funds; however, these funds have not been formally authorized by council. Petty cash is not as widely used as it was in the past due to electronic forms of payment and the risk factor that comes along with handling cash. It is useful when cash transactions are initiated by the public for payment of city transactions.

The draft asks Council authorization to establish two funds; one in the administrative office and the other in the police department. Over the past year of usage, a conclusion was made these funds would require \$100 each to operate.

Purchasing requirements coincide with the purchasing policy and the basic documentation requirements are reiterated. Stipulations for receiving cash are provided along with replenishing and reconciliation guidelines. Disciplinary provisions for misuse of petty cash funds are also included.

Action requested for the following:

1. *Should petty cash funds be used and in what departments?*
2. *Establish dollar amount of fund.*
3. *Designate a custodian for each fund.*
4. *Other language/suggestions to be included.*

DRAFT - Petty Cash Policy

Purpose:

The City Council authorizes the use of petty cash in the administration department (\$xxx.xx) and police department (\$xxx.xx) to make minute purchases and make change for city charges. Payments from the petty cash fund may be used in situations where the traditional payment method is impractical. Petty cash funds may not be used to pay claims based on salary or personal expenses of a City officer or employee.

Process:

Custodian. The City Council hereby appoints the Administrative Assistant for Administration and Police Administrative Assistant as custodians.

Disbursing Petty Cash. *The City will utilize the advance method. The custodian will give (advance) an estimated dollar amount to the requester. The custodian will start the documentation by filling out the disbursement form and noting the amount of the advance. The requestor will sign the form. The purchaser will then purchase the item and return with the original cash receipt along with any change received. The receipt is attached to the form the change is counted to match the amount of the advanced.*

or

The City will utilize the reimbursement method. When using this method, the purchaser uses its own funds to purchase authorized items and is reimbursed with the presentment of the appropriate receipts to the custodian. The disbursement form shall be signed by the purchaser and custodian.

Purchases must be consistent with all other state laws and city policies, including the requirement that claims presented for payment must be in writing and itemized. The original receipts must consist of the vendor name, description of goods and services, date and amount. Credit card charge receipts are not sufficient receipts for payment because the charge slip lacks the details of what was purchased. Purchases must be coded and signed by department heads.

Receiving Cash. As cash comes in via counter traffic, a receipt will be disbursed to the payer and the funds placed in the cash drawer along with a copy of the receipt.

Replenishing/Reconciling Petty Cash. The Finance Officer will reconcile petty cash on a quarterly basis (or more if requested by personnel). Reconciliations may be unannounced. At such times, transactions will be recorded in the general ledger and cash beyond the designated fund balance will be deposited. If the fund is not at the minimum established, a request will be made by the Finance Officer to the council to replenish the fund.

Petty cash funds will be kept in a locked, secured location to prevent unauthorized use. Personal checks may not be cashed. If it is found that cash on hand plus the receipts (plus any outstanding advances) do not equal the authorized balance, the custodian will be held liable for the difference and may be subject to disciplinary measures.



City of Osseo City Council Work Session Meeting Item

Agenda Item: Discuss City Policies for Purchasing, Petty Cash, Capital Assets

Meeting Date: February 29, 2016

Prepared by: Teri Portinen, Finance

Attachments: Capital Assets Policy

Background:

During the 2014 audit our audit firm, KDV, noted the City does not have a formal capital asset policy in their Recommendations for Management Letter. They suggest a formal policy to establish consistent reporting guidelines for future operating periods.

Cities are required to keep records of its capital assets including infrastructure under GASB 54. Maintenance of the capital asset records are kept by KDV. Additions and deletions are reported at the end of each year and depreciated using the straight-line method.

The staff draft suggests thresholds, useful life and guidelines. Staff is slated to begin a physical inventory of its assets this summer for insurance valuation.

Recommendation/Action Requested:

1. Set threshold for capitalization – useful life and \$ value
2. Establish thresholds for types of capital assets
3. Establish useful life for types of capital assets
4. Disposition – only capital assets will declared as surplus and disposed with council approval.
5. Other language/suggestions to be included and/or changed.

Next Step:

Finalize policy and submit to council for approval.

DRAFT POLICY: Capital Asset Policy

Objective: To ensure that all capital assets are uniformly reported and accounted for in accordance with Generally Accepted Accounting Principles (GAAP), Minnesota Statutes, other state and federal laws, and reporting requirements.

Definition: A capital asset is defined as tangible property that has a useful life of more than 3 years and has a cost of no less than \$5,000. Valuation will be determined by total cost of the asset plus ancillary charges necessary to place the asset in its intended location and condition for use. Equipment donations will be recorded at fair market value at the time it is received.

Items deemed as expenses are:

- Materials and supplies that are used or consumed within twelve months of acquisition date.
- Small tools and equipment with a cost of less than \$5000 per unit
- Maintenance contracts
- Leased equipment
- Easements

Policy. The capitalization threshold for all capital assets is as follows:

- Equipment no less than \$5,000 with a useful life of at least 3 years.
- Property Services Project Costs greater than \$35,000.
- Signage and Street lighting annual purchases greater than \$35,000.
- Land

Useful Life. Estimated useful lives for assets are as follows:

- Infrastructure 15-100 years
- Structures and Improvements 25-50 years
- Equipment 3-5 years
- Public Improvements 20-40 years

Betterment Costs incurred to achieve greater future benefit to an asset (betterment) are capitalized. The cost of the addition/improvement to the asset must meet the following:

- Increases the useful life of the asset
- Increases the efficiency of the asset
- The betterment must have a cost threshold of no less than \$5,000

Depreciation. The straight-line method will be used for all capital assets. Department heads will assign a useful life to each asset. Depreciation will be taken for the full year of acquisition and not recorded in the final year of disposition.

Disposition. All capital assets will be examined with respect to its condition, efficiency and/or obsolescence during each year-end. Those assets deemed to be no longer useful will be reported and disposed/recycled/sold in accordance with council approval.



City of Osseo City Council Work Session Meeting Item

Agenda Item:	Discuss General Fund Excess Plan
Meeting Date:	February 29, 2015
Prepared by:	Riley Grams, City Administrator
Attachments:	Excerpt of City of Breezy Point Fund Balance Policy

Background:

The City Council has requested a discussion about formulating a general fund excess policy or plan to handle year-to-year excess monies. Staff has reached out to several local municipalities to see if they had example policies to share.

After reviewing all of the collected policies used by other municipalities, it seems the prevailing process is that municipalities will “pay down” their year-to-year General Fund transfers for capital needs. This, in turn, would reduce the expense side of the yearly budget and require a lower tax levy amount in order to balance the budget.

Here is a summary of other municipal general fund policies:

City of Kasson – All excess money is applied to the general fund transfer.

City of Hastings – General Fund balance kept at min 30%. Balance up to 40% may be used for ‘one-time’ uses or working capital. Fund balance in excess of 40% can be considered for use for operations in lieu of a levy increase or other revenue raising options.

City of Montevideo – Unwritten policy states 5% per year (if available) to General Fund reserve, and remainder to go Capital Improvement Fund.

City of Savage – Maintain fund reserve between 30-50% of estimated General Fund budgeted for following year. Any excess over 50% is available to be spent by Council to appropriate areas that they believe is in the best interest of the City (which includes Park improvements or other Capital needs).

City of Medina – No formal policy, but Council passes yearly Resolution that gives Council flexibility to move funds in excess to their reserve fund for upcoming projects to reduce the burden on the tax levy the following year.

City of Montgomery – Keep fund balance between 40-50%. If more than 50% is available, that amount is divided up and sent to various other funds (Capital, Park Improvement, Equipment and Street Improvement Funds).

City of Minnetonka – Fund balance at 30-50% and any excess can be used on one-time project or other capital expenditures.

City of Breezy Point – Keep fund balance at 40-45% with any excess being transferred to the Revolving Capital Fund.

City of Lauderdale – Keep 55% fund balance and any excess is divided among various enterprise funds which are expected to come up short of their fund balance minimums. This is done post-audit by Council Resolution.

City of Minnetonka Beach – Keep no less than 65% on hand. No formal policy on any excess.

City of Richfield – Maintain no less than 40% balance. All excess is transferred to other funds by Council approval.

City of Edina – Maintain fund balance between 42-47% with excess going to various funds as needed (Equipment Replacement Program and CIP).

City of Little Canada – Maintain balance between 42.5-65%. Any excess goes to General Capital Improvement Fund or other assigned funds as necessary.

City of St. Paul Park – Fund balance between 35-50% with excess going to pay for one-time expenditures.

After reviewing all of the received policy examples from other area cities, I recommend the following:

- 1) Maintain a General Fund Balance of somewhere between 40-50% of the anticipated annual City budget for the following year.
- 2) Any excess over 50% would be applied to the following years Capital Improvement Plan transfer.
- 3) If the General Fund Balance falls below 40%, a separate transfer amount is added to the following year's expenditures budget to bring the General Fund Balance back to the 40% mark.
- 4) Do not use fund balances for any on-going operating expenditures. We do not want to rely on having a fund balance year-to-year, because if/when we don't, we would then need to come up with money to keep supporting City services or risk lowering services to balance the budget.
- 5) In lieu of using excess money to go towards the Capital Improvement Transfer, the Council may, from time-to-time, use excess money to cover one-time project costs as they deem necessary.

As an example, at the end of 2014, Osseo had a General Fund Balance of \$1,348,262. The 2015 adopted budget was \$2,268,976 (and 50% of that is \$1,134,488). Therefore, using the above draft policy, the City would use a total of \$213,774 to go towards the 2015 CIP transfer, which would result in lowering the needed tax levy by that same amount (the tax levy for 2015 was \$1,148,935 and would have been reduced to \$935,161) and reduce the overall tax burden on Osseo property owners.

I have included an excerpt from the City of Breezy Point's Fund Balance Policy that closely mimics what Staff recommends as the foundation of a General Fund Excess Policy. See attached.

Overall, the rating agencies want cities to have a policy, and want cities to be in compliance with the policy. They also look to the State Auditor guidelines for what is "reasonable" for a policy. So, having a policy with 50% and having at least 50% is viewed as very positive with the rating agencies.

I believe that having a little more than the minimum required in our policy is also viewed as a positive by the rating agencies, but if the additional money becomes much larger with no plan or reason for a large excess, I think that starts to raise some questions. (ie., if you have a policy of 50%, but we consistently carry a balance of 100%.) On the other side of that argument, if we have a policy of 50%, but are increasing the balance for a specific future project (ie., cash contribution to a capital project), then the questions from the rating agencies are minimized. This also helps in the future when / if that additional balance is spent. Rating agencies want to know that cities have a plan and don't have a lot of surprises. Rating agencies don't have a concern if the additional money is spent, but they don't want the reason for spending the money to be tied to poor financial planning.

Recommendation/Action Requested:

Staff recommends the City Council discuss drafting a general fund excess plan and direct Staff accordingly.

Next Step:

Staff will take discussion points and formulate a draft policy/plan. Then, Staff will proceed to discuss the draft policy with members of the Council Budget Committee, or other appropriate committee.

Comprehensive Fund Balance Policy

City of Breezy Point

Purpose

Maintaining a fund balance is extremely important for a city as the majority of revenues received are derived from taxes which are paid twice a year to the county. The county then makes payments to the city. The city is responsible for cash flow to manage operations until taxes are received. Although a small amount of funding is received in January the city needs to manage operations from January through June with adequate resources to pay bills.

Appropriate Fund Balance Levels

General Fund. The city shall endeavor to maintain a 40% to 45% general fund balance based on the operating and debt service requirements of the current budget year. If funds exceed 45% of that amount, those resources shall be transferred to the Future Improvement line item in the Revolving Capital Fund. If the fund balance falls below the 40% threshold the City Council shall consider what remedial action to take to resolve the fund balance deficiency.



City of Osseo City Council Work Session Meeting Item

Agenda Item: Discuss North Water Tower

Meeting Date: February 29, 2016

Prepared by: Riley Grams, City Administrator

Attachments: KLM Engineering Report from June 2013
Emails from Council member Johnson
Conditions Assessment from Elk River

Background:

As a starting point, let's examine where we are at in the current on-going process with the North water tower: The Council last approved accepting a MN Historical & Cultural Heritage Grant from the MN Historical Society. Staff has worked to fulfill the necessary steps to complete that action, and obtained three or more proposals from historians to complete the work on behalf of the City, being paid from the grant money. Staff anticipates coming back to the Council in the very near future to approve the hire of a consultant to do that work. The Consultant will then prepare the final application to place the water tower on the National Register of Historic Places. Once the application is complete, Staff will recommend that the Council will be given the findings and the Council can choose to formally submit the application or not. If submitted, the application may take months for review before a final determination is decided. If accepted to the National Register of Historic places, our consultant believes additional grant money will be made available to the City to repair, repaint, or fix the tower to allow it to stand for the foreseeable future.

At this point, Staff does NOT know what special conditions may be placed on the City (if any) in order to receive additional funding for needed repairs. Staff has heard that yes there will be unintended conditions placed on the City, and Staff has also heard that no conditions of any kind will be placed on the City should the application to accepted and the water tower be placed on the National Register of Historic Places.

My recommendation is that when the hired consultant has completed the final application, someone from the MN Historical Society be present to answer those questions at a Council meeting before the Council delivers the final vote. The City may also request written confirmation of what conditions may be placed on the City if it moves forward (again, if any at all, we don't know at this point) from the MN Historical Society.

Attached is the second report given to the City by KLM Engineering Inc., dated June 2013. A few of the current Council members were not on the Council when this report was completed. Summarizing its findings, KLM engineers were unable to inspect the entire tower as the ladder system was unfit for access and needed repairs before the full examination could take place. The quoted repair costs totaled approximately \$350,000. However, that number is if the City wanted to bring it up to a point where it would become a useable water tower. Of course, the City has no intention of using this tower for the purposes of storing City water, and thus, the estimate for the entire repair should be discarded.

While most repairs have been made to the ladder system, KLM (or any other similar company) have not been back to redefine the full extent of necessary repairs. As you can see, when this report was written, the thinking was to restore the tower to a useable condition. However, the City should only be concerned with the following:

- 1) Necessary repairs to the structure to maintain structural integrity (non-useable condition)
- 2) Potentially repainting the structure in order to remove any lead-based paints

You'll note on page 15 of the report that KLM has quoted the City \$124,300 in exterior structural repairs and \$141,400 for a complete exterior coating/paint replacement (totaling \$265,700 for both repairs). This doesn't include any of the "Mobilization" which would most likely be needed as well. KLM also quoted the City \$80,000 for an alternate demolition cost. It remains to be seen what level of grant money might be available to the City if the tower were to be accepted onto the National Register of Historic Places.

I have also included three emails sent to then-City Administrator Doug Reeder from Council member Johnson, outlining his visits to several MN historic water towers and talking with City Staff about the process by which those cities went through. The most closely comparable situation to Osseo is that of Elk River and Milaca. According to Council member Johnson, Elk River went through a similar process, which took years to complete. Additionally, in Milaca, City Staff placed three warning sirens on the tower structure which, according to their Staff, would not be allowed if the tower was on the Historic Register. Because of this, they have not proceeded with placing their tower on the Historic Register.

I was able to connect with Zack Carlton, Planning Manager for the City of Elk River. He stated that the Elk River water tower was recently accepted to the Historic Register. The next step after acceptance was to get a "conditions assessment" which would tell the City and MN Historical Society what repairs needed to take place, including cost estimates. It sounds like Elk River's tower is very similar to Osseo's, including the level of repairs and painting that are needed. Mr. Carlton mentioned the conditions assessment is the first step in securing grants for repairs after acceptance. Elk River's conditions assessment came back with the following (I have attached the conditions assessment which was shared by Mr. Carlton):

Total repair cost: \$85,000
Total repainting costs: \$60,000
Additional testing: \$4,000
Additional minor repairs: \$5,000
Documents and drawings: \$5,000
Contingency: 15%

Once you have the conditions assessment, you can go after two separate grant paths. The first is the MN Historical and Cultural Grant. Mr. Carlton mentioned that there is no match involved, but that this grant was very competitive and money generally runs out fast before all accepted projects could be funded. The second path is through the State Capital Grant (which requires Legislative bonding). This path requires a 50/50 match, but generally speaking all projects are funded, often times with money left in the pot. Elk River opted to go through the State Capital Grant, because their water tower is owned by the Elk River Municipal Utilities Organization, and that group had been setting aside money each year, knowing some repairs would eventually need to be made. So Elk River already has an identified source for their 50/50 match. I also asked Mr. Carlton about the painting process. He said that the requirement includes shrouding the tower, but only to get rid of the flaking lead-based paint. They did NOT have to get rid of ALL of the paint on the tower, only in places where repairs took place and where flaking occurred. Then, a thick epoxy would be applied to the entire structure to effectively seal in the lead paint, allowing for a new surface to paint.

Recommendation/Action Requested:

Staff recommends the City Council discuss next steps for the water tower and direct Staff accordingly.

JUNE
2013

ELEVATED WATER TANK INSPECTION REPORT
REVISION 1

**50,000 GALLON CAPACITY
NORTH TOWER
CITY OF OSSEO, MINNESOTA**

KLM PROJECT MN 2965



P.O. Box 897 • 3394 Lake Elmo Ave. N. • Lake Elmo, MN 55042
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1.0 PROJECT INFORMATION

KLM Project No.: MN 2965 Customer P. O. Number: _____
 Customer: City of Osseo, MN Phone: 763-425-5741
 Street/City/State/Zip: 415 Central Avenue Osseo, MN. 55369-1195
 Customer Contact: Randy Korfiatis, Public Services Director
 Tank Owner: City of Osseo, MN Phone: 763-238-8643 cell
 Tank Owner Contact: Randy Korfiatis, Public Services Director
 Owner's Tank Designation: North Tower
 Tank Description: Lattice Legged Riveted EWT
 Tank Street Location: 415 Central Ave Osseo, MN
 Purpose of Inspection: Dry tank examination and interior & exterior coating evaluation
 Date of Inspection: October 2, 2012
 Inspected By: Rodney J. Ellis, NACE #1686 & Dewey Prinzing, IIT
 Type of Inspection: Dry Tank
 Manufacturer: Minneapolis Steel & Machinery Construction Date: 1915
 Serial No.: None Design Code: Unknown
 Capacity: 50,000 Gallons
 Type of Construction: Riveted
 Number and Size of Support Columns: Four (4) lattice support columns
 Tank Diameter: Approximately 30-feet
 Height: Overall Unknown Balcony Unknown
 Height to: HWL Unknown LWL Unknown
 Type of Access to Tank Interior: Exterior ladder to roof/roof manway (Unsafe)
 Tank Construction Drawings: None
 Previous Inspection Records: None

EXISTING COATING INFORMATION

	<u>INTERIOR WET</u>	<u>EXTERIOR</u>
Date Last Coated	Unknown	Unknown
Full or Spot Repair	Unknown	Unknown
Coating Contractor	Unknown	Unknown
Surface Preparation	Unknown	Unknown
Paint System	Unknown	Unknown
Paint Manufacturer	Unknown	Unknown
Lab Lead Test Paint Chips	No Access	Yes

2.0 **EXECUTIVE SUMMARIES**

In our initial evaluation report on the North Tower, as well as Addendum Number 1, we recommended modifications to the shell and roof ladder to facilitate safe access to the roof to complete the inspection. General Construction Services performed modifications to the shell ladder, although the roof ladder did not appear to be modified, therefore access to the roof remained limited to the area immediately adjacent to the roof access manway.

These modifications enabled David Montgomery of KLM to more thoroughly inspect the tower, corroborate some previous assumptions, and identify additional deficiencies. This report incorporates items from the original 2012 evaluation report, the addendum sent January 3, 2013 and the results of the latest inspection. [Items from the latest visit are shown in brackets, such as this sentence.]

2.1 **Structural Examination Summary**

Based on the inspection data, it appears that extensive miscellaneous structural modifications and repairs are required to either maintain the tower in its existing, out of service, condition or to return it to service. These modifications and repairs serve to stabilize the tower structurally, as well as to bring the tank into compliance with OSHA regulations, AWWA standards, as well as allow for better coating bonding, allow for safer access in and on the tank and, in some cases, removing unnecessary items.

[The shell ladder was modified by General Construction Services, enabling KLM to access the roof and open the roof manway to perform a visual assessment of the interior from that location.]

[Performing the recommended structural modifications and coating repairs should enable the tower to remain in satisfactory condition for the foreseeable future, provided it is inspected regularly and periodic maintenance is performed. Periodic maintenance will include re-painting every 15 to 25 years. While lead abatement would not be required on future reconditioning, the tower will still require containment due to its location. Therefore, factoring increases in costs for inflation and compliance, future repainting costs can be expected to be similar to or greater than the current costs, and should be factored into the cost of ownership of the structure.]

[Alternatively, as the tower is not part of the City of Osseo's plans for water storage or pressure, you should investigate if the tower can be demolished, rather than paying the costs to recondition the tower now and perform the necessary periodic future maintenance. KLM estimates that the cost to demolish this tower is approximately \$80,000.00. If the City decides to demolish, rather than recondition the tower, the tower should be able to provide several years of life before the demolition, although some safety modifications and/or limitations would be required.]

2.2 Coating Evaluation Summary

2.2.1 Lead and Chromium Content Analysis

The total lead and chromium content of the exterior coatings was analyzed. The results in Appendix D show from 8.5 percent to 12.0 percent lead content for the exterior coating. Current State regulations classify the exterior coating as lead based paint. Removal of lead based paint must be performed in accordance with applicable local, state and Federal regulations. Reconditioning specifications must include provisions for full containment as well as provisions to prevent hazardous waste generation. Chromium levels in the test samples indicate levels from 0.048 to 0.65 percent chromium. These chromium levels are not high enough to be a concern in the waste streams generated during reconditioning.

KLM did not enter the interior wet area to obtain coating samples for testing. Past experiences with riveted elevated water towers, that has been out of service for decades (as has been reported to KLM on this tower) would suggest that the interior wet coating is probably lead based paint. In conjunction with specifications for either reconditioning or demolition, KLM recommends that the interior wet coating be sampled and tested for lead and chromium.

2.2.2 Interior Wet Coating

It is unknown when the interior wet area of the tower was last coated. The interior wet coating was inaccessible to inspection due to safety concerns with exterior ladders, and KLM can provide no assessment of its condition at this time.

[The interior wet coating is in fair condition on the shell and bowl, and poor condition on the roof, which has large amounts of delaminating occurring, leaving bare steel with no corrosion protection. If the tower is to remain out of service, there is no immediate need to perform coating replacement, although if the tower is to be returned to service, the coating would need to be completely replaced. See photos in Appendix A.]

2.2.3 Exterior Dry Coating

It is unknown when the exterior of the tower was last coated. The exterior coating is classified as a lead base paint. Although the coating is in fair condition, consideration should be given to replacing it within one to three years to avoid future, more costly lead paint removal problems. See photos in Appendix A.

Current regulations for lead paint removal are stringent and are expected to become more so. Consideration should be given to removing, rather than repairing, the lead base paint before the regulations become more restrictive.

It is more cost effective to remove the exterior and the interior coating at the same time.

2.3 Repair and Reconditioning Cost Estimate

The costs for exterior structural repairs, replacing the interior and exterior coatings (including the containment and removal of the lead base paint) are estimated at \$352,300.00. Interior structural modifications have not been included as KLM has had no access to the interior to this point.

This estimate is based on current pricing. For up-to-date competitive bids the project should be bid 9 to 12 months before the scheduled starting date.

An experienced tank-coating contractor with the proper crew and equipment should be able to complete the project in six (6) weeks. At the time of reconditioning, the tower will need to be drained and remain off-line during interior structural modifications, abrasive blasting and painting. However, most of the exterior structural modifications can be performed prior to draining, with the tank in-service.

2.4 Remaining Tank Life

Based on the inspection data, if the recommended structural repairs and coating replacement are completed within the next one to three years, the tank will be satisfactory for continued service provided that it is inspected and maintained regularly.

The tank and coating should first be inspected within the warranty period and every three to five years thereafter. New interior and exterior coatings, if applied and maintained properly, should last 15 to 20 years.

3.0 **RECOMMENDATIONS**

The photographs referred to in this section are in Appendix A. All drawings are found in Appendix B. The surface preparation requirements for all repairs as well as the requirements for welding are described in Appendix C. The exterior and interior paint chip lead tests are in Appendix D.

Based on an evaluation of the inspection data, the recommendations are:

3.1 **Interior Wet Structural**

[After modifications to the shell and roof ladders were performed, KLM was able to complete the exterior evaluation of the tower, and obtain interior photographs.]

3.1.1 [The interior of the reservoir appeared to be in good overall condition, and did not exhibit large amounts of corrosion or pitting. See photos 43 through 50.]

3.1.2 [To prevent rust streaks and corrosion, urethane caulk the lapped plate joints between the roof plates and the gaps at the junction between the roof plate and the top of the shell. See photos 44 through 48.]

3.2 **Interior Wet Coating**

3.2.1 It is unknown when the interior wet area of the tower was last coated. [The interior wet coating is in fair condition on the shell and bowl, and poor condition on the roof, which has large amounts of delaminating occurring, leaving bare steel with no corrosion protection. If the tower is to remain out of service, there is no immediate need to perform coating replacement, although if the tower is to be returned to service, the coating would need to be completely replaced. See photos in Appendix A.]

3.2.2 The costs for replacing the interior wet coating with a new zinc/epoxy coating system have been included in our Engineer's Cost Estimate.

3.3 **Cathodic Protection System (C. P.)**

3.3.1 [The reservoir does not have a Cathodic Protection system. Although it is considered an inexpensive form of interior corrosion protection, it may not be required if the coating is applied and maintained properly. The cost of a Cathodic Protection System is not included in the Engineer's Cost Estimate.]

3.4 Exterior Structural

It has been reported to KLM that the tower has been out of service for approximately 25 years. KLM was initially unable to inspect or evaluate the tower above the balcony level due to safety concerns with the existing ladders. [Following modifications to the shell and roof ladders, KLM was able to complete the exterior evaluation of the tower, and obtain interior photographs.]

- 3.4.1 The exterior ladder from the tower balcony to the roof appears to be broken and is not properly secured into place. The ladder is unsafe and climbing this ladder to the roof should not be attempted before repairs are completed. The shell ladder should be properly secured by welding support brackets to the ladder and tank shell, which will require cutting a section of the roof plate out. This will enable climbers to safely access the balcony prior to climbing the shell ladder to the roof. Perform any required modifications to the roof ladder to adequately secure it for the exterior roof and interior inspections. This is separate from item 3.4.5 below. See photos 2 through 8. [The ladder was modified by General Construction Services to facilitate access to the roof.]
- 3.4.2 Replace the tank vent/finial with a 24-inch diameter removable top mushroom vent, similar to the one shown on KLM Drawing No. 16. See photo 9. The new vent and vent screen design should meet AWWA D100-11 and local Health Department Regulations. The removable top will improve ventilation, provide access to the tank interior during reconditioning, and aid in compliance with OSHA Confined Space Entry Requirements.
- 3.4.3 Install one (1), 24-inch diameter round, hinged cover, roof ventilation manway, approximately 180 degrees from the existing roof manway. See photo 9. This will provide additional ventilation during the interior surface preparation and coating and aid in compliance with OSHA Confined Space Entry requirements. See KLM Drawing No. 25.
- 3.4.4 To prevent trespassing, install a padlock on the roof access manway. The cost of a new lock is not included in the Engineering Cost Estimate.
- 3.4.5 Remove the connection to the roof vent and weld the sections of the ladder to the roof. Install an OSHA-compliant pipe-style handrail around the entire roof edge, directly above the shell, to enclose the roof manways and roof ladder. Vertical pipe members shall include appropriately sized repads at the roof connection, and be spaced at no more than 5-foot intervals. Install a swinging gate at the top of the shell ladder as required by OSHA. See KLM Drawings No. 18 and 20, and photos 1 and 9.

- 3.4.6 The existing balcony handrail does not meet OSHA top-of-rail height requirements or the requirement for a mid rail and structural loading, and access from the leg ladder to the balcony is difficult and may be unsafe. Replace the handrail with a new, OSHA-compliant balcony handrail. See photos 1 through 11 and KLM Drawing No. 10.
- 3.4.7 The existing tower access ladders and ladder safety cages are not OSHA compliant due to ladder width, size of ladder rungs, distance to support column, distance between ladder rungs, structural integrity and size and number of bars on the safety cages. The ladder from the balcony to the roof is missing a safety climb device and is not properly attached to the tower. Replace all tower access ladders with OSHA-compliant ladders, ladder safety cages and ladder safety climb devices. See photos 2 through 8, 16, 24 and 25. Install both a hinged, locking cover at the base of the ladder safety cage plus a solid gate enclosure over the lower 8 feet of the ladder. This will restrict access by unauthorized personnel. See KLM Drawings No. 11 and 21.
- 3.4.8 Containment will be required during abrasive blasting and painting of the exterior of the tower. The roof plate appears to be 3/16-inch thick which would not support either a roof or roof edge hand railing nor an exterior containment system to enclose the tower during exterior reconditioning. Additional modifications will be required either to the roof and shell in order to stiffen and strengthen those areas sufficiently to support the containment, or to the coating contractor's containment rigging supports. Past experience has shown the method varies by contractor and tank, but these costs alone can be as much as \$30,000. This cost would be in addition to the costs of abrasive blasting and painting, and are included in the mobilization portion of the Engineer's Cost Estimate. See photos 1, 2 and 9.
- 3.4.9 The tower is equipped with a stub overflow pipe and no screen. Extend the stub overflow pipe to grade level as recommended by AWWA D100-11. Install an overflow pipe screen retainer and screen meeting Health Department regulations, as shown on KLM Drawing No. 12. Use a corrosion resistant, heavy-gauge, No. 4 mesh screen. Install a splash pad under the overflow pipe outlet as recommended by AWWA D100-11.
- 3.4.10 Past experience has shown there is a high degree of difficulty in abrasive blasting and painting the lattice legged areas on towers such as this. In a methodical manner, remove the lattices on the backside of the support columns and replace with solid plate, similar to the plate on the front of the support column. Seal weld the plate to the channel side members. This will enclose the interior of the support column and eliminate the need to abrasive blast and paint it. See photos 1, 2, 7, 9 and 15 through 28.

- 3.4.11 [Additional weld repairs are required to complete the ladder modifications, as there are some incomplete welds on the ladder and safety cage members. Install two (2) additional support brackets on the roof ladder, which is now connected by two supports at the bottom and around the roof finial. See photos 29 through 34.]
- 3.4.12 [The roof access manway has broken hinges and is difficult to open and close. Replace the one under-designed hinge with two heavy duty hinges. Install a lock on the roof access manway. See photos 35 and 36.]
- 3.4.13 [There are multiple holes in the roof near center finial. To waterproof the tank and roof, seal weld cover plates over the holes.]
- 3.4.14 [There is electrical wiring on the tower that is not enclosed or routed within conduit. If the wiring is active, such as supplying power to the aviation warning obstruction light, the City of Osseo should determine if it meets state and local electrical codes.]
- 3.4.15 [There appear to be missing or damaged cotter pins on at least six (6) of the pinned connections for the cross-rods and struts. The pins appear to be pulled through the hole despite the cotter pins, which ultimately damages the cotter pins. Continued pulling of the pins, which can be expected due to wind loading, particularly with an empty tank, can lead to catastrophic failure at these locations, which could lead to subsequent failures. If demolition of the tank is not performed, all of the pinned connections should be inspected and new pins or bolted connections installed at these locations as required. See photos 39 through 42.]
- 3.4.16 Additional structural items are included in Section 3.7, Telecommunications Considerations, as they relate to the telecommunications installations on the tower.

3.5 Exterior Dry Coating

- 3.5.1 It is unknown when the exterior of the tower was last coated. The exterior coating is in fair to poor overall condition, and due to age, chalking, and deterioration, the exterior coating cannot be repaired or over-coated. The coating on the entire exterior of the tower should be removed by abrasive blasting to an SSPC-SP-10 Near White Metal Blast Clean and replaced with a zinc/epoxy/urethane coating system, similar to those manufactured by the Tnemec Company. See photos 1 through 28.

- 3.5.2 The coating contains a high level of lead compounds. Removing it using conventional open-air dry abrasive blasting methods will create environmental problems. Reconditioning specifications must comply with current environmental regulations for lead paint containment, removal, and abatement. They must also include provisions to eliminate generating hazardous waste and stipulate proper disposal of generated waste.

3.6 Site And Environmental Considerations

- 3.6.1 In conformance with Minnesota State Rules Chapter 7025 and Federal USEPA Rules for removal of lead paint from steel structures a "Risk Factor (RF)" analysis has been performed to determine the class of pollution control required for this storage structure during reconditioning. RF is the calculation of potential risk for the structure and the values in the table of subpart 3 (of the standard) are the standards of risk factor for the (surrounding) designated properties. The class of pollution control required for compliance with the rules is Class II, requiring full containment, impervious ground cover, a top cover or bonnet and negative air dust collection.

3.7 Telecommunications Considerations

- 3.7.1 The tower has some telecommunications equipment, including antennas, coaxial cables, support brackets and other miscellaneous equipment. The Owner is advised to maintain accurate records of each of the antenna sites on the tower, including As-Built Drawings, site manager and owner contact information, upgrades performed, and future plans for antenna installations or upgrades. These records will help facilitate the future reconditioning with a minimal amount of effort on the Owner's part.
- 3.7.2 Prior to reconditioning, in accordance with the lease requirements of each antenna owner, the City of Osseo should notify the telecommunications owners or manager of the work to be performed. The City should also determine whether: a) the antenna owners will pay the additional costs to work around and protect the antennas; b) the antenna owners will temporarily remove their antennas and associated equipment to facilitate reconditioning; or c) the City of Osseo will have to pay for these costs themselves.

4.0 **INSPECTION AND EVALUATION METHODS**

Some or all of the following procedures were performed as applicable.

4.1 **Methods**

- 4.1.1 The tank was evaluated on the interior and exterior in conformance with the following:
 - a. KLM Engineering, Inc. proposal.
 - b. General guidelines of AWWA Manual M42 Appendix C "Inspecting and Repairing Steel Water Tanks, and Elevated Tanks for Water Storage."
 - c. KLM "Procedures and Guidelines for Inspecting Existing Steel and Concrete Water Storage Tanks".
- 4.1.2 The inspection of the base metal and coatings on interior and exterior surfaces included only areas accessible without scaffolding or special rigging. Only the exterior coatings were examined excluding the roof.
- 4.1.3 Tank plate thickness was measured at random locations on the liquid holding shell. The overall structural condition of the tank was visually examined.
- 4.1.4 No structural analysis was done to determine if the tank design complies with the AWWA D100-11 Standard for "Welded Carbon Steel Tanks for Water Storage." However, any observed non-conformance to the AWWA D100-11 standard is noted in this report.
- 4.1.5 Although compliance with OSHA regulations was not a part of this inspection, any unsafe conditions or violations of current OSHA regulations that were observed are noted in this report.

4.2 **Examination and Evaluation Techniques**

Some or all of the following procedures were performed as applicable.

4.2.1 **Site**

The tank site was evaluated for proper drainage, conditions affecting access and lead paint abatement during reconditioning.

Also, the following site dimensions were obtained: distance to fence(s), power lines, owner buildings, public property, private property/buildings, school/playgrounds, public parks and other property.

4.2.2 Foundations

The tank concrete foundations were visually examined for cracks, spalling, condition of grout, indications of distress/settlement, and elevation above grade.

4.2.3 Tank Plate Thickness

Plate thickness measurements were taken using ultrasonic methods (UTM). The readings were taken using a digital readout Nova D-100 Ultrasonic Thickness Gage that has a dual element probe (transducer). The probe's transmitter element sends a short ultrasonic pulse to the material. The pulse, reflected as an echo from the opposite side of the plate, returns to the probe's receiver element. The round trip time is directly related to the material's thickness.

4.2.4 Coating Thickness

Interior and exterior coatings, where accessible, were tested in accordance with Steel Structures Painting Council SSPC-PA2-82 "Measurement of Dry Film Thickness with Magnetic Gages," using PosiTector-6000-F1 Type 2 magnet flux gages with a fixed probe.

4.2.5 Coating Adhesion

Adhesion testing of the coating to the steel was performed by ASTM D3359: Shear Adhesion Test, Measuring Adhesion by Tape Test. In addition, a subjective coating adhesion evaluation was performed using a penknife.

4.2.6 Coating Cure

The cure of the interior wet coating was evaluated by ASTM D 5402-93 Standard Practice for Assessing the Solvent Resistance of Organic Coatings Using Solvent Rubs and/or with the manufacturer's recommended field method / industry standard procedures.

4.2.7 Coating Serviceability

The estimated remaining coating life or serviceability evaluation was performed using a wide variety of inspection instruments such as dry film thickness gauge, pen knife, Tooke gauge, adhesion tester(s), 30x microscope and serviceability evaluation experience (minimum experience 10 years).

The instrument inspection was combined with a close visual inspection of all the interior coating's accessible areas. This was done to detect any holidays (misses), skips, runs, sags, surface contaminants, overspray, dry spray, poor coating cohesion, inter-coat delamination, loss of adhesion to the substrate, adverse conditions of the steel underneath the coating, or any other defects affecting the intended service.

4.2.8 Coating Lead and Chromium Content Analysis

Samples were taken of the various types of coatings present on the exterior surfaces. Corrosion Control Consultants and Labs of Kentwood, Michigan tested these coatings in conformance with ASTM D-3335 Standard Test Methods for Concentrations of Lead and Chromium in Paint. Copies of the Laboratory Analysis are included in Appendix D.

The interior wet coating was not available for paint chip testing. Prior to either reconditioning or demolition the interior wet coatings should be tested.

5.0 ENGINEER'S COST ESTIMATES

The following cost estimate is based on a construction schedule of six (6) weeks. This cost estimate does not include the costs for installing lettering and/or a logo, or multiple colors. An updated Engineer's Cost Estimate should be obtained within 12 months prior to bidding the project. Engineering specifications, construction management, and inspection fees have not been included in this estimate, but are available upon request.

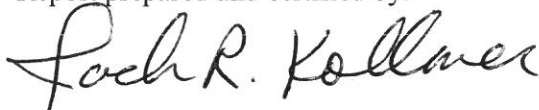
5.1	Interior Wet Structural Repairs	\$ <u>300.00</u>
5.2	Interior Wet Coating Complete Replacement Type of Coating - Zinc/Epoxy System	\$ <u>36,300.00</u>
5.3	Exterior Structural Repairs	\$ <u>124,300.00</u>
5.4	Exterior Coating Complete Replacement * Type of Coating - Zinc/Epoxy/Urethane System	\$ <u>141,400.00</u>
5.5	Mobilization	\$ <u>50,000.00</u>
5.6	Estimated Total Cost	\$ <u>352,300.00</u>

* Includes cost for containment and lead paint removal.

Alternate	Demolition Cost	\$ <u>80,000.00</u>
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KLM ENGINEERING, INC.

Report prepared and certified by:



Jack R. Kollmer
Principal Associate/President
NACE Certified Coatings Inspector No. 691

Report certified by:



Matt Erickson, PE
Manager of Engineering
MN License No. 42727

June 24, 2013

APPENDIX A

PHOTOGRAPHS



Photo No. 1
Overall view of North Tower



Photo No. 2
Overall view of North Tower - note upper access ladder



Photo No. 3
Inadequately supported shell to roof ladder

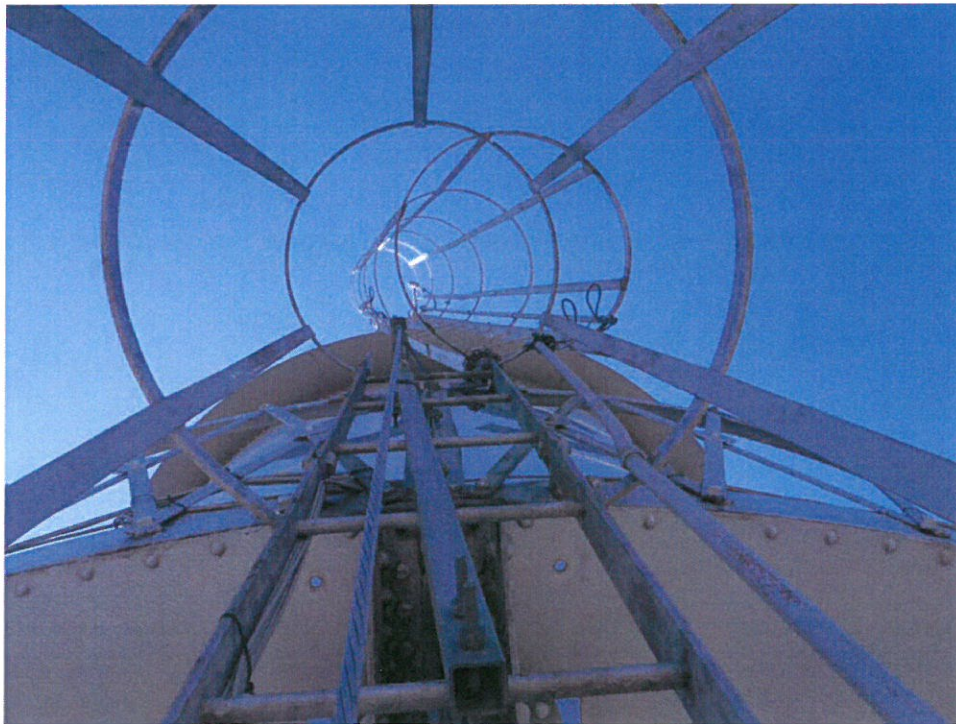


Photo No. 4
Tower access ladder from balcony to roof with lack of adequate supports



Photo No. 5
Tower access ladder from balcony to roof



Photo No. 6
Tower access ladder from balcony to roof



Photo No. 7
Tower access ladder from balcony to roof



Photo No. 8
Tower access ladder from balcony to roof



Photo No. 9
Roof as viewed from the ground – note roof ladder attached to finial



Photo No. 10
Balcony hand railing



Photo No. 11
Balcony hand railing

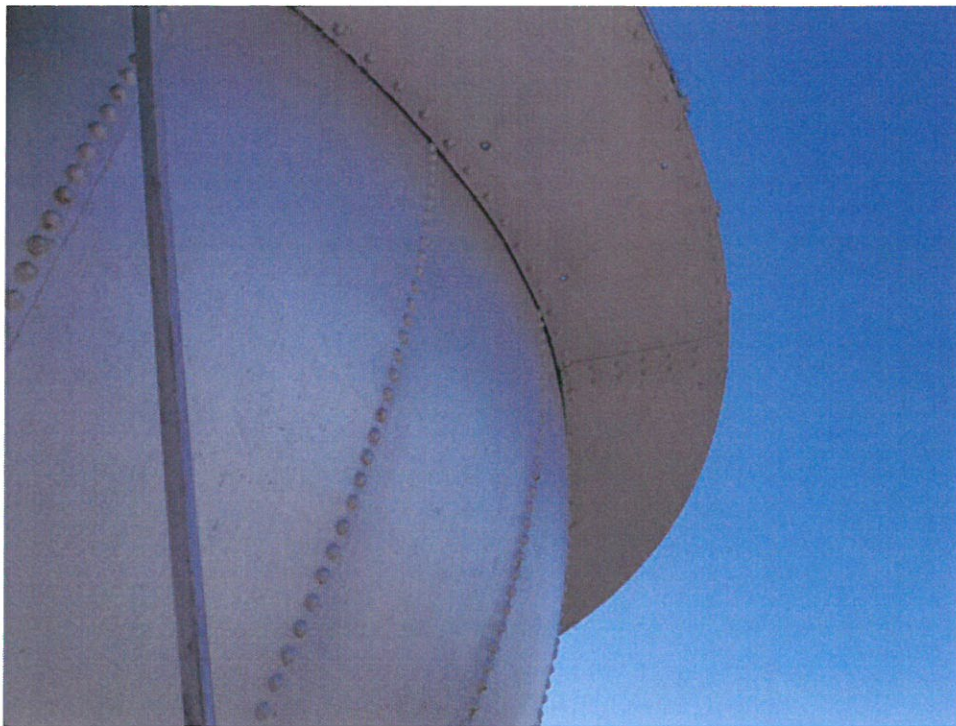


Photo No. 12
Exterior bowl coating conditions



Photo No. 13
Exterior bowl coating conditions



Photo No. 14
Conditions of tower bowl and inlet pipe/expansion joint and frost jacket



Photo No.15
Overall exterior conditions



Photo No. 16
Typical exterior coating conditions



Photo No. 17
Typical exterior coating conditions

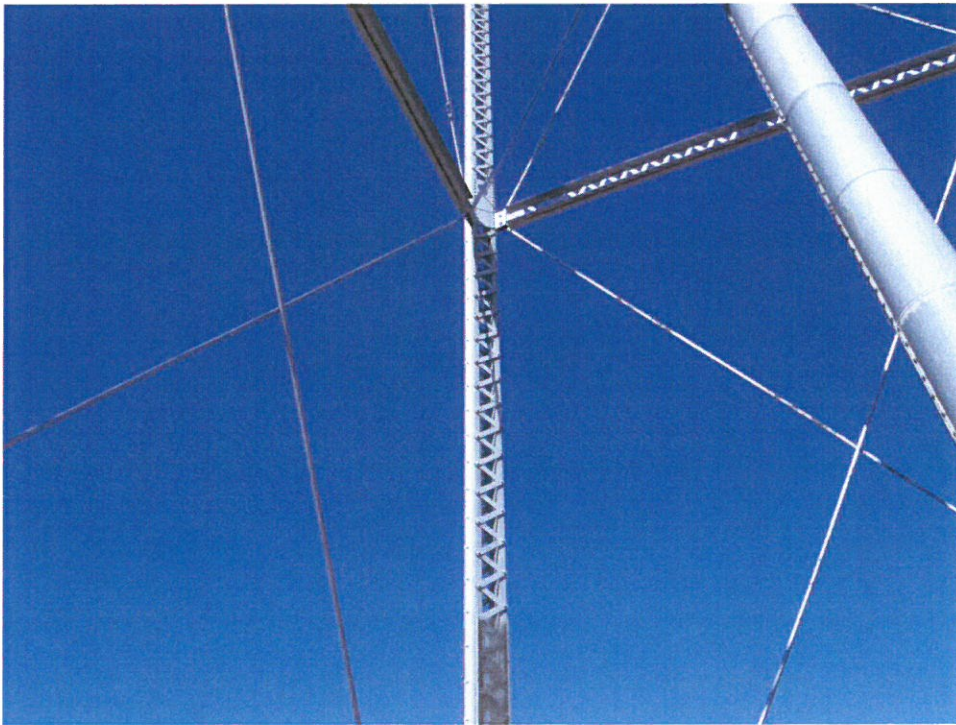


Photo No. 18
Conditions of support structure



Photo No.19
Conditions of tower accessory



Photo No. 20
Typical exterior coating conditions



Photo No. 21
Typical exterior coating conditions



Photo No. 22
Typical exterior coating conditions

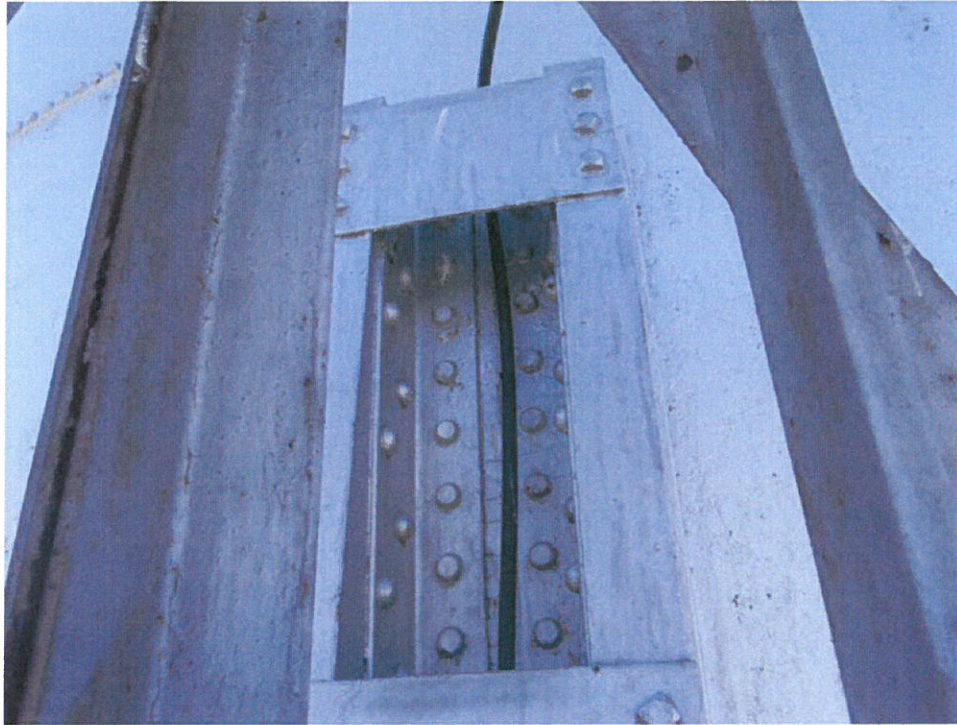


Photo No. 23

Typical exterior coating conditions – note antenna coax cable inside column



Photo No. 24

Conditions at base of tower



Photo No. 25
Conditions at base of tower



Photo No. 26
Typical exterior coating conditions



Photo No. 27
Conditions at base of tower



Photo No. 28
Conditions at base of tower

REVISION 1

**PHOTOGRAPHS FOLLOWING LADDER
MODIFICATIONS**



Photo No. 29
Shell ladder following modifications



Photo No. 30
Modifications to ladder at balcony



Photo No. 31
Modifications to ladder at balcony



Photo No. 32
Modifications to ladder on roof



Photo No. 33
Overall conditions on roof



Photo No. 34
Roof finial, obstruction light, and ladder

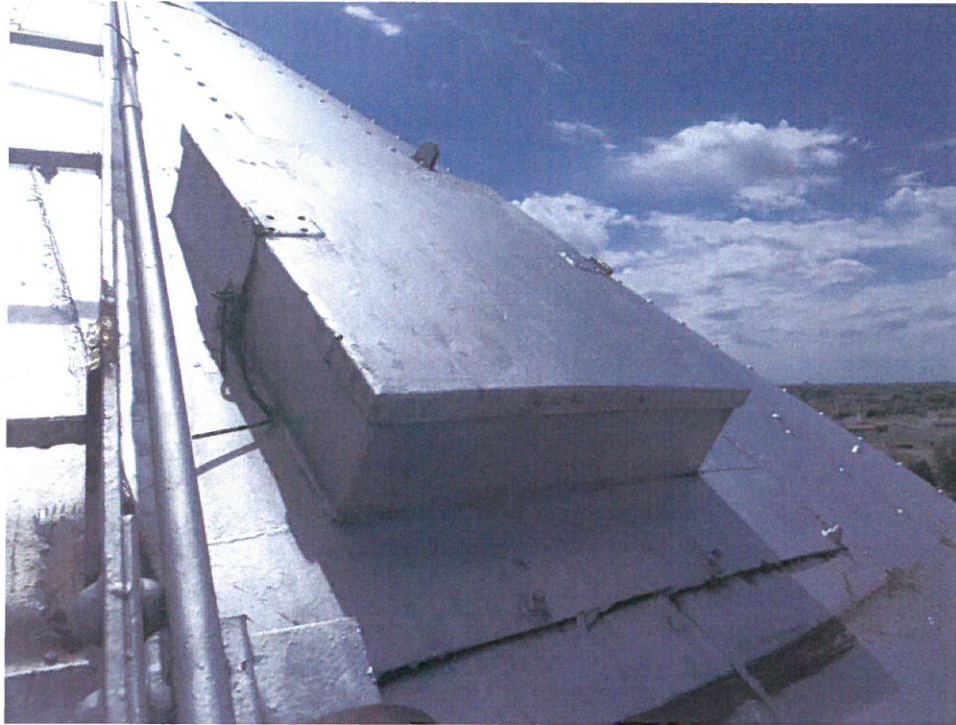


Photo No. 35
Roof access manway – note lack of lock

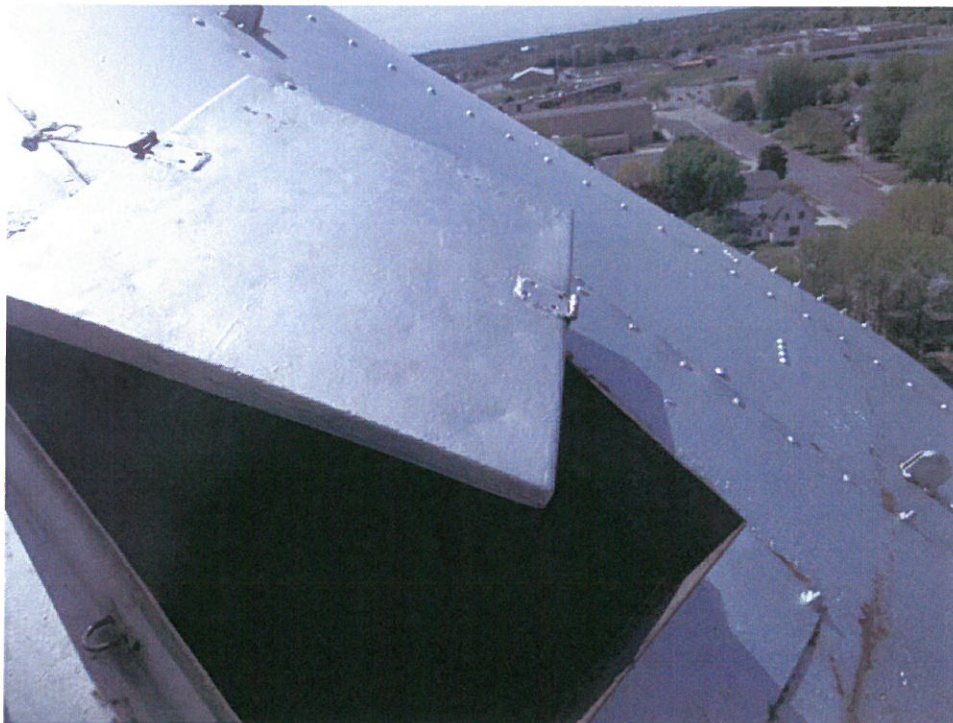


Photo No. 36
Roof access manway with broken hinge



Photo No. 37
Overall conditions on roof



Photo No. 38
Overall conditions on roof



Photo No. 39
Strut truss – note cotter pins at pinned connections

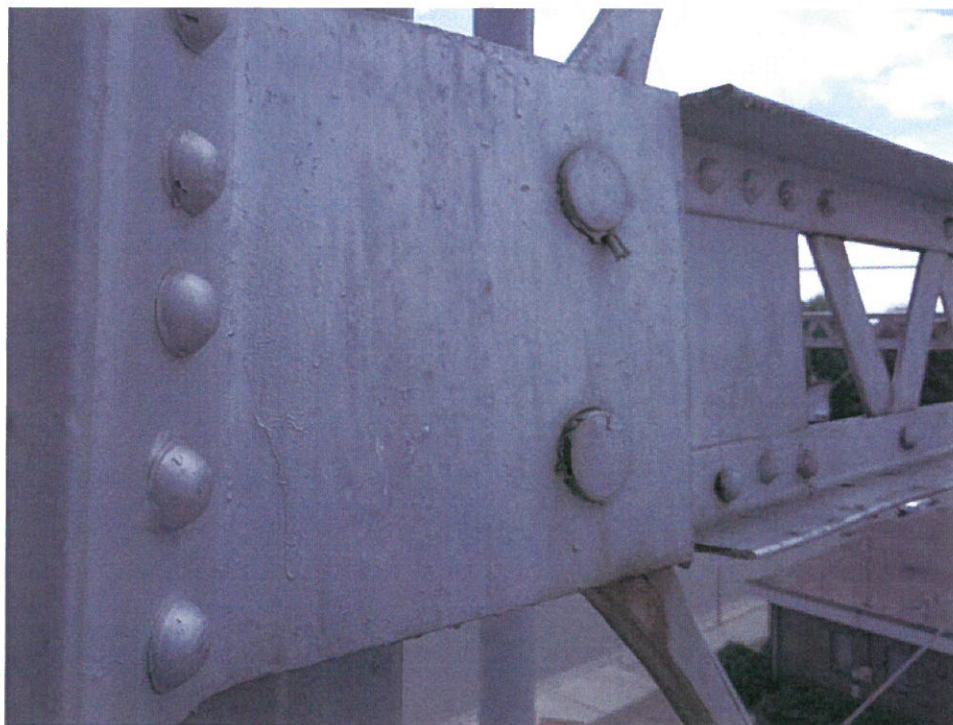


Photo No. 40
Strut truss – note damaged or missing cotter pins at pinned connections



Photo No. 41
Strut truss – note damaged or missing cotter pins at pinned connections

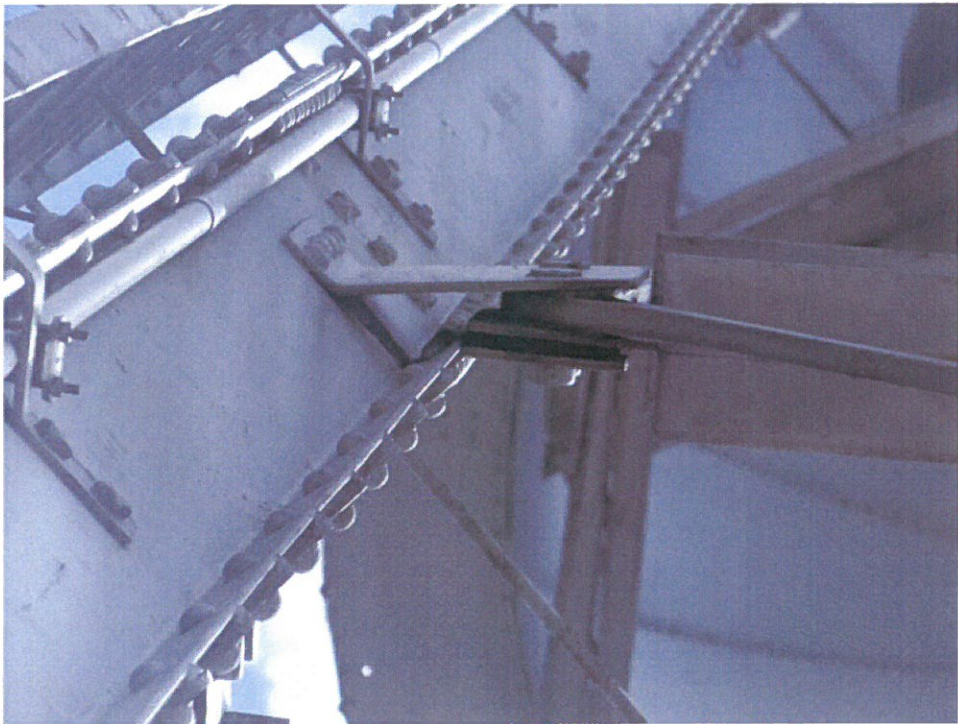


Photo No. 42
Underside of pinned connection with damaged cotter pins



Photo No. 43
Typical conditions on roof – note delaminations



Photo No. 44
Typical conditions on roof – note delaminations



Photo No. 45
Typical conditions on roof – note delaminations



Photo No. 46
Typical conditions on roof – note delaminations



Photo No. 47
Typical conditions on roof – note delaminations

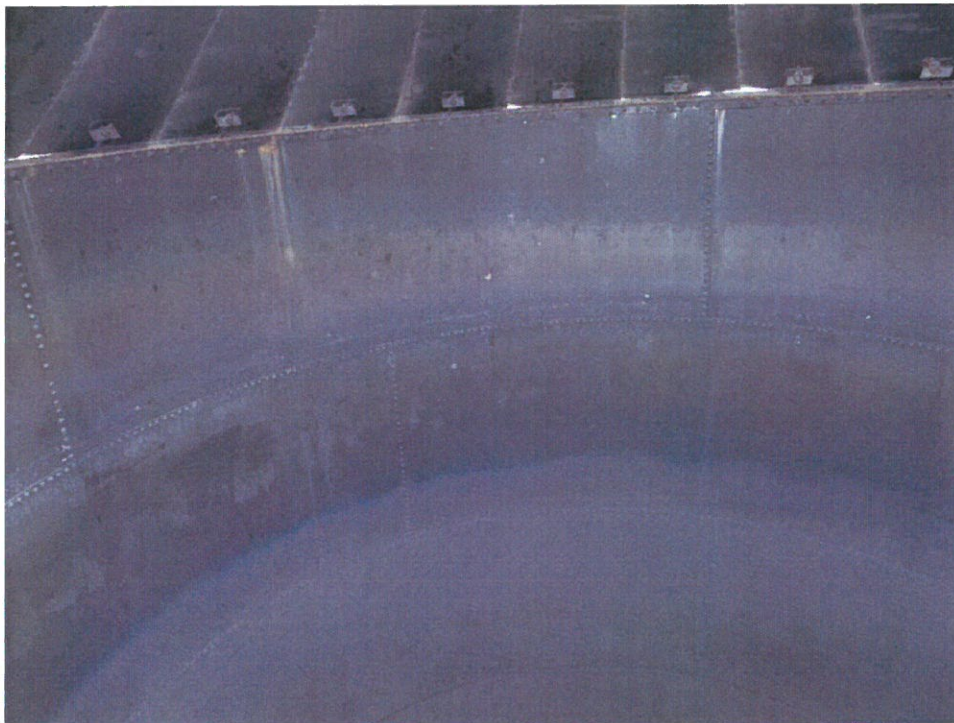


Photo No. 48
Overall interior coating conditions

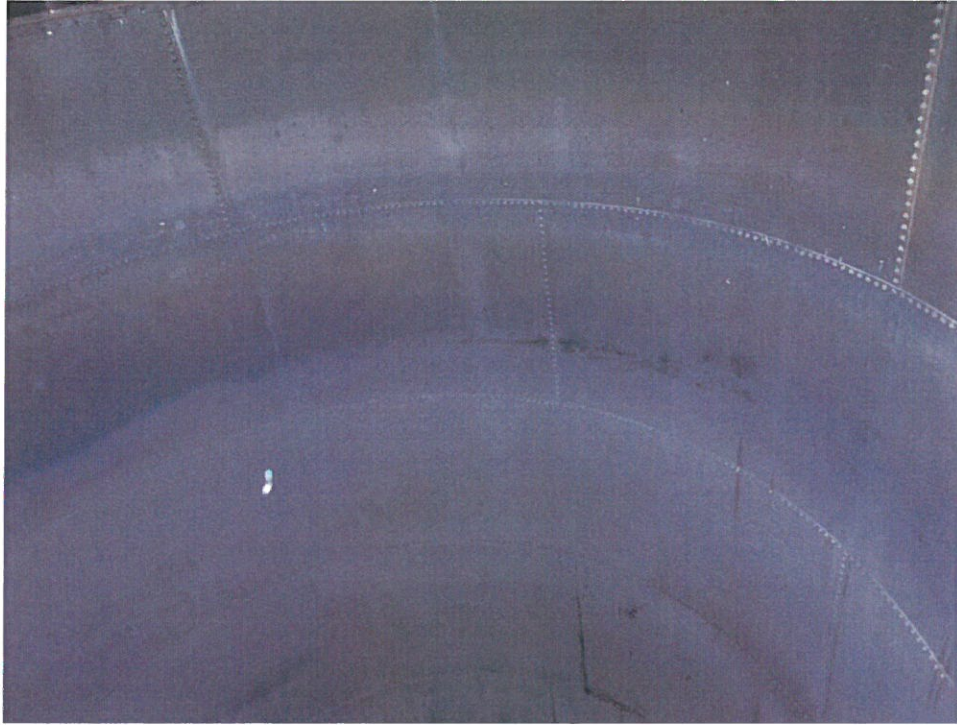


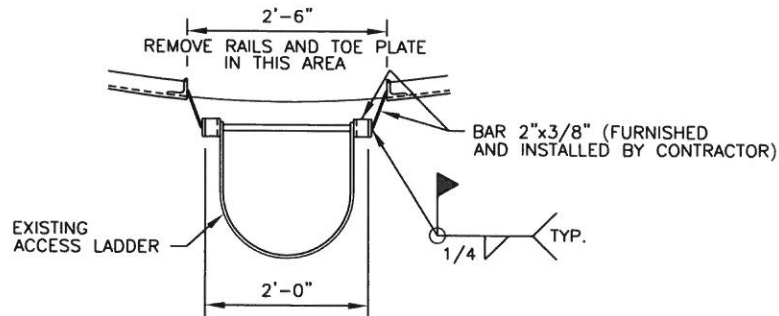
Photo No. 49
Overall interior coating conditions



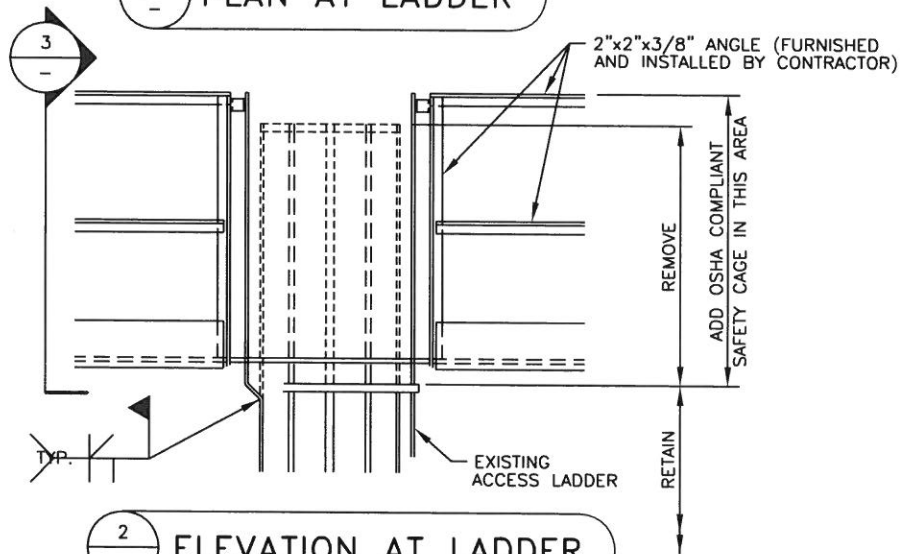
Photo No. 50
Overall interior coating conditions

APPENDIX B

DRAWINGS



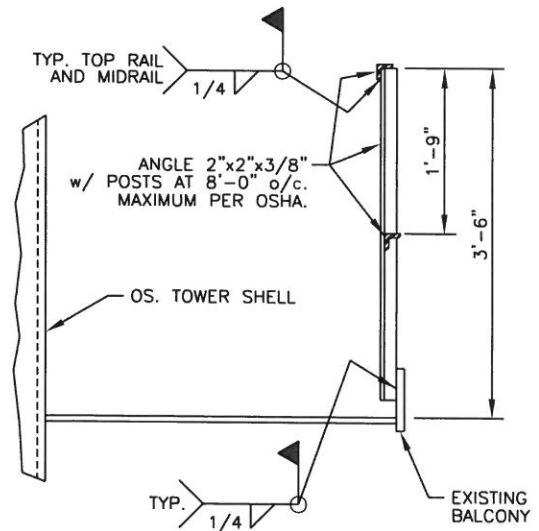
1
-
PLAN AT LADDER



2
-
ELEVATION AT LADDER

NOTES:

1. REPLACE OR EXTEND THE EXISTING VERTICAL POSTS TO A HEIGHT OF 3'-6".
2. REINSTALL THE TOP RAIL AS INDICATED.
3. INSTALL OSHA COMPLIANT MIDRAIL AS INDICATED.
4. INSTALL AN OPENING IN THE BALCONY HANDRAIL AT THE LADDER AS INDICATED.
5. ALL WELDING IS TO BE DONE WITH E70XX ELECTRODES.
6. ALL WELDING SHOWN IS TO BE DONE BY CONTRACTOR.



3
-
SECTION THRU HANDRAIL



LADDER CAGE/ BALCONY MODIF.

KLM PROJECT NO.
KLM DRAWING NO.

10



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KLM PROJECT NO.

KLM DRAWING NO. 11

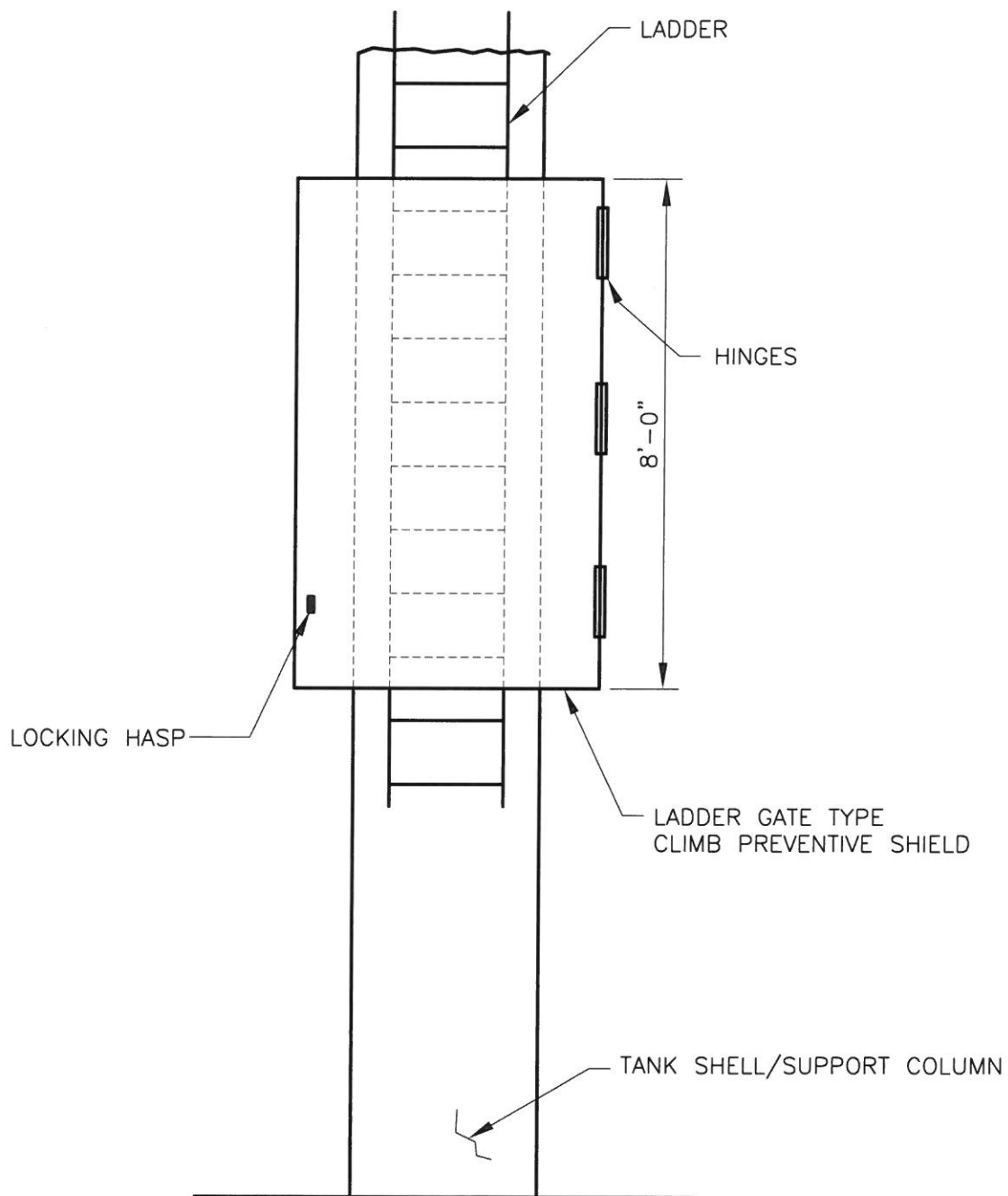
SUBJECT LADDER GATE/ANTI-CLIMB PLATE

DRAWN BY

DATE

CHECKED BY

DATE



ELEVATION



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KLM PROJECT NO.

KLM DRAWING NO. 12

SUBJECT OVERFLOW PIPE SCREEN RETAINER w/ELBOW

DRAWN BY

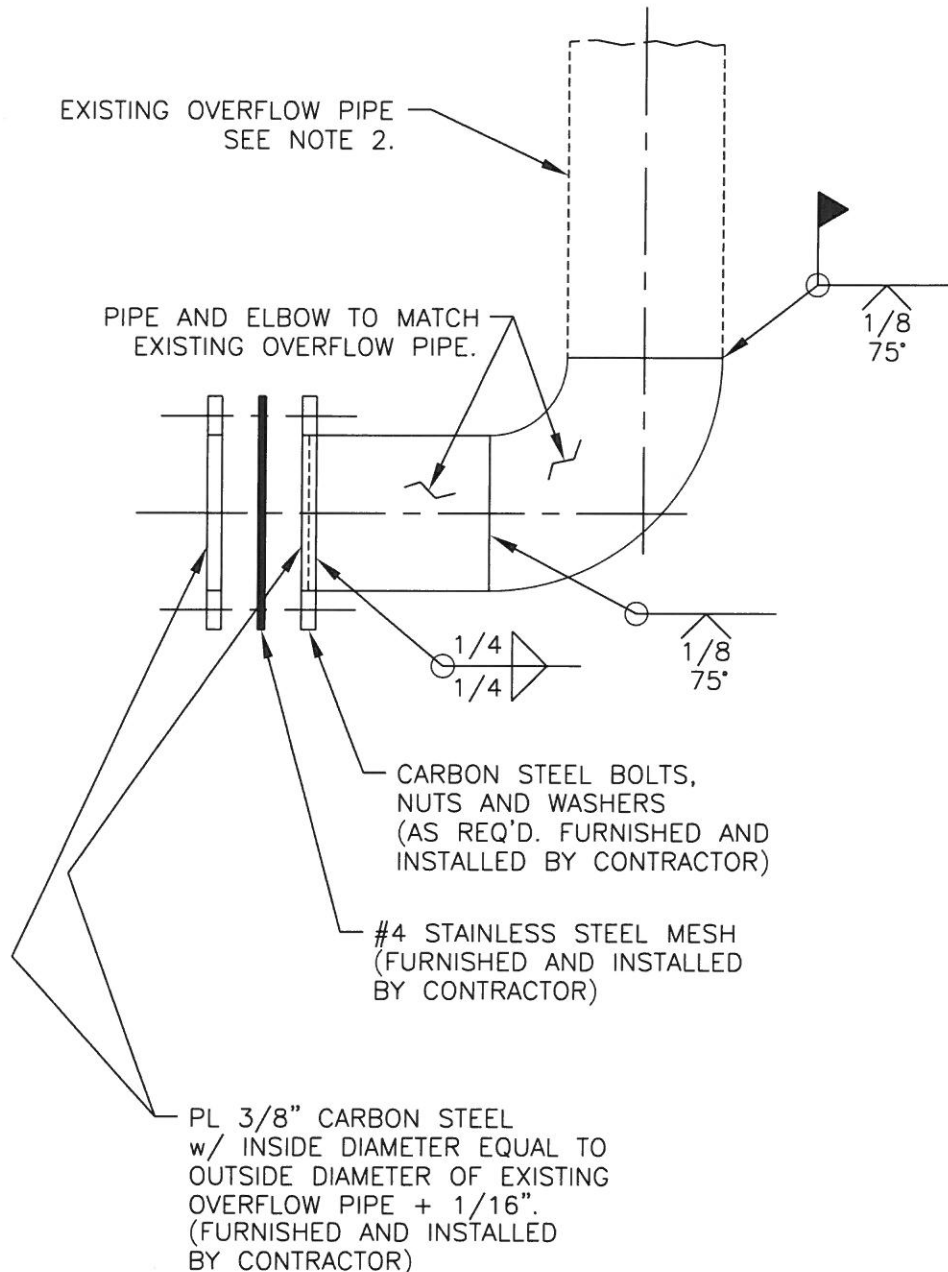
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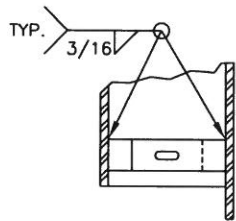
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NOTES:

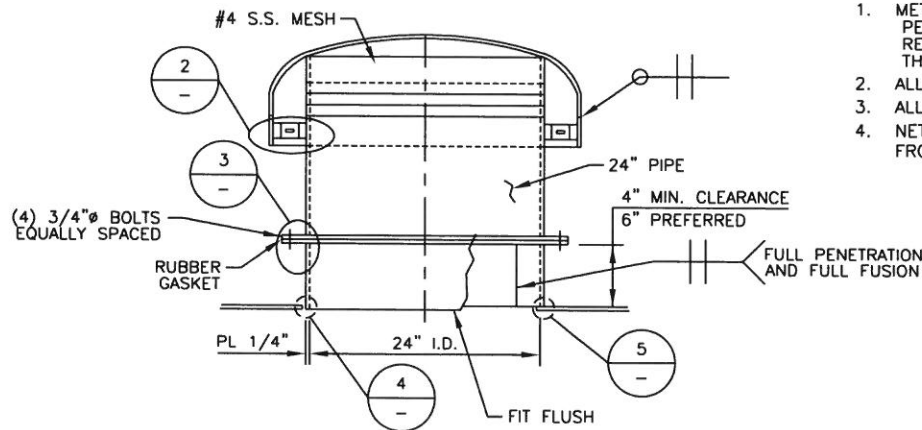
1. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING SIZE REQUIREMENTS.
2. BOTTOM END OF EXISTING PIPE IS TO BE BEVELLED SO THAT REQUIRED WELDING MAY BE ACHIEVED.
3. ALL WELDING SHOWN MUST BE DONE WITH E70XX ELECTRODES.
4. ALL WELDING AS SHOWN TO BE DONE BY CONTRACTOR.



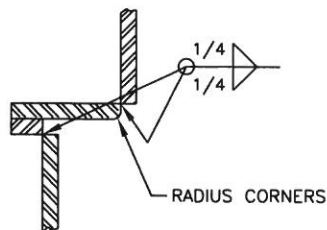
ELEVATION



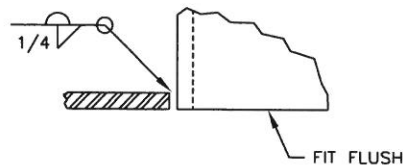
2
-
DETAIL



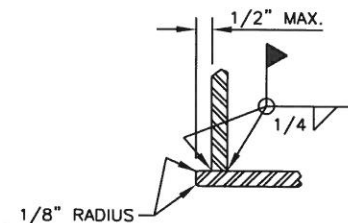
1
-
ELEVATION



3
-
DETAIL



4
-
DETAIL-OPTION 1



5
-
DETAIL-OPTION 2

- NOTES:**
1. METHOD AND MATERIALS OF CONSTRUCTION ARE PER FABRICATORS OPTION BUT MUST MEET REQUIREMENTS OF LATEST EDITION OF AWWA, THIS DRAWING AND PROJECT SPECIFICATION.
 2. ALL WELDING TO BE DONE WITH E70XX ELECTRODES.
 3. ALL WELDING SHOWN IS TO BE DONE BY CONTRACTOR.
 4. NET VENT OPENING SIZE AS DETERMINED BY ENGINEER FROM INLET PUMPING AND OUTLET FLOW RATES



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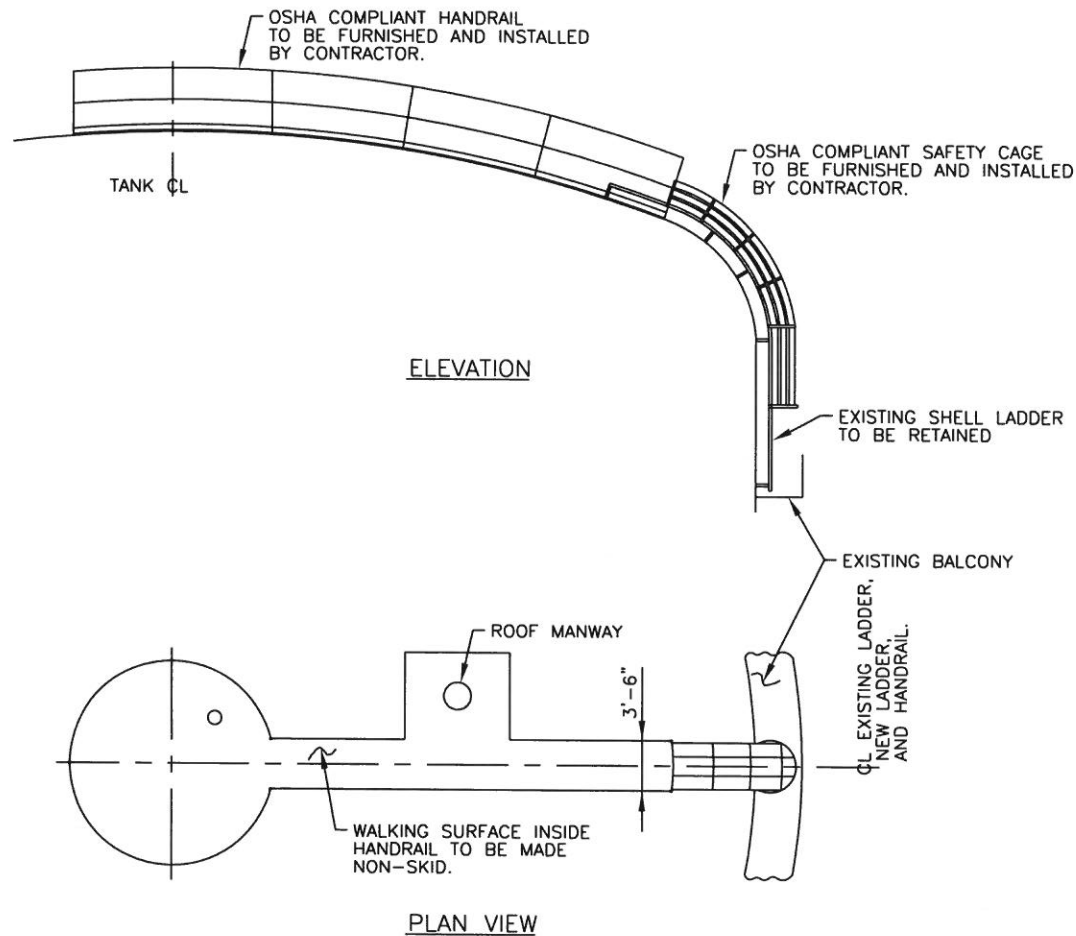


ROOF VENT/FINIAL w/ REM. COVER

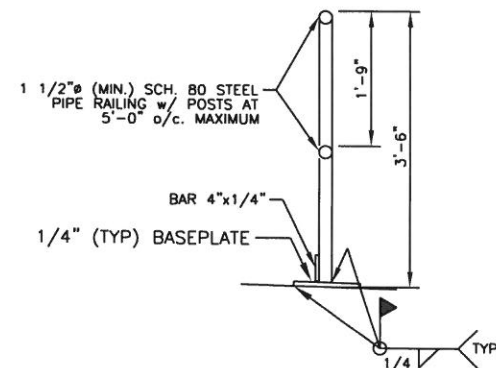
KLM PROJECT NO.

KLM DRAWING NO.

16



- CONTRACTOR NOTES:**
1. REMOVE WHEELS FROM EXISTING ROLLING ROOF LADDER.
 2. REMOVE CONNECTION BETWEEN ROOF LADDER AND CENTER ROOF VENT.
 3. PLACE EXISTING ROOF LADDER IN ALIGNMENT WITH EXISTING SHELL LADDER.
 4. WELD 2"x2"x3/8" CLIP ANGLES TO BOTH THE EXISTING ROOF LADDER AND THE ROOF.
 5. FURNISH AND INSTALL AN OSHA COMPLIANT SAFETY CAGE IN ROOF AREAS WHERE THE SLOPE IS GREATER THAN 5 IN 12.
 6. FURNISH AND INSTALL AN OSHA COMPLIANT HANDRAILING WITH NON-SKID WALKING SURFACE IN ROOF AREAS WHERE THE SLOPE IS GREATER THAN 0 IN 12 BUT LESS THAN 5 IN 12.
 7. ALL WELDING IS TO BE DONE WITH E70XX ELECTRODES.
 8. CONTRACTOR TO PERFORM ALL WELDING AS SHOWN.
 9. DIAMETER AS LISTED IN SPECIFICATIONS



SECTION THRU HANDRAIL

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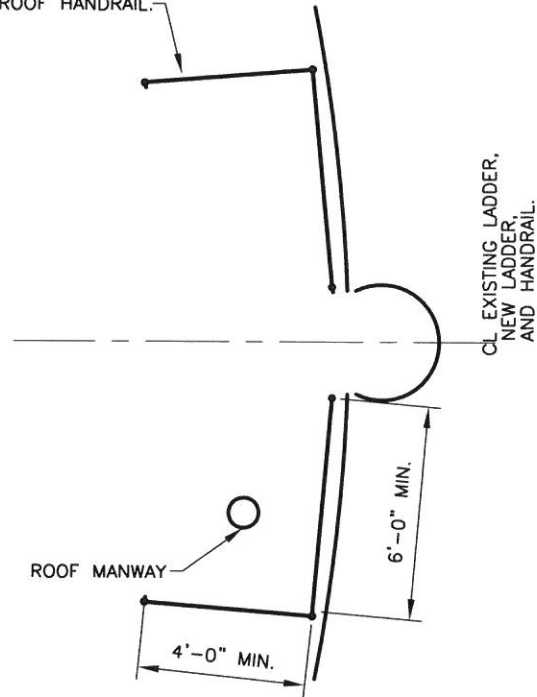
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Lake Elmo, MN 55042
Fax (651) 773-5222

PIPE STYLE HANDRAIL
ROOF LADDER-EWT w/ COLUMNS

KLM PROJECT NO.
KLM DRAWING NO.

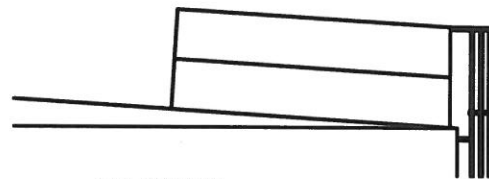
18

CONTRACTOR TO FURNISH
AND INSTALL OSHA COMPLIANT
ROOF HANDRAIL.

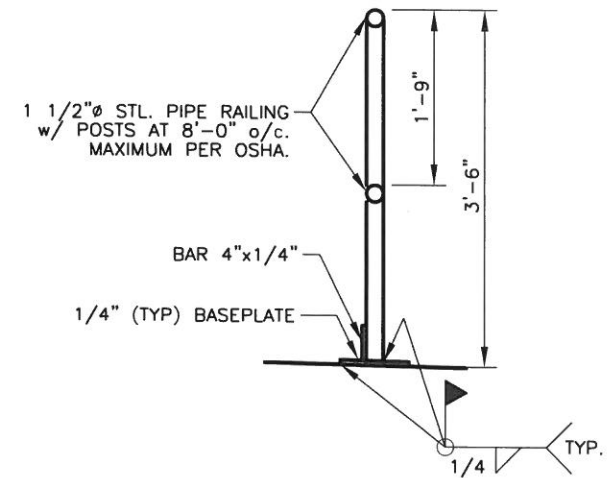


PLAN VIEW

- CONTRACTOR NOTES:
1. CONTRACTOR TO FURNISH AND INSTALL AN OSHA COMPLIANT HANDRAIL SYSTEM WHERE INDICATED ON PLAN VIEW. IN AREAS WHERE ROOF SLOPE IS GREATER THAN 0 IN 12 BUT LESS THAN 5 IN 12, SURFACE MUST BE MADE NON-SLIP.
 2. ALL WELDING TO BE DONE WITH E70XX ELECTRODES.
 3. ALL WELDING SHOWN IS TO BE DONE BY CONTRACTOR.



ELEVATION



SECTION THRU HANDRAIL



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PIPE STYLE ROOF EDGE HANDRAIL
GROUND STORAGE RESERVOIR

KLM PROJECT NO.

KLM DRAWING NO.

20



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KLM PROJECT NO.

KLM DRAWING NO. 21

SUBJECT SAFETY CLIMB DEVICE – CABLE STYLE

DRAWN BY

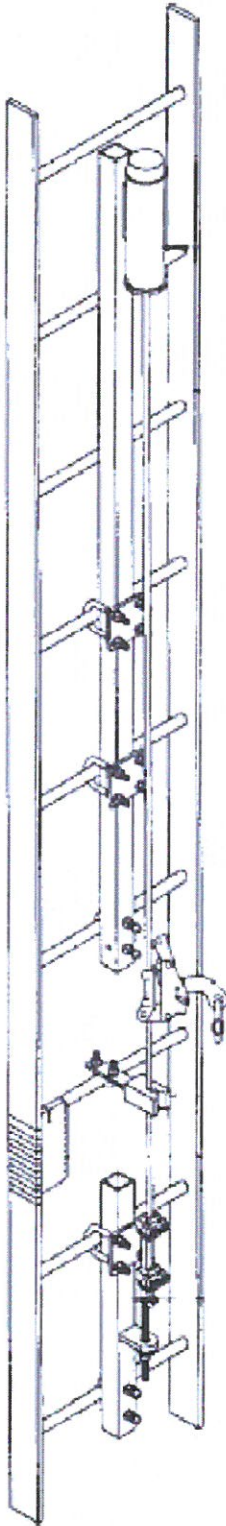
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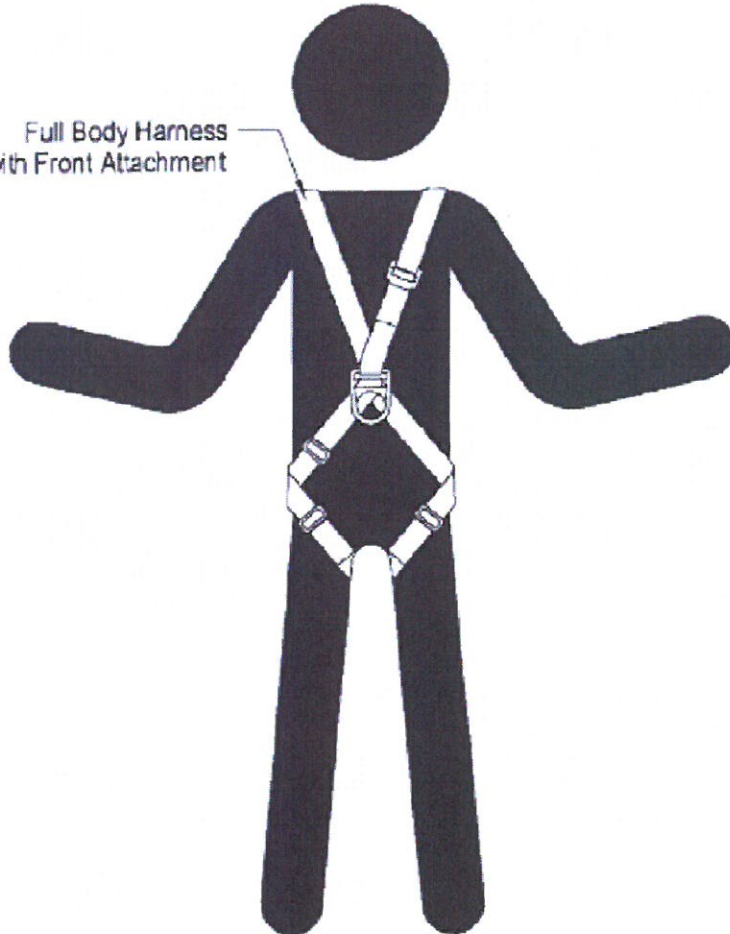
DATE

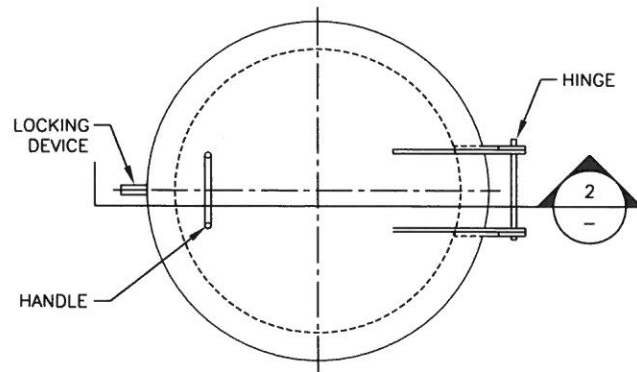
NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL A CABLE STYLE SAFETY CLIMB DEVICE PER THE SPECIFICATION
2. SYSTEM SHALL BE EQUIVALENT TO THE DBI/SALA LAD-SAF(R) FLEXIBLE CABLE SYSTEM
3. CONTRACTOR SHALL PROVIDE TWO (2) HARNESES AND LAD-SAF(R) SLEEVES WITH SAFLOK CARABINER (OR EQUIVALENT)
4. CONTRACTOR SHALL PROVIDE DOUBLE LANYARDS WITH EACH HARNESS PROVIDED

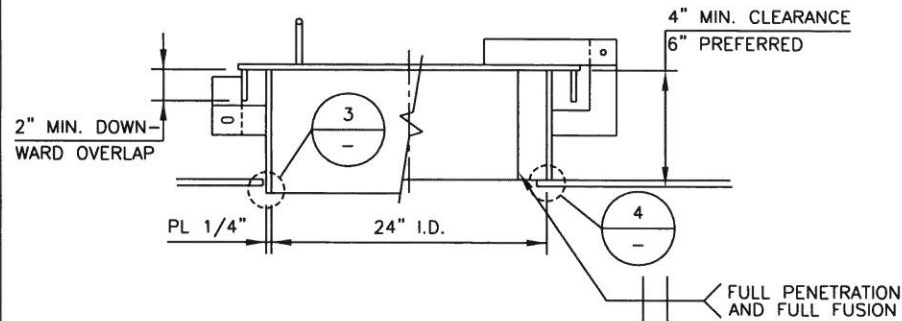


Full Body Harness
with Front Attachment



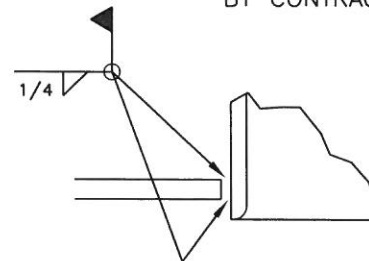


1
- PLAN VIEW

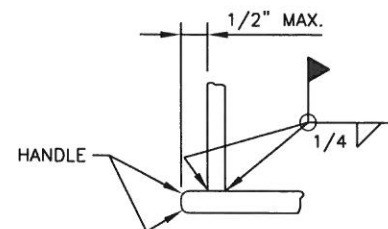


2
- SECTIONAL ELEVATION

- NOTES:**
1. METHOD AND MATERIALS OF CONSTRUCTION ARE AT FABRICATOR'S OPTION, BUT MUST MEET REQUIREMENTS OF LATEST EDITION OF AWWA.
 2. ALL WELDING TO BE DONE WITH E70XX ELECTRODES.
 3. ALL WELDING SHOWN IS TO BE DONE BY CONTRACTOR.



3
- DETAIL-OPTION 1



4
- DETAIL-OPTION 2



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P.O. Box 897 3394 Lake Elmo Ave. N.
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24"Ø VENTILATION ROOF MANWAY

KLM PROJECT NO.

KLM DRAWING NO.

25

APPENDIX C

SURFACE PREPARATION REQUIREMENTS



NACE SP0178-2007
(formerly RP0178-2003)
Item No. 21022

Standard Practice

Design, Fabrication, and Surface Finish Practices for Tanks and Vessels to Be Lined for Immersion Service

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Revised 2007-03-10
Reaffirmed 2003-03-17
Reaffirmed September 1995
Reaffirmed March 1991
Revised 1989
Approved 1978
NACE International
1440 South Creek Drive
Houston, Texas 77084-4906
+1 281/228-6200
ISBN 1-57590-167-6
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NACE International gratefully acknowledges the contributions of the following companies in the preparation of the welding samples and the fabrication of the die from which the plastic replicas have been molded:

Ausimont USA, Inc.,⁽²⁾ Thorofare, NJ
CenterPoint Energy,⁽³⁾ Houston, TX
S.G. Pinney & Associates, Inc.,⁽⁴⁾ Port St. Lucie, FL
The Sherwin-Williams Company,⁽⁵⁾ Cleveland, OH

NACE also gratefully acknowledges the assistance of KTA-Tator Inc.,⁽⁶⁾ Pittsburgh, PA, in developing the weld pattern that was used to mold the plastic replica of weld samples.

In NACE standards, the terms *shall*, *must*, *should*, and *may* are used in accordance with the definitions of these terms in the *NACE Publications Style Manual*, 4th ed., Paragraph 7.4.1.9. *Shall* and *must* are used to state mandatory requirements. *Should* is used to state something considered good and is recommended but is not mandatory. *May* is used to state something considered optional.

⁽²⁾ Ausimont USA, Inc., 10 Leonards Lane, Thorofare, NJ 08086.

⁽³⁾ CenterPoint Energy, P.O. Box 1325, Houston, TX 77251-1325.

⁽⁴⁾ S.G. Pinney & Associates, Inc., Corporate Office, 1326 S.W. Biltmore St., Port St. Lucie, FL 34983.

⁽⁵⁾ The Sherwin-Williams Company, 101 Prospect Avenue N.W., Cleveland, OH 44115.

⁽⁶⁾ KTA-Tator, Inc., 115 Technology Drive, Pittsburgh, PA 15275.

SP0178-2007

3.2.2 Rivets shall not be used.

3.2.3 The use of internal bolted connections should be avoided to the fullest extent possible.

3.2.4 Continuous lap-welded joints may be used but are not preferred. For sheet lining material, this type of construction may not be acceptable.

3.3 Connections

3.3.1 All connections to the tank or vessel shall be flanged.

3.3.2 Threaded connections should not be used in tanks and vessels operating in corrosive environments (see Figure A4, Appendix A). However, if threaded connections cannot be avoided in corrosive environments, these parts shall be fabricated of corrosion-resistant materials, or constructed as shown in Figure A10, Appendix A.

3.3.2.1 CAUTION: Dissimilar metal (galvanic) corrosion occurs when, for example, an alloy is used to replace the steel bottom of a tank, or in a similar circumstance when alloy appurtenances must be part of the construction of a vessel. If a lining is then applied to the steel and part of the alloy (usually 150 to 610 mm [5.9 to 24 in.]), any discontinuity in the lining exposes a small anode surface. Once corrosion starts, it progresses rapidly because of the large exposed alloy cathodic area to the much smaller anodic area. Without the lining, galvanic corrosion causes the steel to corrode at the weld area, but at a much slower rate. The recommended practice is to apply the lining to all of the alloy as well as the steel, thereby eliminating the possible occurrence of a large-cathode-to-small-anode surface.

3.3.3 Nozzle connections to be lined shall be as short as possible and be a minimum of 50 mm (2 in.) in diameter (see Figure A4, Appendix A). Connections less than 50 mm (2 in.) in diameter shall be suitably attached through a reducing flange (see Figure A10, Appendix A). When trowel-applied thick-film linings are required, additional nozzle inside diameter shall be allowed for lining thickness.

3.4 Appurtenances Inside the Tank or Vessel

3.4.1 The standard practices in Sections 3, 4, and 5 shall apply to any item to be installed inside a tank or vessel that is to be lined. Such appurtenances include, but are not limited to, agitators, anti-swirl baffles, outlet connections, gauging devices, vortex breakers, and internal piping.

3.4.2 If appurtenances inside the tank or vessel, including nuts and bolts, cannot be lined, they shall be made of corrosion-resistant materials. (CAUTION: See Paragraph 3.3.2.1.)

3.4.3 If bolted connections are necessary and cannot be made of corrosion-resistant materials, the mating surfaces shall be lined before assembly. Gaskets shall be used on mating surfaces and the sealing surfaces of nuts and bolts to protect the lining.

3.4.4 Dissimilar metals shall be electrically isolated from the steel tank or vessel surface whenever possible. Where dissimilar metals are used, selection shall be such that the galvanic effect is minimized. Other corrosion mitigation methods may be required (see Figure A8, Appendix A).

3.4.5 Heating elements shall be offset from the tank or vessel surface to provide access for surface preparation, application, inspection, and cleaning. Elements shall be positioned so as not to damage the lining system.

3.5 Structural Reinforcement Members

3.5.1 Structural support members should be installed on the exterior of the tank or vessel. However, if such members are installed internally, they shall be fabricated of simple shapes such as smooth, round bars or pipe for ease of applying the lining material.

3.5.2 The use of internal flanged connections, stiffening rings, reinforcement pads, angles, channels, I-beams, and other complex shapes should be avoided. If they must be installed internally, these members shall be fully welded and welds and sharp edges ground to a radius of at least 3.2 mm (0.13 in.) or as agreed between the tank or vessel fabricator, tank or vessel owner, and lining applicator (see Figures A1 and A6, Appendix A).

3.6 Heat Sinks

3.6.1 Heated, forced curing of lining systems is often preferred if not specifically required. During tank or vessel design and fabrication, especially with field-erected units, consideration must be given to avoiding or minimizing heat sink areas. Such areas might include opposite saddles or support lugs, flat bottoms on foundations, and stiffening rings.

3.6.2 These situations may be addressed either by tank or vessel design or by construction or insulation of the foundation or supports. Another possible solution is the use of temporary constructions, such as false floors or temporary shelters, to achieve uniform heating and curing.

Bibliography

API⁽⁷⁾ Standard 650 (latest revision). "Welded Steel Tanks for Oil Storage." Washington, D.C.: American Petroleum Institute (API).

API RP 652 (latest revision). "Lining of Aboveground Petroleum Storage Tank Bottoms." Washington, D.C.: API.

ASME⁽⁸⁾ Boiler and Pressure Vessel Code (latest revision). New York, NY: ASME.

Directive 97/23/EC (latest revision). "Pressure Equipment Directive (PED)." Brussels, Belgium: European Commission.⁽⁹⁾

NACE Standard SP0294 (latest revision). "Design, Fabrication, and Inspection of Storage Tank Systems for Concentrated Fresh and Process Sulfuric Acid and Oleum at Ambient Temperatures." Houston, TX: NACE.

⁽⁷⁾ American Petroleum Institute (API), 1220 L Street, NW, Washington, D.C. 20005-4070.

⁽⁸⁾ ASME International (ASME), Three Park Avenue, New York, NY 10016-5990.

⁽⁹⁾ European Commission (EC), Rue de la Loi 200, B-1049 Brussels, Belgium.

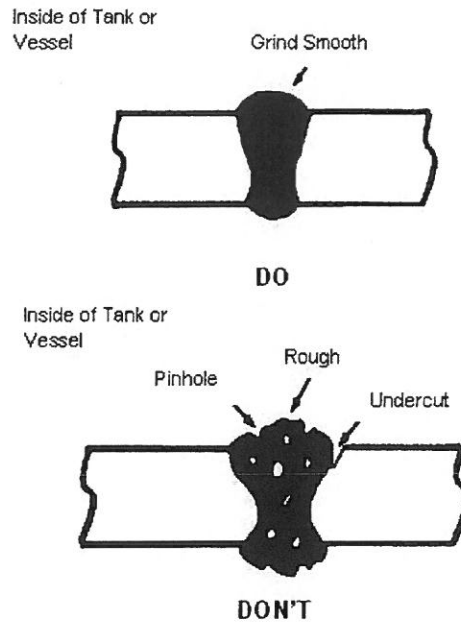


FIGURE A2

All joints shall be continuous full-penetration porosity-free welds. In tanks and vessels that require a 100% holiday-free lining, all welds must be smooth with no holes, high spots, lumps, or pockets. Grinding is required to eliminate sharp edges and high spots. Weld metal shall be used to fill in undercut or pits.

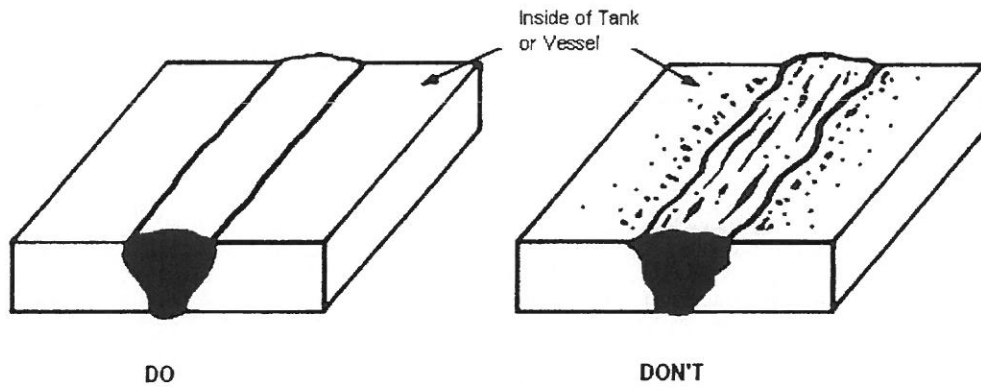


FIGURE A3

All weld spatter shall be removed.

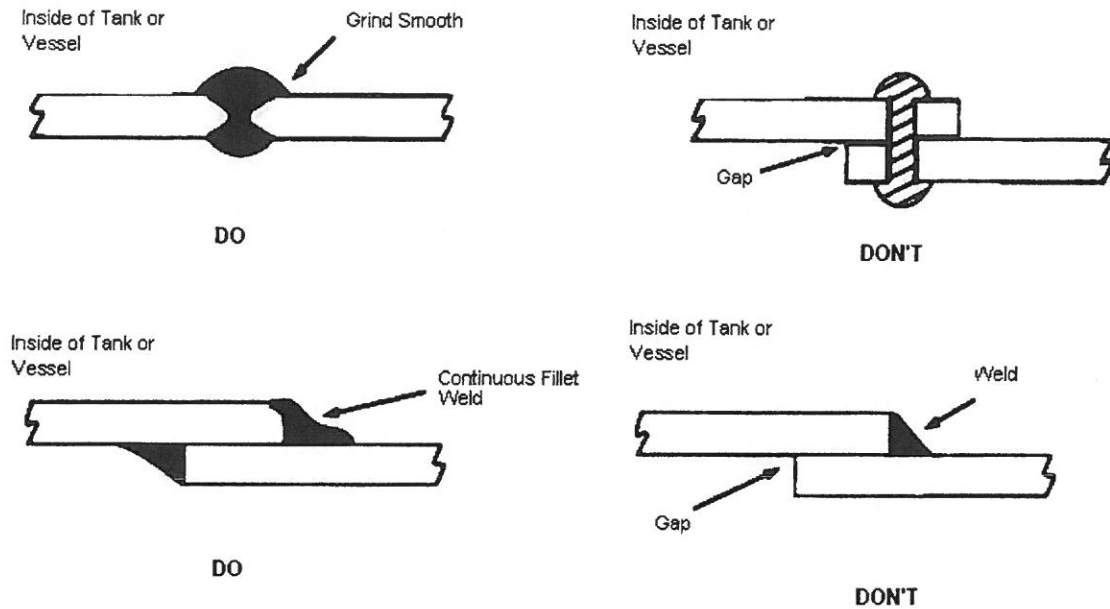


FIGURE A5

Butt welding shall be used whenever possible rather than lap welding or riveted construction.

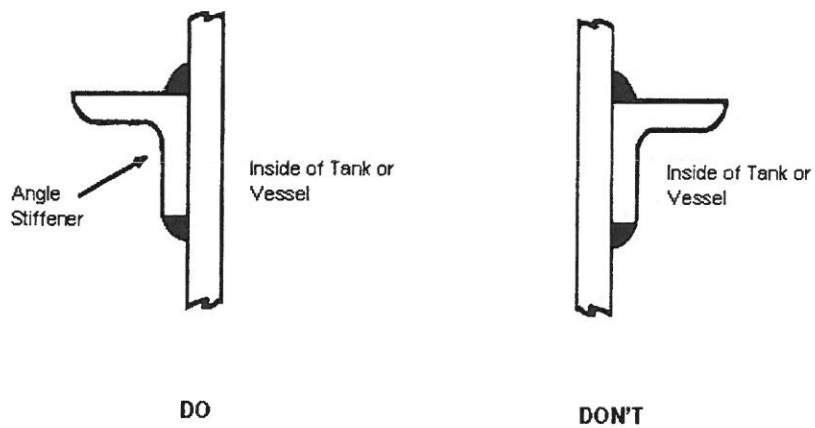


FIGURE A6

Stiffening members should be on the outside of the tank or vessel.

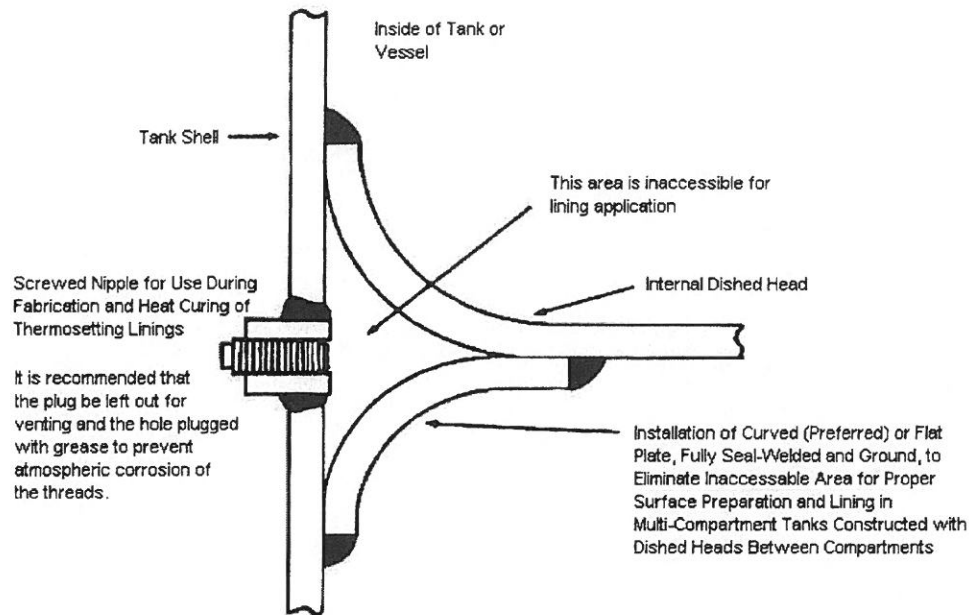


FIGURE A9

A technique (detail of fabrication) to allow for good continuity of lining application for inaccessible areas such as those in multicompartment tanks or vessels.

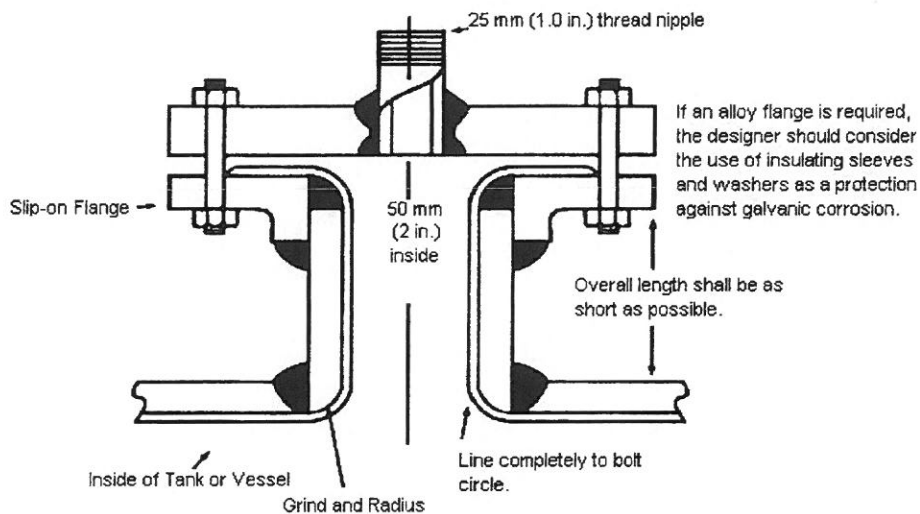



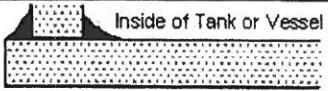
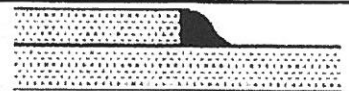


FIGURE A10

Minimum 50-mm (2-in.) diameter nozzle required for most thin-film linings. Thicker-film linings may require a larger-diameter nozzle. This diagram also illustrates fabrication practice where a threaded connection is required in a tank or vessel that requires a holiday-free lining.

Appendix C—Written and Graphic Descriptions of Various Degrees of Surface Finishing of Welds That May Be Specified in Preparation for Lining of Tanks and Vessels^(A)

NACE Weld Preparation Designation	Type of Grinding	Butt Weld	Fillet Welded Tee Joint	Lap Weld
A	Ground flush and smooth; free of all defects. ^(B)	Weld spatter is removed and all surface imperfections are repaired as necessary. The weld is ground flush with the plate surface.	Not Applicable	Not Applicable
			Not Applicable	Not Applicable
B	Ground flush	Minor imperfections such as porosity and undercutting exist. The weld is ground flush with the plate surface.	Not Applicable	Not Applicable
			Not Applicable	Not Applicable
C	Ground smooth; free of all defects. ^(B)	Weld spatter is removed and all surface imperfections are repaired as necessary. The weld is ground smooth and blended into the plate surfaces.	Weld spatter is removed and all surface imperfections are repaired as necessary. The weld is ground smooth and blended into the plate surfaces.	Fillet weld between the two plates. Weld spatter is removed and all surface imperfections are repaired as necessary. The weld is ground smooth and blended into the plate surfaces.
				

^(A) The written descriptions of the various degrees of surface preparation of welds in the appendices of this standard take precedence over the graphics and the companion visual comparator. The graphics are only pictorial representations of welds and grinding finishes and are not intended to be representative of the integrity of the welds. The "weld condition prior to finishing" is not a typical weld; it is only intended to illustrate defects in welds that must be corrected prior to lining. Good welding practices and welding codes govern the integrity of the tank and vessel welds; this standard only addresses surface preparation of the welds for the purpose of lining the tank or vessel for immersion service.

The visual comparator mentioned in Appendix C is a molded plastic replica that illustrates various degrees of surface finishing for welds prior to coating or lining. Full-seam welds, skip welds, butt welds, lap welds, and others are depicted. For more information, contact the NACE International FirstService Department, 1440 South Creek Dr., Houston, Texas 77084-4906 (telephone +1 281/228-6200).

APPENDIX D

PAINT CHIP LEAD TEST RESULTS

CORROSION CONTROL CONSULTANTS & LABS, INC. a GPI company**ANALYTICAL LABORATORY REPORT**

Thursday, October 18, 2012

Page 1 of 2

CUSTOMER: KLM Engineering, Inc.
PO Box 897, 3394 Lake Elmo Ave N
Lake Elmo, MN 55042

DATE RECEIVED: Wednesday, October 10, 2012
PO/PROJECT #: 2965
SUBMITTAL #: 2012-10-10-015

LAB NUMBER: AB36910

Sampled By: Rod Ellis
Job Location: Osseo, MN
Sample Identification: 1 - Ext Shell

Date Sampled: Tuesday, October 2, 2012
Sample Description: Paint Chips

Preparation Method: EPA 3050B-P-M (Acid Digestion for Paints)
Analysis Method: EPA 6010C (ICP-AES Method for Determination of Metals)
Date Analyzed: Thursday, October 18, 2012

ELEMENT	RESULT (by weight)	REPORTING LIMIT (RL)
Cadmium	< RL	0.00075 %
Chromium	0.65 %	0.0013 %
Lead	12 %	0.0025 %

LAB NUMBER: AB36911

Sampled By: Rod Ellis
Job Location: Osseo, MN
Sample Identification: 2 - Ext Legs

Date Sampled: Tuesday, October 2, 2012
Sample Description: Paint Chips

Preparation Method: EPA 3050B-P-M (Acid Digestion for Paints)
Analysis Method: EPA 6010C (ICP-AES Method for Determination of Metals)
Date Analyzed: Thursday, October 18, 2012

ELEMENT	RESULT (by weight)	REPORTING LIMIT (RL)
Cadmium	0.00096 %	0.00075 %
Chromium	0.16 %	0.0013 %
Lead	8.5 %	0.0025 %

LAB NUMBER: AB36912

Sampled By: Rod Ellis
Job Location: Osseo, MN
Sample Identification: 3 - Ext Legs

Date Sampled: Tuesday, October 2, 2012
Sample Description: Paint Chips

Preparation Method: EPA 3050B-P-M (Acid Digestion for Paints)
Analysis Method: EPA 6010C (ICP-AES Method for Determination of Metals)
Date Analyzed: Thursday, October 18, 2012

ELEMENT	RESULT (by weight)	REPORTING LIMIT (RL)
Cadmium	< RL	0.00075 %
Chromium	0.048 %	0.0013 %
Lead	10 %	0.0025 %

CCC&L has obtained accreditation under the programs detailed on the final page of the laboratory report. The accreditations pertain only to the testing performed for the elements, and in accordance with the test methods, listed in the scope of accreditation table. Testing which is performed by CCC&L according to other test methods, or for elements which are not included in the table fall outside of the current scope of laboratory accreditation.

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CORROSION CONTROL CONSULTANTS & LABS, INC. a GPI company

ANALYTICAL LABORATORY REPORT

Thursday, October 18, 2012

Page 2 of 2

CUSTOMER: KLM Engineering, Inc.
PO Box 897, 3394 Lake Elmo Ave N
Lake Elmo, MN 55042

DATE RECEIVED: Wednesday, October 10, 2012
PO/PROJECT #: 2965
SUBMITTAL #: 2012-10-10-015

Unless otherwise noted, the condition of each sample was acceptable upon receipt, all laboratory quality control requirements were met, and sample results have not been adjusted based on field blank or other analytical blank results. Individual sample results relate only to the sample as received by the laboratory.

Tests Reviewed By: Michael J. Swiech, QA/QC Manager

Michael J. Swiech Michael J. Swiech
2012.10.18 14:24:43 -04'00'

CCC&L has obtained accreditation under the following programs:

- National Lead Laboratory Accreditation Program (NLLAP)**
ELLAP: AIHA Laboratory ELLAP Accreditation Program Laboratory, ID#101030 (www.aiha.org)
OH: Ohio Department of Health Lead Poisoning Prevention Program, Approval #E10013 (www.odh.ohio.gov)
- AIHA Laboratory IHLAP Accreditation Program** (www.aiha.org)
IHLAP: Laboratory ID#101030
- National Environmental Laboratory Accreditation Program (NELAP)**
NY: State of New York Department of Health, Laboratory ID#11809 (Serial # 46417 through 46421) (518-485-5570)
LA: State of Louisiana Department of Environmental Quality, Laboratory ID#180321 (Certificate 05036) (www.deq.louisiana.gov)
OK: Oklahoma Department of Environmental Quality, Laboratory ID#9993 (Certificate 2012-034) (www.deq.state.ok.us)

The accreditations pertain only to the testing performed for the elements, and in accordance with the test methods, listed in the table below. Testing which is performed by CCC&L according to other test methods, or for elements which are not included in the table below fall outside of the current scope of laboratory accreditation. Customers are encouraged to verify the current accreditation status with the individual accreditation programs by calling or visiting the appropriate website for the applicable program.

SCOPE OF ACCREDITATION

Air and Emissions

Element/Test	Method	Accreditation(s)
Particulates (PM10)	40 CFR 50 Appendix J	NY, LA
Total Suspended Particulates (TSP)	40 CFR 50 Appendix B	NY, LA
Lead in Airborne Dust	NIOSH 7300	ELLAP, OH, NY, LA
Lead in Airborne Dust	EPA600/R-93/200	ELLAP, OH
Metals in Airborne Dust	NIOSH 7300/ EPA 6010B or EPA 6010C	IHLAP
Metals in Airborne Dust	EPA600/R-93/200/ EPA 6010B or EPA 6010C	IHLAP

Solid Chemical Materials

Element/Test	Method	Accreditation(s)
TCLP	EPA 1311(Sample Preparation Method)	NY, LA, OK
Acid Digestion	EPA 3050B	NY, LA
Lead in Soil	EPA 3050B/EPA 6010C	NY, LA, OK
Lead in Soil	EPA 3050B/EPA 6010B or EPA 6010C	ELLAP, OH, NY, LA
Lead in Paint	EPA 3050B/EPA 6010B or EPA 6010C	ELLAP, OH, NY, LA
Lead in Dust Wipes	EPA 6010B or EPA 6010C	NY, LA
Lead in Dust Wipes	EPA600/R-93/200/EPA 6010B or 6010C	ELLAP, OH

Non-Potable Water / Analysis by ICP

Element/Test	Method	Accreditation(s)	Method	Accreditation(s)
Arsenic	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Barium	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Cadmium	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Chromium	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Copper	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Lead	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Mercury	EPA 245.1 Rev.3	NY, LA, OK		
Mercury	EPA 7470A	NY, LA, OK		
Nickel	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Selenium	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Silver	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Zinc	EPA 6010B	NY	EPA 6010C/ EPA 200.7 Rev 4.4	NY, LA, OK
Acid Digestion	EPA 3010A	NY, LA		

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Properly Contained YES NO N/A
Properly Filled YES NO N/A
Adequate Cooling YES NO N/A
Adequate Ph Adjust YES NO N/A
Lab acidified: By/Date: *WAF*

Properly Filled YES NO N/A

Adequate Cooling YES NO N/A

Adequate Ph Adjust YES NO **(N/A)**

Lab acidified: By/Date: *WJ*

[illegible]

Signature: Farid Sykt

Relinquished Date/Time:

Relinquished Date/Time:

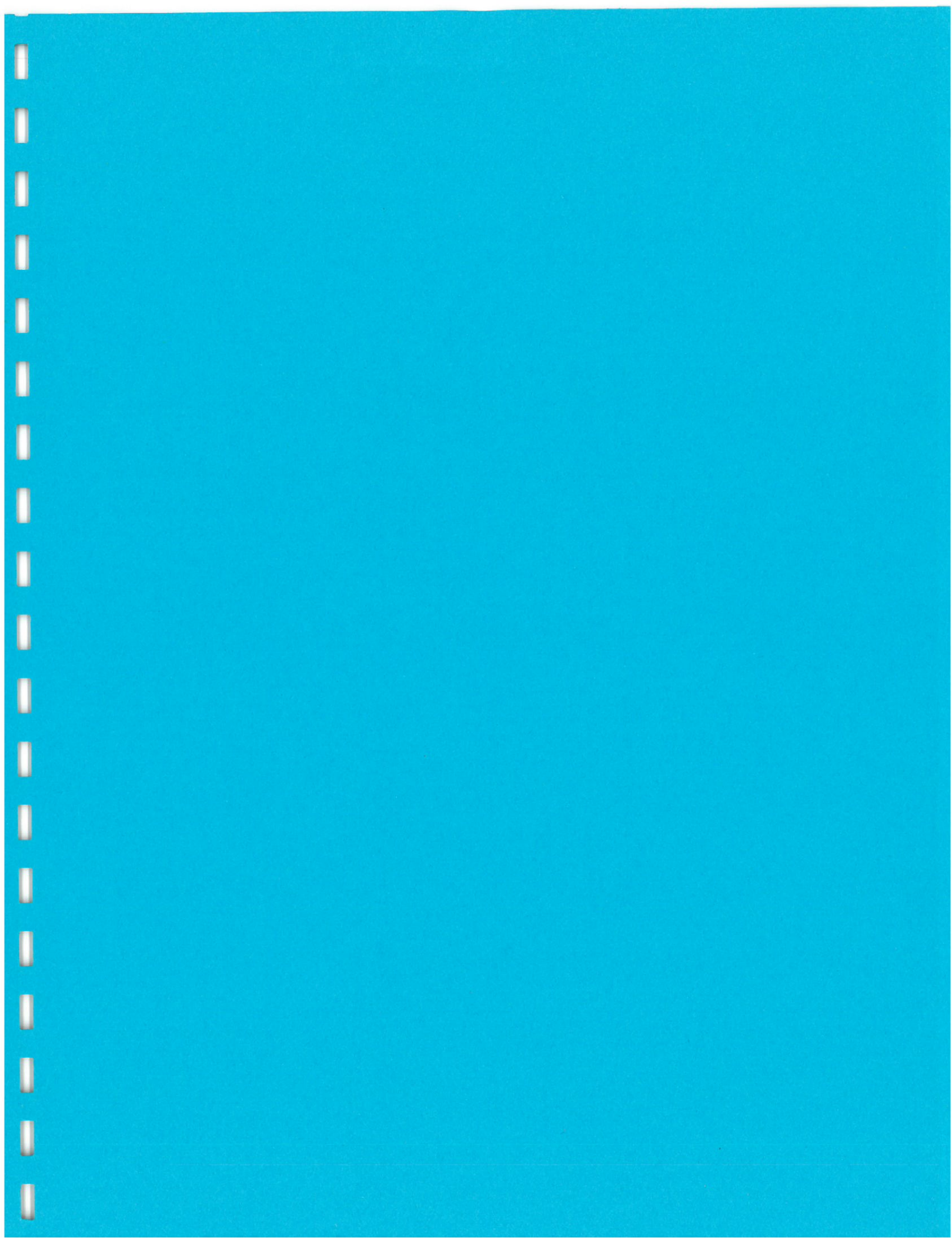
Date/Time: 10/10/2 11:45

Courier: ~~can't~~

Form #53

4/9/10 Rev. 8

7012-10-10-015



Riley Grams

From: Harold Johnson
Sent: Tuesday, April 07, 2015 1:18 PM
To: Doug Reeder
Cc: Riley Grams
Subject: Water tower information

Doug,

The past two weeks I have been on a fact finding mission on historical water towers.

Elk River has finally been approved by National it has been nearly a three process. To date they still not have received any information as what is required by the city to complete its part to move forward. It has not been used for water for some time, plus it is not city owned yet. A utility company currently owns the tower and land, it has set aside \$80,000 for its removal. This will all be transfer to city upon its final approved acceptance. This is according to Zack Carlton Planner 1 (in this position little over a year). 763-635-1035, zcarlton@elkriver.mn.gov

Wanamingo is still using their water tower, not on historical record and no intent to consider. Michael Boulton, City Administrator/EDA Director 507-824-2477 email: cityadministrator@cityofwanamingo.com furnished to me information regarding their refurbishing inside and out of their entire structure with cost and estimates in 2014. Has been painted red dome. Financed through MN Rural Water Micro Loan cost \$77,866.50. Contractor K & M Coatings LLC., Elkader, IA.

Hampton is still using their water tower, not on historical record and no intent to consider, Marlin Reinardy, City Water Department cell 651-250-4011 email mrmr@embarqmall.com. Painting done in 2014 by Slack Painting Inc. Evansville, MN.

Scope of service:

- A complete power wash of exterior of water tank, removing any loose paint, dirt, etc.
- Areas that are failed will be power tool cleaned and painted with one coat of epoxy. Estimated area to be done 75 square feet.
- Tank will be painted with a top coat of aluminum, with top painted red.
- The logo will be punched and repainted, bid price \$28,500.

Waconia water tower was not in service until 2 years ago, when there became a need for additional water supply for the city. Some refurbishing was necessary at that time. It is not on the historical record and has not been considered. Lane Braaten, Community Development Director was not available 952-442-4235 email lbraaten@waconia.org.

Carver County Historical Society Heidi Gould Education Coordinator 952-442-4235 www.carvercountyhistoricalsociety.org or hgould@co.carver.mn.us was able to give some information. Once placed on national historical record there will be time period assigned when or what can and has to be done. Required repairs would be necessary to use exact same type of holders for top and made with the same type material that was used when built in 1915. Otherwise it is not likely to qualify as historical. As much as she would like to see it preserved, it is a costly undertaking and hard to do what would be required by the national historical society.

Hope you find this helpful. Share with others if you wish to do so.

Harold

Riley Grams

From: Harold Johnson
Sent: Thursday, April 09, 2015 9:42 AM
To: Doug Reeder
Cc: Riley Grams
Subject: RE: Water tower information

Doug,

Yesterday, April 8th, I visited Milaca's water tower. Steve Burklund Public Works Director cell 320-492-8246 email steve_burklund@aol.com.

This water tower is not in use for water now. Interesting item is the inside of the tank is still coated on the inside with beeswax for sealing. This had been redone many years ago when it was still in use for water. This would not be allowed now because it would be a health hazard.

Exact age not know for sure. A water control valve on the system removed when decommissioned had a date of 1901 on it. It is believed that this not proper date of tower erection that it was some later. This tower was used until about 15 years ago, when a new and larger capacity tower was installed. An attempt was made to use the two together, but water flow pressure from new system caused the old tank to overflow. They stopped using it for any water at that time.

Old water tower sits right next to city museum so this would be good to have it on historical record. Concern is that control and necessary requirements would be taken away from the city and how would necessary cost to maintain be covered without going to taxpayers in some fashion.

In last few years city had their warning sirens located three different areas through the city, because of the land level variation all residents still could not hear them. All three were placed on the old water tower facing in different directions, now allowing everyone in the city to hear them plus even off to the rural area that surrounds. This surely would not be allowed if placed on historical records. For this reason alone they have no interest to do anything about it. If painted again they may consider painting it the required colors.

I believe my mission of discover is finished. Use and share as you like .

Harold

From: Doug Reeder
Sent: Tuesday, April 07, 2015 1:34 PM
To: Harold Johnson
Cc: CouncilGroup; Riley Grams
Subject: Re: Water tower information

Thanks Harold. Good stuff I will pass on
Riley pls print and put in water tower file
Sent from my iPad

On Apr 7, 2015, at 1:18 PM, Harold Johnson <HJohnson@ci.osseo.mn.us> wrote:

Doug,

The past two weeks I have been on a fact finding mission on historical water towers.

Riley Grams

From: Harold Johnson
Sent: Friday, August 07, 2015 10:35 AM
To: Riley Grams
Cc: Doug Reeder
Subject: RE: Osseo City Council meeting on Monday, August 10, 2015, at 7:00 p.m.

Riley,

With the water tower on agenda I would hope the information furnished in April 2015 regarding other 5 water towers I visited would be provided to Council Members before any action is taken. Last month I spoke to Zack Carlton of Elk River as to how their process had proceeded. On going for over four years, finally were approved by federal. Still waiting for explanation of what is required of the city to fulfill their requirements, have no idea if it will be a cost of \$30,000 or \$400,000. The application for final federal approval \$5,000, grant received \$3,000, fund raising \$900 balance \$1,000 cost to the city. Elk River knows it will need to raise funds for any grants that they will be receiving in the future. They have had to set up a 501(3) charitable fund in an attempt to cover expected expenses. Now when it comes to support the water tower with funds, the feelings have changed considerable. The flow of funding has been far short of expected.

Harold

From: LeAnn Larson
Sent: Thursday, August 06, 2015 4:52 PM
To: CityofOsseo; CouncilGroup; Dennis Smith; Marcus Thomas; Mary Tietjen ; Osseo Press news Alicia ; Rebecca Kurtz; Timesaver; Warren Limmer ; Bonny McIntyre; Steve Erickson; Alexandra Renslo; Mike Johnson; newsroom for Channel 12; Tim Gaffron; Anne Zelenak; Chris Mercadante; Duane Poppe; Harold Johnson; Kevin Rebman; Larry Stelmach; Mark Schulz; Alden Webster; Barbra Plzak; Casey Robertson; Deanna Burke; Dee Bonn; Todd Woods
Subject: Osseo City Council meeting on Monday, August 10, 2015, at 7:00 p.m.

Here is the packet for the City Council meeting on Monday eve. Thanks, LeAnn



LeAnn Larson | City Clerk

City of Osseo | 415 Central Ave | Osseo, MN 55369

P: 763-425-4064 | F: 763-425-1111

llarson@ci.osseo.mn.us

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Jackson Street Water Tower

City of Elk River

Condition Assessment



Prepared By



100 PORTLAND AVENUE SOUTH, SUITE 100

MINNEAPOLIS, MINNESOTA 55401

PHONE: 612.332.3654 FAX: 612.332.3626

Project Number 15010.00

August 3, 2015

August 3, 2015

Zack Carlton
City of Elk River
13065 Orono Parkway
Elk River, MN 55330

Re: City of Elk River Jackson Street Water Tower Condition Assessment
CDG Project #15010

Dear Zack,

We have completed the Condition Assessment for the Jackson Street Water Tower as proposed. This report summarizes our evaluation procedures, along with our observations, conclusions regarding the current condition of the water tower, and recommendations for repairs.

The services performed in evaluating this assessment and in preparing this report have been in accordance with the level of skill and care normally used for this type of project. The conclusions and recommendations discussed in this report are our best professional opinions based on our knowledge of current design and repair of this type of building. No warranties are expressed or implied.

It has been a pleasure to perform this service for you. If you have any questions, or if we can be of further assistance, please feel free to call.

Very truly yours,
Collaborative Design Group



Craig Milkert, PE
Principal

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EXECUTIVE SUMMARY

From a structural standpoint, all components of the Water Tower appear to be performing well. Besides some more superficial issues, such as the presence of chipped paint, rust, and lichen, all steel components are in average condition, especially for their age. The legs are securely bolted to the concrete footings. There are no noticeable problems with any of the tie rods, horizontal girders, or lattice work on the legs.

Two issues were observed, both located on the legs, which will need further maintenance beyond the obvious painting. The first issue relates to some corrosion of the steel at the base of the legs. This condition is hidden by the concrete that was installed to drain water from the legs. It would be important to investigate the condition of the steel behind the concrete further during the painting project by removing a portion of the concrete infill and inspecting the steel. If the corrosion is worse than what is observed presently, some remedial action may need to be done to strengthen the base, such as the addition of steel plates to replace the loss of cross sectional area due to corrosion.

The second potential concern involves the steel splice plates connecting the leg sections. Some of the plates are bowing as result of rust jacking, which occurs when the backside of the metal rusts and expands, causing the front of the panel to move outward. Further investigation and testing is recommended to confirm the severity of the corrosion and determine the proper remedial action.

Paint is chipping on the Water Tower's legs, tie rods, and horizontal girders; the surface of much of the exposed steel is covered in rust. The condition of the underside of the tank and its surrounding walkway platform was observed to be similar to that of the legs, tie rods, and girders, with a significant amount of weathered paint and rust. The sides of the tank appeared to be in good condition relative to the rest of the Tower, but the roof and cap are weathered with rust stains present from seams in the roof panels.

Considering that the Water Tower structure is no longer supporting the weight of water in a full tank, maintenance and periodic observation will be all that is required in the future, and no major structural modifications will be necessary. Some minor modifications may be necessary as identified above.

All of the Tower's surfaces should be painted, including areas that may not be easily visible from the ground, such as any exposed areas of steel angles, the inside of legs, and the walkway platform. A new coat of paint will not only return it to its original appearance, but it will also protect the steel from further rusting and deterioration.

The two potential structural issues should be further investigated with a more in depth study of the areas in question. We recommend that a portion of concrete from one of the leg bases be removed to get a better understanding of the condition of the steel. The bowing steel splice panels should also be closely observed and tested to determine the extent of damage.

INTRODUCTION

The Jackson Street Water Tower was built in 1920 by the Minneapolis Steel & Machinery Company as part of a water works project that developed a fire protection program for the City of Elk River. The Water Tower consists of a 100,000 gallon tank on a four leg, lattice-girder trestle tower and stands approximately 129 feet tall. The Tower is currently coated with paint that is assumed to be lead-based, and displays a non-historic City of Elk River logo, which differs from the original silver tank and red conical roof. The structure was added to the National Register of Historic Places on May 23, 2012.

The City of Elk River and the Elk River Heritage Preservation Commission have plans to restore this structure. The intent of this Condition Assessment is to provide an understanding of the required restoration work, along with the associated costs.

SCOPE OF REPORT

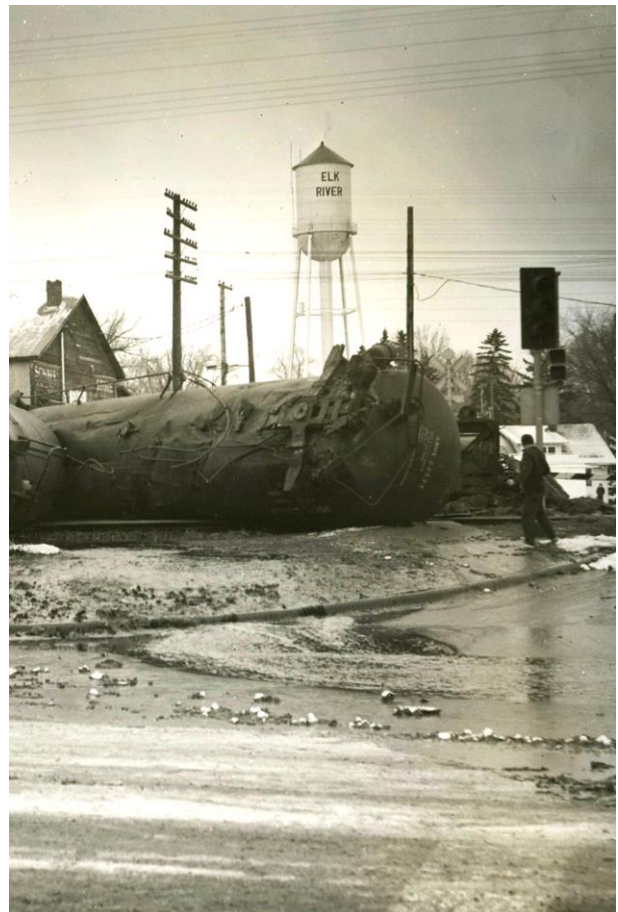
Review of Documents

Available documents regarding the Jackson Street Water Tower were limited, but the National Register of Historic Places Registration Form was reviewed to gain an understanding of the structure's construction and history. This paperwork informed us that, besides cleaning and painting of the Water Tower, no alterations had been made to the structure since its construction.

Discussions with City of Elk River Personnel

The Jackson Street Water Tower is an iconic landmark, and provides an important piece of the identity and heritage of the City of Elk River. The historic paint colors were silver for the main structure and tank, and red for the sloped roof. Simple black lettering spelled out "Elk River" on the side of the tank.

The water tank structure was constructed in 1920 by the Minneapolis Steel and Machinery Company. The tank was constructed initially as a response to the many fires that occurred in the downtown area. These fires were difficult to fight since the railroad line created a barrier between the downtown and the river. After the construction of newer water tanks in other locations, the Jackson Street Water Tower was de-commissioned in 1960.




Observations

Initial, ground-level observations were made on January 30, 2015. A more thorough site visit was made on March 12, 2015 to further document the structure from both the ground and the top of the Tower.



The following rating system was used in assessing the condition of the structure components:



- Good: The component is new, with no apparent defects.
- Average: The component is able to perform its originally intended function in its current condition. Any defects are minor and do not affect the performance of the component.
- Poor: The component is unable to perform its originally intended function in its current condition. The component has major defects, but is repairable.
- Unacceptable: The component is unable to perform its originally intended function in its current condition, and cannot be economically repaired. Replacement of the component is required.



Visual observations of the building are recorded below.


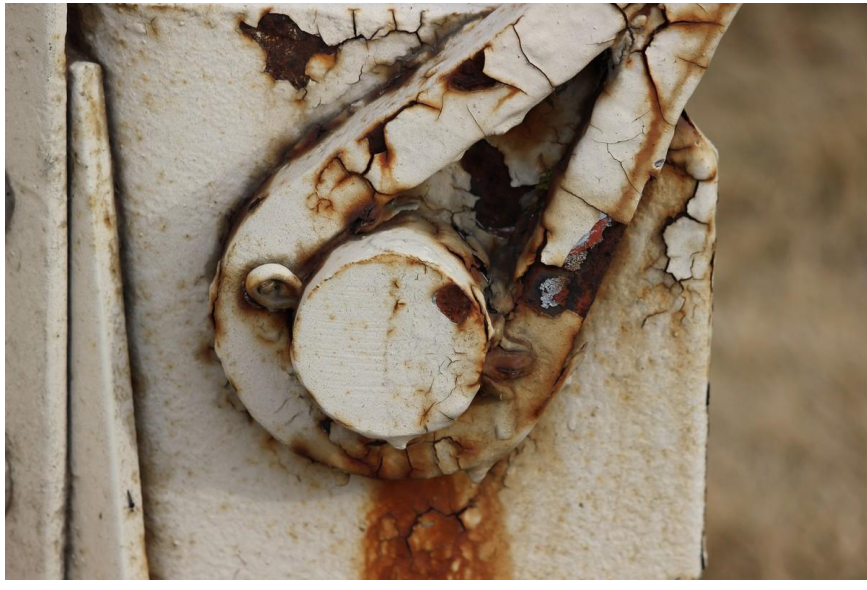
OBSERVATIONS	REFERENCE PHOTO
1. Each of the Water Tower's legs consists of two parallel steel channels, which are bracketed on the outside with a flat steel plate, and on the inside with small latticed bars.	



OBSERVATIONS	REFERENCE PHOTO
2. The Water Tower was constructed in 1920.	A close-up photograph of a rectangular metal plate mounted on a larger metal structure. The plate is heavily rusted and has embossed text that reads: "1920 MINNEAPOLIS AND STEEL MACHINERY CO BUILDERS MINNEAPOLIS MINN. U.S.A." The background shows a clear blue sky and a residential area with houses and trees.
3. The Water Tower has four concrete footings with varying amounts of exposure due to the surrounding landscape. All footings appear to be in average condition, with no significant deficiencies noted.	A photograph showing the base of a water tower where it meets a concrete footing. The footing is partially buried in dry, yellowish-brown grass and soil. The metal structure of the tower is visible, showing rivets and a rusted section. A red-painted area is visible on the side of the concrete footing.



OBSERVATIONS	REFERENCE PHOTO
<p>4. The legs are connected onto a steel base plate at each footing with steel angles, all of which appear to be in average condition.</p>	
<p>5. The steel base plate at the bottom of each leg is bolted into the concrete footings. These bolts show no significant deterioration, and are in average condition.</p>	



OBSERVATIONS	REFERENCE PHOTO
6. The inside of the base of each leg has been filled with concrete.	
7. The sloped surface of the concrete allows water to drain from the base of the legs, but water that flows to sides of the legs has begun to rust and deteriorate the steel.	



OBSERVATIONS	REFERENCE PHOTO
<p>8. Water flows out of the legs along the steel at the edge of the concrete, which has caused the steel to corrode. Loss of cross-sectional area of the steel is occurring on the steel channels due to corrosion.</p>	
<p>9. Loss of cross-sectional area of the steel is occurring on the steel channels due to corrosion.</p>	



OBSERVATIONS	REFERENCE PHOTO
10. Steel tie rods are connected to the base of each leg. Steel legs and tie rods are covered with a significant amount of rust and chipped paint.	
11. Rust and chipped paint are prevalent on all steel tie rods and legs.	



OBSERVATIONS	REFERENCE PHOTO
<p>12. Diagonal tie rods are in overall average condition and are performing well, but are showing a significant amount of chipped paint and rust.</p>	
<p>13. Diagonal tie rods are in overall average condition and are performing well, but are showing a significant amount of chipped paint and rust.</p>	



OBSERVATIONS	REFERENCE PHOTO
<p>14. Tie rods are connected with steel turnbuckles. Like the tie rods, these turnbuckles are covered with rust and chipping paint, but their performance is unaffected.</p>	
<p>15. A ladder extends up the northwest leg of the Water Tower. Surface rust and peeling paint are visible in some areas, but no functional concerns regarding the ladder were observed.</p>	



OBSERVATIONS	REFERENCE PHOTO
<p>16. Lichen (organic growth) is growing on the legs in some areas.</p>	 A close-up photograph of a light-colored metal surface. There are several large, irregular patches of grey, fuzzy lichen growing on the surface. Numerous small, dark spots are scattered across the metal, likely representing rust or other surface degradation. A circular metal fastener or bolt head is visible in the lower-left corner of the frame.
<p>17. The lattice girder legs appear to be in average condition, with no structural deficiencies observed. Lattice surfaces generally seem to be in better condition than the flat sides of the legs, with considerably less chipped paint, rust, and lichen.</p>	 A photograph of a tall, vertical lattice girder leg of a water tower. The structure is made of light-colored metal with a triangular lattice pattern. It is supported by two diagonal bracing legs that meet at the base. The tower is situated in a grassy area with bare trees and a residential building in the background under an overcast sky.



OBSERVATIONS	REFERENCE PHOTO
<p>18. The paint on the flat sides of the legs is weathered; lichen and corrosion was observed in some areas.</p>	 A close-up photograph of a water tower leg. The leg is a light-colored metal beam with a series of rivets along its length. The paint is significantly weathered, with dark, irregular patches of lichen and corrosion visible, particularly along the edges and around the rivets.
<p>19. Each of the Water Tower's legs is essentially made up of three sections, with the longest at the bottom and the shortest at the top. The leg sections are connected with steel splice plates on all four sides, with some plates inside the legs and some outside. Note the two exterior plates indicated in the photo.</p>	 A photograph of the water tower legs from a low angle looking up. The legs are made of multiple sections joined by steel splice plates. Two red arrows point to the exterior splice plates on the legs, highlighting the connection points between the sections.



OBSERVATIONS	REFERENCE PHOTO
<p>20. The presence of bolts and rivets within the leg channels indicates that there is a steel plate inside the leg, the condition of which could not be ascertained from ground level. The steel bracket connecting the horizontal girder is rusting and the bottom of the exterior plate is expanding outward slightly.</p>	
<p>21. A steel plate is attached to the legs just above the connection to the horizontal girders. Each of these plates (eight total) appear to be in average condition.</p>	



OBSERVATIONS	REFERENCE PHOTO
22. The plates on the outside of the Water Tower are in average to poor condition, with some showing significant rust and expansion.	
23. Close up of one of the outside steel plates. It appears as though water has corroded the backside of the plate, causing the steel to expand and bow outward, a condition known as rust jacking.	



OBSERVATIONS	REFERENCE PHOTO
24. Another instance of rust jacking. While this plate is in better condition than others, it can be expected to continue to degrade.	
25. A horn sits on a platform perched atop two horizontal steel girders, requiring an electrical conduit running up the northwest leg from the ground. The horn and platform contain surface rust and weathered paint, but no major deficiencies. It is unknown if the horn is functional.	



OBSERVATIONS	REFERENCE PHOTO
<p>26. Horizontal girders are connected to the legs with steel angles and rivets. There are eight total girders, connected just below the seams between leg sections. All girders appear to be in average condition, with just some rust, weathered paint, and lichen noted on their surfaces.</p>	
<p>27. Lichen is growing on horizontal girders.</p>	



OBSERVATIONS	REFERENCE PHOTO
<p>28. Rust and chipped paint is evident on the surface of horizontal girders.</p>	 A close-up photograph of horizontal steel girders. The surface of the girders is heavily corroded, showing significant rust and areas where the paint has chipped away. The girders are set against a clear, bright blue sky.
<p>29. At the epicenter of the four Tower legs is vertical steel tube that encloses an eight inch stand pipe connecting the tank to the water system. Eight tie rods connect the center tube to the Tower's legs.</p>	 A low-angle photograph looking up at the center of a water tower. A vertical steel tube runs from the bottom towards the top, surrounded by a network of tie rods that connect it to the tower's legs. The tube and rods are painted a light color, possibly white or light grey, and show some signs of wear and rust. The background is a clear blue sky.



OBSERVATIONS	REFERENCE PHOTO
30. An access hatch leads underground underneath the Water Tower.	
31. A small hatch allows access to the enclosed stand pipe.	


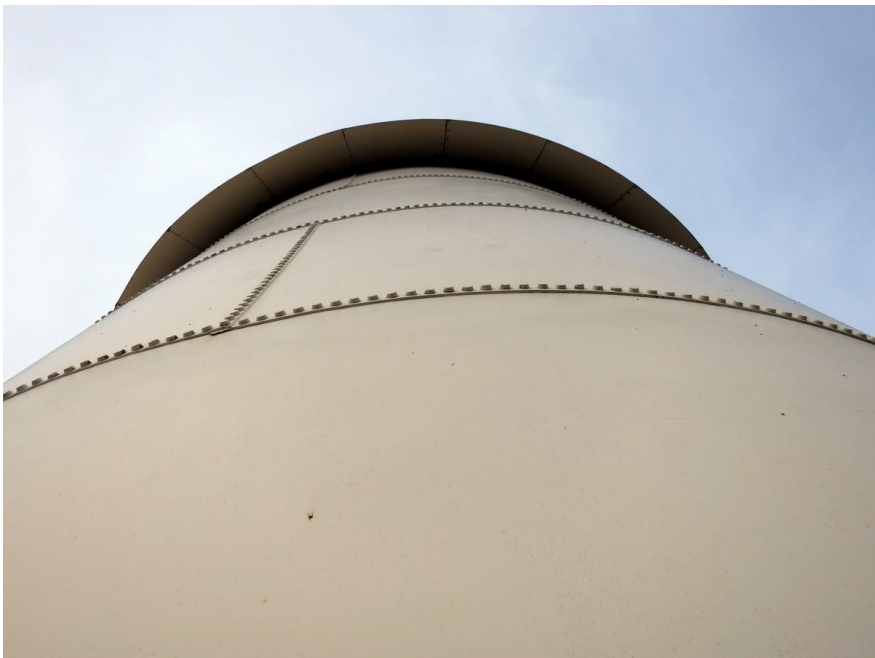
OBSERVATIONS	REFERENCE PHOTO
<p>32. Some minor rusting and weathered paint were observed on the vertical tube.</p>	
<p>33. The vertical tube is bolted into a concrete pad. The surfaces of the bolts are covered with rust and dirt, but are performing well.</p>	



OBSERVATIONS	REFERENCE PHOTO
34. The standpipe enclosure extends from the ground to the underside of the tank.	
35. The underside of the tank is in average condition, with some rusting and weathered paint.	



OBSERVATIONS	REFERENCE PHOTO
<p>36. The walkway platform surrounding the tank is in average condition, with weathered paint.</p>	
<p>37. Sections of the steel plate walkway are riveted to steel splice plates beneath the platform.</p>	



OBSERVATIONS	REFERENCE PHOTO
<p>38. Steel plates and rivets beneath the walkway platform connect the sections of steel walkway plates. The walkway has a latticed steel guardrail, which - like the platform - is weathered but in average condition.</p>	
<p>39. The latticed handrail around the tank is in average condition overall, but features many areas of chipped paint and rust.</p>	


OBSERVATIONS	REFERENCE PHOTO
<p>40. The latticed handrail around the tank is in average condition overall, but features many areas of chipped paint and rust.</p>	
<p>41. The four legs extend inside the walkway platform and are connected with steel angles and rivets to the vertical surface of the tank.</p>	

OBSERVATIONS	REFERENCE PHOTO
42. View looking down the inside of one of the Water Tower's legs.	
43. The side of the tank is in average condition.	

OBSERVATIONS	REFERENCE PHOTO
<p>44. The side of the tank is in average condition.</p>	 A close-up photograph of the side of a white-painted metal tank. The image shows a horizontal weld joint with several large, circular, raised rivets or bolts. The paint is slightly chipped and worn around the rivets, and there is some visible rust or staining along the weld line.
<p>45. A second ladder rises along the side of the tank. Like the ladder along the northwest leg, this ladder features surface rust and chipped paint, but is performing well and has a good connection to the Water Tower.</p>	 A photograph showing a vertical metal ladder structure attached to the side of a white-painted tank. The ladder consists of several vertical rungs and horizontal cross-braces. The metal shows signs of rust and chipped paint, particularly on the rungs. The ladder is connected to the tank with a bracket. In the background, a portion of the tank's surface with large, dark, stylized letters is visible.

OBSERVATIONS	REFERENCE PHOTO
<p>46. A third ladder allows access to the conical roof of the tank and the cap on the very top of the Water Tower. This ladder can disconnect from the second ladder, and pivot around the cap at the top to provide access around the entire circumference of the roof.</p>	
<p>47. Some minor rusting and water staining was observed at seams and the edge of the tank on the underside of the roof eave.</p>	

OBSERVATIONS	REFERENCE PHOTO
48. The conical roof is rusting at panel seams.	
49. The conical roof is rusting at panel seams.	

OBSERVATIONS	REFERENCE PHOTO
50. The cap atop the roof appears to be in average condition.	

DISCUSSION AND CONCLUSIONS

Introduction

This condition assessment focuses on two main points concerning the Jackson Street Water Tower: the overall structural condition of the Tower, and the requirements to preserve the Tower to maintain its integrity and value. Part of the preservation plan is to restore the water tower to its original appearance, which will require extensive work to clean and remove old paint, rust, and growing lichen. A few rusting areas, such as at connecting splice plates on the outside of the legs and deteriorating areas within leg bases also present a concern from a structural standpoint.

General Discussion

From a structural standpoint, all components of the Water Tower appear to be performing well. Besides some more superficial issues, such as the presence of chipped paint, rust, and lichen, all steel components are in average condition, especially for their age. The legs are securely bolted to the concrete footings. There are no noticeable problems with any of the tie rods, horizontal girders, or lattice work on the legs.

The Water Tower's legs consist of two steel channels sitting parallel to each other and riveted to a long, flat steel plate on the edges on the outside perimeter of the Tower and small

latticed bars on the inside edges. Put together, these pieces form a square leg that rises to the tank in three sections. Each section is connected with four steel splice plates, two of which are bolted and riveted inside the legs, and two that are bolted on the legs' exterior surfaces.

Two issues were observed, both located on the legs, which will need further maintenance beyond the obvious painting. First, the base of each leg is filled with concrete that promotes the drainage of water out of the leg assembly. It appears that water naturally flows to the sides of this concrete and along the edge of the inside of the legs, which has resulted in some deterioration and loss of cross sectional area of the steel. The thickness of the steel channels is important, as this is what transfers the load of the water tower to the foundation. At this time, the condition of the steel behind the concrete is unknown. It would be important to investigate the condition of the steel behind the concrete further during the painting project by removing a portion of the concrete infill and inspecting the steel. If the corrosion is worse than what is observed presently, some remedial action may need to be done to strengthen the base, such as the addition of steel plates to replace the loss of cross sectional area due to corrosion.

If it is determined that additional steel needs to be added, a sample of the steel should be taken and tested to determine its physical properties. Steel produced during the time of the construction of this water tower did not have the same physical properties of modern day steel, and may not be able to be welded. This testing information will inform the design of the connection of any additional steel members, if needed.

The second potential concern involves the steel splice plates connecting the leg sections. Some of the plates are bowing as result of rust jacking, which occurs when the backside of the metal rusts and expands, causing the front of the panel to move outward. This appears to be happening exclusively on the eight plates on the outside perimeter of the Tower, which is not surprising since the slope of these surfaces allows water to travel down the legs and flow behind the connection plates. Since these plates hold the legs together, they are integral to the structural integrity of the Tower. If the plates continue to corrode, the connection between each section will weaken and the structural capacity of the legs will diminish.

Paint is chipping on the Water Tower's legs, tie rods, and horizontal girders; the surface of much of the exposed steel is covered in rust. A significant amount of lichen is also growing on some of these surfaces.

The condition of the underside of the tank and its surrounding walkway platform was observed to be similar to that of the legs, tie rods, and girders, with a significant amount of weathered paint and rust. The sides of the tank appeared to be in good condition relative to the rest of the Tower, but the roof and cap are weathered with rust stains present from seams in the roof panels.

Considering that the Water Tower structure is no longer supporting the weight of water in a full tank, maintenance and periodic observation will be all that is required, and no major structural modifications will be necessary. Some minor modifications may be necessary as identified above.

RECOMMENDATIONS

It is the City of Elk River's intent to restore the Water Tower to its original appearance, which consisted of mostly silver painted steel except for black lettering and a red roof. In order to do so, chipped paint, lichen, and rust will need to be removed to provide for the adhesion of the new paint. Because the paint is likely to contain lead, all removed paint will need to be captured by qualified workers and properly disposed of. It will not be necessary to strip all of the paint off of the water tower down to bare steel. Any lead based paint that is adhered well can be encapsulated with the new paint. Proper cleaning and preparation of all surfaces will need to be performed prior to cleaning.

All of the Tower's surfaces should be painted, including areas that may not be easily visible from the ground, such as any exposed areas of steel angles, the inside of legs, and the walkway platform. A new coat of paint will not only return it to its original appearance, but it will also protect the steel from further rusting and deterioration.

The two potential structural issues should be further investigated with a more in depth study of the areas in question. We recommend that a portion of concrete from one of the leg bases be removed to get a better understanding of the condition of the steel. Areas of rust and deterioration are present on the exposed steel just above the concrete, and the possibility exists that water has been able to seep between the metal and concrete and cause unseen damage to the steel. The bowing steel splice panels should also be tested to determine the extent of damage.

PRIORITIES AND ESTIMATE OF PROBABLE COSTS

Description	Estimated Cost
Additional Testing	\$ 4,000
Steel repair (if required)	\$ 5,000
Painting	<u>\$60,000</u>
Sub Total	\$69,000
Contingency, 15%	\$10,350
Design Fees, 8%	<u>\$ 5,525</u>
Total	\$84,875



City of Osseo City Council Work Session Meeting Item

Agenda Item: Discuss Procedures for Council Approval

Meeting Date: February 29, 2016

Prepared by: Riley Grams, City Administrator

Attachments: Excerpt from League of MN Cities Handbook

Background:

Now that we have a much more interested and involved Committee system (with Public Safety Advisory Committee, Parks & Recreation Committee, Heritage Preservation Commission, Intergovernmental Relations Committee, Human Resources Committee, Budget and Finance Committee, and Risk Management Committee) Staff has had some difficulty navigating the process by which the City Council wishes to have items, events, or projects approved. Often times Staff believes we are taking the correct approach, only to find out some Council members would have preferred a different approach.

This is a good time to review the process and procedures by which the City Council, in its entirety, would like Staff to navigate in order to get work done.

Of course, with some of the Committees only meeting four times a year, scheduling can get tricky. How do we handle those situations?

We have reached out to the League of Minnesota Cities to get some idea of “best practices” when it comes to navigating Council Committees. I’ve attached an excerpt to this agenda item. The only required Committees/Commissions are the EDA, Planning Commission and Heritage Preservation Commission, and that is because they are in our Code.

Recommendation/Action Requested:

Staff recommends the City Council discuss the process and procedure by which Staff are to navigate several Committees and Commissions in order to get work done and direct Staff accordingly.

RELEVANT LINKS:

See LMC information memo,
Meetings of City Councils,
for more information.

C. Council committees

Although the statutes do not require the use of committees, some councils find they are helpful in reducing workload. By dividing their membership into several committees, a council enables its members to devote most of their time to specific areas of the city's operations. Each councilmember becomes a relative specialist in these areas and that councilmember's services become of greater value to the council as a whole.

Council action is necessary to establish committees either in the council's bylaws, by special resolution, or through a motion.

The council may set up special and standing committees. The council appoints special committees to deal with a single transaction or project. For example, the council might appoint a special committee to study the advisability of purchasing land for a new park. Standing committees concentrate on work that is continuous or repeated from time to time during the year. Many cities, for example, have a standing committee on finance.

Sometimes councils set up their committees on a functional basis. Such committees deal with fire, police, health, public works, welfare, or public utilities. This system encourages councilmembers to handle administrative details and, consequently, does not make full and proper use of the city's administrative officers. Thus, councils should try to limit their work to special policy problems or to certain staff or public-relations functions that are not the responsibility of administrative personnel. Examples include committees on auditing, personnel, budget, public reporting, purchasing, and licensing.

Committees may exercise all duties the council has legally assigned to them. They can have authority to conduct investigations and to make recommendations. Committees, however, may not make decisions on behalf of the council. Committees of the council are subject to the same rules as the full council under the open meeting law.

In many cities, it is routine for the council to approve a committee's recommendations if it has done a thorough and competent job. It is important, however, for all councilmembers to be aware of their independent obligation to the city when considering whether to adopt a committee's recommendation. It is only the council's final decision, and not the committee's recommendation, that can bind the city. For example, committees may not enter into contracts or employ workers even if a specific motion of the council delegates such power to them.



City of Osseo City Council Work Session Meeting Item

Agenda Item: Emergency response situations

Meeting Date: 02/29/2016

Prepared by: Shane Mikkelsen, Police Chief

Background:

We don't often have emergency situations in Osseo, thankfully. Since the apartment fire, there has been some discussion of how the Council should respond to an emergency situation that is or has occurred to avoid confusion and to keep everyone safe.

All communication about the incident should come from the first line supervisors to the City Administrator, and the City Administrator will then notify the Council. During any major emergency the Police Department building will be opened at the earliest time possible after the event. If, as a Councilmember, you would like to respond, we ask that you go directly to the Police Department. The person that is asked to be at the desk at the Police Department will let you in. That person will have access to a radio and will have phone numbers to call if questions need to be answered. This will also give us, as supervisors, a place to go to brief everyone on the issues we are facing and ask for your help if it is needed. The Police Department will become the hub of information gathering as the incident goes along. This provides a central location to get the information you need to do your jobs as councilmembers for your community. The only time the Police Department would not be opened would be if the emergency situation occurred at that location.

These situations are fluid and we would not want anyone to get hurt responding to the scene of the incident. It is also important to avoid a situation where the media approaches city officials who may not have all pertinent information for the emergency situation.

Next Step:

Agree to the best way for our city officials to respond in a city emergency situation.



Osseo City Council Work Session Topic

Agenda Item: Discuss Heritage Preservation Commission

Meeting Date: February 29, 2016

Prepared by: Nancy Smebak Abts, City Planner

Attachments: Main Street Program factsheet

Background:

At the last Work Session meeting, the City Council discussed restructuring the Heritage Preservation Commission (HPC) to fit “underneath” the Planning Commission. Some thoughts on enacting that vision are provided for conversational fodder:

- The HPC could be “downgraded” to a committee and public meeting and minute-taking requirements could be removed
- HPC could meet during daytime hours, rather than in the evening, allowing greater support from staff
- HPC could meet ASAP after a relevant development proposal is received
 - Development proposals need to be acted on within 60 days. Application deadlines are generally ~4 weeks before a Planning Commission (PC) packet is sent out. HPC would need to act quickly to gather any necessary information before PC review.
- HPC findings could be presented as part of the Planning Commission’s Development Review process
- Because its role relates to many other city entities, the HPC’s membership could be augmented with appointees from the Planning Commission, Parks & Recreation Committee, EDA, and/or City Council
- HP is an important component to Osseo’s future, and it should be supported by City resources
 - A “baseline” assessment, similar to the 2007 Phase 1 Environmental Assessment conducted for commercial properties, could be conducted for the City
 - This assessment could support the City’s Comprehensive Planning process
 - The baseline assessment would give the HPC a “leg up” on its ASAP development reviews
 - The baseline could provide an initial work plan for topics & properties the HPC could attend to when not reviewing development proposals
 - HPC would probably not review development proposals for sites not identified in a baseline assessment or designated as Heritage Sites
- HPC could also adopt some of the practices and strategies of the National Trust for Historic Preservation’s **Main Street** program, “preserving” Osseo’s social and small business characteristics. (The Main Street program has a strong emphasis on revitalizing downtown areas, which has already been addressed in Osseo, but some of the programming & business promotion & retention strategies the program offers could augment the EDA’s activities & re-instate some of OBA’s functions)

Recommendation/Action Requested:

Staff recommends the City Council discuss the roles of the options for restructuring the HPC and direct Staff accordingly.

The Main Street Four Point Approach®

A Proven Strategy to Revitalize Traditional and Historic Commercial Districts

As a unique economic development tool, The Main Street Four-Point Approach® is the foundation for communities to revitalize their commercial districts by leveraging local assets – from cultural and architectural heritage to local enterprises and community pride. Developed by the National Trust Main Street Center, the Main Street Approach is a *comprehensive* strategy tailored to meet local needs and opportunities. Local staff and volunteers work to implement projects in four key areas:

- **Organization:** Building consensus and cooperation among public and private groups and individuals and identifying sources of funding for revitalization activities.
- **Design:** Enhancing the district's physical appearance through building rehabilitation, compatible new construction, public improvements, and design management systems.
- **Promotion:** Marketing the commercial district through events and advertising to attract customers, potential investors, new businesses, residents, and visitors.
- **Economic Restructuring:** Strengthening the district's economic base and creating new opportunities through careful analysis and appropriate mixed-use development.

MORE THAN 25 YEARS OF SUCCESS

Cumulatively, the commercial districts taking part in the Main Street program have generated more than \$48.8 billion in new investment, with 206,600 in building rehabilitations and a net gain of more than 391,050 new jobs and 87,850 new businesses. Every dollar a community uses to support its local Main Street program leverages an average of \$25 in new investment, making the Main Street program one of the most successful economic development strategies in America.

Main Street offers a revitalization framework appropriate for communities of all types. Local Main Street programs are established either as freestanding organizations or as part of an existing entity, such as a CDC or economic development organization. Working in conjunction with a state or citywide Main Street Coordinating Program or directly with the National Trust Main Street Center, local Main Street programs plan and implement projects that create more vibrant and healthy commercial districts over time.

GETTING STARTED

Learn more, build a public-private coalition, and get going! To begin the process:

- Call the National Trust Main Street Center at [202.588.6219](tel:202.588.6219) or visit www.preservationnation/main-street.org.
- Discuss the idea with business and property owners, residents, government officials, and key leaders in your community.
- Learn from existing programs in your area. For referrals, contact the Center.
- Consider a Main Street Assessment for a professional opinion on whether Main Street is appropriate for your commercial district.

The National Trust Main Street Center[®]

Established in 1980 as a program of the National Trust for Historic Preservation, the National Trust Main Street Center is the nation's largest full-service commercial district revitalization organization. The Center serves as a resource to communities and individuals interested in revitalizing traditional commercial districts. A nonprofit organization, the Center provides information, offers technical assistance, holds conferences and workshops, and conducts research and advocacy on critical revitalization issues.

Community Assistance: Through our consulting services and information resources, the National Trust Main Street Center has helped more than 2,200 cities, towns, and neighborhoods of all types rebuild the economic and social vitality of their downtowns and neighborhood commercial districts. We can help your commercial district in the following ways:

Publications: We offer several publications and training materials on revitalization, ranging from getting-started basics to advanced how-to materials.

Conferences: Held annually, the *National Main Streets Conference* is the largest commercial district revitalization conference in the United States, with more than 70 educational sessions and networking opportunities for revitalization professionals and community leaders like you.

National Main Street Network[®]: This cost-effective membership keeps local programs informed about key revitalization issues. Benefits include *Main Street News*, access to the Members Area of our website, and valuable discounts on products and conferences.

Consulting Services: Main Street's Field Services staff provide experienced, professional assistance for your revitalization effort through on-site consulting and training services. Our knowledgeable staff can help you start your revitalization program and solve your toughest challenges. Typical clients include local Main Street organizations, business associations, CDCs, chambers of commerce, and municipal governments. Our services include:

- assessment of commercial districts
- economic development services (business mix, retention, recruitment)
- organizational development
- market analysis
- urban design
- fund-raising services
- strategic and long-term planning
- real estate development services
- marketing strategies
- planning and ordinance review

Financial Assistance: Loan and equity financing is available for organizations, municipalities, and for-profit and nonprofit developers of historic properties through the National Trust Loan Funds and the National Trust Community Investment Corporation. For more information, call 202.588.6054.

To learn more about the National Trust Main Street Center, call [202.588.6219](tel:202.588.6219) or visit www.preservationnation/main-street.org.



Osseo City Council Work Session Topic

Agenda Item: Discuss Amendments to City Code § 153.091 *Signs: Regulations and Standards; Permits*; and § 151.04 *Property Maintenance: Amendments to International Property Maintenance Code* to clarify size requirements for house numbers

Meeting Date: February 29, 2016
Prepared by: Nancy Smebak Abts, City Planner

Policy Consideration:

Consider updates to the Osseo City Code unifying minimum size requirements for property identification numbers in the City of Osseo.

Background:

Osseo City Code presently sets forth minimum size requirements for house identification numbers in two locations. The sign code requires address numbers to be 3 ½ inches tall, while the property maintenance code requires them to be 6" tall with a ½ inch stroke.

The State Building Code is adopted by reference. When building permit inspections are conducted, Metro West ensures that the state's requirement for 4" address numbers with coloring that contrasts their background are present. The Building Code is only enforced when a building permit is applied for. Its provisions are not sufficient to ensure address numbers are maintained on all properties.

The city should set forth uniform size requirements for building address identification numbers. Clearly legible address identification numbers are necessary for emergency responders, many of whom are not Osseo natives and may also be responding from neighboring jurisdictions. They also aid Staff in enforcing property maintenance and nuisance regulations.

City Code Amendments (new content/revisions in red underline):

§ 151.04 PROPERTY MAINTENANCE: AMENDMENTS TO INTERNATIONAL PROPERTY MAINTENANCE CODE Location (Q):

Section 304.3 Premises identification. Buildings shall have approved address numbers placed in a position to be plainly legible and visible from the street or road fronting the property. These numbers shall: contrast with their background, be Arabic numerals or alphabet letters, and be a minimum of four inches high with a minimum stroke width of one-half inch.

§ 153.091 SIGNS: REGULATIONS AND STANDARDS; PERMITS, Location (I):

A minimum of one address sign shall be required on each building in all districts. The sign shall contain numerals of a sufficient size to be legible from the nearest street yet shall not exceed two square feet in area. The numerals shall be metal, glass, plastic, or durable material and shall not be less than four inches in height

with a minimum stroke width of one-half inch and shall be in a contrasting color to the base. The numerals shall be lighted or made of some reflective material and so placed to be easily seen from the street.

Maple Grove's City Code "Sign" section is worded similarly to Osseo's existing text, stating that the "numerals shall be **light** or made of some reflective material..." In Maple Grove, this language is enforced to ensure that numerals are **lighted**. Clarifying this wording in Osseo's code will make the city's requirements more understandable to residents.

Budget or Other Considerations:

Monitoring the minimum size of house numbers is a low enforcement priority for the City (in recent years, spring and fall code enforcement sweeps conducted by the police department have not addressed house numbers). However, establishing a uniform requirement across all sections of City Code will provide a basis for any necessary future enforcement actions.

If property owners find a need to replace their address numbers to comply with the new requirements, this can be done at a moderate cost.

Recommendation/Action Requested:

Discuss the proposed amendments and identify any necessary changes.

Next Steps:

The amendments can be considered at a future Council meeting.



Osseo City Council Works Session Topic

Agenda Item: Discuss Mobile Food Vending

Meeting Date: November 23, 2015

Prepared by: Nancy Smebak Abts, City Planner

Background:

Osseo residents and officials have expressed interest in having food trucks come to town. Brick and mortar restaurants seem to support the idea of event-specific food truck sale, but are more resistant to a more blanket allowance for food trucks.

No action is needed in order to allow food trucks to continue to be present at city-approved events, like Lions Roar. The city could sponsor a single event or a series of “Food Truck Day in Osseo” events under current practice (Council approval only), meeting local interest for food trucks and minimizing conflicts with existing land uses. Pursuing food trucks at authorized could be a good way to “test the waters” before considering more permanent changes. However, as the process of updating City Code is often protracted, they city may also wish to be proactive in providing allowances for more permanent food truck uses.

If food trucks are desired on a more permanent basis, a Conditional Use Permit process could be implemented to allow food trucks to locate on private commercial property. Such a process would require amending City Code. The City could also consider creating an interim use approval strategy, to, for example, allow food trucks to operate on a short-term basis on undeveloped property. The city does not currently issue interim use permits, but, unlike Conditional Use Permits, they have the benefit of expiring after a set time.

Another approach to allowing Food Trucks on a more permanent basis would be to issue city permits for food trucks. Larger cities have developed multiple strategies to implement permitting processes; however, developing and administering a program to allow food trucks to conduct a private business on public streets would be difficult administratively and may provide a poor return on investment.

Requested Action:

Discuss the matter and provide direction to Staff.

If a permit process is otherwise desirable, the Council may consider:

- Which portions of the city and/or specific streets would be open to food trucks, e.g., Central Avenue, C-2 Highway Commercial District, areas with or without sidewalks, etc.
- How frequently and for how many consecutive hours/days a Food Truck would be allowed to operate
- Whether permits should serve primarily as a “gate-keeping” mechanism to limit when and where food trucks operate or as an enterprise of the city, with fees set to compensate the city for the cost of providing the public streets, sidewalks, and infrastructure that allow food trucks operate
- What city department(s) would be responsible for issuing and enforcing permits, and how much staff time might be necessary for enforcement